



Identifying Factors Influencing Waiting Time in Out-Patient Pharmacy of a Tertiary Care Hospital

Nupur Gupta; Roll Number- 0313; IIHMR University, Jaipur

About Max Super Speciality Hospital, Mohali

- Max Super Speciality Hospital, Mohali is a 217-bedded tertiary care super speciality hospital located in Phase 6, Mohali, Punjab.
- Adheres to NABH and NABL standards.
- LEED certified Green Hospital.
- The hospital specializes in offering a broad array of clinical and surgical facilities and in-house amenities like Blood Bank, 24*7 Pharmacy etc.

Objectives

- To calculate the average waiting time of the OP pharmacy of a tertiary care hospital, Mohali.
- To calculate the highest and lowest dispensing, wait for billing, and billing times.
- To assess the various factors responsible for increase in waiting time.
- To identify the various factors in a prescription that can lead to an increase in the waiting time.

Methodology

Study Population: The study was conducted among prescriptions of OPD patients and discharge summaries of IPD patients which is supplied from OP pharmacy.

Sample Size: 236 patients for pharmacy waiting time

Sampling Technique: Convenience sampling.

Methodology: The study was carried for over a 20 day period where patients were directly observed. A **time-monitoring card** was maintained for all the 236 selected patients.

S. No.	Name of Patient	Waiting time				Observations about Prescription	Issue(s) with Prescrip-tion
		Medicines Dispensing Time		Billing Wait	Billing		
		Start	Stop	Start	Stop	Start	Stop

Prescription Audit: on parameters relevant to waiting time scanned at the time of observation.

S. No.	Printed prescrip-tion	Prescrip-tion Order Clear & legible(If Manual)	Route of administration (other than oral- IV, IM , SC)	Date written	Whether Do Not use Abbreviation's have been used in prescription	If yes, which abbrevia-tions	Capital Letter
--------	-----------------------	--	--	--------------	--	------------------------------	----------------

Sample Size: 221 prescriptions.

Key Findings

- Waiting Time of 236 patients, following was observed:
- **Average time:** Total time taken by all 236 patients/ Sample Size: 236

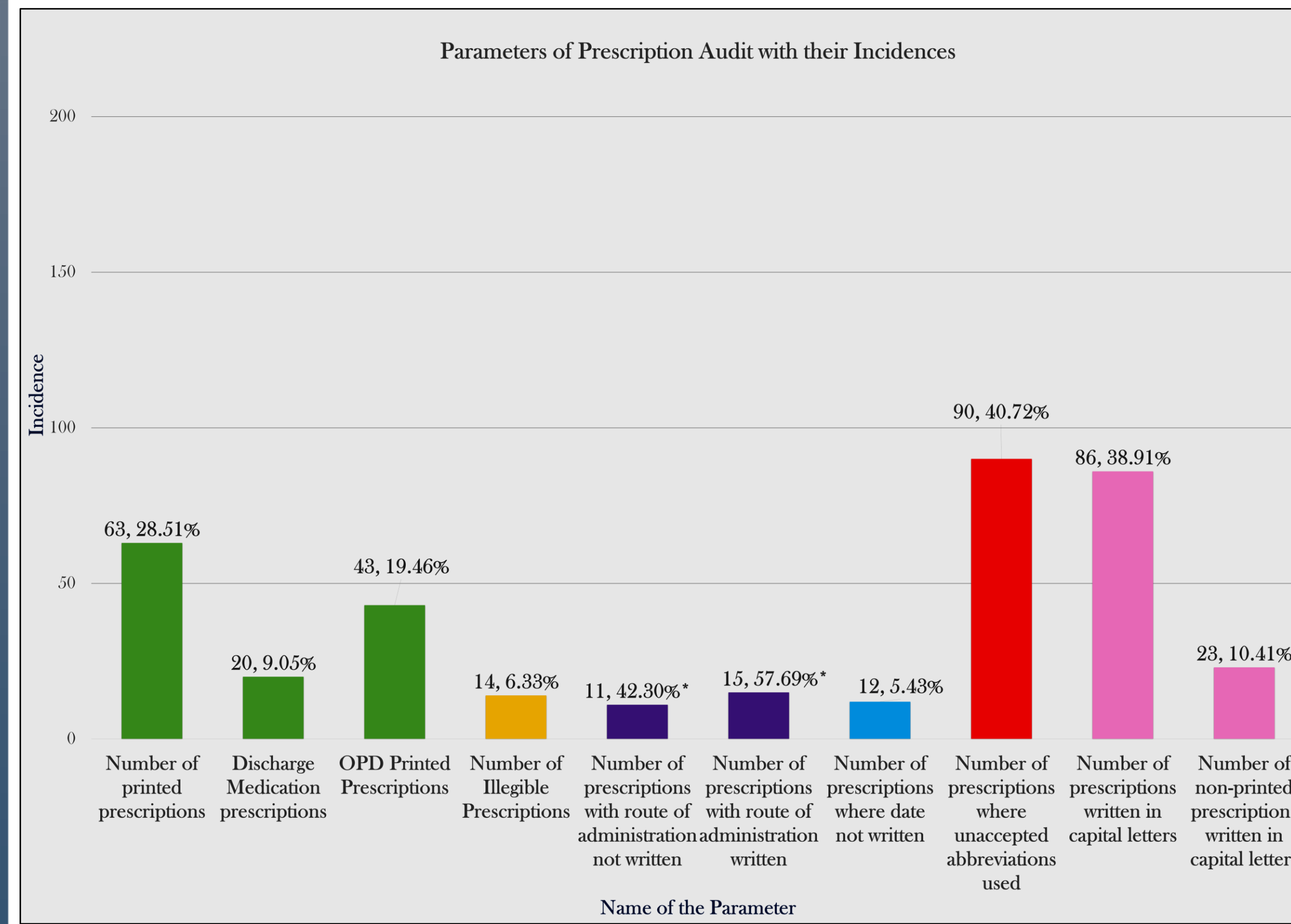
	Dispensing time of Medicines (Minutes)	Waiting time for billing (Minutes)	Time taken in Billing (Minutes)	Total Waiting Time (Minutes)
Average time	02:20	01:33	03:25	07:04
Most time taken	11:00	10:00	19:00	22:00
Least time taken	00:00	00:00	00:00	00:00
Standard Deviation	01:58	02:05	02:45	04:10

