

**Title: Guidelines to Calculate Waiting Time of Patients in Out-Patient Department (OPD) / Clinics of Government Hospitals**

**Introduction**

Patients attend various out-patient units within the hospital system, but almost invariably, a high percentage of these patients show a large diversity of time durations spent in between their arrival to the OPD and departure from the hospital. The period of time a patient waits to see a Medical Officer, is one factor which signifies the efficiency of the health services and undoubtedly, patients perceive long waiting times as barriers to actually obtaining services. Patients' waiting time has been defined as "the duration of time spent by a patient from his/her arrival to the Out-Patient's Department/Clinic to the time the patient actually leaves the OPD/Clinic with prescribed drugs".

Since there is no standard scale to calculate waiting time in hospitals, various methods are being adopted in calculating it in OPD/ Clinics in different hospitals. This guideline is prepared, focusing on the steps/events a patient experiences at the OPD/Clinic set up, introducing a similar way of calculating waiting time in state hospitals; this would help to streamline and maintain uniformity of waiting time studies carried out in these institutions.

Waiting Time of a patient is a dynamic measure and is sensitive to many factors. Therefore, it is important to describe patient waiting time as a function of the time during the working hours.

**Objective:**

To calculate the mean waiting time of patients attending the OPD/Clinics

**Study Methodology:**

This is a cross-sectional study (Kind of motion study)

**Study Setting:**

OPD and Clinics of a government health facility

**Sample Selection**

**Study population:** all persons attending the OPD and Clinics within a given period. The selected sample should represent the entire study population. Depending on the seasonality, the number of patients visiting OPD varies. Therefore, if the variability related to seasonality is not taken into account, expression of a mean waiting time should be interpreted cautiously.

**Precision – 10 Minutes / Confidence Level 95%**

Total Number of OPD patients per day	Number need to select
100	49
200	65
300	73
400	78
500	81
600	83
700	85

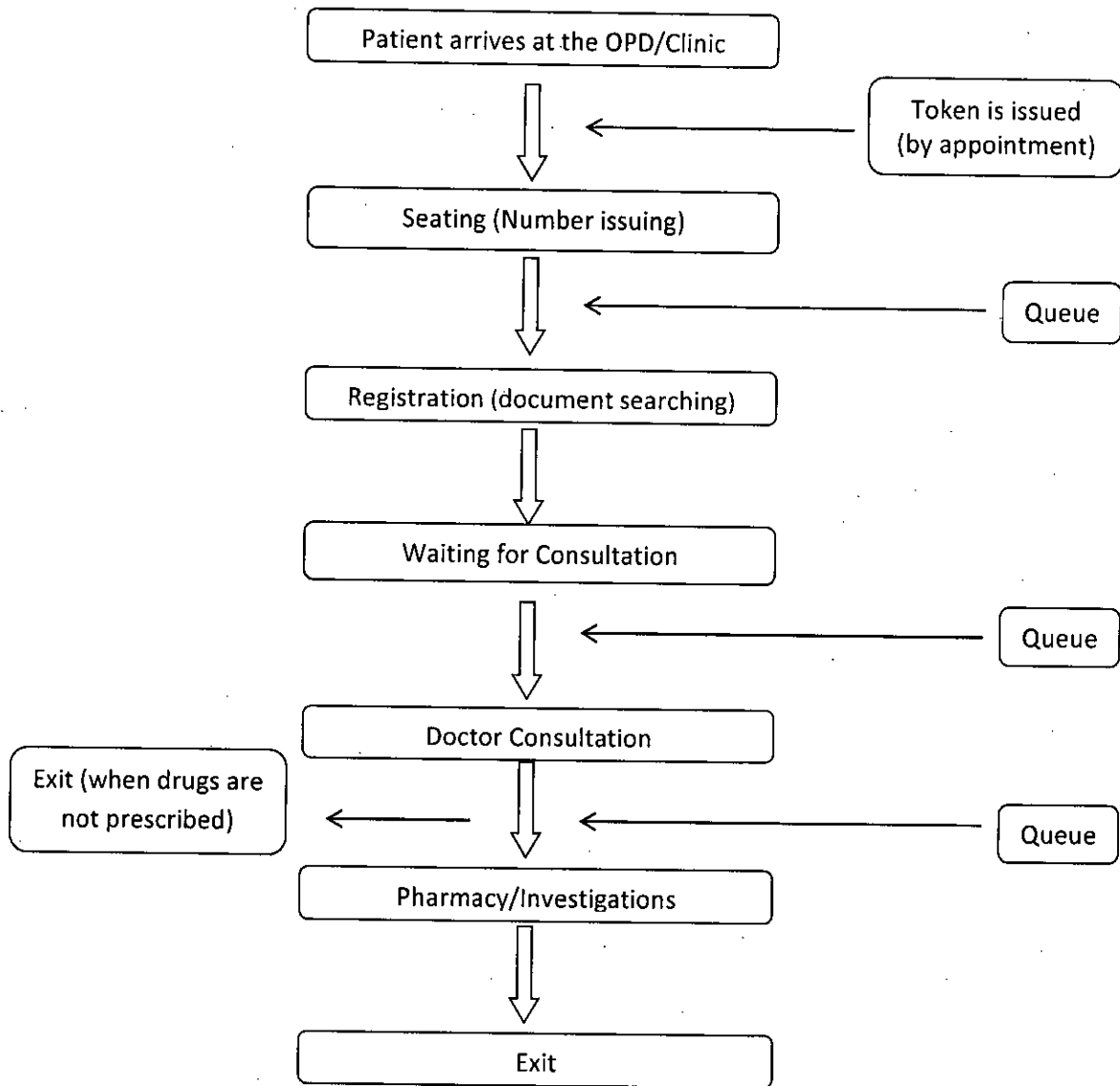
**Steps to calculate Waiting Time in the OPD/Clinic**

1. Identify the nature of the visit of the patient; e.g. first visit, follow up visit or visit for any other purpose
2. Identify main activities/steps of OPD/Clinics related to the nature of the visit
3. List all activities/steps from the arrival to the departure

4. For the study, the sample can be selected at the entrance to the OPD/Clinic and random sampling method can be used. For instance, if the total number of daily attendance of OPD patients approximates to four hundred, and when the plan is to study 100 patients, every fourth patient can be included in the study sample; e.g. No 04 is the first and followed by numbers 8, 12, 16 ... up to 100.
5. Entire chain of activities has to be identified and the time should be calculated from the arrival to the OPD/Clinic to the departure from the pharmacy/unit; other exit points also should be considered.

It is emphasized that waiting time for each nature of visit should be calculated, analysed and presented separately. This is because the procedures/steps to be followed by a patient at the OPD differ from those of a patient in a Clinic; and moreover, those steps differ according to the nature of the visit even within the same unit. For example, in an Ante Natal Clinic, there's a vast difference between the procedures/steps pregnant mothers are supposed to follow at the first visit to the clinic when compared to those of follow up visits. Hence, we cannot compare waiting time of patients of first visits with that of patients of consequent visits at certain units such as Ante-natal Clinics in a similar manner.

Example: Flow of Patients (Activity Steps)



### **Collection of Data**

1. Issue the Data Collection Form at the time of registration after completion of basic information form, marking the time of arrival to the OPD/Clinic
2. A designated person should be present at each point to gather and enter the relevant data into the form
3. All wall clocks and wrist watches of staffs should be synchronized to minimize errors.
4. All relevant health personnel who will be involved in the survey should be pre-informed about the survey
5. A pilot study involving 10 patients from the OPD and a Clinic should be conducted prior to the proper study in order to understand the practical issues and streamline the study
6. Director of the health institution should inform all relevant sectional heads to facilitate the study

### **Analysis of Data and Results**

1. Calculate mean waiting time of patients at the selected section at the OPD or Clinic
2. Calculate waiting times of patients separately at different steps of the pathway from the arrival to the exit
3. Plot the waiting time against the time of the day

### **Conclusions and Follow up**

1. Understand the realistic picture of the total waiting time of a patient and separate waiting times at different steps of the pathway
2. Identify bottle necks and possible causes, using Root Cause Analysis
3. Recommend issues to rectify issues identified

### **Important Aspects of Data**

The best measure is geometric median as most time task data are positively skewed.

### WAITING TIME DATA COLLECTION FORM

Date:

Index Number:

Appointment Number:

Age (Years):

Sex: Male / Female

Purpose of the Visit: OPD Treatment / Admission / Referral / PCU

No:	Activity	Time (hh:mm)	Remarks
01	Time of arrival to the OPD/Clinic		
02	Time at which the token is received		
03	Time of Registration		
04	Time at which the consultation starts		
05	Time at which the patient leaves the Consultant/Medical Officer		
06	Time of arrival for Investigations (When applicable)		
07	Time of departure with investigation reports (When applicable)		
08	Time of arrival at the Pharmacy Queue		
09	Time of departure from the Pharmacy		
10	Time of departure from the OPD/Clinic Exit		
	<b>Total Waiting Time from the Arrival to the Departure</b>		

Fish bone analysis can be done to study the issues as depicted in this diagram below:

