ORIGINAL RESEARCH PAPER

Management

A STUDY ON WAITING TIME IN DENTAL OUTPATIENT DEPARTMENT AT EX-SERVICEMEN CONTRIBUTORY HEALTH SCHEME DENTAL CENTRE, DEHRADUN

KEY WORDS: waiting time, outpatient department, quality of care

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ABSTRACT

Introduction: The success of any healthcare setup depends upon the number of patients coming to Outpatient Department (OPD) each day, the efficiency of the health team, the availability of services, and the quality of the treatment offered.
Aim: To analyze the Waiting Time in Dental OPD of ECHS , Dehradun and measures to reduce it.
Methodology: The research approach in the study will be cross sectional , descriptive as well as analytical. It will include collection of information through direct observation of dental OPD ,from past records and through collection of information, opinion and attitude directly from the OPD staff through structured questionnaire.
Result: 90% of the appointment patients came on scheduled appointment with only 9 out of 82 sample patients getting delayed by an average of 5 minutes. Average waiting time of walk in patients was 137 minutes which was 27 times more than waiting time of appointment patients. Study depicts that the OPD always starts on time with a delay of average 4.33 minutes. Average 90 minutes of overtime by consultants were observed. walk -in -patients formed a queue 45 minutes before the start time of OPD.
Conclusion: The present study concludes that dissatisfaction with waiting time in the clinic reveals an important problem that needs to be resolved, possibly through a proper channel of appointment system.

INTRODUCTION

Patient turnaround time is defined as the length of time from when the patient entered the outpatient clinic to the time the patient actually leaves the OPD. Patient waiting time is often one of the most frustrating parts about healthcare delivery system. The success of any healthcare setup depends upon the number of patients coming to Outpatient Department (OPD) each day, the efficiency of the health team, the availability of services, and the quality of the treatment offered. The level of healthcare among the Indian population has risen markedly in every aspect, whether in respect of life expectancy, infant mortality rate, healthcare facilities, and more. This can be attributed to the growth of the nation, availability of resources, and technological advancements in field of medicine and dentistry. While dentistry has a rich literature on patient anxiety, fear, and phobias, much less is known about the routine interactions during the dental visit, which by virtue of their pervasiveness could exert similar effects on oral health outcomes. Direct observation of a large number of patient visits offers the opportunity to collect this information, providing a fuller description of patient visits and complementing the quantitative data on frequency and timing of observed behaviors. The link between procedure-based interactions and verbal interactions is not well characterized and such knowledge will lay the foundation for oral health research on patient and provider behavior change, effects of communication on patient self-care and adherence, and interventions to improve communication and patient-centered care.

AIM

To analyze the Waiting Time in Dental OPD of ECHS, Dehradun and recommending measures to reduce it.

METHODOLOGY

The research approach adopted in the study is cross-sectional descriptive as well as analytical method using Microsoft Excel. It includes collection of information though direct observation of the OPD process; through past records from MRD and through collection of information, opinions and attitude directly from the OPD staff through structured questionnaire. Primary data was collected by collection of information though direct observation of the OPD process and through past records from MRD. Secondary data is collected from periodicals, books, journals, research studies, articles, etc.

RESULTS

1. **Patient Number:** It was observed that Average number of Walk-in Patients on any day is almost equal to average number of Appointment Patients.
2. **Average Waiting Time:** Average Waiting Time for Walk in Patients (137 Minutes) is almost 27 times that of average waiting time for Appointment patients (5 Minutes). The reasons for long waiting time for walk-in patients are manifold.
3. **Average Service Time:** There is difference more than 5 minutes in the average service time for appointment patients and average service for walk-in patients.
4. **MRD:** Time taken by the MRD porter to bring the files from MRD from the time of request sent was on average 71 minutes. It was observed that MRD is overburdened and understaffed, as requests for patient's files is sent from all the departments of hospital.
5. **Billing:** Observations revealed that billing and cash/deductible payment consumes more than 5 to 7 Minutes.
6. **Suggestion Box:** Administrative staff is quite concerned towards the patients' expectation. They serve the suggestion box for patients and make sure to respond to the suggestion satisfactorily.
7. **Techniques Used:** Appointment Scheduling is followed for reducing waiting time in OPD.
8. **Outpatient Department Start Time:** Study depicts that OPD almost starts on time with a delay of average 4.33 Minutes.
9. **Over Time:** Average 90 Minutes of over time by the consultants was observed.
10. **Appointments:** 90% of the Appointment Patients came on scheduled appointment with only 9 out of 82 sample patients getting delayed by an average of 5 Minutes.
11. **Preference Patients:** Preference for consultation is always given to the appointment patients.
12. **IT System:** HMIS for OPD is available but integration with other departments is not efficient. And effective.
13. **Language Barrier:** Since majority population is Nepali and Garhwali speaking population and receptionist and other staff is non-nepali and non garhwali speaking population, language barrier was major reason for wastage of time. Also

