

## A Prospective Study of Internal Transfer Delays In A Private Hospital Of North India

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**Abstract:** The aim of the study was to document the intra-hospital patient transfer process and to observe the delays in the process at Fortis Memorial Research Institute, Gurgaon, India. The study of intra-hospital patient transfer analyses the process, time and personnel in the transfer procedure. This prospective Study was conducted in Fortis Memorial Research Institute, Gurgaon, India. Patients were included from the ward . A total of Total 211 transfers were tracked which included IPD patient transfers to Radiology Department, IPD transfers from Wards to OT, Daycare patient transfers from Wards to OT and Patient transfers from ICU to Wards. In the Transfer of IPD patients from Wards to Radiology Department, 4.10% transfers delayed were there due to Lack of communication between nurses of different shifts. In the Transfer of patients from Wards to OT, 27(51%) transfer Delays were reported and from Daycare to OT, 5 (25%) transfer Delays were reported. In the Transfer of patients from ICU to Wards, (17%) transfers delayed due to nurse shift change and 6(12%) transfers delayed due to unavailability of HDU beds. Delay in providing healthcare is unacceptable. Inter-departmental co-ordination is very important in a healthcare setup. Delay in transfer results in high hospital census. Further study of this problem is necessary. (10 Italic)

**Keywords:** Daycare, delays, Internal transfer, IPD patients, wards. (10 Italic)

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Date of Submission: 04-10-2018

Date of acceptance: 19-10-2018

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### I. Introduction

In a hospital, the transportation of inpatients within the hospital is a critical component of the patient care process. Patients are moved within the hospital because of the need for clinical care or to have fixed facilities investigations performed, or therapeutic procedures not performed at the bedside.

Internal transfer delays have been associated with worse outcomes after trauma, stroke, and acute myocardial infarction.<sup>1</sup> Young et al. report the findings of a well-designed observational study that examined the impact of delays in ICU transfer in this high-risk group.<sup>2</sup> Proper patient transfer guidelines issued by NABH are to be followed to ensure safe transfer of the patient, along with this there should be a fixed protocol which should be followed. Any gaps in the process will lead to delays in transfers which would directly affect the patient satisfaction level and goodwill of the hospital.

ICUs provide life-sustaining treatments and monitoring that are often unavailable on typical hospital wards. However, outcomes of ICU care are dependent on patients' severity of illness at the time of ICU admission.<sup>3,4</sup>

This study was done in the period from 19<sup>th</sup> MAY 2014 to 19<sup>th</sup> AUGUST 2014 to track the transfers in the hospital and to find out gaps in the process. (10)

### II. Methodology

The purpose of this study was to evaluate existing opportunities to increase the efficiency of the execution of this process as well as to gain overall system efficiency in terms of management and to calculate the efficiency and inefficiency of the hospital system.

The data for the study regarding transfers of the patients was collected on spot everyday for a period of 3 months along with observing other activities related to transfer. Some secondary data was also collected from HIS Trackcare.

Three types of internal transfers were observed and analysed:-

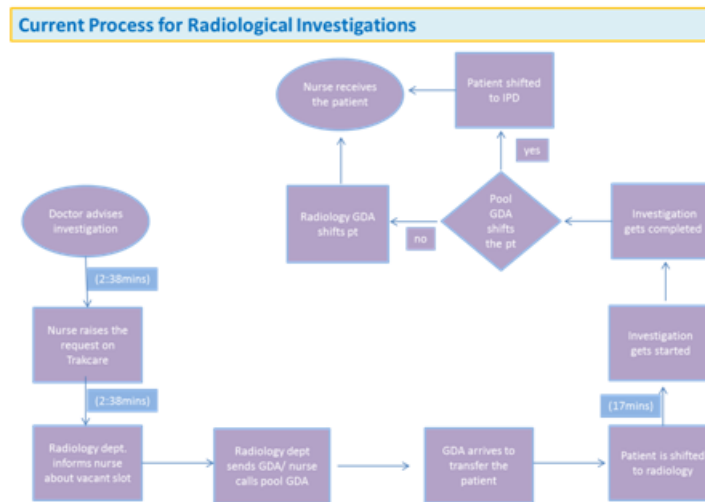
1. Transfer of IPD patients from Wards to Radiology Department
2. Transfer of patients from Wards and Daycare to OT
3. Transfer of patients from ICU to Wards .

**1. Transfer of IPD patients from Wards to Radiology Department**

There are 4 types of Wards in FMRI:

- Ward 1 – situated on 1<sup>st</sup> floor (100 bedded)
- Ward 2 – situated on 3<sup>rd</sup> floor (65 bedded)
- Ward 3 – situated on 4<sup>th</sup> floor (65 bedded)
- Ward 4 – situated on 5<sup>th</sup> floor (35 bedded)

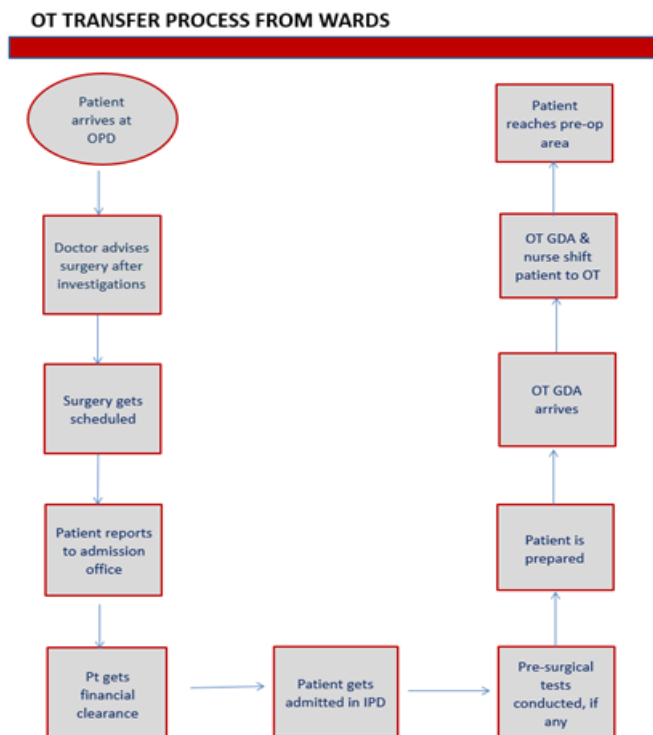
Radiology department was Situated on the lower ground floor .Total Staffing included 5 radiologists 7 technicians 2 nurses. Total number of cases were 87.out of 87 cases , 9 were from MRI, 13 were from CT, 26 from X-ray and 39 were from Ultrasound.



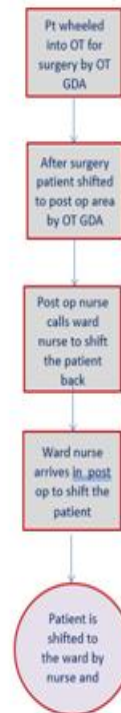
**2. Transfer from Wards and Daycare to OT**

Daycare is situated on the 1<sup>st</sup> floor (12 bedded). OT complex is situated on the 2<sup>nd</sup> floor , having a total of 10 OTs

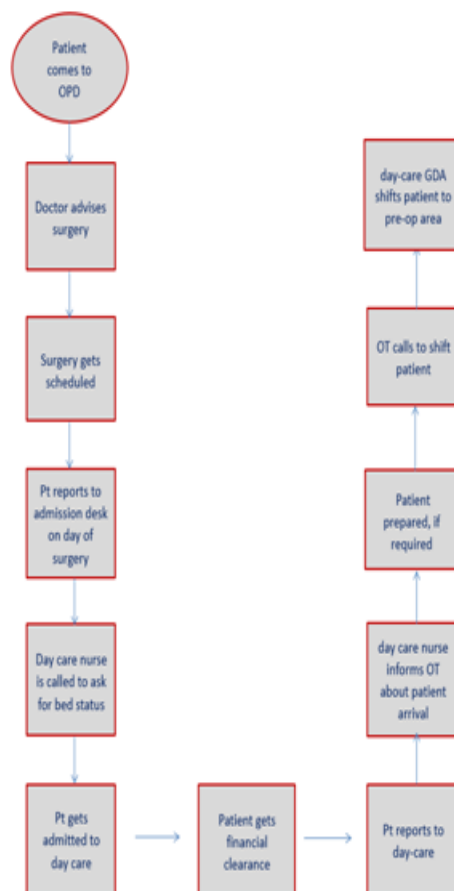
Total cases examined were 73 ( ward patient were 53 and Datcare patient were 20).

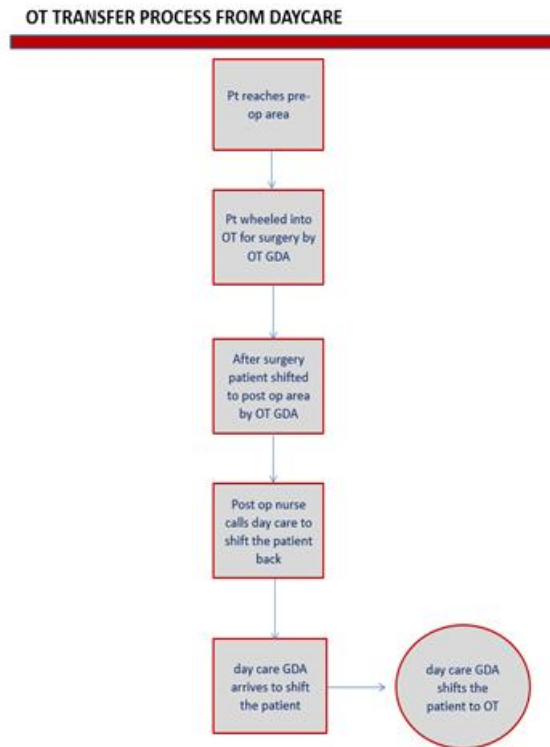


**OT TRANSFER PROCESS FROM WARDS**



**OT TRANSFER PROCESS FROM DAYCARE**

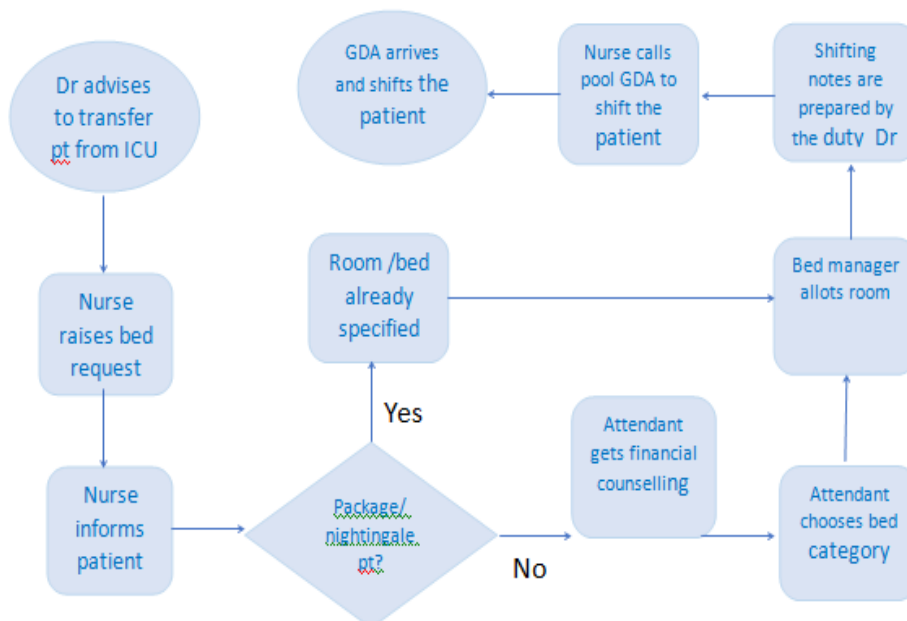




**3. Transfer from ICU To Wards**

There are 5 ICUs in FMRI ,they are divided on the basis of specialities and are fully equipped with advanced equipments maintaining the conditions of asepsis round the clock, each of them is 15 bedded .These included 1 Pediatric ICU , 1 Neuro ICU , 1 Medical ICU and 2 Cardiac ICUs Total number of cases were 51 which were tracked from Neuro, Pediatric and Medical ICU.

**CURRENT PROCESS FLOW**



### **III. Result and observations**

After collection of all the data, calculations were made using statistical tools like average and percentage for calculating the efficiency of the transfer process, TAT of the process and gaps in the transfer system.

On the basis of these findings analyses were done and suggestions and recommendations were given regarding the reduction of gaps in the transfer process of patients.

#### **1. Transfer of IPD patients from Wards to Radiology Department (Observations)**

##### **NUMBER OF MRI CASES TRACKED = 9**

Average TAT doctor advised to request raised - 1hr 25 mins  
Average TAT request raised to GDA arrival - 1 hr 50mins  
Average waiting time after shifting - 19 mins

##### **NUMBER OF X-RAY CASES TRACKED – 26**

Average TAT Doctor advised to request raised - 31 mins  
Average TAT request raised to GDA arrival - 1hr 38 mins  
Average waiting time after shifting - 11 mins

##### **NUMBER OF CT CASES TRACKED = 13**

Average TAT doctor advised to request raised - 4 hrs  
Average TAT request raised to GDA arrival - 1hr 2 mins  
Average waiting time after shifting - 22 mins

##### **NUMBER OF ULTRASOUND CASES TRACKED - 39**

Average TAT doctor advised to request raised - 55 mins  
Average TAT request raised to GDA arrival - 2 hrs 25 mins  
Average waiting time after shifting - 19 mins

- No appointment system for IPD patients
- No dedicated slot for IPD patients
- No estimated time given to send the patient for radiological investigation
- No fixed protocol for GDAs
- Nurses delay in raising request on trakcare – 27%
- Lack of communication between nurses of different shifts – 4.10%
- Pool GDAs are deficient at times and sometimes do not respond to calls – 7.1%
- Instant appointment interferes with patient's meal timings – 4.10%
- Fasting patient / patient with full bladder gets irritated by delay

#### **Recommendations**

- An early morning slot should be dedicated for IPD patients .
- Investigations advised by doctor at night should be raised before 7 am the next day so that the radiology department is prepared accordingly.
- After every 3 OPD slots , one slot should be left vacant for IPD patients to reduce waiting time of IPD patients
- Tentative appointment should be booked by nurse, and final confirmation can be given on phone so that patient can be prepared accordingly & patient waiting time can be reduced.
- Fixed system for shifting of patients by GDAs will reduce shifting time and avoid confusion.
- Between shifts, nurses should communicate the status of the patients along with the causes of delay so as to avoid confusion.

#### **2. Transfer of patients from Wards and Daycare to OT(Observations)**

##### **A.) WARD**

##### **WARD TRANSFERS – Gaps in process**

Delay in shifting beyond half an hour -- 4(8%)  
Delay in shifting beyond one hour -- 7(13%)  
Delay in shifting beyond two hours -- 6(11%)  
Average TAT scheduled time to shifting time – 36 min  
Delays after transfer to pre-op area -- 27(51%)

- 31(58%) patients were transferred before scheduled time

- Nurse has no information of surgeries being rescheduled .
- New patient entries not done on the board, makes it difficult for GDA to find the nurse.
- If GDA arrives early , nurse takes time to shift the patient
- If surgery is delayed , nurse is not given any approximate shifting time
- GDA has to wait if nurse shift is getting changed

#### B.) DAYCARE

##### DAYCARE TRANSFERS – Gaps in process

Delay beyond half an hour – 3(15%)

Delay beyond one hour – 2(10%)

Delay beyond two hours -- 2(10%)

Delay after transfer to pre-op area – 5 (25%)

Average TAT scheduled time to shifting time - 44min

Average TAT pt reporting time to pt transferred back – 4 hrs 10 min

- 3(15%) patients were transferred before scheduled time
- Calls from admission office and OT go unattended when the nurse goes to handover patient file in OT.
- Daycare nurse has no information about unplanned cases
- Some patients report early and block the bed (3)
- One GDA is not enough from 9am to 12 pm
- Delay in making discharge summary when MT is on leave.

#### **Recommendations**

##### A.) WARD

- Approximate shifting time should be notified to the nurse for rescheduled surgeries
- All patient entries should be complete on the board
- Nurse should be informed by OT before OT GDA reports to shift the patient

##### B.) DAYCARE

- Approximate shifting time should be notified to the nurse for unplanned cases / delayed cases
- When daycare GDA is not available, pool GDA should be called

### **3. Transfer from ICU To Wards**

#### **GAPS IN THE PROCESS (Delays)**

- ❖ Average TAT request raised to bed allotment time – 1 hr 15 min
- ❖ Average TAT request raised to shifting notes prepared – 1hr 6 min
- ❖ Average TAT GDA call time to GDA arrival time -- 11 min
- ❖ Average TAT request raised time to pt shifting time -- 3 hrs 36 min
- ❖ Minimum TAT in shifting the patient -- 53 min
- ❖ Maximum TAT in shifting the patient -- 6 hrs 6 min

- Delay in bed allotment by bed manager – Average time taken (1 hr 15 min)
- Bed planning not done even for planned transfers
- Delay in writing shifting notes by duty doctor
- 9(17%) transfers delayed due to nurse shift change
- 6(12%) transfers delayed due to unavailability of HDU beds.

