

## OPERATION THEATRE NURSING TEAM: A SPECIALIZED NURSING SERVICE

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### ABSTRACT

Operating rooms are expensive to run, and hospitals strive to be efficient. The purpose of this study was to evaluate an initiative to increase operating theatre ergonomics and organize them to reduce related financial loss in the operating theatre of a quaternary hospital. For this, a 6-step approach was used which includes creation of transport nursing team, patient and family connect, designated bed manager, transport bag and addition of OT delay as a quality indicator. The result showed that a targeted, multifaceted approach can increase the percentage of operations that begin on time in a hospital. The improvement in efficiency and reduction in related financial loss were also observed.

**Key words:** Operation Theatre Nursing, Patient Transfer, Operating Room Efficiency, OT utilization, OR Transport.

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### INTRODUCTION

To maintain prosperity and success in the current medical climate, hospitals must continually balance the forces of shrinking insurance reimbursements, advancements in medical technology, and the logistics of running an operationally complex and successful facility. In addition, the end result, namely, safe and high-quality health care for patients, cannot be compromised. When examined closely, the operating rooms serve as a scaled-down model for the challenges that face the entire hospital. There are a number of studies in the literature aimed at increasing operating room efficiency and controlling operating room costs while striving to provide high-quality, technologically advanced surgical services. Often the focus is on streamlining the existing steps that are involved with patient care preoperatively, intra-operatively, and postoperatively. These studies, for example, have investigated how to better increase operating room ergonomics and organization, how to identify and eliminate delays in the operating rooms as a whole and whether shortening a given variable in the

operating room could actually make a meaningful impact on increasing case volume [1].

According to a study, the hospital's first cases averaged a 15-minute delay i.e. only forty percent were meeting the 7:30am cut time. When the first surgical case of the day starts late, it delays subsequent cases, causing bottlenecks and frustrating patients, surgeons and staff. To tackle this issue, a multi-disciplinary team was formed which was a great success [2].

In this study, we sighted to change paradigm in a manner that has not been published in the literature to date. In our surgery suites, the routine is that the patient is brought from ward into the Pre-operative Room, then to the operating theatre. After surgery, the patient is shifted to Recovery room and then to the ward when patient gets stable. For this study, we examined the loopholes in the transfer protocols of patients planned for surgery. Our belief was that the patients would not be negatively impacted by this change in protocol and that they would remain highly satisfied with their care.



## AIM

Because of rising costs and shrinking reimbursements, hospitals must continually find ways to improve efficiency and productivity. This study attempts to increase caseloads in operating theatres while maintaining patient satisfaction and safety.

## OBJECTIVES

- To maximize utilization of OT
- To avoid the Non Productive Time in OT
- To improve efficiency and reduce related financial loss
- Zero- cancellations of cases in OT related to delay in shifting

## NEED OF THE PROJECT

Health care expenditure is a serious concern, with escalating costs failing to meet the expectations of quality care. The surgical setting typically consumes 9-10% of the hospital budget and requires maximum utilization to ensure optimum cost-benefit.

Indraprastha Apollo Hospital is a quaternary care hospital with a complex set up covering various super specialties with 700 beds, 20 operating rooms and 2500 surgeries per month. Delay in surgery means delay in assigned time for all patients leading to patient dissatisfaction. It leads to inefficient utilization of available resource hours and cancellation of surgical procedures, increases the cost of patient care in the hospital and also results in monetary loss to the patient as he/she is away from work. Cancellation also results in psychological trauma to patients, as they have to undergo the preoperative mental and clinical preparation again [3]. In a three- month retrospective study, it was noted that in a hospital only 13% of surgeries started on time [4].

As a ward nurse looks after 4-6 patients and for one nurse sometimes 2-3 patients could be there for different surgeries and for shifting into different OT's. So it is difficult for the assigned nurse to coordinate all the activities on time and to shift her patients to different OT's on time. Shifting the patients to OT deprived other patient's services on time. It leads to delay in services, dissatisfaction of consultants and patients, long waiting time for admission, discharge, transfer in, transfer out, receiving post-operative patients, delay of cases followed by cancellation etc.

Another study shows that if turnover time is reduced by an average of 15 minutes, then an hour of operating time could be gained, resulting in the ability to perform 1 more short surgery each day. Even if an hour of additional operating room time is not gained, ending the day earlier could potentially reduce the amount of overtime paid to staff, which would reduce overall staffing costs for the operating room [5].

These observations warranted further study as they fall outside the scope of usual studies done on

Operating Theatre efficiency and may provide new insight in this area.

## IMPLEMENTATION

For maximum utilization of OT and to overcome the need for delay in shifting of patients to OT following initiatives were taken:

- **Conception of Transport Nursing Team-** A transport team of 8 nurses (available 8am-8pm, as per scheduled hours of working OT) was concocted. Nominations were made by the unit staff and in-charges. The team underwent 3 days of intensive training. The training included Introduction to concept of peri- operative nursing, Patient considerations, Management of complications. Pre and Post tests were executed and skill assessment was performed. They exercised on manikins in a simulation environment. The team was certified and recognized as a Transport Nurse with a Badge. The task of Transport Nurse was to ensure pre- surgical patients are clinically taken over & shifted to OT on time as per schedule.

- **Patient and Family Connect:** Pre- operative rounds one day prior to surgery by Senior Nursing Leadership Team to decrease patient and his family's anxiety and facilitated a smooth recovery.

