A Study on Standardized System of Shift Handover Communication Compliance

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ABSTRACT

One of The Joint Commission's 2007 National Patient Safety Goals is to implement a standardized approach to hand-over communication. Patient handover has been recognized internationally as a high-risk area for patient safety. Keeping in mind the above backdrop, the study was carried to increase the handover communication compliance in a super-specialty hospital in Gurgaon, India. The interventional research was carried with 120 shifts data of the Nightingale ward, ICU's, and Executive Rooms in the hospital. Handover communication and awareness was found to be very low. An intervention to improve the compliance of handover communication to 75 % was planned in consultation with Head of Quality and Medical Superintendent. After the intervention, it was found that the handover communication was improved and the target of 75% was achieved. The Handover communication form was filled on daily basis including Situation, Background, Assessment, Recommendation (SBAR), and a system of digitalized daily reporting of handover communication form to Medical Superintendent was implemented.

Keyword: - *Communication, handover, safety, patient safety, quality improvement.*

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1. INTRODUCTION:

Clinical handover (clinical handoff in North America) refers to the "transfer of professional responsibility and accountability for some or all aspects of care for a patient, or groups of patients, to another person or professional group on a temporary or permanent basis". [1] Handovers permeate the health-care system and can occur at shift changes, when clinicians take breaks, when patients are transferred within and between hospitals and during admission, referral or discharge.

In the recent patient safety literature, there is an increasing agreement that effective patient handover is critical to patient safety by ensuring appropriate coordination among health-care providers and continuity of care. It has repeatedly been pointed out that a lack of formal training and formal systems for patient handover impede the good practice necessary to maintain high standards of clinical care. Thus, patient handover has been defined a research priority for patient safety, and research in this field is increasing rapidly. [1] The correspondence amid handover has also been recorded as one of the National Patient Safety Goals (NPSG) 2007 by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO). [2] The Goal 2 is to Improve the effectiveness of communication among caregivers and requirement 2e is to implement a standardized approach to "hand-off " communications, including an opportunity to ask and respond to questions. Thus, patient handover has been recognized internationally as a high-risk area for patient safety.

Keeping in mind the above backdrop, the study was done to increase the handover communication compliance in a super-specialty hospital in Gurgaon, India.

2. REVIEW OF LITERATURE:

Many studies have been carried on clinical handover communication, few have been described below.

A study on "Effective handover communication: An overview of research and improvement efforts" by Tanja Manser and Simon Foster, in Switzerland in 2011. The aim of this article was to review the current state of research and improvement efforts to establish the evidence base for effective handover practices and identify key areas for future research. In doing so, they focused on handover situations relevant to the specialty of anesthesiology. The research concluded that there is wide agreement that patient handover is a key process to improve patient safety, and that formal systems for patient handover combined with formal training on effective handover communication will promote patient safety in all areas of health-care.

The Joint Commission Center for Transforming Healthcare addressed the problems that can result from ineffective handoffs viz. include delayed or inappropriate treatment, adverse events, omission of care, increased length of hospital stay, avoidable readmissions, increased costs, inefficiency from rework. To develop the right tool to address these problems, they have released a new handoff communications tool - The Targeted Solutions Tool (TST) which measures the effectiveness of handoffs conducted either from one department to another within the same facility or from one facility to another. The Center studied patient transfers in 10 hospitals. The study found that expectations related to handoffs differed significantly between senders (caregivers who transmit patient data and transfer care) and receivers (caregivers who accept patient data and care). By using the TST™, senders and receivers had better matched expectations, developed a successful handoff process, and had more effective communications and relationships. The Center and the 10 hospitals that participated in the study developed handoff communications solutions based on the acronym SHARE. S = Standardize critical content (Give the receiver details of the patient's history and Emphasize key patient data for the receiver), H = Hardwire within your system (Develop standardized forms, tools, and methods, such as checklists), A = Allow opportunities to ask questions (Use critical thinking skills when discussing a patient), R = Reinforce quality and measurement (Monitor compliance with standardized handoff tools and processes), E = Educate and coach (Teach staff members what makes a successful handoff).

A research on "New Targeted Solutions Tool Availble for Hand-off Communications–Ambulatory Customers Pilot Tested" was carried out by Michael Kulczycki. The research applied Joint Commission Center for Transforming Healthcare Targeted Solutions Tool (TST) in three ambulatory care accredited organizations in USA. By fully implementing the solutions there was 50 percent reduction in defective hand-offs. The organizations reported an increase in staff, patient, and family satisfaction, and successful transfer of patients.

