

Reducing Waiting Time of Patients in Outpatient Services of Large Teaching Hospital: A Systematic Quality Approach

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Abstract: Continuous quality improvement is required to achieve the parameters laid down by the healthcare organisation. To achieve the parameters, certain PDCA cycles are to be done using tools like time and motion study, FMEA etc. Patients' waiting time has been defined as "the length of time from when the patient entered the outpatient clinic to the time the patient actually leaves the OPD"

This Research presents different types of issues which lead to increased waiting time in hospitals, and it also presents the results of a project of improving the quality of services provided in an outpatient department of teaching hospital in India. The project was conducted on the basis of the systematic use of Quality tools, such as Process mapping of OPD services, FMEA of OP services, waiting time analysis which aimed to reduce waiting times in outpatient department.

Significant reduction in waiting time was achieved in the outpatient services of OPD department. In addition to the overall reduction in waiting time outpatient process flow was also improved.

As an off shoot of the study registration forms were modified, patient care coordinators were appointed to guide patients, additional staff were appointed to handle the telephones in all the OPD wings and they were also trained basic telephone etiquette, Communication training was given to all the front office executives and they were trained for proper scheduling of appointments.

Further data collection through VOC will help to monitor and control any variance.

Keywords: process mapping, waiting time, Time motion study, OPD, Appointment Scheduling.

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I. Introduction

Whether it's a time used for registration of patient, routine doctor's appointment, emergency room treatment, laboratory/diagnostic test, procedures, receiving the results of various tests, waiting happens to just about everyone seeking medical care. It's often one of the most frustrating parts about healthcare delivery system. The first impression of the hospitals starts at the OPD. This impression often influences the patient's sensitivity to the hospital and therefore it is essential to ensure that OPD services provide an excellent experience for patients.

A time motion study was conducted to know the time taken in different service delivery points in outpatient department and to assess the perception of beneficiaries regarding the total time spent in the OPD. The study was conducted at Apollo Hospitals Jubilee hills Hyderabad and data was collected from the outpatient department wings, A, B, C, and D for a month from January to February 2015. Wing B reception was not able to do new registration because of resource constraints therefore patients had to go to wing A or C to get registration done, this increased the waiting time for the patients for registration. In case of patients in surgical outpatient department waiting time was increased because of mismatched scheduling done. These delays cause reduction in patient satisfaction level. The service can be improved by effective communication, providing enough man power and education patient about the importance of taking an appointment before arriving at the hospital. The number of patients seeking Outpatient Department (OPD) services has increased many folds, but the facilities in the OPD have not increases at the same rate. Huge number of patients in OPDs with limited manpower creates chaos as well as the chance of mismanagement. OPD thus requires systematic study of its services for its efficient management and function. It is therefore iterative that a simple time and motion study of an OPD system and suitable inexpensive interventions can go a long way to improve the efficiency of a hospital. Dearth of literature has been found on time and motion study in OPD settings. Hence the present study was carried put in OPD to know the time taken in different service delivery points and to assess the perception of beneficiaries regarding the total time spent in the OPD.

II. Methodology

It was an observational descriptive study with institution based cross sectional design carried out in Apollo Hospitals (Medical College, Hyderabad) over a period of one month (January to February 2015) All processes are interdependent; meaning that the last process step is outcome or first product. For example getting the results of a diagnostic test may be the last step in the diagnosing process but the first step is the admission process or discharge process .The smaller process usually feeds into another process and often is part of one or larger processes .The patient in the hospital flows through a series of processes in the hospital patient pathway. For more information about flow look at the following given process: Outpatient visiting process, FMEA of OP services, time motion study, and analysis of waiting time.

Period of Study – January 2015 – February 2015.

a. Measurable

1. Total waiting time
2. Process mapping of OPD
3. FMEA of OP services

b. Sample size

Respondents of this study included selected patients, staffs and doctors in the OPD department. Active observational study

1. 100 samples was collected from different OP wings of the outpatient department in February 2015
2. Simple random sampling was followed.

