p-ISSN: 2348-6848
e-ISSN: 2348-795X
Volume 03 Issue 14
October2016

A Model to Reduce Cold cases in Emergency Room - A prospective observational study in Saudi Arabia.

Dr. Sriram Chandramohan [1] Mohammed Abdullah Alshehri [2]

[1]Lecturer, Department of Public Health , College of Health Sciences, Saudi Electronic University , Abha Branch , Kingdom of Saudi Arabia. drsrirammd@gmail.com.

[2]Student , Bachelor of Health Informatics, College of Health Sciences, Saudi Electronic University , Abha Branch , Kingdom of Saudi Arabia

Abstract:

Overcrowding in Emergency Department is a major problem in every hospital; worsen by shortage of nurses and physicians. Overcrowding of cold cases illnesses may contribute to an inability to triage and treat patients in a timely manner as well as increased number of patients leaving the emergency department without being examined. It reduces the morale among healthcare professional and may make violence in emergency department. The objective of this is to reduce crowding of cold cases illness by improving the quality and efficiency of emergency care and setting the quality plan for the triage, or sorting to help in determining the severity of the real emergency cases and cold cases illness to see which cases must be seen by the physician directly and to plan an access to the other cold cases to get their treatment or their appointment as well as rising public awareness to avoid this overcrowding by cold cases illness. A prospective observational study at Al Namas General Hospital in Emergency Department by observing and recording all emergency cases visits in one week period of time on 24 hours daily operational work. The major findings showed that the average percentage of cold cases per day was 63.3 % while the real emergency cases fall at 46.7%. Patient with upper respiratory tract infection have the most cold cases illness as 36.7% then gastroenteritis at 25.6% and others at 0.6% (UTI, headache, abdominal pain, etc).

Key Words: Cold cases, overcrowding, Emergency Room.

Introduction

Al Namas General Hospital is located at Al Namas City, Asser Region in the south of Saudi Arabia with 100 bed capacity and with services provided in ER, OPD, DR, OR, In- Patient Areas, ICU, NICU, Hemodialysis, Dental , Radiology and Imaging, Laboratory, Nutrition Services, Health Education, Medical Coordination and Telemedicine (RCO), Social Services, medical Records and Pharmacy. Due to its location as tourist region, influx of patients during summer season is anticipated. ED crowding can be described as a "situation in which the identified need for emergency services outstrips available resources in the emergency department when there are more patients that staffed ED treatment beds and wait times exceed a reasonable period". Ministry of Health (KSA) built the hospital capacity depending on Al Namas population only due to poor understanding to the situation during summer season, which happens to be as tourist destination during summertime.

Crowding of cold cases illness in ED is of increasing concern to the health sector which has been ignored by the Ministry of Health, as the population grows and demand on emergency services will grow accordingly. The impact associated with caring for these frequent visitors can morale among the nursing and medical staff and may make violence in ED. Patients arriving with cold cases illness in ED (e.g. common colds, old wound change, etc.) were clogging up the system and were the cause of emergency department overcrowding. When crowding occurs, patients are often placed in hallways and other non-treatment places to be monitored until ED treatment beds or staffed hospital inpatients beds become available or free. In addition, crowding may contribute to an inability to triage and treat patients in a timely manner as well as increased rates of patients leaving the emergency department without being seen.[1]

Emergency department overcrowding can have a negative impact on the car of individual patients. Crowding may result in reduced quality of patient care and increased risks to patient safety. Patient leaving the emergency room before being medically evaluated, boarding of in-patients in ED and ambulance diversion which consequences of these circumstances may lead to unpleasant care environment; lack of patient privacy, patient dissatisfaction; prolonged patient pain and suffering; poor clinical outcomes;

emergency care provider stress and dissatisfaction; increased potential for errors; infectious disease spread and increased liability risks.[2,3, 4]

Objectives:

The objective is to reduce crowding of cold cases illness by improving the quality and efficiency of emergency care and setting the quality plan for the triage or sorting to help in determining the severity of the real emergency cases and cold cases illness to see which cases must be seen by the physician directly and to plan an access to the other cases to get their treatment of their appointment as well as rising public awareness to avoid this overcrowding by cold cases.

Methodology:

A prospective observational study in Emergency department by observing and recording all emergency cases visits in one week for 24 hours period on day to day basis.

Results:

The major findings show that the average percentage of cold cases per day was 63.3 % while the true emergency cases fall at 46.7%. Patient with upper respiratory tract infection have the most percentage (36.7% then followed by gastroenteritis at 25.6% and others at 0.6%.

