STUDY ON DISCHARGE PROCESS USING DMAIC APPROACH AT THE MISSION HOSPITAL, DURGAPUR

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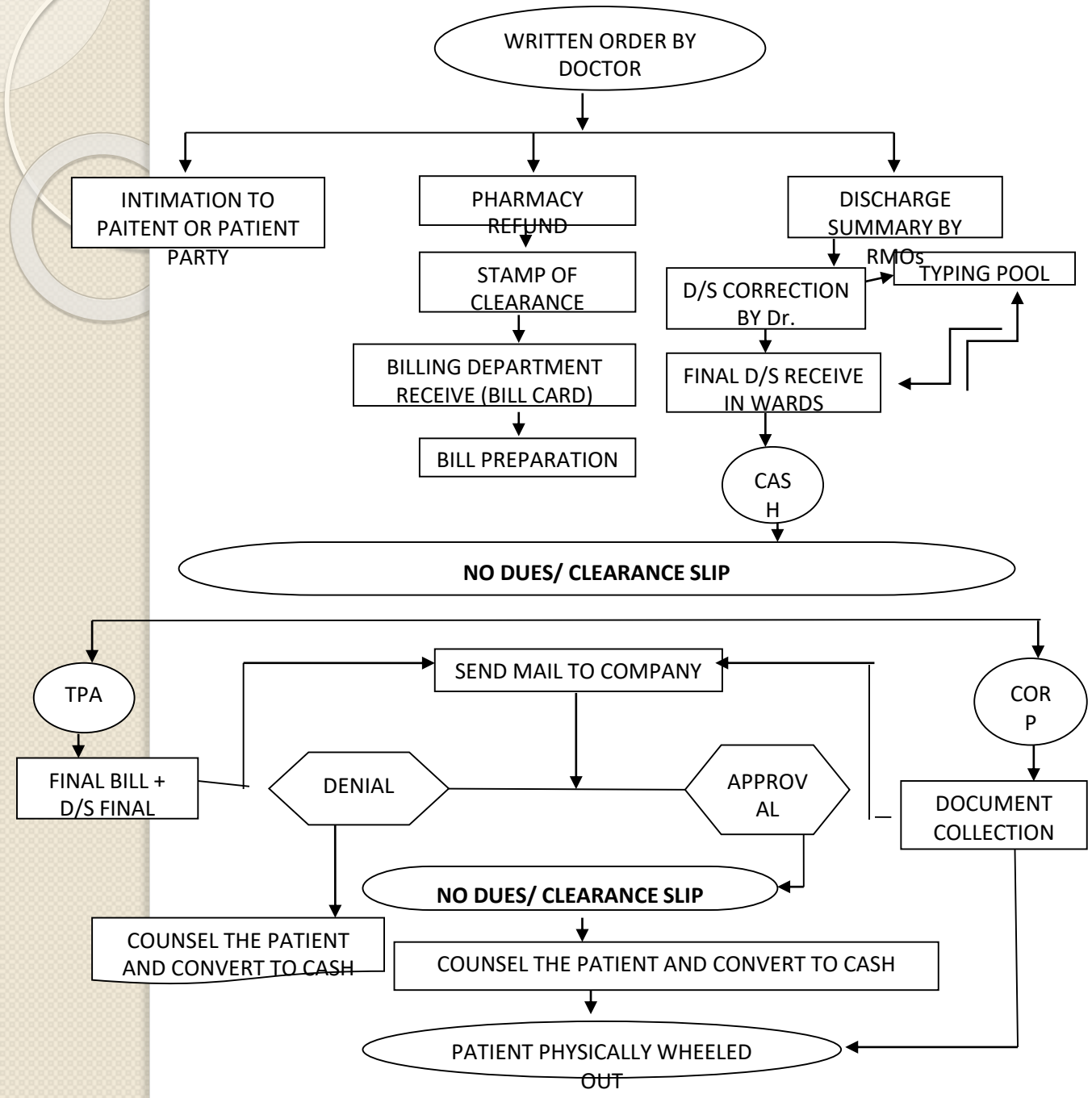
INTRODUCTION- Hospital Discharges

- Leaving a hospital after treatment, a patient go through a process called hospital discharge
- Discharge from the hospital is the point at which the patient leaves the hospital and either returns home or is transferred to another facility such as one for rehabilitation or to a nursing home

Discharge Flow Chart at The Mission Hospital



RESEARCH QUESTION

What are the factors blocking the discharge process to be streamlined?