A research on A Standardized Shift Handover Protocol: Improving Nurses' Safe Practice in Intensive Care Units was carried by Malekzadeh J, Mazluom SR, Etezadi T, Tasseri A., published online in 2013, in US National Library of Medicine, National Institute of Health. The pretest-posttest quasi-experimental study was conducted in 2011, with a convenience sample of 56 ICU nurses. The Nurses' Safe Practice Evaluation Checklist was used for data collection. The study concluded that using a standard handover protocol for communicating patient's needs and information improves nurses' safe practice in the area of basic nursing care.

A study on "Communication in Clinical Handover: Improving the Safety and Quality of the Patient Experience" was carried by Suzanne Eggins and Diana Slade1, and was published online in 2015. [5]. The research used audio and video recorded data of routine handover interactions in real hospital contexts to answer the questions and to provide an evidence base from which to develop realistic policies and protocols in patient-centred communication in handover.

A briefing tool to standardise the structure of handover communication for nurse-physician communication was originally developed by Doug Bonacum, Kaiser Permanente's vice president of Safety Management. It was termed ''SBAR,'' which stands for ''situation, background, assessment, and recommendation.''. It was originally implemented in northern California, USA. SBAR was designed as a situational briefing tool to convey, in less than a minute, vital information needed by the doctor or next caregiver. It was designed to convey only the most critical information, eliminate excessive language, and allow staff to get immediately to the heart of every issue.

2. STUDY AREA

The study on "Standardized System of Shift Handover Communication Compliance" was carried in quaternary care healing facility at Gurgaon, Haryana, India. The hospital is National Accreditation Board for Hospitals and

Healthcare Providers (NABH) & Joint Commission International (JCI) Accredited and National Accreditation Board for Laboratory (NABL) Accredited laboratory. The hospital has 288 operational beds, with capability of extension to 1000 beds and is the most technologically advanced hospital in India. The specialties of the hospital are mentioned in Table 1 below.

Table 1: Specialties of the hospital

Anesthesiology	Family Medicine	Ophthalmology	Radiology
Dermatology	General Medicine	Otorhinolaryngology	Psychiatry
Dental Sciences	General Surgery	Pediatrics	Respiratory Medicine
Emergency & Trauma	High risk Obstetrics and Gynecology	Pediatric Orthopedics	

The super specialties offered in the hospital are mentioned in Table 2.

Table 2: Super-specialties offered in the hospital

Cardiology/Cardiothoracic	Neurology
Clinical Hematology	Neuro-Radiology
Endocrinology	Neurosurgery
Hepatology	Nuclear Medicine
Hepato-pancreato-biliary surgery	Oncology-Medical Gynecological, Oncology, Surgical, Radiation
Medical Gastroenterology, Robotic Surgery	Orthopedic & Joint Replacement
Neonatology	Pediatric gastroenterology
Nephrology	Pediatric Cardiology
Pediatric Cardio-Thoracic Vascular Surgery	Transplantation Services-Kidney, Liver, Heart, Corneal
Pediatric Hematology and BMT	Rheumatology
Pediatric Surgery	Surgical Gastroenterology
Plastic & Reconstructive Surgery	Urology
Pulmonology	Pediatric Neurology
In Vitro Fertilization	Thoracic Surgery

General outlay of the hospital was 5 floors, 10 staircases, 10 lifts, 288 operational beds, 11 acre area, 4 entry and exit points, built-up-area 7,50,000 sqft. and has Medical Gas Pipeline System (MGPS). The infrastructure of the hospital is mentioned below in Table 3.

Table 3: Infrastructure of the hospital

Floor	Areas
Basement	Engineering (Chiller Plants, Uninterruptible Power Supplies (UPS) Room, Pneumatic tube system (PTS) Blower Room)
	Biomedical engineering (BME)
	Medical Records Department
	Radiation Oncology
	Contractual Staff Dining
	Mortuary
	Stores (General, Food and Beverage (F&B), Medical)
	Materials & Purchase
	Nursing Training Room
	Parking for Staff & Visitors
Lower Ground Floor	Out Patient Department (OPD)
	Radiology

