ABSTRACT

Outpatient service is the most important service provided by all the hospitals as it is the point of contact between a hospital and the community. Many patients gain their first impression of the hospital from the OPD and thus is also called as the “shop window” of the hospital. Apart from the quality of staff, equipment, the main feelings and image carried by patients about hospital mainly depends on human aspect and the concern, sympathy and understanding shown by hospital staff. Ensuring efficient and safe patient flow through the hospital system is a consistent problem in healthcare settings. As demand and patient complexity increases, inefficiencies and defects in health care delivery can cause hospital overcrowdings and service delay. Defects in the OPD process reflects the overall performance of the hospital management. A well-managed, neat and clean hospital with necessary information boards and proper directions generally provide good image. Successful and efficient management of OPD can lighten the burden on the outpatient wards. Recommending solutions for reduction of the defects to improve patient care delivery.

Defect: Is a shortcoming, fault, or imperfection also a lack or want, especially of something essential to perfection or completeness. Defects in OPD process are the issues arising in the process leading to inefficiency in providing complete satisfaction to patients. Defects from equipment, manpower, logistics or process itself hamper the overall process thus affecting patient care delivery.

A defect is anything that results in customer dissatisfaction.

Various functions affecting the services of an OPD are:
- The patients' arrival pattern at the waiting room.
- Waiting Time for services given at various clinics of OPD.
- Queue lengths at waiting rooms of clinics of OPD.
- Patients conveyed to wrong services etc.

Definition: The condition or feeling of being displeased or unsatisfied; discontent is the state of being unsatisfied or disappointed. In hospital OPD dissatisfactions are dissatisfied due to the defects arising from human resource, equipment or from the process itself. The dissatisfaction of patients is reflected in the OPD feedbacks or through their behavior in the OPD.

OPD is an ambulatory care centre which provides to all members of a community the whole scope of services that are needed to keep them in good state of health directly or by referral to more qualified institutions. As there are numerous technological advances in diagnostics, medications, procedures and modifications in healthcare reimbursement plans, the mode of healthcare has been gradually shifting away from the inpatient setting to the outpatient basis. Apart from the quality of staff, equipments the main feelings and image carried by patients about hospital mainly depends on human aspect and the concern, sympathy and understanding shown by hospital staff.

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”. 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 health home. The hospital has highly qualified medical personnel and technicians to ensure healthcare delivery of the highest quality. It offers a wide range of clinical services such as cardiology, obstetrics & gynecology, minimally invasive surgeries, medical and surgical oncology, pediatrics and neonatology, ophthalmology, urology, gastroenterology, renal transplants, orthopedics, joint replacements, plastic surgery and bariatric surgery.

Method:
The tertiary care hospital where the study was conducted in a 200 bedded multi-speciality facility situated close to the IT Parks at Kharadi, Pune. The hospital has highly qualified medical personnel and technicians to ensure healthcare delivery of the highest quality. It offers a wide range of clinical services such as cardiology, obstetrics & gynecology, minimally invasive surgeries, medical and surgical oncology, pediatrics and neonatology, ophthalmology, urology, gastroenterology, renal transplants, orthopedics, joint replacements, plastic surgery and bariatric surgery.

The hospital's infrastructure along with internationally benchmarked standards of medical, nursing and operating protocols is the key components that will make it a preferred hospital in Pune. A proprietary hospital information system and electronic medical record management assures error free and convenient patient records management, thereby greatly minimizing patient waiting time.

Sample Size
Random sampling of 100 patients analysing the defects and then the no. of patients affected by the defects in month of June 2015 in general shift of 9am - 6pm.

Data Collection
1. Data was also collected through direct observation for no. patients affected by listed defects.
2. Management staff and doctors were interviewed to obtain information on the working process in the hospital.

Statistical Tools
1. Cause and Effect Diagram - Diagram that shows the relationship of a cause that gives rise to a certain problem.
2. Bar Diagram and Moving range (MR)

Discussion:
The hospital has two OPD set-ups running simultaneously. OPDs covering all the specializations manned with highly specialized and professional doctors and nurses. The two OPDs divided into OPD 'A' and OPD 'B'.

Defects in OPD Process Leading to Patient Dissatisfaction

Dr (Brig) A. P. Pandit| Ms. Meenal Kulkarni | Mr. Aditya Kamthe

1. MD(HA)DNB(H&HA), Prof, Symbiosis Institute of Health Sciences, Pune-411004.
2. MBA(HA) PhD Scholar, Asst Professor, Symbiosis Institute of Health Sciences, Pune-411004.
3. MBA(HHM), Symbiosis Institute of Health Sciences, Pune-411004.
Both OPD shave nurse station with two-three nurses on duty on daily basis. Nurses are on duty, into shifts of: 7.30 am-4.30 pm, 12 noon-9pm, 10am-7pm. One customer care supervisor is appointed at OPD mainly for queue management and patient query handling.