OBJECTIVES

- To identify the variation in the discharge process
- To identify the factors causing delays to streamline the process

RESEARCH METHODOLOGY

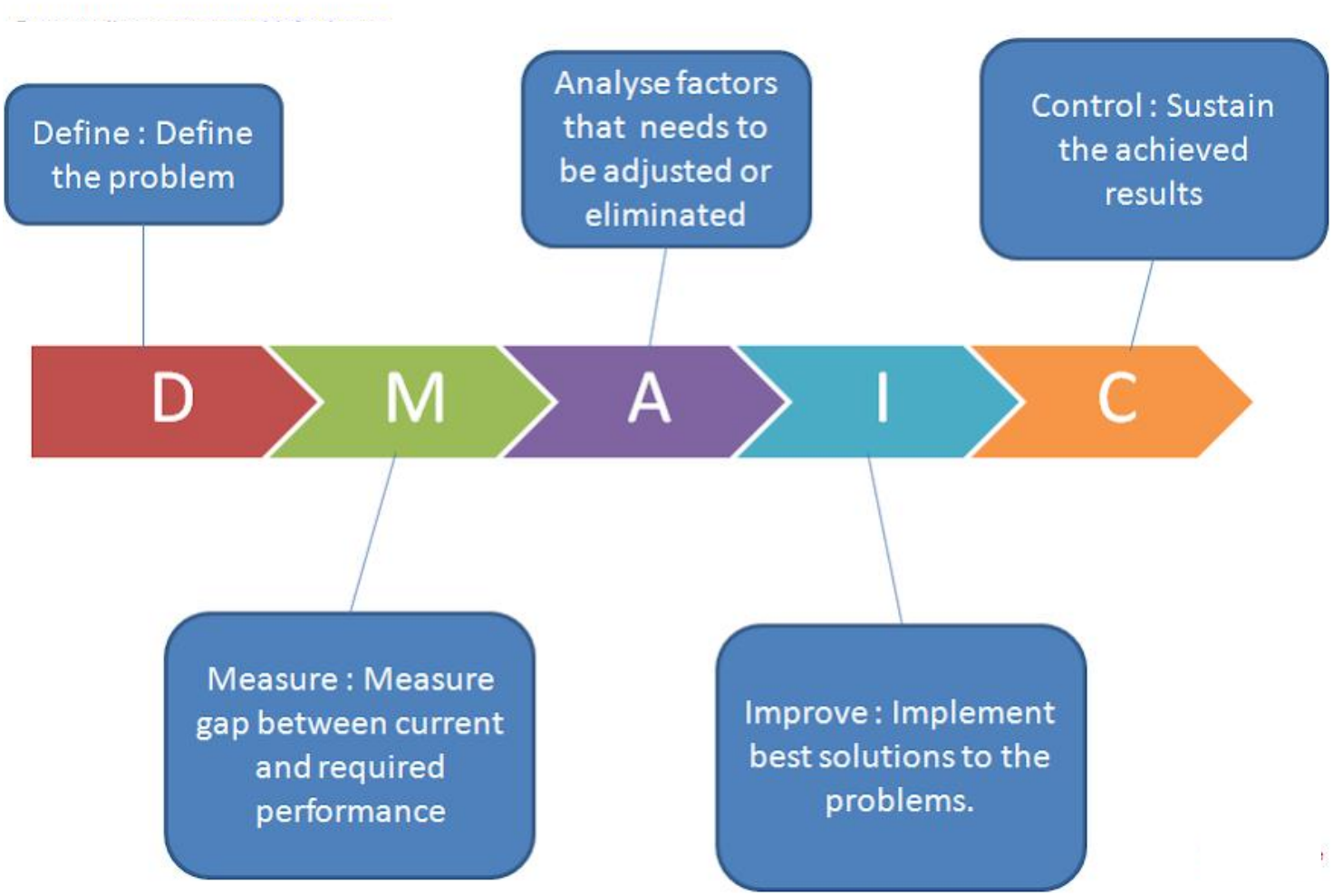
- Study Design: Descriptive Cross- sectional, Observational Study
- Study Location: The Mission Hospital, Durgapur West Bengal
- Sampling Technique: Convenient Sampling
- Study Duration: Two months (i.e 8 weeks)
- Sample size: 300 planned discharges
- Time of observation: Discharges from wards between 9am to 6pm (except Sundays)
- Source of data collection: Discharge Monitoring Sheet, Interaction with IP Coordinators

Inclusion criteria: Patients who go through normal discharge process and on DOR.