	SRL's Pathology Laboratory	
	Nuclear Medicine	
	Emergency & Minor Operation Theatre (OT)	
	Day Care	
	Whole Food Outlet	
	Non-Invasive Cardiology	
	Pediatrics	
	Physio First	
	One-stop solution for maternity related services	
	Laundry	
	Central sterile services department (CSSD) - in charge of the sanitization of instruments utilized in the doctor's facility.	
	Doctor's Library	
	Centre for Cellular Medicine - Oncology Department, providing bone marrow transplant and cellular therapy.	
	Costa Coffee (British multinational coffeehouse company) & Gelato Vinto Outlets (Natural Italian Frozen Desserts)	
	Chemo Day Care Lounge	
Upper Ground Floor		Italian Bakery
	Small Auditorium for the attendants to relax and watch a movie.	
	International Patient Lounge	
	Health4u -Preventive Health Checkup (PHC)	
	Chai Thela- Noida-based quick service restaurant chain offering best quality, fresh and Hygienic chai along with some Nashta (Breakfast) products.	
	Tummy Luck (Joost, Haldiram's, The Crunch Box, Subway, Whole Food, Baskin Robbins)	
	Retail Outlets (Medi Rent, Being Human, Titan Eye Care, Fila, Chicco, Bouncing Babies, Baby Oye)	
	ATMs (Axis & Yes Banks)	
	Bloom IVF Centre - for fertility, IVF and other assisted conception treatments.	
	Fortis Bone & Joint Institute	
	OBS & Gynae OPD	
	Religare Wellness Pharmacy	
	VIP Lounge	
	Radiance (Dermatology & Cosmetic)	
	Inpatient & Discharge Lounge	
	Administrative Offices	
	Kitchen	
	Prayer Room	
1st Floor	Mind Café - board game café	
	Meditorium - auditorium for knowledge sharing programmes.	
	Dialysis	
	Rest & Relax Lounge (Proposed Bone Marrow Transplantation - BMT ICU)	
	Blood Bank - NABH and NACO accredited	
	Clinical Laboratory	
	Neonatal intensive care unit (NICU)	
	Well Baby Nursery	
	Pediatric Intensive Care Unit (PICU) to provides sick children with the highest level of medical care.	
	Labor, delivery, and recovery room (LDR) rooms.	

	Nightingale Ward-1,2,3 (hospital ward, which contains one large room without subdivisions)
2nd Floor	Intensive care unit (ICU) – 1-9
	Catheterization laboratory (Cath Lab)
	Pre/Post Cath Bed
	Pre/Post Endoscopy Beds
	Endoscopy Suite
	OR Complex; OT 1-14 Zoning in OT: - Dirty Zone: outside corridor, changing rooms; Clean Zone: supply store; clean territory; pre-operation room; Aseptic Zone: operation theater; sterile planning.
3rd Floor	Insignia Rooms
	Orthopedics Ward
4th Floor	Executive Rooms
5th Floor	Deluxe Suite
	Executive Suite
	Maharaja Suite
	Presidential Suite
	Signature Suite

3. DATA USED AND METHODOLOGY

Research Question:
> *What is the handover communication compliance in the hospital?*
> *What is the awareness of handover communication among doctors in the hospital?*

Research Objectives:
- To measure the compliance of handover communication.
- To make the transfer of patient data transparent and well documented.
- To increase the compliance of handover communication in the hospital.

Research Design: Interventional Study
Study Site: Leading hospital in Gurgaon (Name not disclosed).
Study Area: Nightingale ward, ICU's, 3rd floor, 4th floor Executive Rooms in the hospital.
Sample Size: 120 shifts data
> Before intervention-60 shifts data
> After intervention- 60 shifts data

Sampling – Purposive sampling
Sample Tool – Handover communication form
Duration of Study: May - June, 2017.

Methodology: The handover form was checked on systems and doctors were asked regarding handover communication process in all the floors -Nightingale ward, ICUs,3rd FLOOR, 4th FLOOR etc. Handover communication and awareness was found to be very low. The Head of Quality department and the Medical Superintendent was thus involved and an intervention for improving the handover communication was planned. Revised handover communication form was devised and doctors were asked to fill on every shift change. Also digitalized daily reporting of handover communication form through mail to Medical Superintendent was implemented. The compliance was again measured. The results of the improvement in handover communication has been given in the results in discussion section.

4. RESULTS AND DISCUSSION:

The study revealed that there was low compliance with handover communication protocols. The reluctance to participate actively or involve the patient in handover arose principally from lack of awareness and limited training

in handover skills. Significant improvement was observed after the training on handover communication was given to doctors. These have depicted in the charts given below.
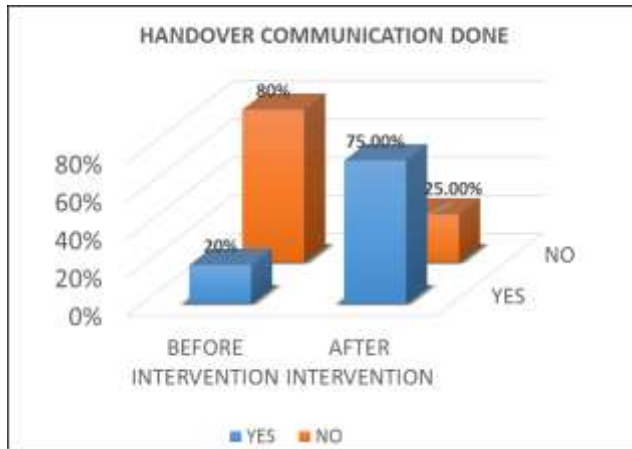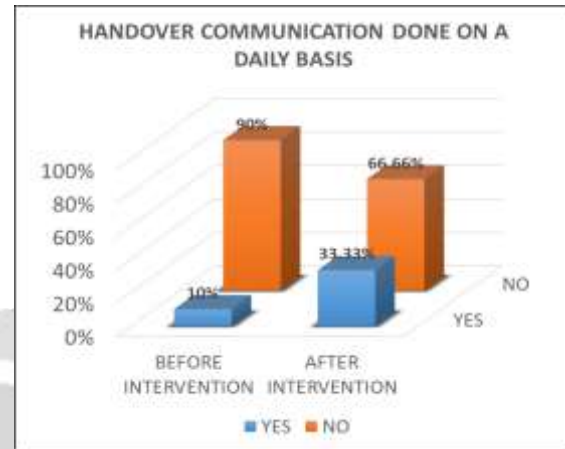