#### **Recommendations**

- Bed planning for planned transfers should be done beforehand
- TAT for bed allotment should be determined
- Attendants of planned transfers should be counselled one day prior
- Shifting notes should be prepared as soon a patient is advised for transfer
- Morning transfers should be done before nurse shift change

## **IV. Discussion**

In this study, we found that delay in transfer of IPD patients from Wards to Radiology Department of 4.10% which were mainly due to Lack of communication between nurses of different shifts. Other reasons were due to non-availability of vacant slot in Radiology Department, delay after shifting the patient, unavailability of pool GDA, patient's bladder not full, patient etc. In the Transfer of patients from Wards to OT, 27(51%) transfer Delays were reported and from Daycare to OT, 5 (25%) transfer Delays were reported. In the Transfer of

patients from ICU to Wards, (17%) transfers delayed due to nurse shift change and 6(12%) transfers delayed due to unavailability of HDU beds.

Some delays may be unavoidable because of the aforementioned constraints. Specifically, delays in transfer may be markers for deterioration that occurred during off-hours or on the weekends. During these periods, nurse staffing is typically lower, physicians are less likely to be available, and patients may be at increased risk for adverse outcomes.<sup>5</sup>

The risk factors for complications during intrahospital transport are related to patient's illness severity, handling during transport, inadequate equipment, lack of highly trained staff, inadequate monitoring and ineffective communication among staff during transport.

Nurses have an active involvement in intrahospital transport procedures, as personnel of the sending and receiving departments or as members of the intrahospital transport team, following or upgrading current policy. Nurses can create an intrahospital transport protocol, based on published guidelines, train the staff on it, assess and stabilize patient's health condition prior to transport and improve the overall quality of care for transported patients. The risks posed by intrahospital transports for critically ill patients can be minimized or even prevented by a well-designed transport protocol with the effective participation of the nurse.<sup>6</sup>

Patients' intrahospital transport is considered as part of the medico nursing care continuum, since patients frequently need diagnostic or therapeutic procedures not performed at the bedside.<sup>7</sup> Severe complications, such as airway obstruction, artificial airway or intravenous line removal, arterial blood gas and blood pressure changes, and arrhythmias or cardiac arrest, have been described during this transportation, especially in critically ill patients.<sup>8</sup> Risks can be diminished if the patients are appropriately selected and carefully monitored during transportation.<sup>9</sup> Risk factors for complications that usually occur during intrahospital transports and describe the role of nursing in intra-hospital transport policies are of major concern.

Fewer studies, however, have evaluated the association between the timing of unplanned transfers and inpatient outcomes; previous small reports suggest that delays in ICU transfer adversely affect mortality and length of stay.<sup>10,11,12</sup>

Some patients may be fit enough to travel using their own transport escorted by a relative or volunteer. Conversely a critically ill patient in ICU may require a full medical team to undertake the transfer.

Following are the limitations of our study:

- Investigations and transfers taking place after 5pm were not included
- Investigations and transfers taking place on Sundays were not included
- Time duration was less
- Simultaneous transfers from different areas could not be tracked
- Sample size was small as the occupancy rate is not high

## **V. Conclusion (11 Bold)**

As a result of the findings about the current scenario of the transfer process efforts need to be made to streamline the transfer system. Emphasis should be given on training the staff and to make them understand the patient's preferences, desires, needs and perceptions.

Delay in transfer is common and is associated with increased healthcare cost. Because the most common reason for this delay was due to lack of inter-departmental coordination. Future efforts should include proper protocol for appointment system, turn around time (TAT) for each activity of transfer, planned transfers should be notified to receiving healthcare department one day prior so that patient satisfaction can be improved.

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IOSR Journal of Business and Management (IOSR-JBM) is UGC approved Journal with SI. No. 4481, Journal no. 46879.

Samragi Madan. " A Prospective Study of Internal Transfer Delays In A Private Hospital Of North India. " *IOSR Journal of Business and Management (IOSR-JBM)* 20.10 (2018): 44-51.