Exclusion criteria:

- Patients who get discharge from OT, ICU and ED etc
- Patients who get discharge through DORB

DMAIC Approach



- **Phase I: Define:** *Define the problem*

  There is a delay in discharge process and discharge process needs to be streamlined.

- **Phase II: Measure:** *Gaps identified in existing manpower involved in discharge process*

1. *Nurse time Calculated*: Time taken by nurses to intimate patient family about discharge
2. *IP Coordinators time Calculated*: Time taken by coordinators from the time doctors sign discharge summary to the discharge summary receive by wards
3. *GDA time Calculated*: Time taken by GDA in transferring discharge summary from wards to TPA desk
4. *Billing Department time Calculated:* Time taken by billing department in bill clearance of planned discharge patient
5. *Patient time Calculated:* Time taken by patient to physically wheeled out from hospital from no dues clearance

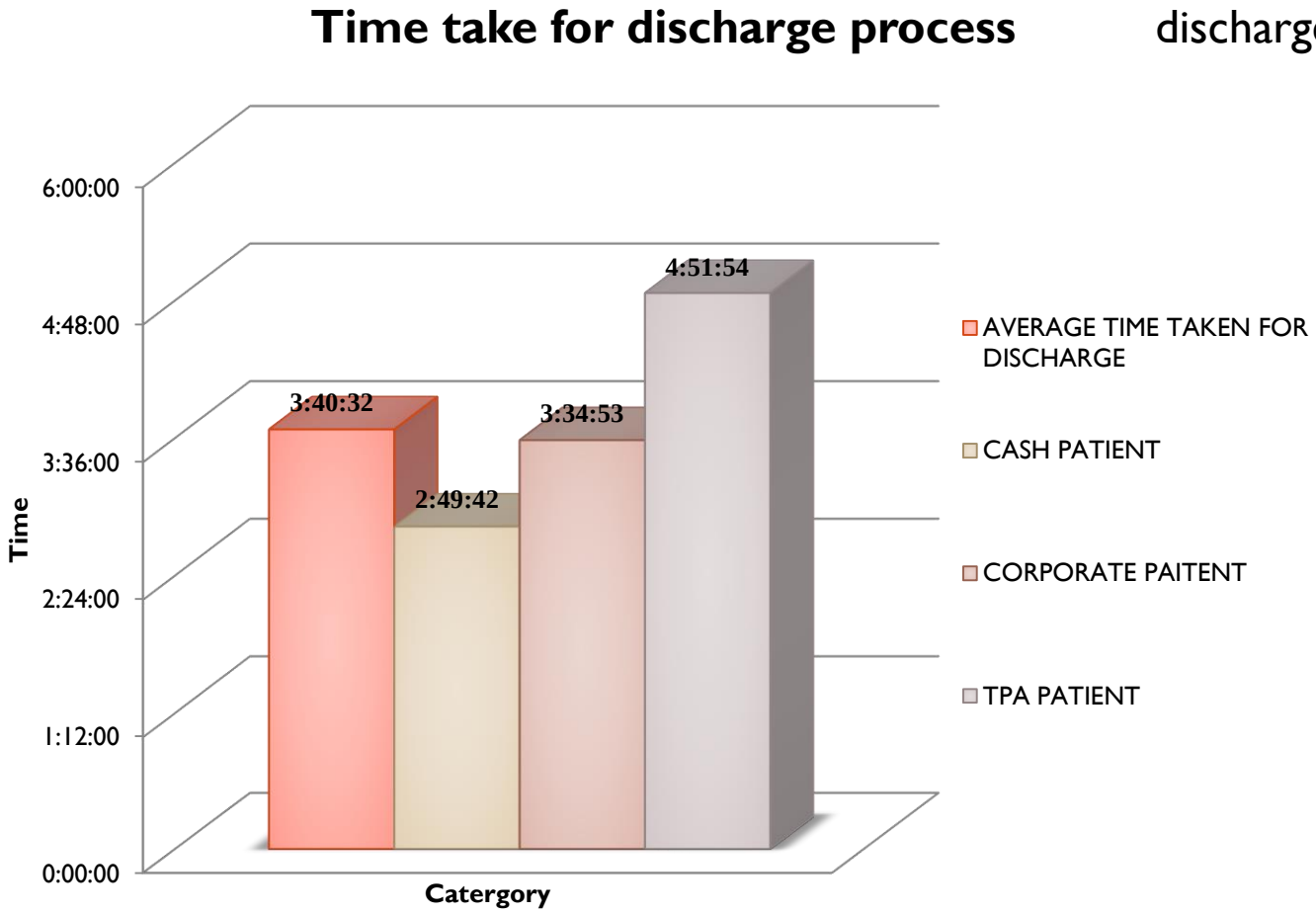
- **Phase III: Analysis:** *Calculations and evaluation of factors*

