

A Study on Patient Delay for Vaccination at Paediatric OPD, In Multispeciality Hospital.

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Abstract - The purpose of this study is to reduce patients' waiting time at the OPD (outpatient department) paediatric vaccination billing counter. The present study was aimed at reducing the waiting time of outpatients in the pediatric department for vaccinations. According to this study, patients typically spent close to an average of 33 minutes in the OPD vaccination paediatric department from arrival to departure. There are long waiting times at the OPD paediatric department for vaccinations for medical billing, billing payment for vaccination, and movement from billing to the vaccination room. To promote patient happiness and decrease patient resentment, a separate billing counter has been suggested just for the vaccination process.

Key Words: OPD (out patient department), paediatric department, vaccination billing counter .

1.INTRODUCTION

Patients frequently experience lengthy wait times in all outpatient hospitals, clinics, and health care facilities. Thus, it contributes significantly to a variety of issues relating to public health, such as decreased access to health care services, disruption of work schedules, and patient discontent. Long wait times are the consequence of inefficiency and poor resource management.

It may also result in a patient who does not follow medical instructions well. The hospital or department where patients received a diagnosis or treatment but did not stay over night is referred to in this study as the outpatient department (opd). Making patients wait needlessly can be stressful for both the patient and the doctor. Thus, it is crucial to reduce the amount of time that OPD patients wait.

1.1 DEFINITION:

ARRIVAL TIME: Indicate the moment of patient arrives at the assessment facility in order to receive medical attention.

TIME OF DEPARTURE: Indicate the moment of patient departs the assessment facility, whether or not they have received medical attention or have been admitted to a hospital ward.

PATIENT FLOW: Describes how a patient moves through a series of stages from the moment they enter a medical facility until the moment the health professional releases them to depart at the time of their choosing.

SECTION WAITING TIME: The amount of time patients must wait before receiving a treatment at a particular hospital service location.

The term "**SERVICE POINT**" describes the various clinic stations where patients go to obtain a particular service.

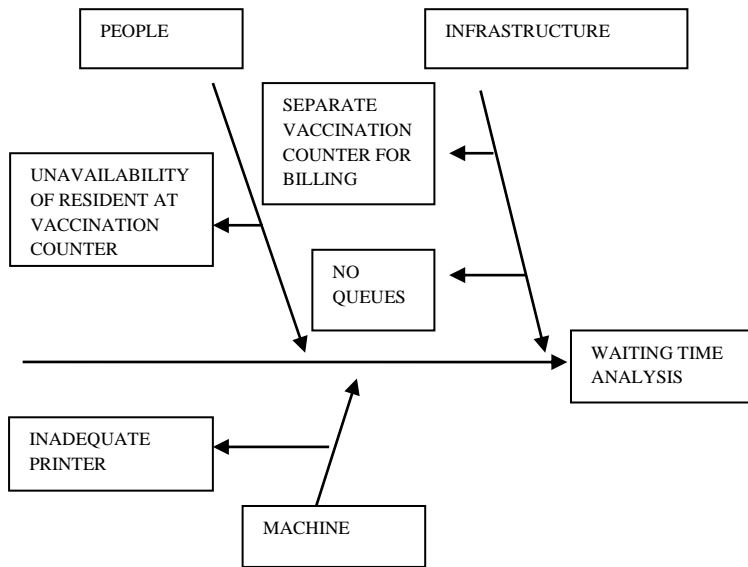
The amount of time patients must wait before receiving a treatment is known as the **WAITING PERIOD**.

The sum of each section's wait periods is the overall **wait time**.

Common factors affecting patient flow in a psychiatric department are:

1. The patients' arrival pattern
2. Time of services given at the OPD vaccination
3. Queue lengths at waiting rooms for OPD vaccinations
4. Queue lengths at the billing counter for OPD vaccination

1.2 ROOT CAUSE ANALYSIS



1.3 OBJECTIVES OF STUDY

1. To study the factors responsible for prolonged waiting time in vaccination opd at paediatrics department in multispeciality hospital
2. To find out the causes of delays in the process at vaccination counter
3. To suggest measures to reduce waiting time at vaccination counter.

2.1 LITERATURE REVIEW

1. According to **Cristina Warren¹ (2023)**, this study shows that In Ireland, 68,000 patients are waiting for their first Ear, Nose & Throat (ENT) outpatient (OPD) appointment. One third of referrals pertain to non-complex ENT conditions. Community-based delivery of non-complex ENT care would facilitate access in a timely manner, locally. Despite the creation of a micro-credentialling course, community practitioners have encountered barriers implementing their newly acquired expertise, including a lack of peer support and subspecialty resourcing.