- Various events encountered with various prescriptions:

VARIOUS ISSUES WITH PRESCRIPTIONS	NUMBER OF INCIDENCES	PERCENTAGE
NONE	80	33.90
Fewer medicines bought by Customer	60	25.42
Name of Doctor not written on prescription	25	10.59
Out of Stock	25	10.59
Name not written on prescription	18	7.63
Alternate Medicine/Salt given	13	5.51
Brand unavailable	11	4.66
Banned medicine	10	4.24
Medicines not dispensed by pharmacist	9	3.81
Extra Medicine Bought	8	3.39
No Supply from Company, Alternative not given	8	3.39
Customer didn't buy at all	6	2.54
Complete Medicine not available	4	1.69
Illegible Handwriting	4	1.69
All drug strengths unavailable	4	1.69
Ambiguity regarding availability of medicine	3	1.27
Other bills generated in between	3	1.27

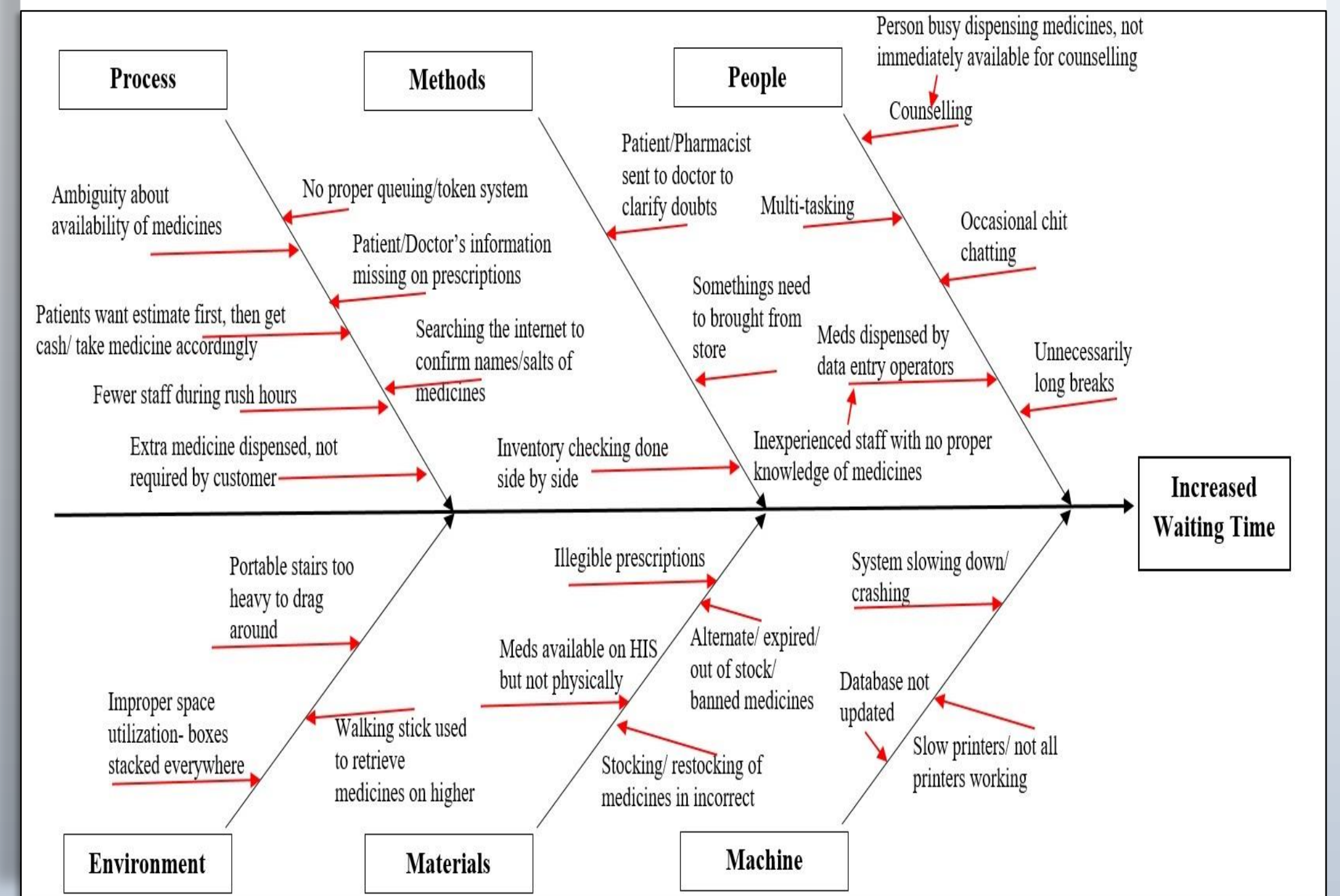
No Supply from Company but alternative given, database not updated, ambiguity between Sound-Alike Drugs, alternate medicine/salt not accepted by customer, number of days on prescription not written, non-cooperative customer, expired medicine as not prescribed much, dispute over return of medicines were few events which were rare but occurred.

- Prescription Audit- Of 221 Prescriptions



* Percentage calculated in these parameters is out of 26, since remaining 195 prescriptions did not require any alternate routes of administration.

- **Fish-Bone diagram showing factors influencing increased waiting time in OP Pharmacy:**



Recommendations

Materials:

- A laminated list of banned medicines can be made available in the pharmacy for reference at all times.
- Prescriptions can be computerized/ printed in a specific format pan hospital which should include name of doctor, patient, dose, frequency etc.
- An extensive list of alternatives of frequently prescribed medicines can be worked out with the help of pharmacists and doctors.
- Editable templates of frequently prescribed set of medicines and vaccines can be created with the help of IT Department to save time during billing.
- Medicines should be stocked in correct slots within 5 hours of procurement.

Machine:

- Extra printer can be provided in the pharmacy as two billing systems share one printer. Servicing of all electronics should be done on regular basis.

Process:

- Only one person per prescription should be allowed to stand at the counters.
- Logs should be maintained for entry and exit of pharmacists/data entry operators.
- Re-Order Level (ROL) of at least frequently prescribed medicines in OP Pharmacy can be calculated and stocked accordingly.
- A dedicated counter for senior citizens can be assigned.
- Token system can be introduced.
- A security person can be assigned to ensure queueing system at pharmacy counters and avoid chaos.

Methods and People:

- Instead of data entry operators, a complete team of pharmacists can be employed for billing purposes too. Training can be provided to existing data entry operators to increase their efficiency in dispensing medicines, if required.
- A pharmacist can be deployed exclusively for counselling.
- Delegating tasks like inventory checking, stocking etc. to pharmacists working night shift can be done assuming OP Pharmacy is less busy at night.

Environment:

- A lighter weight staircase should be provided to access the medicines lying at top shelves, apart from the existing staircase.