Table 1: shows daily percentages of cold cases illnesses in a week period of time

Saturday	60.2%
Sunday	63.9%
Monday	64.9%
Tuesday	59.8%
Wednesday	62.9%
Thursday	66.1%
Friday	65.5%
Average percentage of cold cases per day	63.3%

Discussion:

This is a prospective observational study in Emergency department by observing and recording all emergency cases visits in one week for 24 hours period on day to day basis mainly to identify the cold cases as a result of overcrowding. The study results showed that the average percentage of cold cases were 63.3 % which is lesser than the study conducted in the Khartoum teaching hospital. [5]The studies conducted in Toronto in Canadafound that 54% [6] and 57 %[7]of cold cases were reported due to overcrowding which is lesser than our study. There are many important factors affecting patient's health in emergency department. One of them is the psychological issue heavy visitors of the emergency department often have social or psychological problems in addition to their physical ailments. These psychological problems have bad outcome on healthcare professionals too, as it blocks access to emergency care, induce stress in providers and patients alike, and can lead to errors and impaired quality of care. [8]

The IOM's recommendations to prioritize crowding include enterprise-wide operations management, greater use of information technology, enhanced reimbursement from uncompensated care regionalization of pre hospital care and critical specialty on-call services and enhanced research in emergency care. Emergency department effectiveness is a main problem in Emergency room as lack of experience or training for healthcare professional, the triage receptionists are not medically trained but rely on established criteria and experience only. Although the system functions fairly well, we are presently considering the advantages of having a nurse practitioner in the area of triage. [9] Emergency department effectiveness of overcrowding are not only determined by external pressure but also by internal factors such as cooperation among Emergency room staff. Although crowding is related to ED volume, it can be busy without being crowded when it is managed wrongly. Causes of overcrowding sometimes by delays in service provided by radiology, laboratory and ancillary services.

Reducing access block should be one of the highest priorities in allocating resources to reduce overcrowding. This would result in reduced in ambulance diversion and improved ER waiting time and improving hospital inpatient flow which directly reduce access block. [10. 11, 12]

Conclusion:

Many strategies have literature announced but the success of strategies to address operational inefficiencies depends on commitment of hospital leadership and staff. Continuous involvement to achieve objectives of this paper, depends on the administrator with the involvement of the ER director, quality management director and nursing director to discuss the action plan and modify or develop it to meet the ability of ED to provide timely care to patients with emergency medical conditions and minimize crowding by cold cases illness as it considered a system issue. If solutions may fall outside the ED's control such as reduced resources, including manpower or capacity that affects the efficiency of patient flow can be raised to hospital director then to the Ministry of Health. As a complexity involved enlarging of crowded ER the strategy of improvement should focus in each element that causes the overcrowding so the developing more efficient triage and registration process to reduce patient waiting times, establishing protocols and monitoring systems to measure and assess hospital operation capacity in an effort to alert when the hospital is reaching maximum capacity or the need to go on diversion; emergency healthcare providers must continue to deliver safe, quality patient care regardless of departmental crowding. The ED must work with and receive support from all components of healthcare system to improve the efficient disposition of emergency patients.

Acknowledgment:

I acknowledge the support of the ER staff especially the nurses who participated and helped in the statistical process, the quality management staff that helped in collecting and analyzing data and especially to the hospital administration for giving the opportunity to conduct this research.

References:

1. Gordon JA, Billings J, Asplin BR, Rhodes KV: Safety net research in emergency medicine: proceedings of the Academic Emergency Medicine Consensus Conference on 'The Unraveling Safety Net'. Acad Emerg Med 2001, 8:1024-1029.

2. American College of Emergency Physician, Crowding resources Task Force (2002), responding to Emergency Department Crowding: A guide for chapters, Dallas Texas

3. Triage: A working solution to overcrowding in the Emergency department, Chandrakant P. Shah, MD and Luby M. Carr B.A. Toronto, Canada

4. Analysis of patient flow in the emergency Department and the Effect of An Extensive Reorganization, Emergency Department, Hospital Clinic Barcelona, Villaroel 170, 08036 b Barcelona, Catalonia, Spain Emergency Med. Journal 2003 March.

5. Sara AM Abd Elaal MD et al, The Waiting time at Emergency Department at Khartoum State – 2005 , Sudanese Journal of Public Health: April 2006 , Vo.1 (2).

6. The Department of Health, The NHS Plan. London: Department of Health, 2000.

7. Bond K, Ospina M, Blitz S, et al. Frequency, determinants, and impact of overcrowding in emergency departments in Canada: a national survey of emergency department directors. Health Q 2007;10:32-40, doi:10.12927/hcq.2007.19312.

8. Andren KG. A study of the relationship between social network, perceived ill health and utilization of emergency care. Scand J Soc Med 1988:16:87-93

9. Institution of Medicine. Hospital-Based Emergency Care: at the Breaking Point. Washington, DC: National Academies Press, 2006.

10. Access Block Causes Emergency Department overcrowding and ambulance diversion with Perth, Western Australia, Fatovich DM, Nagree Y, Spivulis.

11. Academic Medicine: volume 76(7) July 2001p 672-674 Emergency Department Overcrowding: A National Crisis McCabe, John B. MD.

12. Frequent users of the emergency department: A program to improve care and reduce visits Dorothy Pope, Christopher M.B. Fernandes, France Bouthillette, Jeremy Etherington. CMAJ 2000; 162(7):1017-20.