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Audit/Re-Audit

Recording The Door-To-Consultation Time for Patients Presenting to the Emergency Unit- A Clinical Audit and Re-Audit

Maheen Shahid, Muhammad Osama Farooq, Javeria Kamran

Department of Research & Development, Armed Forces Institute of Cardiology/National Institute of Heart Diseases/ National University of Medical Sciences (NUMS) Rawalpindi, Pakistan

ABSTRACT

This Audit was focussed to assess the Door-To-Consultation time of patients who presented in emergency department, in accordance with NICE guidelines. Each audit cycle consisted of two months during which all patients presenting to the Emergency Department were assessed. Total 200 patients were assessed in each cycle. A re-audit was conducted 1 year later. Study was conducted at Armed Forces Institute of Cardiology/National Institute of Heart Diseases, Rawalpindi Pakistan, from Dec 2022 to Jan 2023 and Feb to Mar 2024. In the first cycle, 129(64.5%) patients were attended within 15 minutes of arrival in the emergency department while in the second cycle, 158(79.0%) patients had a door to consultation time within 15 minutes. The repeat audit cycle demonstrated a moderate improvement in door-to-consultation times following weekly health education of ED staff on triage processes and target consultation times. Additionally, guideline posters were displayed inside and outside the ED for four weeks to reinforce these objectives.

Keywords: Audit, Door-to-consultation time, Emergency unit.

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INTRODUCTION

Emergency services around the world are facing an increase in patient load and expectations. One of the assessment parameters about whether the demands are being met is the Door-to-Consultation time.[1] The primary objective in any Emergency Unit is to assess the patient's health and then be screened by the unit and signposted to the next appropriate step in their care journey.[1] Door-to-consultation is the initial conversation between the patient and the doctor[2] and patients' assessment according to either their chief complaint or acuity.[3]

Door-to-consultation time significantly affects the overall duration of stay in the Emergency Department (ED), which in turn influences patient satisfaction. A study by Andrew et al. demonstrated that extended waiting times in the ED were strongly linked to a poorer patient experience, especially among those with longer stays or those who were discharged after significant delays. Of the two groups, door-to-doctor time had the greater impact on patient experience.[4]

The NHS guidelines suggest that patients should be assessed within 15 minutes of arrival at the Emergency Unit, the initial assessment aims to identify life-threatening conditions, prioritize non-life-threatening conditions, and identify safeguarding concerns.[3] Classifying patients according to the severity of their symptoms and their subsequent sequence of management is known as Triage. This process aids greatly in ensuring that critical patients are treated promptly. While triage can be performed by triage nurses, at AFIC, it is conducted by consultants. Therefore, the door-to-consultation time is also an indicator of the effectiveness of triage.[5] The Door-to-Consultation time greatly impacts the prognosis of patients, patient satisfaction,[6] and the crowding of the Emergency Unit, subsequently affecting the overall quality of care provided to all patients. This clinical audit gathered data on the time between the arrival of a patient in the ER to the first consultation with a doctor and implement changes to meet the NHS criteria.

Re-audit was aimed to reduce the time taken to triage the patient and assure that any critical patient coming into the emergency department was seen timely by a doctor and managed accordingly. Thereby the study purpose was to assess the Door-To-Consultation time of patients presenting in emergency department, in accordance with NICE guidelines.

METHODOLOGY

The study was performed at the emergency setup of Armed Forces Institute of Cardiology, National Institute of Heart Diseases, Rawalpindi Pakistan, after ethical approval from Institutional Ethical Review

Correspondence: Dr Maheen Shahid, Department of R&D, AFIC/NIHD, Rawalpindi, Pakistan

Board (Ltr#9/2/R&D/2024/330; Dated: 25th Oct, 2024). First audit cycle was performed from December 2022 to January 2023. After first audit cycle, mini flyers were made and distributed throughout the ED and posters were placed on the interior and exterior of ED. Education of staff, including doctors, nurses, and assisting staff was ensured. Second audit cycle was performed from February to March 2024. Each cycle was conducted for a period of two months.

Sample size of n=196 was calculated by considering 15% prevalence of chest pain at presentation in emergency department. WHO sample size calculator was used, with 95% confidence level and 5% Margin of error.[7] However data was collected from 200 patients.

Inclusion Criteria: All patients presenting to the ER with chest pain from February 2024 to March 2024 for a period of two months between 0800 hours to 1500 hours were included.

Exclusion Criteria: All individuals/patients not requiring emergency treatment or being referred to different specialities for diagnostic purpose were excluded.

Door-to-Consultation time was defined as 'the time interval between the arrival of the patient to the ER to the time of consultation with a doctor'. All time values were recorded in minutes by digital wristwatches worn by the investigation team. Consultation for current audit was considered as, 'a two-way dialogue between a patient and a doctor resulting in a streamlined plan of care'. Triage was included in the aforementioned consultation.

Data was collected daily except weekends, from 0800 hours to 1500 hours over a period of two months. Participation was voluntary and patients were informed that all data would be treated confidentially. Data was collected in the form of self-administered questionnaires. Patient demographics such as age, and gender were noted from their ER slips. Travel time to reach at AFIC, arrival time, the patient's first medical contact and door-to-consultation time were also documented.

