

# *Managing the Outpatient Department Waiting Time at Rajas Eye Hospital*

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## **Case Summary**

The case depicts the longer waiting hours of the patients in the eye-care hospital that has resulted into a crowding in Outpatient Department (OPD). It is evident that such waiting is a sign of poor services to the patients who are in critical health. These patients desire to spend more time in the treatment rather than in wait. Managing waiting time becomes very essential aspect in service operations such as this hospital.

## **Analysis**

Examining the situation at Rajas Eye Hospital, the problem of longer waiting hours can be attributed to following reasons:

- Capacity issue
- Variability in arrival and process times
- Improper design of operations
- In-efficient scheduling

The above attributes are discussed below.

### **Capacity Issue**

Analyzing the average processing times given at various stages in table-6, the hospital can serve about 108 patients per day. Hence, it seems that hospital is capable to handle average arrival of 100 patients per day as given in table-5. Therefore, capacity seems to be a non-issue for longer waiting hours.

### **Variability in Arrival and Process Times**

It can be seen from table 5 and Figure 5 of the case that there is large variability in number of patients arriving at the hospital everyday as well as in processing times at various stages. Avoiding variability in processing times is inevitable as processing time depends on the nature of the problem in terms of the severity of their

diagnosis. The variability in processing times often results into longer waiting hours for the jobs when capacity utilization is higher. Hence, it is advisable to keep buffer capacity in the system in order to improve the Turn-around Time in the system. It can also be interesting to divide the patients into different groups based on the processing time requirements in order to manage hospital operations. Perhaps, Mr. Bhagleji would have also collected similar data, e.g. electrical maintenance can better handle the complaints by proper allocation of resources if complaints are classified into minor and major complaints.

It is equally important to understand the arrival of patients and the nature of patients. However, efficient appointment mechanism can control variability in the arrival pattern. It is good that the patients without appointments are discouraged over patients coming with prior appointment.

### **In-efficient Scheduling and Design of Operations**

Examining the operating timings in table-6 of the case, it is evident that the director cannot attend the patient before 1 PM. It is also given in the case that it takes only about an hour for a patient to pass through all the stages in the system. Therefore, if appointment is given from 10AM onward the patients need to wait more than two hours to see the director. It is important that the director being a bottleneck in the system, he need not wait for the patients and waste his precious time. But at the same time, while designing the operations, one has to understand how to synchronize the input and other activities in the operating system with the bottleneck. One can refer the concept of theory of constraints, which can be very useful to avoid such non-synchronization in the operating system.

### Recommendations

Given the variability in arrival and processing rates, it is advisable to the director (the bottleneck in this operating system) to start his OPD activity one or two hours early. It is very essential to have flexibility and buffer capacity in the system dealing with variability in arrival and processing rates.

It is equally important to synchronize the input and other processes with the bottleneck to avoid waiting hours between the processes in the operating system. Given the nature of hospital operations, it is possible to synchronize the arrival of patients by proper scheduling of the appointment by the staff.

One can analyze and evaluate various scenarios/alternatives using the simulation tool and observing important parameters like the waiting hours of the patients and average number patients in the hospital at any point of time.

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