Data collection

The following collection methods was used in this study

1. Data was collected through direct observation
2. OP department staff and front office staff were interviewed to obtain information on the working process in the hospital.

Statistical tools

1. Process Map- Flow Chart that shows description and sequence of the process done.
2. FMEA: Failure mode effect analysis
3. Descriptive analysis
4. SPSS analysis
5. Bar chart

III. Study Evolved

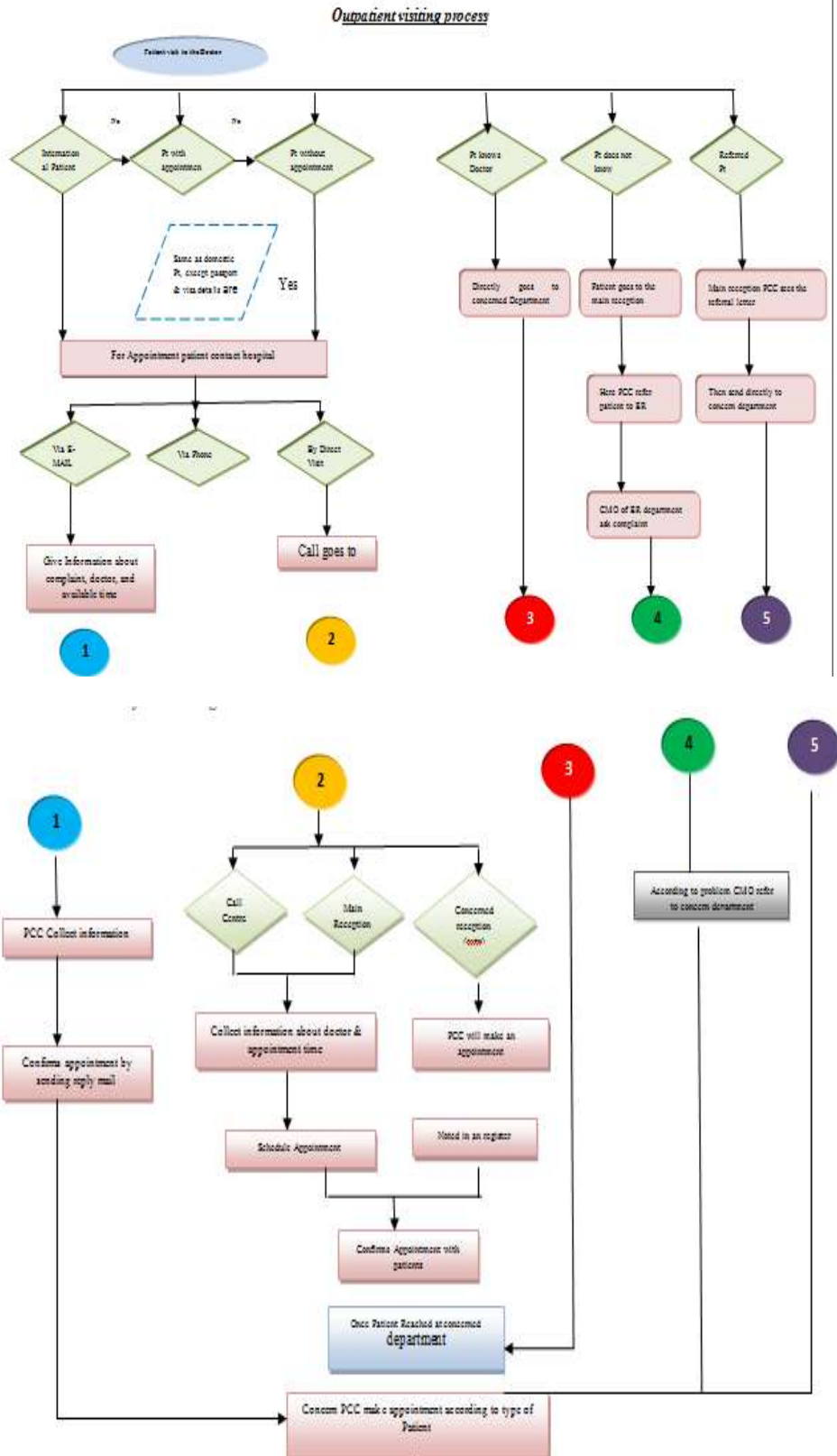
- A living document that shows the current patient care pathway and some great ideas about changes that will make a real difference.
- An improved service which both enhances relationship with patients and the quality of the working life for staff in that service
- A key starting-point to any improvement project
- The opportunity to bring together multi-disciplinary teams from OPD, call centre, various diagnostic department of all roles and professionals and to create a culture of ownership, responsibility and accountability
- An aid to help plan effectively where to test ideas for improvements that are likely to have the most impact on the improvement aims
- Brilliant ideas, especially from staff who don't normally have the opportunity to contribute to service organisation, but who really know how things work