- **Specializations in OPD A:** Internal Medicine & Diabetics, Cardiology, Ophthalmology, General surgery, Infectious Diseases.

  OPD A contains TMT, ECG & procedure room manned by nurses.

- **Specializations in OPD B:** Obstetrics & Gynaecology, Gastroenterology, ENT & Ortho, Psychiatry, Skin & STD Diseases

The basic SIPOC diagram details us about the resources and process involved in OPD and these resources therefore leads or have affect over the defects.

**Results:**

The analyze phase was undertaken to determine the disparity that exist in the process performance. The understanding of the relationship between cause and effect is necessary to bring about any improvements. The Fish Bone Diagram was prepared.

15% of total observed patients were affected due to rare or no usage of the appointment display screens(boards) placed in the OPDs. Overall waiting time affected 12% patients whereas radiology services made an effect on 10% patients. Monitoring of patients by nurses included patients appointment listing, patient arrival and their departure from the examination room contributed to effect up to 9%. Lack of signages and interrupption due to health checkup patients affected 7% patients. Technical issues affected 4% patients where as hand holding patients from front desk, nurses behaviour, medication not available and less coordination at laboratory affected 2% patients each.

### Table 1: Percentage of Patients Satisfaction affected by various factors

<table>
<thead>
<tr>
<th>Defects in OPD Process</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rare or no usage of the appointment display screens</td>
<td>15%</td>
</tr>
<tr>
<td>Overall waiting time</td>
<td>12%</td>
</tr>
<tr>
<td>Radiology services</td>
<td>10%</td>
</tr>
<tr>
<td>Monitoring of patients</td>
<td>9%</td>
</tr>
<tr>
<td>Lack of signages and interrupption</td>
<td>7%</td>
</tr>
<tr>
<td>Technical issues</td>
<td>4%</td>
</tr>
<tr>
<td>Hand holding patients</td>
<td>2%</td>
</tr>
<tr>
<td>Nurses behaviour</td>
<td>2%</td>
</tr>
<tr>
<td>Medication not available</td>
<td>2%</td>
</tr>
<tr>
<td>Less coordination at laboratory</td>
<td>2%</td>
</tr>
</tbody>
</table>

Moving range chart depicting patients affected by the 16 potential defects. Upper Ceiling Limit(UCL) of 95 patients and movig range(MR) mean of 29 patients.

### Figures:

- **Figure 1:** OPD Patient Flow
- **Figure 2:** OPD Process
- **Figure 3:** Fish Bone analysis of OPD shortcomings
- **Figure 4:** Moving Range Chart : Patient Affected
- **Figure 5:** Null Hypothesis : Patient Affected

Patients' satisfaction affected by defects in OPD process:

Random sampling of 100 patients in month of June 2015 were observed who are affected by these potential defects.
Fig 6 : Defects affecting OPD patient flow and patient satisfaction level

Recommendations:
Appointment display screens should be attached in the centre of the waiting area and should be big enough with bright colour background so as to be readable by the patients. Waiting time can be reduced by giving the appointments precisely and inform patients about the ideal waiting time during appointment booking. Walk in patients should compulsorily be informed from the front desk about the scenario and about the waiting time. Radiology department needs installation of one more USG machine. Nurses should divide themselves handling patients of specific doctor and must strictly monitor their Doctor’s patients and keep informing them about their turn. Billing counter to be present at OPD station. Signage’s to be increased in number and should be bold and bright so as easily understandable by the customers. Doctor’s coming late should be asked to reschedule the appointments, as per their work load in OPD & wards.

Conclusion:
Defects affecting maximum patients were due to lack of usage of appointment display screens, excess waiting time for consultation, radiology services, nursing services and also due to lack of signage’s and communication. Hospital OPD needs to focus more over the waiting time by reducing doctors arriving late and time for procedures. One more USG machine installation may enhance the radiology service efficiency. Proper and clear indications through display screens, signage may increase process effectiveness. Standardization of complete process would reduce the defects in the OPD process & patient dissatisfaction, thereby improving its performance. Customers first! - The motto of the hospital can be achieved through enhanced communication, co-ordination and improvement in process.

REFERENCES: