

Root Cause Analysis on Errors in Patient Identification Process in a Multi Speciality Hospital

By

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Internship Training

At

Shree Siddhi Vinayak Hospital , Bhilwara

**“ROOT CAUSE ANALYSIS ON ERRORS IN PATIENT IDENTIFICATION
PROCESS IN A MULTI SPECIALITY HOSPITAL”**

By

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Under the guidance of

Dr. Sandesh Sharma

MBA Hospital and Health Management

2014-2016



The IIHMR University, Jaipur

CERTIFICATE

This is to certify that the projects titled 'A study of compliance in medical records documentation of departments in Medanta The Medicity' and 'A study to analyze the waiting time and service time for EHC and creating MIS dashboards at Medanta The Medicity hospital' have been done entirely and submitted by, **Dr. Shreyansh Tripathi** a student of Masters Of Business Administration in Hospital and Health Management-19th Batch from Institute Of Health Management and Research, Jaipur.

The study projects were prepared in the internship period from 9th April, 2015 to 9th June, 2015 at Medanta The Medicity Hospital, Gurgaon, Haryana, under my guidance and supervision. This is his original work.

I wish him all success for his future endeavors.



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!! सर्वे भवन्तु सुखिनः !!

श्री सिद्धि विनायक हॉस्पिटल

(मल्टी स्पेशलिटी हॉस्पिटल)



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TO WHOM SO EVER IT MAY CONCERN

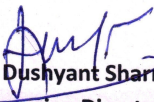
This is to certify that Dr.Shreyansh Tripathi has completed his training in Shree Siddhi Vinayak Hospital (A Unit of Shree Siddhi Vinayak Hospicare Pvt.Ltd.), Tilak Nagar, Kota Road, Bhilwara , Rajasthan as Management Trainee in the department of Medical Quality from 10th February 2016 to April 30th, 2016 and has successfully completed his project on

“A Root Cause Analysis on the errors in the patient identification process in the hospital”.

During his training he was part of hospital set up and was reporting to Mr.Tushar Bhatnagar (Corporate manager) He came across as a committed, sincere & diligent person who has a strong drive and zeal for learning.

We wish him all the best in his future endeavors.

For Shree Siddhi Vinayak Hospital


Dr. Dushyant Sharma
(Managing Director)

डॉ. दुष्यन्त शर्मा
चिकित्सालय अधीक्षक
श्री सिद्धि विनायक हॉस्पिटल
कोटा रोड, तिलक नगर, भीलवाड़ा

भ्रूण लिंग परीक्षण करवाना जघन्य अपराध है तथा इसकी शिकायत 104 टोल फ्री सेवा पर की जा सकती है

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Abstract:

Root cause analysis (RCA) is a method of problem solving that tries to identify the root causes of faults or problems.

A root cause is a cause that once removed from the problem fault sequence, prevents the final undesirable event from recurring

RCA practices solve problems by attempting to identify and correct the root causes of events, as opposed to simply addressing their symptoms.

Focusing correction on root causes has the goal of preventing problem recurrence.

RCFA (Root Cause Failure Analysis) recognizes that complete prevention of recurrence by one corrective action is not always possible.

Conversely, there may be several effective measures (methods) that address the root causes of a problem. Thus, RCA is an iterative process and a tool of continuous improvement

RCA is typically used as a reactive method of identifying event(s) causes, revealing problems and solving them.

Analysis is done *after* an event has occurred. Insights in RCA may make it useful as a preemptive method. In that event, RCA can be used to *forecast* or predict probable events even *before* they occur

ACKNOWLEDGEMENT

I extend my sincere gratitude to **Mr Tushar Bhatnagar (Corporate Manager)** ,who has been my mentor for the summer internship program & has been instrumental in helping me shape this study in a desirable way and for giving me the opportunity to do this study and undergo the process of learning at **SHREE SIDDHI VINAYAK HOSPITAL, BHILWARA (RAJASTHAN)** . I thank him for all the trust and faith he posed in me and I only hope that I have been able to live up to his expectations. His guidance and support was helpful in enhancing my work.

I would also like to thank **Dr Dushyant Sharma (Managing Director)** and **Dr Rekha Sharma** for supporting my work all along.

Last but not the least; I would like to thank the entire **staff of SHREE SIDDHI VINAYAK HOSPITAL, BHILWARA (RAJASTHAN)** for their support and guidance.

I would like to express my sincere thanks to **Dr. S.D. Gupta (President IIHMR)**, Retd Col.**Dr. Ashok Kaushik (Dean)**, **Dr. Sandesh Sharma (Guide)** and all the faculty members of IIHMR for the proper guidance and cooperation extended by them. I am also grateful to my parents, my family and my friends for giving me moral support.

However, I accept the sole responsibility for any possible error of omission and would be extremely grateful to the readers of this project report if they bring such mistakes to my notice.

Date – May 5th 2016 Dr. Shreyansh Tripathi

MBA HM-19

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PREFACE

Dissertation is an integral part of MBA-HM curriculum. For the partial fulfillment of the requirements of the curriculum each student has to join an organization for the period of dissertation and complete their assigned project for submission of their final Thesis.

The major objectives of the Dissertation programme are as follows:

- 1) To understand and learn day to day operational management of a Hospital / Health Care Organization and its service centers.
- 2) To study identified issues/ problems associated with some specific operational area / programme .
- 3) To acquire more knowledge on roles and responsibilities of key players and stakeholders in the hospital. To understand various functions in hospital by interactions with key stakeholders, policy makers, academicians and researchers.
- 4) To work on the project/task assigned by the organization.

During the dissertation period, I had an **Overview of various departments of the hospital**. I also carried out a study titled **“Root cause analysis on errors in patient identification process in a multi speciality Hospital”**

The aim of the study was to understand the discharge process of an organization and to identify the possible points of delay in discharge process and then suggesting steps to improve the discharge process as well as decreasing the overall discharge time of the hospital.

ABOUT THE ORGANISATION

We at Shree Siddhi Vinayak Hospital believe that the core values of excellence, respect, teamwork, integrity and caring are essential for the well being and this is evident in the vision and mission of our hospital.

VISION:

“Shree Siddhi Vinayak Hospital will strive with excellence to fulfill the needs of the community in its chosen field of medical treatment”

MISSION:

"To serve patients suffering from diseases, through an efficient technology and human expertise, in a caring and nurturing environment with the respect for human dignity and life."

“sarve bhavantu sukhinah”

We believe in setting the best practice standards in our services, continuously improving performance and exceeding the expectations of our patients as well as their families.

We believe in:

- Training and developing the best human resource as the key to deliver superior patient service.
- Consistently investing in technology and infrastructure to match the benchmarks..
- Continuously educating the community about the prevention of cardiac disorders.

The Journey:

Shree Siddhi vinayak hospital is a hundred bedded multi speciality hospital located in the heart of Bhilwara. It encompasses modern healthcare facilities and state of art

technology dedicatedly supported by a committed staff that brings to fore our broad health care system. As per MD Dr.Dushyant Sharma, our hospital is a continuous commitment to Quality human care, which truly reflects our motto “sarve bhavantu sukhinah”. Being a center of medical excellence where technology meets international norms and standard we have got what it takes to be a Pioneering Quality Health care institute that is also one of the most sought after and “Patient Friendly Hospital”

The Hospital boasts of a cardiac ambulance service committed to provide patients with the highest level of Medicare and comfort during transport. The new air suspension technology of the vans, state of art medical equipment for monitoring and sound management of life threatening emergencies and also it helps reduce risk and provide critical care at the time of an emergency.

Spacious wards and pleasant ambience coupled with scenic view from all floors, the trendy cafeteria with calming interiors and nutritious food helps ease the stress of the relatives of patients, the 24-hours Chemist Shop has readily available supply of drugs and medicines for the convenience of patient's relatives.

Our excellent nursing staff and patient friendly atmosphere helps the patient to recuperate faster and better.

The hospital owes a Cath lab, a modular OT with laminar air flow and HEPA filters for coronary Bypass surgeries, Coronary Angioplasty and other special surgeries.

They are having 4 bedded ICU including cardiac, surgical, Medical, neonatal and pediatric ICU.

The citizens of south east Rajasthan could now avail multi speciality medical care in the areas of

Neurology, Neurosurgery, Orthopaedics, Minimal Access Surgery and Critical care

Besides other specialities like Urology, Nephrology, Medical and Surgical Oncology, Endocrinology, Gynaecology, Paediatrics, Emergency Care and Preventive Healthcare, in Bhilwara itself rather than having to go westwards.