Benchmark of Hospital	Non - Compliance	Total Summary
D/S not Ready by 9 AM	100%	00

Average Turn Around Time Calculated for various steps in Discharge Process	
Average Time taken by Nurse to intimate patient family (Median value)*	00:30:00
Average time taken to finalize Discharge Summary after Doctor Correction	5:23:15
Average time taken by GDA Staff for transferring summary to TPA desk (Median value)*	0:16:00
Average time taken for Bill Clearance	3:47:40
Average time taken by patient to physically wheeled out after issuing Clearance Slip	1:42:54
Average time taken for Discharge	3:40:32
Cash	2:48:42
Corporate	3:34:53
TPA	4:51:54

*Median Value: Median Value states that the average of total sample excluding the outliers (special cases)

N=300 planned discharges

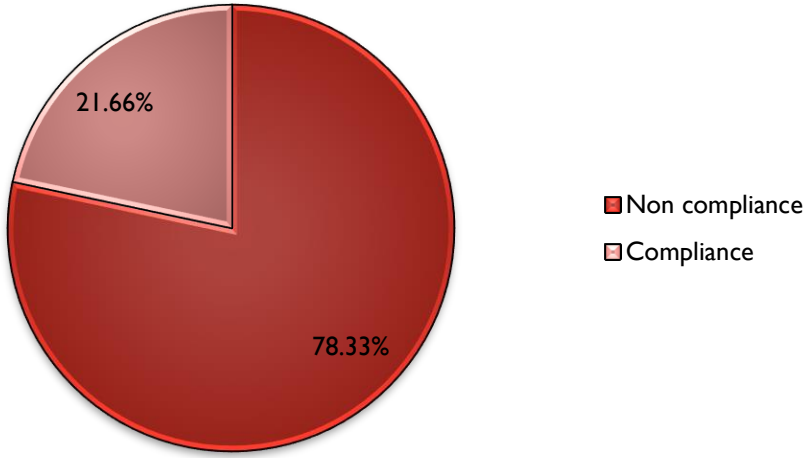


Interpretation: On an average time taken for discharge process is 3 hours 40 minutes

The maximum time taken in discharge process was by TPA patient for their clearance from their respective insurance companies.