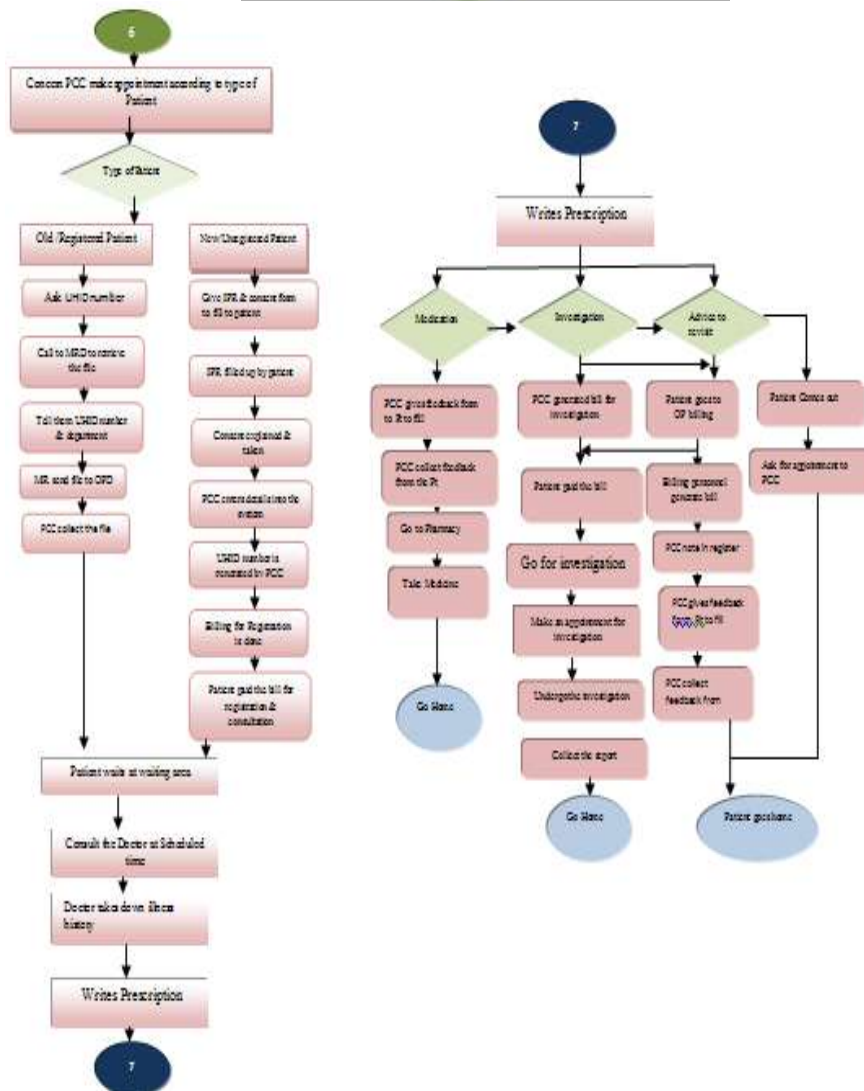
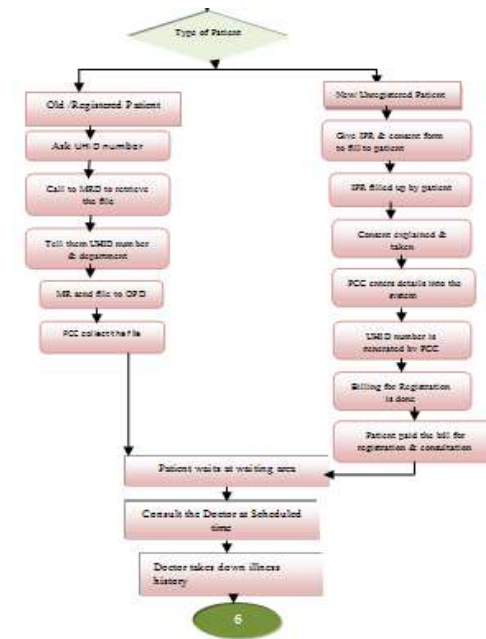
Statement of the problem:

- Lack of coordination while scheduling an appointment for patients with multiple providers. For example, if a patient needs multiple tests, book the test with the longest wait for results first
- Lack of enough manpower
- Lack of communication between various sources while scheduling appointment for example between patient care coordinator and doctors, including surgeon, call centre staff in case to change schedule or any new doctor's appointment
- Patients are not informed about change in appointment
- Patient sometimes forget to bring their UHID number
- When patient come without appointment than waiting time is increased
- Wastage of time in searching correct doctor if patient does not know whom to consult
- Billing is done at different places
- Lack of functional computers where registration can be done.

IV. Tables & Charts

Process flow: 1





FMEA OF OP SERVICES

Process or sub process	Potential failure mode	Potential failure mode	sev	Potential cause for failure	occ	de t	rp n	Recommended action	Person responsible
Pt call for app, Call goes to call centre	Call goes to call centre operator, Call centre operator busy and puts call on hold and might drop the call	The Pt call gets dropped so Pt has to call again where he is inconvenienced and frustrated.	2	The call centre is under staffed and overloaded with work. The call centre operator not trained efficiently.	3	7	42	Training of call centre operators.	Call centre operator
	Call centre operator is unaware of new or transferred Doctors in the hospital	Call centre operator is not able to direct Pts to available Doctors.	4	Failure in communication between HR and call centre	3	7	84	Effective communication between various departments	HR
Appointment made	Appointment given at wrong time	Increased waiting time for doctors and pt ,If doctor not available pt has to make the trip to hospital again. Will be terribly inconvenienced and dissatisfied	5	Improper communication between call centre operator and PCC, & PCC and Dr	3	7	105	Educate importance of communication skills to call centre operators and PCC	Call centre operator and PCC
Pt arrives at reception without appointment & does not know the Dr	Pt directed to wrong department by Main Receptionist	Pt unnecessarily tasked and inconvenienced, if in pain will experience more discomfort, may result in serious damage to Pt if treatment delayed	4	Main reception not performing the duty properly	1	2	8	Training to be given to main receptionist in sending these Pt to ER to be checked up and CMO refers them to concerned Doctor	Main Reception
Pt arrives at reception without appointment and knows which Dr he prefers	Pt has arrived without app, hence the waiting time has been increased and if doctor not available has to leave and return again	Pt inconvenienced, by waiting for doctor or has to return to hospital again due to non availability of doctor. Increased waiting time other patients are inconvenienced due to these walk-in pts	2	Patient arriving to the hospital without appointment	8	1	16	PCC should educate patients to take appointment and come to hospital.	Patient & PCC
Referred Patients	Referred patients sent to wrong department or wrong doctor	Patient unconvinced	3	PCC or receptionist directed pt to wrong doctor	1	8	24	Training for main receptionist and PCC of the various departments and doctors present in hospital	Main Reception & PCC
	Medical record file of the patient not maintained properly	Due to lack of relevant documentation the doctor cannot administer proper diagnosis and treatment	6	MRD or PCC not maintained proper file or file not retrieved by PCC or pt lost some documents	1	7	42	MRD should be trained to properly maintain medical record file and Pt educated to arrive for consultation with Doctor with all relevant documents	MRD Personnel & Patient
	Patient carrying the MR file while in transit to referred doctor	Pt may leave the hospital in possession of the MR file	2	PCC hands the MR file to the pt when pt goes to referred doctor	1	7	14	Train the PCC such as not to hand over MR file to Pt	PCC
New Patient /unregistered Pt	Registration of new PT done in another reception not at the reception he has arrived	Pt will be get irritated to have to go to another reception for registration	4	Registration not done at the concerned reception	3	5	60	Infrastructure such that registration should be done at the reception that the Pt arrives at .It should be made available at all receptions for Pts convenience	Administration
Consent	Consent not explained in detail to the Patient	Pt not aware of what he is signing, & will lead to misunderstanding and grievances	3	PCC not properly explained the consent	7	2	42	Training PCC in language skills and to in detail explain the consent form	PCC
	Consent not taken from Patient	In case of any problem that may arise and consent not taken Doctor will be liable	3	PCC not taken consent	1	2	6	Training PCC in language skills and to in detail explain the consent form and take signature from all Pts as a routine procedure	PCC