Various departments in the hospital are :

Clinical Services:

- 24-hour Accident & Emergency Services
- Anesthesia
- Cardiology
- Cardiothoracic Surgery
- Dermatology
- Endocrinology
- ENT
- Gastroenterology
- General & Laparoscopic Surgery
- Health Check-Ups
- Internal Medicine
- Medical Oncology
- Nephrology
- Neurology
- Neurosurgery
- Obs. & Gynaecology
- Ophthalmology
- Orthopaedics
- Paediatrics
- Psychiatry & Psychotherapy
- Respiratory Medicine
- Urology

Critical Care Unit

- Cardiac Intensive unit
- Surgical intensive care unit
- Neonatal Intensive care unit
- Intensive Cardiac care unit

Diagnostic Services

- Laboratory (Pathology, Microbiology)
- Radiology (MRI Service delivery at SRL Diagnostic centre)

Therapeutic services

- Clinical consultation services
- Clinical inpatient service
- Operation theatres
- Labor room
- Digital Cath Lab
- Dialysis Unit
- Bronchoscopy
- Endoscopy
- ECG, Echo, TMT, EEG, EMG, PSG, Spirometry

Ambulatory Care Area

- Outpatient services
- Emergency services
- Pharmacy services (IP- 24 Hrs, OP Pharmacy)

Auxiliary Services

- Dietary services
- Central Sterile and Supplies Department
- Stores (general, medical) & Sub stores
- Housekeeping
- Security
- Medical record department
- Hospital Management Information System
- Administrative Office
- Ambulance & Non ambulances

INTRODUCTION:

Root cause analysis (RCA) is a method of problem solving that tries to identify the root causes of faults or problems. A root cause is a cause that once removed from the problem fault sequence, prevents the final undesirable event from recurring. A causal factor is a factor that affects an event's outcome, but is not a root cause. Though removing a causal factor can benefit an outcome, it does not prevent its recurrence for certain.

RCA practice solve problems by attempting to identify and correct the root causes of events, as opposed to simply addressing their symptoms. Focusing correction on root causes has the goal of preventing problem recurrence. RCFA (Root Cause Failure Analysis) recognizes that complete prevention of recurrence by one corrective action is not always possible.

Conversely, there may be several effective measures (methods) that address the root causes of a problem. Thus, RCA is an iterative process and a tool of continuous improvement.

RCA is typically used as a reactive method of identifying event(s) causes, revealing problems and solving them. Analysis is done *after* an event has occurred. Insights in RCA may make it useful as a preemptive method. In that event, RCA can be used to *forecast* or predict probable events even *before* they occur. While one follows the other, RCA is a completely separate process to Incident Management.

Root cause analysis is not a single, sharply defined methodology; there are many different tools, processes, and philosophies for performing RCA. However, several very-broadly defined approaches or "schools" can be identified by their basic approach or field of origin: safety-based, production-based, process-based, failure-based, and systems-based.

- Safety-based RCA descends from the fields of accident analysis and occupational safety and health.

- Production-based RCA has its origins in the field of quality control for industrial manufacturing.
- Process-based RCA is basically a follow-on to production-based RCA, but with a scope that has been expanded to include business processes.
- Failure-based RCA is rooted in the practice of failure analysis as employed in engineering and maintenance.
- Systems-based RCA has emerged as an amalgamation of the preceding schools, along with ideas taken from fields such as change management, risk management, and systems analysis.

Despite the different approaches among the various schools of root cause analysis, there are some common principles. It is also possible to define several general processes for performing RCA.

General Process for performing and documenting an RCA:

RCA (in steps 3, 4 and 5) forms the most critical part of successful corrective action, because it directs the corrective action at the true root cause of the problem. Knowing the root cause is secondary to the goal of prevention, but without knowing the root cause, it is not possible to determine what an effective corrective action for the defined problem would be.

1. Define the problem or describe the event factually. Include the qualitative and quantitative attributes (properties) of the harmful outcomes. This usually includes specifying the natures, the magnitudes, the locations, and the timing of events.
2. Gather data and evidence, classifying it along a timeline of events to the final failure or crisis. For every behaviour, condition, action, and inaction specify in the "timeline" what should have been done when it differs from what was done.
3. Ask "why" and identify the causes associated with each step in the sequence towards the defined problem or event. "Why" is taken to mean "What were the factors that directly resulted in the effect?"
4. Classify causes into causal factors that relate to an event in the sequence and root causes that if eliminated, can be agreed to have interrupted that step of the sequence chain.

5. Identify all other harmful factors that have equal or better claim to be called "root causes." If there are multiple root causes, which is often the case, reveal those clearly for later optimum selection.
6. Identify corrective action(s) that will with certainty prevent recurrence of each harmful effect, including outcomes and factors. Check that each corrective action would, if pre-implemented before the event, have reduced or prevented specific harmful effects.
7. Identify solutions that, when effective, and with consensus agreement of the group, prevent recurrence with reasonable certainty, are within the institution's control, meet its goals and objectives and do not cause or introduce other new, unforeseen problems.
8. Implement the recommended root cause correction(s).
9. Ensure effectiveness by observing the implemented recommendation solutions.
10. Identify other methodologies for problem solving and problem avoidance that may be useful.
11. Identify and address the other instances of each harmful outcome and harmful factor.

The investigation of adverse events can be decomposed into a number of different activities; For example, data must be collected about the events that led to a mishap. Interviews and the analysis of data logs and charts provide the information that is necessary to understand what happened. Elicitation techniques may also extend more widely into the organizational and managerial context in which an incident occurred. Together these different sources of information can contribute to our understanding of why there was an accident or near-miss. Any causal analysis, in turn, helps to guide the identification of recommendations that are ultimately intended to minimize the likelihood of any future recurrence. It is important to stress that these different activities often overlap so that, for instance, it is often necessary to gather additional evidence to support particular causal hypotheses. Similarly, the identification of potential recommendations often forces analysts to reconsider their interpretation of why an adverse event occurred.

The "US Joint Commission on Accreditation of Healthcare Organizations (2004)" identifies similar stages when it argues that a "meaningful improvement in patient safety" is dependent upon:

1. Identification of the errors that occurs.
2. Analysis of each error to determine the underlying factors -- the "root causes" --that, if eliminated, could reduce the risk of similar errors in the future.
3. Compilation of data about error frequency and type and the root causes of these errors.
4. Dissemination of information about these errors and their root causes to permit health care organizations, where appropriate, to redesign their systems and processes to reduce the risk of future errors.
5. Periodic assessment of the effectiveness of the efforts taken to reduce the risk of errors.”

Previous Studies of Causation in Healthcare Incidents:

Chassin and Becher's (2002) study of an individual incident has been supported by more sustained studies into the causes of adverse healthcare events. For example, VanVuuren's (19XX) study of Intensive Care, Accident and Emergency and Anaesthesia related incidents in UK hospitals found that poor communication was a major factor amongst the many organization issues that contributed to adverse events. A recent investigation into the causes of near miss incidents in an Edinburgh Intensive Care Unit also focussed on organisational factors, including poor communication between healthcare professionals (Busse and Johnson, 1999). This study was based on over ten years of incident data that was collected by a consultant, Dr David Wright. Over the lifetime of the reporting system, a study of the human factors literature together with operational experience were used to inform a classification scheme for adverse events. Each report was analyzed to identify 'causes', 'contributory factors', and 'detection factors'. 'Causes' included human error and equipment failure. Incidents involving human error were further associated with particular tasks, such as "vascular lines related", "drugs-administration-related" or "ventilator-related". Contributory factors included: inexperience with equipment; shortage of trained staff; night time; fatigue; poor equipment design; unit busy; agency nurse; lack of suitable equipment; failure to check equipment; failure to perform hourly check; poor communication; thoughtlessness; presence of students/teaching; too many people present; poor visibility/position of equipment; grossly obese patient; turning the patient; patient inadequately sedated; lines

not properly sutured into place; intracranial pressure monitor not properly secured; endo tracheal tube not properly secured; chest drain tube not properly secured and naso gastric tube not properly secured. Finally, incidents were analyzed to identify detection factors. This illustrates an important issue. It can often be difficult to entirely remove the potential for adverse events; especially when healthcare professionals rely on information and services from other groups and individuals. In such circumstances, it is particularly important to strengthen those detection factors that have successfully identified potential adverse events in the past.

Literature Review:

Root Cause Analysis for beginners- James J. Rooney, Lee Vanden Heuvel:

In this Paper the authors define root cause analysis and how to perform it from a beginners perspective and also illustrate its importance in various sectors. According to them Root cause analysis is a process designed for use in investigating and categorizing the root causes of events with safety, health, environmental, quality, reliability and production impacts. Simply stated RCA is a tool designed to help not only what and how an event occurred but also how it occurred. The authors went on to explain about the root causes which are underlying causes which are reasonably identifiable and can be controlled by management. The authors also explained the process of performing Root cause Analysis as data collection, cause charting, root cause identification, recommendation generation and Implementation.

The development of an incident analysis tool for medical field- W. Van Vuuren, T.W. Vanderschaff and C.E. Shea:

In this study of Intensive Care, Accident and Emergency and Anaesthesia related incidents in UK hospitals the authors found that poor communication was a major factor amongst the many organization issues that contributed to adverse events. In this paper they first briefly describe PRISMA, an incident approach originally developed in the chemical process industry. Following this, the experiences of the first PRISMA applications in the medical field are outlined, leading to some important differences

between the medical field and industry for the development of the medical version of PRISMA .Finally, the medical version of PRISMA is described in detail. Some first validation results are reported, and further developments are outlined.

Human Error in an Intensive Care Unit - A Cognitive Analysis of Critical Incidents- D. K. Busse, C. W. Johnson:

In this recent investigation into the causes of near miss incidents in an Edinburgh Intensive Care Unit also focussed on organizational factors, including poor communication between healthcare professionals (Busse and Johnson, 1999). This study was based on over ten years of incident data that was collected by a consultant, Dr David Wright. Over the lifetime of the reporting system, a study of the human factors literature together with operational experience were used to inform a classification scheme for adverse events Each report was analyzed to identify ‘causes’, ‘contributory factors’, and ‘detection factors’. ‘Causes’ included human error and equipment failure. Incidents involving human errors were further associated with particular tasks, such as "vascular lines related", "drugs-administration-related" or "ventilator-related".

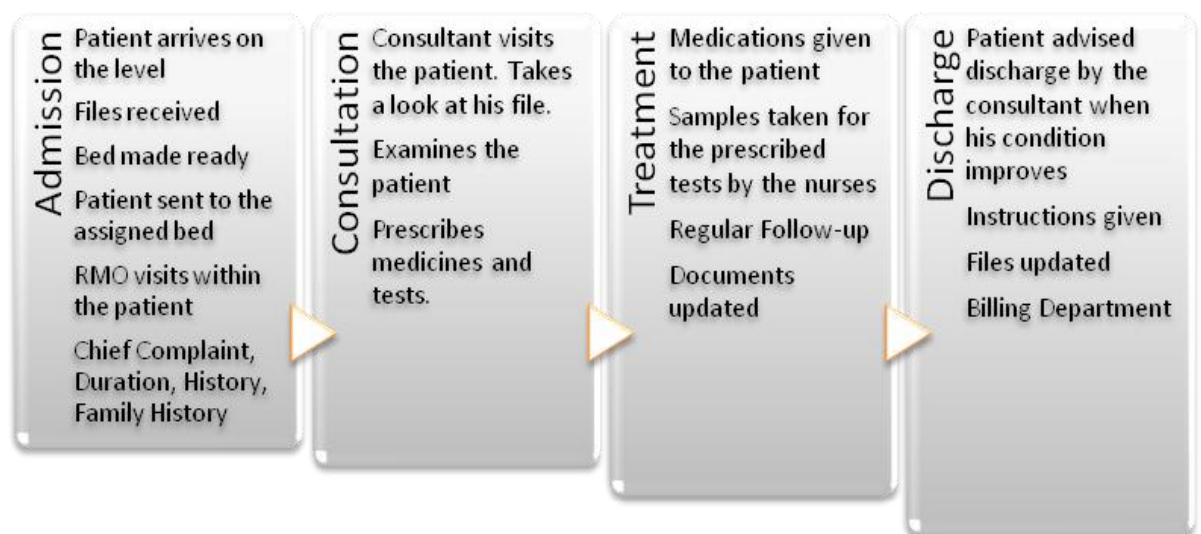
The Wrong Patient- Mark R. Chassin, MD, MPP, MPH, and Elise C. Becher, MD, MA:

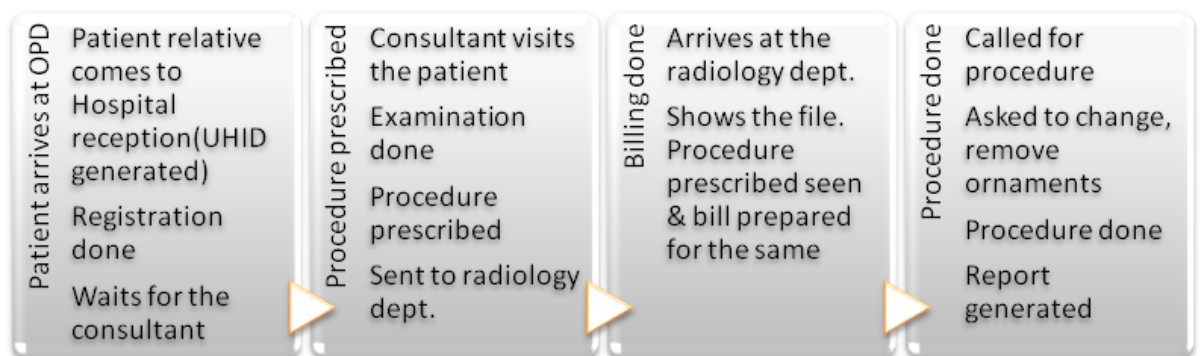
According to the authors among all types of medical errors, cases in which the wrong patient undergoes an invasive procedure are sufficiently distressing to warrant special attention. Nevertheless, institutions underreport such procedures, and the medical literature contains no discussions about them. This article examines the case of a patient who was mistakenly taken for another patient's invasive electrophysiology procedure. After reviewing the case and the results of the institution's "root-cause analysis," the discussants discovered at least 17 distinct errors, no single one of which could have caused this adverse event by itself. The discussants illustrate how these specific "active" errors interacted with a few underlying "latent conditions" (system weaknesses) to cause harm. The most remediable of these were absent or misused protocols for patient identification and informed consent, systematically faulty exchange of information among caregivers, and poorly functioning teams.

Root cause analysis is as useful and perhaps even more efficacious in the near-miss scenario. The technique is applicable not only to laboratory medicine but to all health care-associated disciplines. A root cause analysis should be performed as soon as possible after the error or variance occurs. Otherwise, important details may be missed. All of the personnel involved in the error must be involved in the analysis. Without all parties present, the discussion may lead to fictionalization or speculation that will dilute the facts. Asking for this level of involvement may cause staff to feel hostile, defensive, or apprehensive. Managers must explain that the purpose of the root cause analysis process is to focus on the setting of the error and the systems involved. Managers should also stress that the purpose of the analysis is not to assign blame. The comfort level with the technique increases with use, but the analysis will always be somewhat subjective.

Root cause analysis is a valuable management tool that can be readily learned by managers as well as frontline personnel. It can be conducted at several levels of depth and complexity. As shown in the safety case, this technique has moved us beyond comforting the employee after the event and reminding her to be careful—which is what we might have done in the past. The approach has helped us make meaningful changes. We have developed protocols related to cleaning and the handling of sharps. We have set the stage for reducing error.

Processes and sub processes of the various departments:





RESEARCH QUESTIONS:

1. What causes error in the patient identification?
2. What improvements need to be done in the process to reduce the errors?

OBJECTIVES:

1. To analyze the existing filters for patient identification process.
2. Department wise process analysis to identify single point weakness or the loop holes.
3. To identify errors in each of the process.
4. To provide possible solutions to overcome patient identification errors.
5. To analyze the patient identification process of the hospital and find out the challenges at each step of the process .
6. To suggest strategies to reduce errors in the process, if required.

METHODOLOGY:

☉ Departmental process review for the following departments :

1. Radiology
2. Customer care
3. Wards

☉ Observation of the common identification errors.

- ☉ Potential errors analyzed after the departmental process review and physical observation.
- ☉ Study area: Shree Siddhi Vinayak Hospital, Bhilwara
- ☉ Study respondents: Nurse, customer care staff, duty doctors and staff of the radiology department.

☉ Sampling :

1. This is a cross sectional study. (patient identification in the wards, customer care department and radiology department)
2. Process mapping was done and patients' records were followed and the existing process was reviewed.
3. Review of the current patient identification process was done.

Methods of Data collection:

- ☉ Process mapping
- ☉ Observation
- ☉ Informal Interviews (Nurses, customer care in-charge, Duty Doctors and radiology technician)

Tools of data collection:

- ⦿ Datasheet for RCA
- ⦿ FMEA data sheet

ETHICAL CONSIDERATIONS:

- The data collected from the records will be kept confidential and anonymous
- The anonymity, privacy and confidentiality of the respondents will be ensured
- Written Informed consent will be taken from the respondents wherever needed.
- The data collected will only be used for research purposes.

DATA ANALYSIS :

Failure Mode: First Evaluate failure mode before determining potential causes	Potential Causes		Scoring			Decision Tree Analysis		
			Severity	Occurrence	Detectability	RPN score (S*O*D)	Existing Control Measure ?	Single Point Weakness?
1.IP sticker with wrong details	1a	customer care executive is unaware of the actual spelling	1	1	1	1	Y	Y
	1b	customer care executive preoccupied	4	2	2	16	Y	Y
	1c	error in the personal computer	1	2	2	4	Y	Y
	1d	typing mistake	3	3	2	18	Y	Y
2. Wrong discharge slip issued	2a	executive was preoccupied	5	2	1	10	Y	Y
	2b	confusion regarding the patient details	4	1	1	4	Y	Y
	2c	exchange of discharge slips	1	1	1	1	Y	Y
3. Wrong blood sample taken	3a	sticker placed after the collection	5	2	2	20	Y	Y
	3b	sample collected in the wrong bottle	5	2	2	20	Y	Y
	3c	nursing staff preoccupied	5	3	3	45	Y	Y
4.IP stickers exchange	4a	patient's name not checked	2	3	2	12	Y	Y
	4b	staff was busy	4	2	1	8	Y	Y
	4c	received in the same condition from the ICUs	4	1	1	4	Y	Y
5.Wrong consent taken	5a	RMO preoccupied	2	3	3	18	Y	Y
	5b	Patient's file not cross checked before taking the consent	4	1	1	4	Y	Y
6.Wrong x-ray film	6b	X-ray misplaced	4	4	3	48	Y	Y
	6c	Wrong envelope taken	5	2	3	30	Y	Y
	6e	Files exchanged	5	1	3	15	Y	Y
	6f	Patient's details not checked on the x-ray by the consultant	5	3	3	45	Y	Y
7.Wrong sample collected	7a	Nurse preoccupied,patient details not checked	4	3	3	36	Y	Y
8.Bed number used for the identification of the patient	8a	UHID difficult to remember	2	3	2	12	Y	Y
	8b	IPID too long and difficult to remember	3	2	2	12	N	Y
	8c	Bed number not easy to remember	2	2	4	16	Y	Y
9.Wrong medication	9a	Patient's UHID/Name not cross checked from treatment sheet and not asked before administration of drugs	5	4	1	20	Y	Y
	9b	Medication given not keeping bed no. In mind	2	4	2	16	Y	Y
	9c	Wrong treatment sheet referred for medication	5	2	2	20	Y	Y
10.Wrong stickers placed in patient's file	10a	Carelessness(cust care)	5	2	2	20	Y	Y
	10b	IP Sticker reordered and placed in other adjacent patient file	5	2	3	30	Y	Y
11.Prescription exchanged leading to wrong medication	11a	Carelessness of the customer care	5	2	3	30	Y	Y
	11b	RMO didn't cross check name while transcribing in to treatment sheet	5	3	2	30	Y	Y
12.X-ray exchange	12a	Housekeepig involed in dispatch and receipt of x ray film rather than radiology staff and nursing.	5	5	3	75	Y	Y
	12b	Files exchanged due to carelessness	5	3	3	45	Y	Y
13.wrong patients x-ray shoot	13a	Requisition not cross checked by the technician	5	2	3	30	Y	Y
	13b	Requisition sent for the wrong patient	4	2	3	24	Y	Y
	13c	Technician did not cross check with the nursing or patient	4	2	3	24	Y	Y
14.Wrong x ray dispatched	14a	X-ray put in wrong envelope	5	3	3	45	Y	Y
	14b	X-ray received without cross checking details on film.	4	3	3	36	Y	Y
	14c	X-ray technician wrongly typed some other patients name.	3	2	3	18	Y	Y
15.Wrong report dispatched	15	Wrong report dispatched to the patient	1	1	1	1	Y	Y