Benchmarks are set for physically wheeled out patient from the hospital

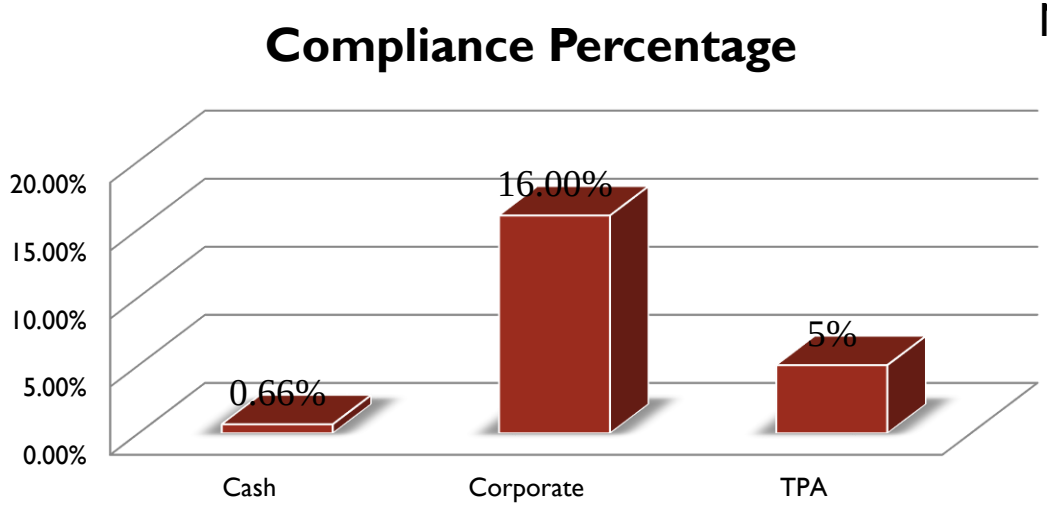
Category	Sample Size	Compliance	Benchmarks
Cash	**104**	2	11 am
Corporate	**113**	48	2 pm
TPA	**83**	15	3 pm
Total Samples	**300**	65	



Interpretation: Out of 300 patient almost three fourth of total patient (78.33%) are not getting discharge as per the set targets by the organization and 21.66% are compliant

Benchmarks are set for physically wheeled out patient from the hospital

N= 65 out of 300



Interpretation: Out of total 113 corporate patient around 16% were compliant as per the targets, 5% TPA patient and 0.6% were cash patient.

➢ **Phase IV: Improve:** *Implement best solution*

- At the time of finalizing discharge summary

S.No.	Reasons	Solutions
1	Multiple correction of discharge summary	Implementation of HIS doctors can use their unique mail ID for writing summary, helps and eliminates multiple correction at typing pool
2	Cross referrals at last moment on the day of discharge	Cross referrals should be done a day before final discharge
3	Planned discharge after 6pm in a day	Late planned discharges should be considered as unplanned discharges
4	Delay in lab reports	Timely lab reports verification increase the discharge process

- At the time of payment of bills

S.No.	Reasons	Solutions
1	Patient unwillingness to pay/ take patient home	Early implementation regarding billing
2	Cash patient: Unavailability of funds	Counselling and refer to government hospital
3	TPA patient: Denial of application, Queries from insurance companies	Regular follow up and quick conversion TPA to Cash should be done
4	Corporate patient: Denial of application, Indenting of medicines	HIS update will timely update pharmacy

- At the time of transferring discharge summary to typing pool or TPA desk/ corporate desk

S.No.	Reasons	Solutions
1	Unavailability of GDA staff on the floor	Recruitment and dedicated distribution of GDA staff
2	Piling of discharge summary at typing pool	Dedicated typing pool, Implementation of HIS