shortage of translators was observed.

14. **Patient Flow:** Walk-in patients formed a queue 45 minutes before the start time of OPD. Patient flow was maximum from 7:45 AM till 9:00 AM. In the later part of the day Appointment patients came as per the schedule.

15. **Same Reception for 3 different Outpatient Departments:** Reception desk and receptionist for Dental, ENT AND Ophthalmology is the same. At times commotion was observed. Reception attendants were overworked in the first hour of the OPD.

Table 1: AVERAGE WAITING TIME (DAY WISE) FOR APPOINTMENT PATIENTS

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
Doctors	2	2	2	2	2	2
Number of Patients	12	14	14	14	14	14
Average Wait Time	6.25 Minutes	4.79 Minutes	3.57 Minutes	4.21 Minutes	4.64 Minutes	5.93 Minutes

Table 2: AVERAGE SERVICE TIME FOR APPOINTMENT PATIENTS (DAY WISE)

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
Doctors	2	2	2	2	2	2
Number of Patients	10	15	20	16	16	14
Average Service Time	20.58 Minutes	17 Minutes	19.07 Minutes	17.79 Minutes	18.71 Minutes	17.64 Minutes

Table 3: AVERAGE WAITING TIME (DAY WISE) FOR WALK-IN PATIENTS

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
Doctors	2	2	2	2	2	2
Number of Patients	10	15	20	16	16	14
Average Wait Time	141.5 Minutes	123.13 Minutes	125.15 Minutes	147.1 Minutes	141.75 Minutes	143.43 Minutes

Table 1: DISTRIBUTION OF OPINION OF THE STAFF REGARDING THE CO-ORDINATION AMONG VARIOUS DEPARTMENTS OF OUTPATIENT DEPARTMENT

OPINIONS	NUMBER OF RESPONDENTS
GOOD	6
SATISFACTORY	3
AVERAGE	1
NEEDS IMPROVEMENT	3

RECOMMENDATIONS

SIX SIGMA IN HEALTHCARE

Six Sigma simply means a measure of quality that strives for near perfection. Six Sigma is a disciplined, data-driven approach and methodology for eliminating defects (driving toward six standard deviations between the mean and the nearest specification limit) in any process.

Six Sigma has been used to address many of the most common challenges facing healthcare, including patient safety, technology optimization, market growth, resource utilization, length of stay and throughput. In some cases, it has been used to focus on a specific department or process, and in other cases it has been implemented on an enterprise-wide basis to achieve a cultural transformation.

QUEUING MODELS

The queuing model is used to construct a numerical example and to illustrate a number of practical applications. First it is demonstrated how detrimental effects of service interrupt on patient flow times. Next, the beneficial effect of pooling hospital resources is illustrated. Finally, develop an optimization model that is able to determine the optimal number of patients treated during a single service session.

SIMULATION MODELS

Simulation improves the understanding of how a facility operates, models real-world variability, lessens testing costs, and minimizes the risk of errors in implementing plans or changes.

Simulation modeling is used in the healthcare industry to analyze:

- Patient flow
- Length of stay
- Resource staffing
- Capital equipment investment
- Planning, building or renovating a particular department
- Process improvement and scheduling

CONCLUSION

From the present study, it is concluded that the OPD services form an important component of Hospital services and feed back of patients are vital in quality improvement maximum patients are satisfied with the waiting time in OPD but are dissatisfied with the functions of the pharmacy. The overall image of the hospital is enough to build a good image and to attract new patients.

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