ROOT CAUSE ANALYSIS:

<u>ISSUE</u>			<u>LIKELY ROOT CAUSE</u>	
DESCRIPTION	SOURCE	CRITICALITY (High/Med/Low)	DESCRIPTION	LIKELIHOOD (high/med/low)
IP sticker with wrong details	Customer Care	Low	Customer care executive is unaware of the actual spelling	Low
			Customer care executive preoccupied	Med
			Error in the personal computer	Med
			Typing mistake	Med
Wrong discharge slip issued	Customer Care	Low	Executive was preoccupied	Med
			Confusion regarding the patient details	Low
			Exchange of discharge slips	Low
	Customer Care	Med	Carelessness(customer care)	Med
			IP Sticker reordered and placed in other adjacent patient file	Med
	Customer Care	Med	Carelessness of the customer care	Med
IP stickers exchanged	Wards	Med	Patient's name not checked	Med
			Staff was preoccupied	Med
			Received in the same condition from the ICUs	Low
Wrong consent taken	Wards	Med	RMO preoccupied	Med
			Patient's file not cross checked before taking the consent	Low
Bed number used for the identification of the patient	Wards	High	UHID difficult to remember	High
			IPID too long and difficult to remember	High
			Bed number easy to remember	High

<u>ISSUE</u>			<u>LIKELY ROOT CAUSE</u>	
DESCRIPTION	SOURCE	CRITICALITY (High/Med/Low)	DESCRIPTION	LIKELIHOOD (high/med/low)
Wrong medication	Wards	High	Patient's UHID/Name not cross checked from treatment sheet and not asked before administration of drugs	High
			Medication given keeping bed no. In mind	High
			Wrong treatment sheet referred for medication	Med
Wrong stickers placed in patient's file	Radiology	High	X-ray misplaced	High
			Wrong envelope taken	Med
			Files exchanged	Low
			Patient's details not checked on the x-ray by the consultant	Med
			RMO didn't cross check name while transcribing in to treatment sheet	Med
X-ray exchanged	Radiology	High	Housekeeping involved in dispatch and receipt of x ray film rather than radiology staff and nursing.	High
			Files exchanged due to carelessness	Med
Wrong patients x-ray shoot	Radiology	Med	Requisition not cross checked by the technician	Med
			Requisition sent for the wrong patient	Med
			Technician did not cross check with the nursing or patient	Med
Wrong x ray dispatched	Radiology	Med	X-ray put in wrong envelope	Med
			X-ray received without cross checking details on film.	Med
			X-ray technician wrongly typed some other patient's name.	Med
	Lab	High	Nurse preoccupied. patient details not checked	Med

Findings:

1. Due to preoccupancy of the staff wrong stickers were placed in patient's file as a result X rays got misplaced and exchanged.
2. The housekeeping staff was involved in dispatch and receipt of films rather than the radiology staff that leads to errors in correct patient identification.
3. IP stickers were issued with wrong details, wrong discharge slips were issued as a result wrong medications were offered to the patients.

Suggestions:

1. Patient's name must be checked before the administration of drugs.
2. ID band must be checked before the patient is admitted to the ward.
3. IP sticker must be placed on the vile before the collection of the blood sample.
4. The IP sticker should not be placed on the cassette of the X-ray film. This might lead to confusion among the films and wrong x-ray film could be given to other patient.
5. Nursing staff must be regularly updated and educated about the importance of patient identification and the complications related to the misidentification of the patient.
6. Surprise audits must be conducted inorder to check the method of patient identification.

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ACRONYMS AND ABBREVIATIONS:

MR No.	Medical record no.
NRHM ward	National Rural Health Mission Ward
TPA	Third Party Assurance
OT	Operation theatre
LAMA	Left Against Medical Advice
HMIS	Hospital Management Information System
RMO	Resident Medical officer