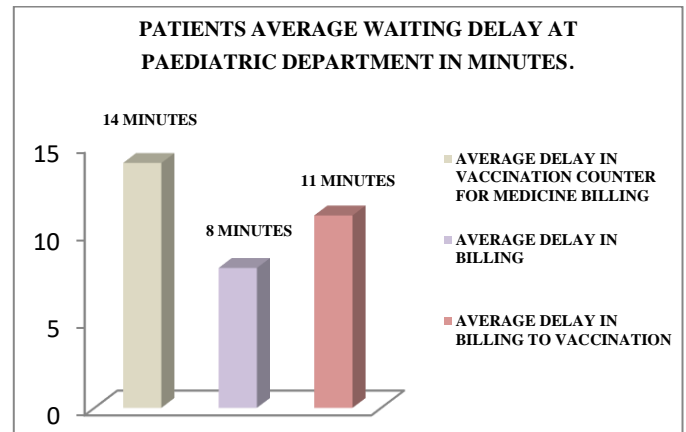
2. According to **Mensur Biya² (2022)**, this study shows that the mean waiting time was higher than the average recommended time by Business Process Reengineering (BPR) and more than five out of every ten clients spent long waiting time at outpatient departments. Waiting time was affected by Educational status, residence, arrival time, and date of the visit.

2.2 METHODOLOGY

This study took place in the pediatric department opd of the selected hospital from January 2023- March 2023. The simple random sampling technique and primary data is used in order to collect data. About 140 data were collected by observational method using a checklist. For this purpose average analysis has been recognized.

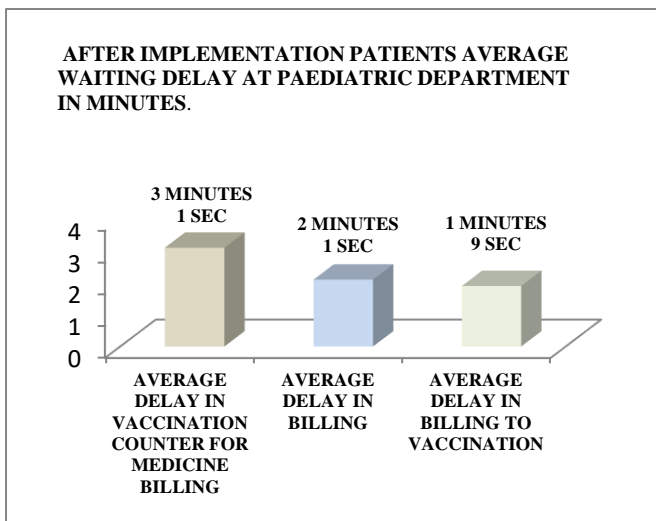
2.3 ANALYSIS

Chart 2.3.1. showing the average time of patients waiting for vaccination.



The average patient waiting period for vaccinations at the paediatric department is shown in the above chart, 2.3.1. The average waiting time for vaccine billing during the observation included 14 minutes for medicine billing, 8 minutes for vaccination billing, and 11 minutes for patients to go from billing to immunisation.

Chart- 2.3.2. showing the average time of patients waiting for vaccination after Implementation at vaccination counter .



The average time for billing vaccine medicine, the average time for billing vaccinations, and the average time for billing vaccinations after the deployment of the vaccination counter are all displayed in the graph in figure 2.3.2. Since the implementation of the vaccination counter, the average time has decreased, falling to 3 minutes and 1 second for medicine billing, 2 minutes and 1 second for billing, and 1 minute and 9 seconds for patient movement from billing to vaccination.

2.4 MAJOR FINDINGS AND RECOMMENDATIONS:

1. In the paediatrics department, it has been found that patients spend an average of 14 minutes getting their medications billed.
2. Then, it has been noted that patients typically wait an average of 8 minutes to be billed at the immunisation counter in the paediatrics department.
3. The patient must wait a lengthy time to go from the billing area to the paediatrics department's immunisation room. It was noticed that there was a delay of 11 minutes.

The recommendations include,

- A separate vaccination billing counter near vaccination room.
- New Personnel for the billing system
- Queue system for vaccination process.
- New desktop for vaccination billing.

3. CONCLUSIONS

In this investigation, 140 different data points were gathered. The purpose of this study is to shorten the queue at the paediatrics department's immunisation counter for both patients and passersby. Longer wait times make the hospital atmosphere uncomfortable for both staff and patients. The primary objective of this study is to upgrade the paediatrics department's vaccine billing system. Thus, by putting new vaccine billing methods into practise, we have improved the billing practises at the paediatrics department. Patients now have a quick billing process and the creation of a separate billing counter for vaccination services is easier.

Overall, this study has shown that there is less wait time at the vaccine counter. Proper teaching and diligent practise are required to reach the maximum level of skill.

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