- **Designation of Bed Manager:** Senior Nursing Supervisor was assigned as single point of contact for easy shifting, identification of beds and to prioritize patient transfers. Their responsibility is timely shifting of patients from OT to required unit (ICU, HDU and Ward etc).

- **Clinical Hand- Off Form and Pre- Operative Checklist (Ward to OT and OT to Ward) & Nursing Clinical Hands- Off Brief (Between Shifts)-** designed to reduce handing over time, to standardize communication and to highlight important clinical information (Figure 2-6).

- **Transport bag-** Uniform transport bags were introduced for carrying patient's documents and indents during transfer (Figure 1).

- **Addition of OT delay** as a quality indicator

## PERFORMANCE OUTCOME

The project led to the following outcomes-

- **100% Arrival of Patients in OT on Scheduled Time:** Turnaround Time for shifting patient to OT was reduced from 90 min to 30 min. (Figure 7)



- **Increased Staff Competency:** Staffs' knowledge & competency has improved due to mock drill and ongoing training (Figure 8)
- **100% Patient Satisfaction:** As shown in VOC (Voice of Customer) patients were more satiated because all services were given timely (Figure 9)
- **Zero Cancellations of Cases in OT:** Organized shifting lead to maximum utilization of OT, zero cancellation and increased revenue. (Figure 10)
- **Decreased Medication Error:** No delay was observed in medications administration as non- value added services were minimized, hence staff were available for providing services. (Figure 11).
- **Reduction of call bell complaints:** Effective utilization of transport team led to reduction of call bell complaints as assigned staff are available in units and there is no disruption to meet patient needs (Figure 12).

- **Increased consultant satisfaction:** Consultants were satisfied as patient reached OT on time, simultaneously staff was available in units to attend rounds and provide patient care.
- **Uniform experience to all patients:** Uniform experience to all patients due to expert transport team.
- Improved operational efficiency of the Operating Room by reducing delays /idle time in theatres/cancellation etc
- Specialized service in the organization
- Efficient use of supplies
- Improved consultant satisfaction
- Timely completion of services
- Building up of competency and creation of a specialized team in Nursing
- Decreased risk of liability and litigation. The team is involved in training the entire nursing staff.

Figure 1



Figure 2

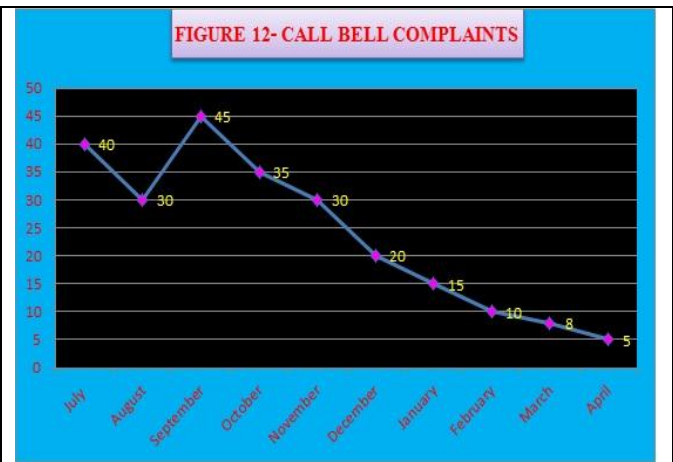
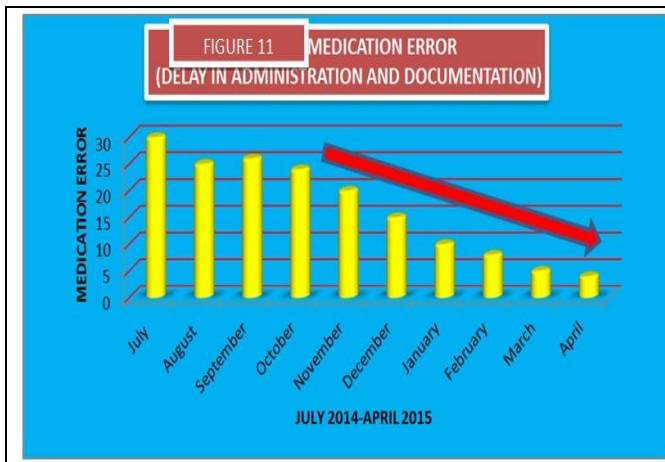
Figure 3

Figure 4









### DISCUSSION AND CONCLUSION

Starting on time is a critical foundation in ensuring productivity and efficiency in the Operation Theatre. Review of the literature reveals that hospitals have employed various approaches to accomplish this including: punitive measures such as loss of allocated block time, motivational pleas to employees through formal presentations, and even specialized task forces dedicated to ensuring on-time starts.<sup>3</sup> This preliminary, a descriptive study was the first to address a long-standing gap on transportation of patients to and from operation theatre. The 6- steps approach exalted the utilization of Operation Theatre. For the study, no extra money was

involved. The training of the staff was sponsored by the agency- 3M. No special recruitment for the Transport Team were made. Eight nurses were selected from existing manpower only. Recruiting one new nurse would cost 16000 INR/Month, hence 1,28,000 INR/Month were saved. Appreciation and accolades were received from patients, unit staffs and Doctors. Surgeons from all the specialty had given the appreciations letter to the transport team for the superb work done by transport nurses with proper handing over of records and information. The Transport Team received "Star Employee Award" by the Management in the March 2015 as 100% patient arrived in theatre on time.

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