The factors leading to delay in consultation and formation of treatment plan were observed and recorded separately on the data collection tool and analysed separately to assess their respective contribution to the delay in consultation times.

Patients' categorical data was presented as frequencies and percentages while continuous variable such as age was calculated as mean and standard deviation. Chi-square test was applied to find the frequency difference of NHS severity level in terms of door-to-consultation time while taking p-value ≤0.05 as statistically significant.

RESULTS

First Audit Cycle (December 2022): The first audit cycle was conducted by collecting the data of 200 patients [179(89.1%) males and 21(10.4%) females] after a year of the initial audit. The mean age of the participants was 57.45±14.74 years. 129(64.5%) patients had consultation time within 15 minutes.

Results showed that 12(6.0%) participants had door to doctor consultation time of 18-28 minutes, 30(14.9%) had 17-27 minutes, 44(21.9%) participants had door to consultation time of 6-16 minutes and 85(42.3%) had consultation within 5 minutes. (Figure)

Mini flyers were made and distributed throughout the ED and posters were placed on the interior and exterior of ED. Education of staff, including doctors, nurses, and assisting staff was ensured.

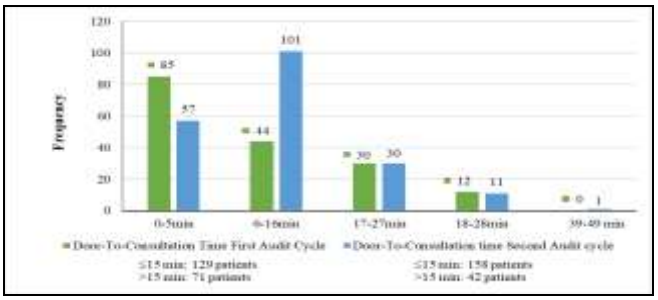

Figure: Comparison of Door-to-Consultation Time between First and Second Audit Cycles (n=200)

Second Audit Cycle (February 2024): The second audit cycle also included data collection from 200 patients; 151(75.5%) males and 49(24.5%) females, with mean age as 57.74±14.47 years. 158(79.0%) patients had a door-to-consultation time within 15 minutes.

We found that only 1(0.5%) patient had consultation time between 39-49 minutes, 11(5.5%) between 28-38 minutes, 30(15.0%) had a consultation time between 17-27 minutes, and 101(50.5%) had a consultation time between 6-16 minutes, 57(28.5%) had a door-to-consultation time within 5 minutes. Comparison of door-to-consultation time between First and Second Audit cycles revealed that majority of the patients were attended within 5 minutes in first

audit cycle 85(42.5%), and within 6-16 minutes in second audit cycle 101(50.5%) (Figure).

In the second audit cycle patients coming in the ED were triaged according to their level of severity. Level 3 showed maximum numbers of patients 74(37.0%). Causes of delay in consultation time were also noted such as: crowding 14.0%, pre-occupied staff 13.5%, registration time 8.0% and others 5.0%. On the other hand, 59.5% of patients were consulted within 15 minutes of arrival in the ER.

The severity of patients in the second audit cycle was noted. The triage scale indicates the severity of the patient and advises on how soon each triage level should be treated and subsequently monitored. We noted how soon the triage scales were assessed by the doctors. Majority of the patients 41(89.1%) out of 46, with severity level 1 and 2 were examined within 15 minutes post-arrival and only 5(10.9%) patients with severity level 2 had >15 minute door-to-consultation time. Most of the patients, 103 (67.8%) out of 140, with severity levels 3 and 4, were consulted within 15 minutes, while 37 (32.2%) experienced delays in consultation. Of the 14-patients with severity level 5, 8(57.1%) were examined within 15 minutes, while 6(42.9%) had waiting time exceeding 15 minutes for consultation. However, the difference in door-to-consultation times across severity levels was not statistically significant (p=0.06), though it is close to the significance threshold.

RECOMMENDATION

To improve the efficiency and effectiveness of patient care in the emergency department, several measures can be implemented. First, setting up a dedicated triage counter will allow patients to be triaged immediately upon arrival, ensuring that critical cases are identified early. Additionally, providing specialized training for triage nurses will enable them to categorize and treat patients based on the severity of their conditions. Streamlining the registration process is essential to not only reduce registration times but also to ensure that critical patients are not delayed due to the prioritization of registration procedures. Increasing the availability of registration counters will further minimize the time between registration and consultation, improving overall patient flow. Lastly, prompt and efficient transfer of patients to inpatient care is crucial for maintaining continuity of care and preventing delays in treatment.

ACTION PLAN

Triage counter should be setup where trained staff, nurses or doctors should be present to triage the patient according to the severity scale. There should be cyclic/adequate training of health care workers to be able to triage patients according to severity scale. The changes will be made by the Head of Department.

CONCLUSION

The repeat audit cycle demonstrated a moderate improvement in door-to-consultation times (<15 minutes) following weekly health education of ED staff on triage processes and target consultation times.

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Authors' Contribution

Following authors have made substantial contributions to the manuscript:

MS & MOF: Study concept, study design, drafting the audit, approval of the final version to be published.

JK: Study concept, data acquisition, critical review, approval of the final version to be published.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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