Chart -1: Handover communication.

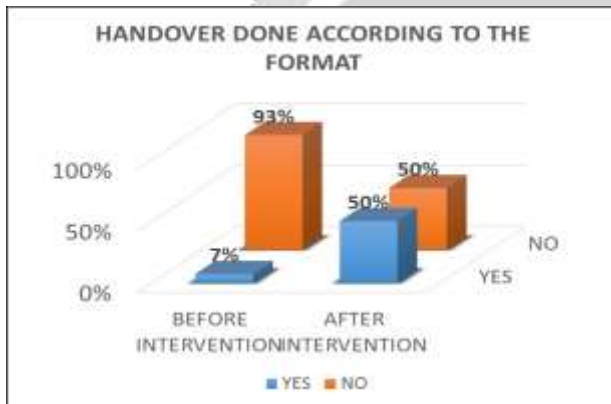**Chart -2**: Handover communication, daily basis.

Chart -3: Handover done according to format.

Chart -4: Completion of Handover form.
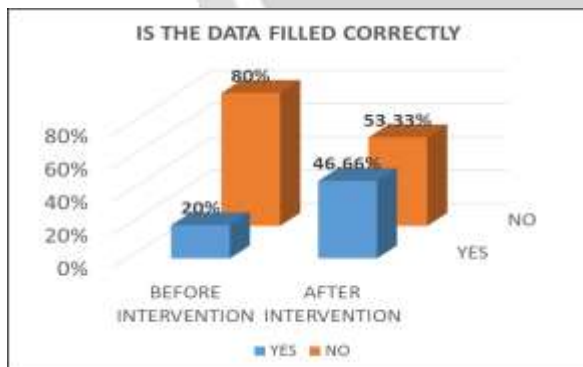

Chart -5: Data filled correctly.

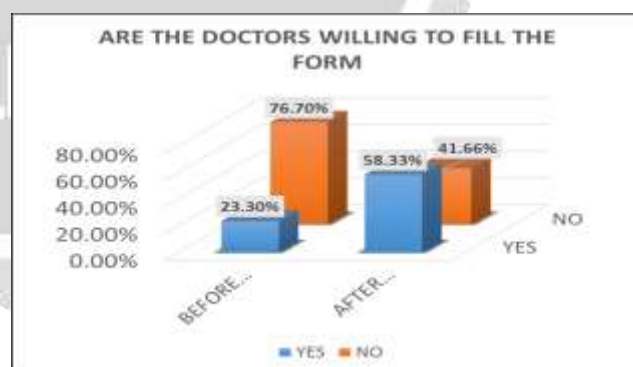**Chart -6**: Doctors willingness to fill the form.

Chart -7: Area wise handover compliance.   **Chart -8**: Overall compliance.

5. CONCLUSION

Handover communication is very important patient safety goal. In the shift data which were studied, the handover communication was observed to be very low. The handover communication was done verbally than in written. The Doctors were not willing to do written handover in a format. The Handover communication was not including SBAR- Situation, Background, Assessment, Recommendation. Hence an intervention to improve the compliance of handover communication to 75 % was planned in consultation with Head of Quality and Medical Superintendent. A meeting was done with quality head and medical superintendent to inform the doctors the importance of handover communication in relation to patient safety and quality of care. Finally, after the intervention it was found that the handover communication was improved and the target of 75% was achieved. Handover communication form filled on daily basis and system of digitalized daily reporting of handover communication form to Medical Superintendent was implemented.

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ANNEXURE

Handover Communication Form

ICU HANDOVER FORM:			
Handover Given By:		Handover Received By:	
Doctor Name		Doctor Name	
Date		Date	
Time		Time	

FLOORS HANDOVER FORM:			
Handover Given By:		Handover Received By:	
Date		Date	
Time		Time	

Identify	Situation	Background	Assessment	Recommendation
Name, Room No., Doctor Department UID NO.	Diagnosis, Patients Present Condition, Medical Mgt., Mental capacity	Past Medical History	Allergy, VTE, Vitals	Continue medicine with, Comments