

To Study the Level of Congestion in OPD clinic and How to Decongest it Sanjay Khare^{1*}, Vinod Dangi², Sarvesh Sharma³

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Abstract

Background. Aim of the study was to reduce congestion in opd clinic, which is the direct indicator of efficiency of the hospital.

1. To study overall waiting time in the opd clinic.
2. To suggest action to improve the waiting time

Methods: Prospective, Descriptive study, 40 patients in each group. **Group “R”** = Patients registered for opd clinic, who’s all vitals and clinical assessment was done after arrival to opd clinic as routine practice. **Group “Q”** = Patients were provided Self-answering questionnaire in waiting area and whose vital parameters were taken beforehand outside clinic by a trained staff. **Data** was recorded for both the groups. **Results:** We found in our study that average waiting time that is total time from registration to completion of prescription in OPD clinic was statistically significantly less in QT-1 (Group “Q”) in comparison to RT-1 (Group “R”). We found in our study that average Doctor – Patient time that is time of interaction with Doctor during examination and discussion in OPD clinic was also statistically significantly less in QT-2 (Group “Q”) in comparison to RT-2 (Group “R”). **Conclusion:** Present study was planned to reduce congestion in OPD for checkup and prescription of medicines. Patient satisfaction comes automatically as a byproduct with the achievement of the goal of the study. Time is money in the present scenario and thus best utilization of time with efficient outcome is the prerequisite of any good management.

Keywords: OPD (outpatient department), Clinic

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Introduction

Checkup or evaluation is defined as the process of clinical evaluation that precedes medical care, which are necessary for the realization of the surgery or non-surgical procedure[1]. Unlike other medical specialty PAC is elaborated and time consuming through systemic clinical examination of patient with aim to optimize patient condition depending upon the type and urgency of surgery to administer safe anesthesia. Urgency of surgical need always compromise with optimization of patients co-morbidities and thus increases the risk during anesthesia and surgery[2-5].

Patients coming to OPD (outpatient department) are usually for consultations and thus need detailed clinical examination with special attention to comorbidities, if any. It is usually seen that there is increased waiting time or queuing congestion in clinics. OPD congestion is usually correlated with patient dis-satisfaction. There are many studies and management techniques have been used to improve patient satisfaction[6,7].

This paradoxical situation where OPD congestion needs to be reduced without compromising the elaborate clinical assessment has rarely been taken care of in previous studies. This study has been formulated primarily keeping in view the optimal management of waiting time with maximum efficient output. The relevant significant information can be gathered by doctors in clinic quickly through filling of self-answered pre-operative questionnaires by the patient whose vital parameters have been already checked before arrival to clinic[8-10].

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Materials and Methods

The study was conducted at Shrimant Madav Rao Sciendia District Hospital, Vidisha, (M.P.) Atal Bihari Medical College, Vidisha (M. P.) Study population was taken from the patients registered in the PAC clinic for elective surgical procedures.

Study Design: Prospective, Descriptive study.

Sample size: 40 patients in each group.

Randomization: Was done by alternate registration in to two groups that is group “R” and group “Q”.

Group “R” = Patients registered for opd clinic, who’s all vitals and clinical assessment were done after arrival to clinic as routine practice.

Group “Q” = Patients who were provided Self-answering Pre-operative questionnaire in waiting area and whose vital parameters such as BP (blood pressure), Pulse rate, Respiratory rate, Temperature, Height, Weight, and SpO₂ (oxygen saturation at room air) were taken before arrival to clinic by a trained staff.

Data : recorded for both the groups-

1. **RT-1** = Average Patient waiting Time in clinic, that is total time from registration to completion of prescription.
2. **QT-1** = Average Patient waiting Time in clinic, that is total time from registration to completion of prescription.
3. **RT-2** = Average Doctor –Patient Time, that is total time of doctor-patient interaction.
4. **QT-2** = Average Doctor –Patient Time, that is total time of doctor-patient interaction.

Inclusion criteria

1. Willing patients.
2. Age 18 to 65 years.
3. Clinically stable patient with one or two controlled systemic comorbidities.
4. Understands English or Hindi scripts.

Exclusion criteria

1. Unwilling patient.

2. Language barrier.
3. Cognitive instability.
4. Extremes of age group (Less than 18 years and more than 65 years).
5. Patients with multiple comorbidities or patients requiring other specialty intervention first.

Observations

Average End Point Observation

Group	Average Waiting Time of Completion of Prescription (In Minutes)	P Value	Significance
RT-1 (Group-R)	73.925	less than 0.0001	extremely statistically significant
QT-1 (Group-Q)	51.825	less than 0.0001	extremely statistically significant

We found in our study that average waiting time that is total time from registration to completion of Prescription in OPD clinic was statistically significantly less in QT-1 (Group "Q") in comparison to RT-1 (Group "R"). The two-tailed P value is less than 0.0001. By conventional criteria, this difference is considered to be extremely statistically significant.