Suggestion:

- Improve the communication facility which help to reduce waiting time of patient
- Trained patient care coordinator to inform patient the importance of appointment, which help to minimize the inconvenience to patient
- Increase the manpower so that employee can do their work effectively
- Reduce the number of steps in the process, particularly those that do not add value
- Wing B reception was not able to do new registration. Therefore the patients had to go to wing A or C to get registrations done. This increased the waiting time for the patients for registration
- In case of patients In Surgical Out Patient department waiting time was increased because of mismatched scheduling done by assistants, and hence scheduling for these patients should be improved.

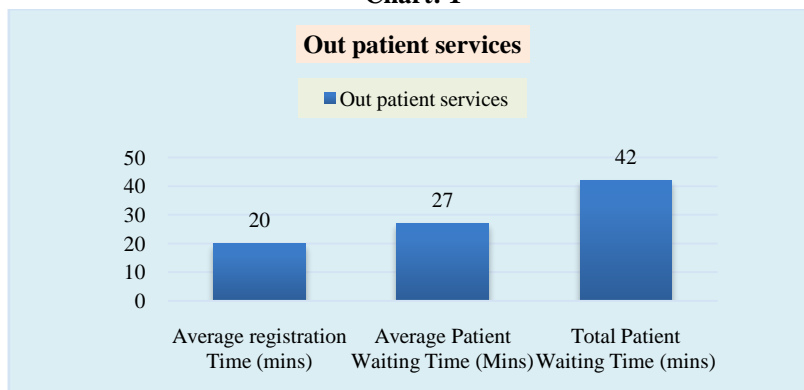
Table and charts:

Data was collected from the outpatient department from wings A, B, C, and D Apollo Hospitals Jubilee Hills Hyderabad. A sample of 100 Patients was taken from the outpatient department..(All time was calculated in minutes)

Table: 1

PARAMETERS	AVERAGE REGISTRAT ION TIME	AVERAGE PATIENT WATING TIME	TOTAL PATIENT WATING TIME
OUT PATIENT SERVICES	20	27	42

Chart: 1



V. Conclusion

In outpatient services there are certain factors which caused delays in providing the services on time .These delays cause reduction in patient satisfaction. Significant reduction in waiting time was achieved in the outpatient service by using quality process approach .In addition the service was improved by effective communication providing enough manpower and educating the patients the importance of taking appointment before arriving at the hospital. Registration forms were modified, additional staff were appointed to handle the telephone in OPD and they were also taught basic telephone etiquette. Further data collection through VOC will help to monitor and control any variance.

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