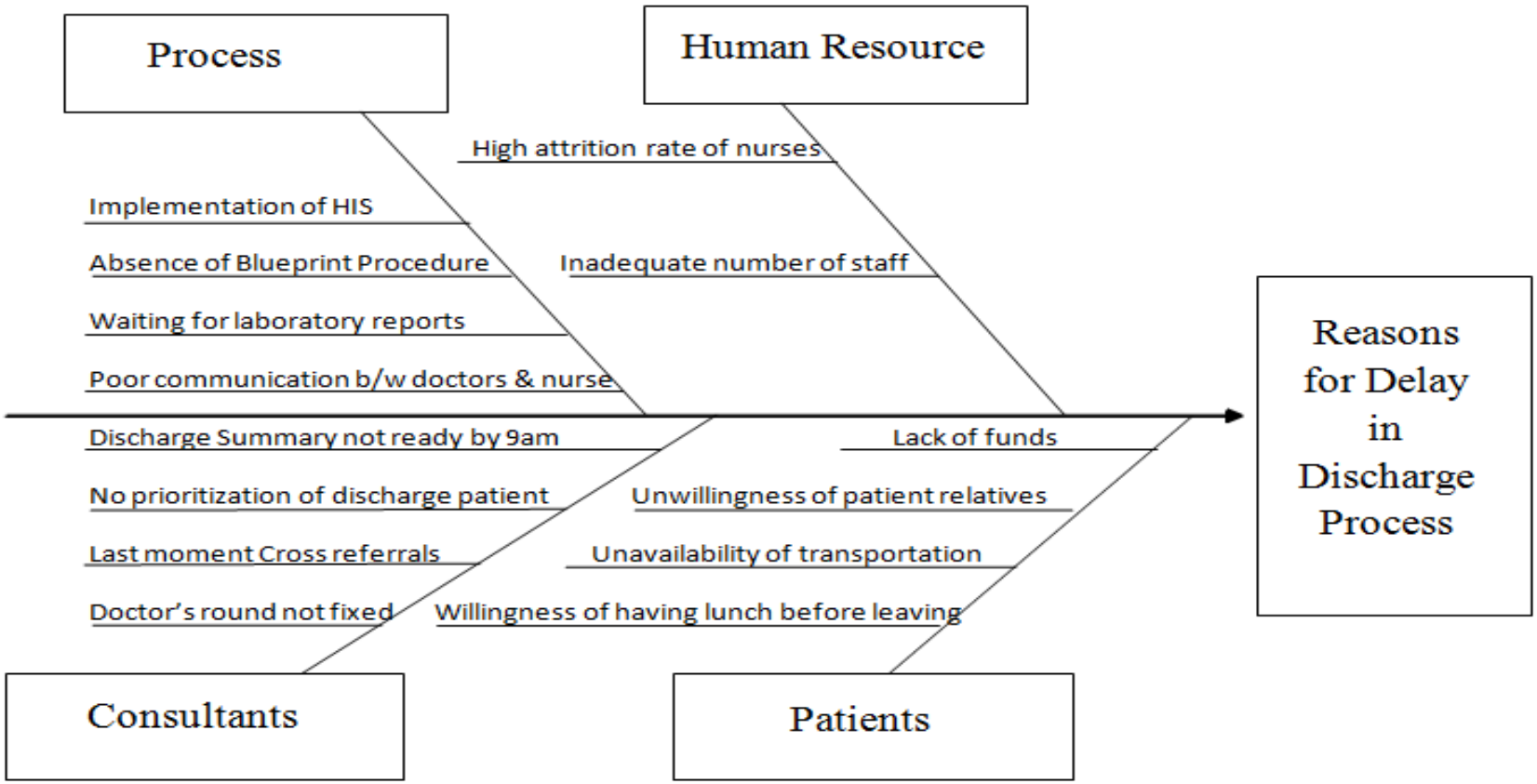
- **Phase V: Control:** *Achieved Results*

  As it has seen that discharge summary finalization takes maximum time in the whole discharge process and other steps are simultaneously affected so the management has instructed RMO doctors to make use of personal WhatsApp to communicate with consultants and finalize the discharge summary as per the set benchmark i.e. 9AM.

  To streamline the whole process hospital has set few targets in physically discharge patient i.e. Cash patient by 11am, Corporate Patient by 2pm and TPA patient by 3pm.

- Since the steps are implemented and hoping for streamlining discharge process in future.

Root Cause Analysis



Fishbone Diagram

Conclusion

Findings	Suggestions
Doctors rounds are not fixed (morning or evening)	Management should take strict action against doctors visits and rounds
Discharge summary not prepared on time 1. Multiple correction of discharge summary by consultants 2. Piling up of discharge summaries at typing pool 3. Cross referrals are planned at the last moment 4. Time loss in transferring of discharge summary 5. Timely verification of investigation not done	1. Online or Hospital Information System (HIS) should be implemented to make the discharge process easy 2. Cross referrals should be done a day prior to the day of planned discharge 3. Dedicated staff should be appointed for time being until HIS is implemented for transferring of discharge summary 4. Investigation reports should be timely verified to avoid delays in the process

Proper implementation of HIS is missing within the organisation	1. Online or Hospital Information System (HIS) should be implemented to make the discharge process easy 2. Training programs should be conducted for the staff for being technology friendly
Lack of manpower to take over the work in the absence of main staff	Implementation of HIS and online system will automatically eliminate or reduce manpower
No standard/ structured policies are made by the organization regarding discharges	Policy of streamlined discharge process should be formed and implemented
Lack of training among staff regarding technology, continuous learning education, workshops, etc.	Training programs should be conducted for the staff
Doctors handwriting are not readable	Doctors writing should be legible to avoid typing errors in typing pool

Thank you