Confidence interval

The mean of Group One minus Group Two equals 22.10000
95% confidence interval of this difference: From 22.10000 to 22.10000

Group	Average Doctor –Patient Time in PAC (In Minutes)	P Value	Significance
RT-2 (Group-R)	22.525	less than 0.0001	extremely statistically significant
QT-2 (Group-Q)	15.6	less than 0.0001	extremely statistically significant

We found in our study that average Doctor – Patient time that is time of interaction with Doctor during discussion in OPD clinic was also statistically significantly less in QT-2 (Group "Q") in comparison to RT-2 (Group "R"). The two-tailed P value is less than 0.0001. By conventional criteria, this difference is considered to be extremely statistically significant.

Confidence interval

The mean of Group One minus Group Two equals 6.92500
95% confidence interval of this difference: From 6.92500 to 6.92500

Clinical parameters distribution results

1. Average mean blood pressure in both the groups that is Group "R" and Group "Q" were found statistically comparable in our study project.
2. Average respiratory rate in study population of both of the group that is Group "R" and "Q" were found comparable statistically in our project.
3. We found average body temperature was statistically comparable in both the groups that is in Group-R and Group-Q of our study population.
4. Average room air oxygen saturation in study population of both of the group that is Group "R" and "Q" were found comparable statistically in our project.

End Point Results

We found in our study that average waiting time that is total time from registration to completion of Prescription in OPD clinic was statistically significantly less in QT-1 (Group "Q") in comparison to RT-1 (Group "R"). We found in our study that average Doctor – Patient time that is time of interaction with Doctor during PAC in OPD clinic was also statistically significantly less in QT-2 (Group "Q") in comparison to RT-2 (Group "R"). The two-tailed P value is less than 0.0001. By conventional criteria, this difference is considered to be extremely statistically significant [11-13].

Statistical analysis

Data collected from both the groups will be cleared, sorted and entered in to Microsoft EXCEL. After data entry, various statistical analyses will be done, such as Average waiting time, Average Doctor-Patient time, mean median patient waiting time etc. This will provide statistical results for the study. SPSS (version 17.0, Chicago,

IL, USA) was used for statistical analysis and continuous variables were noted as mean \pm standard deviation, VAS as mean \pm standard error and analyzed using ANOVA. Waiting times with these values were calculated using "paired T tests". Categorical variables were noted in number of patients (%) and analyzed using chi-squared and Fisher's exact test. A P value of < 0.05 was considered statistically significant and P value of < 0.01 was highly significant were taken.

Discussion

Patient waiting time for healthcare services is identified by the World Health Organization (WHO) as one of the key measurements of a responsive health system. Patient waiting time is the amount of time for patients seeking care at healthcare units before being attended for consultation and treatment [6,7].

The Patient's Charter of the United Kingdom (UK) Government sets a series of standards which state that all patients must be seen within 30 min of their appointment time [14]. In our project although we have able to reduce congestion time statistically significantly to 51.825 minutes from average 73.925 minutes but still we are far from the Patient's Charter of the United Kingdom (UK) Government.

Huang [15] found that outpatients were reasonably satisfied if they waited no more than 37 minutes when arriving on time. Our results are not in line with this threshold finding by Huang [15]. Though with the measures we have applied were able to reduce waiting time has statistically significantly from routine average waiting time of 73.925 minutes to 51.825 minutes. Thus our results have satisfactory to achieve the aim to reduce congestion in PAC clinic OPD. Of Course there is further scope to improvement in waiting time reduction in future with more interventions in the studied hospital as it is not a one-time campaign but continuous efforts.

However, as literatures also proved that time spent with the physician is a stronger predictor of patient satisfaction than is the time spent in the waiting room [20]. In one study Ranjeeta et al, who observed the consultation time to be $(6.6 \pm 3.7 \text{ min})$ with 85.2% patients satisfied with such consultation [16]. We found our results are in line with this finding. The consultations in that is Doctor-Patient time was always exceed this threshold of Ranjeeta et al [16], indicating the good satisfaction level among the patients registered in OPD clinic.

We found in our study the average Doctor – Patient time were always higher in both the groups that is Group “R” that is “RT-2” (22.525 minutes) & Group “Q” that is “QT-2” (15.6 minutes) than the (6.6 ± 3.7 min) of Ranjeeta et al [16] study. But as appears from the results in our study higher Doctor-Patient time in that is “RT-2” than “QT-2” is not correlated with greater patient satisfaction as this time has been used in activities such as taking clinical parameters and Patients past clinical history which were not prudent to consume Doctor – Patient time [17-20]. Also this statistically significant reduction of Doctor-Patient time by implementing the measures to reduce this high value time of Doctor and Patient without compromising the quality of Healthcare services and Patient satisfaction. Thus quality of healthcare improvement is achieved by effectiveness of the interventions by providing Self-answering Pre-operative questionnaire in waiting area and whose vital parameters were taken before arrival to PAC clinic by a trained staff to reduce overall waiting time of Patient that is “QT-1 = 51.825 minutes” from average routine waiting time of “RT-1 = 73.925 minutes”.

Thus we found in our study with intervention used to reduce congestion in OPD clinic were effective and useful with indirect improvement of patient satisfaction. We found in our study the obvious reduction in overall “Waiting Time” in study Group “Q” than Group “R”.

Conclusion

Present study is planned to reduce congestion in OPD. Patient satisfaction comes automatically as a byproduct with the achievement of the goal of the study. Time is money in the present scenario and thus best utilization of time with efficient outcome is the prerequisite of any good management.

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