

**QUALITY ASSURANCE OF PICU IN A 150 BEDDED
TERTIARY CARE HOSPITAL IN HYDERABAD**

**Internship Training
at
Rainbow Hospital Pvt. Ltd., Hyderabad**

**By
Ankita Sharma**

**Under the guidance of
Dr. Santosh Kumar**

**MBA Hospital & Health Management
2013–15**


**Institute of Health Management Research
Jaipur
2015**

Dissertation

At

**Rainbow Hospitals, Banjara Hills,
Hyderabad**

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TERTIARY CARE HOSPITAL IN HYDERABAD**

By

ANKITA SHARMA

Under the guidance of
Prof. Santosh Kumar
(Associate Professor The IIHMR University)

**MBA Hospital and Health Management
2013-2015**



**Institute of Health Management Research
Jaipur**

TO WHOMSOEVER MAY CONCERN

This is to certify that **Ankita Sharma** student of MBA Hospital and Health Management from The IIHMR University, Jaipur has undergone internship training at **Rainbow Hospital Pvt. Ltd., Banjara Hills, Hyderabad** from 6th March, 2015 to 29th April, 2015.

The Candidate has successfully carried out the study designated to her during internship training and her approach to the study has been sincere, scientific and analytical.

The Internship is in fulfillment of the course requirements.

I wish her success in all her future endeavors.



Col. (Dr.) Ashok Kaushik
Dean, Academics and Student Affairs
The IIHMR University, Jaipur



Dr. Santosh Kumar
Associate Professor
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April 30, 2015

TO WHOM SO EVER IT MAY CONCERN

This is to certify that **Ms. Ankita Sharma** has completed her **1 month & 23 days** of internship successfully at Rainbow Children's Hospital & Perinatal Centre, **from March 6th, 2015 to April 29th, 2015**. She has successfully completed the project on "Quality Indicators of Pediatric Intensive Care Unit & to assess the incidents reported in PICU".

Rainbow Hospital for Women and Children & Perinatal Centre is a 225 bedded state of art pediatric tertiary & Gynecology care Hospital with most modern facilities and managed by highly qualified professionals. The Hospital possesses state of art technology of international repute and is certified by **ISO - 9001 to 2008** by BSI and the first **NABH** accredited Pediatric Hospital in Andhra Pradesh. The hospital is equipped with facilities to provide level 3 Neonatal & Pediatric Intensive Care, Surgery and complex therapies including pediatric Oncology, Gastroenterology, Nephrology, Gynecology, IVF, Fetal medicine & other sub-specialties.

She was found to be co-operative, punctual during her tenure with us.

Wishing good luck for all her future endeavors.

Yours truly,

for **Rainbow Children's Medicare Pvt. Ltd.**


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Senior Manager - Human Resources

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CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled Quality Assurance of PICU in a 150 Bedded Tertiary Care Hospital in Hyderabad, submitted by Ankita Sharma Enrollment No 1415 under the supervision of Dr. Santosh Kumar (Associate Professor, The IIHMR University) for award of MBA Hospital and Health Management of the university carried out during the period from 6th March, 2015 to 29th April, 2015 embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.



Signature

ACKNOWLEDGEMENT

I would like to express my sincere thanks and gratitude to Rainbow Hospitals, Banjara Hills, Hyderabad, for allowing me to complete my project in the facility.

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Sincere thanks to all the staff at all levels for helping me at each and every step of my work. Heartiest gratitude to them for making my stay and work at this place a memorable one. Last, but not the least, I am thankful to **Dr. Ramesh Kancharla**, Managing Director Rainbow Hospitals for involving me in some of new initiatives and designing of future plans for the hospital.

Thanks to one and all

Ankita Sharma

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Abstract

Quality Assurance of PICU in a 150 Bedded Hospital in Hyderabad

Author: Ankita Sharma

Background: Quality indicators provide insight in the structure and process aspects of care that are related to outcome that serve as instruments to improve health care. Thus, it is important to identify ways of more efficiently managing Pediatric Intensive Care Unit and reducing the variation in patient outcomes.

Aim: Quality Assurance of PICU in a 150 bedded Tertiary Care Hospital in Hyderabad

Objective

- To identify level of care provided on a time scale. Trend analysis of such data helps in quantifying the standard of care offered in the same setup and compares the same with selected benchmarks.
- To analyze the incidents reported.

Methodology: The study is an analytical study. Primary data was collected from PICU department in the hospital. Secondary data was collected by studying relevant records in the Hospital.

Limitations

- Very common parameters have been selected in this report.
- Stress has been given on mortality, morbidity, infection and safety of patients.

Result and Conclusion: The study shows that the errors and the patient safety when assessed showed results lesser than the international benchmarks but re-intubation rate were found to be higher than the benchmark i.e., 15%. Process indicators such as length of ICU stay was found to be 4.08 days, duration of mechanical ventilation 1.55 days for the month of April. The outcome indicators showed good results, i.e., mortality rate was 3.48% for March. After Root Cause Analysis it was found that errors that took place were due to lack of knowledge or lack of qualification of nursing staff.

Investigator's Suggestions: Non-invasive positive pressure ventilation (NPPV), sedation holidays, weaning trials, avoiding re-intubation, and early tracheostomy to decrease the risk of VAP, improve the management of weaning and extubation, Provider Order Management (POM) to eliminate medication errors, Pressure relief, moisture management, and nutrition support to prevent pressure sore. Not more than 20% of junior nursing staff should be recruited.

INTRODUCTION

1.1 QUALITY INDICATORS

Indicator is a statistical data or measure to screen an event. Thus it helps in drawing attention to a particular issue and highlights potential problem so that corrective measures can be taken. Monitoring of indicators can help in evaluating quality of service in clinical setup and providing higher level of care in standardized manner.

Quality orientation is an integral part of patient care. The best possible care at the institutional level is not considered adequate in the present competitive environment. It should be visible, appreciated and comparable. Total Quality Management therefore, is essential to judge the appropriateness and effectiveness of medical care. Quality of service offered, result of intervention and treatment related processes can be analyzed to define the scope of improvement. Quality indicators help in achieving these objectives. Healthcare is becoming transparent and customer-focused. Patients and their relatives have the right to know the standard of care and its cost.

It is therefore becoming more and more mandatory for an institution to monitor quality indicators/ parameters, and compare their performance level with the national standard or international benchmarks. It gives the individual institution an opportunity to improve its quality of care through standardization of processes, procedures and treatment protocols. Unfortunately, due to a variety of reasons, performance levels are not monitored in India and therefore a national database does not exist for a meaningful comparison. Dependency on an international data base, even if not logical for Indian scenario, becomes inevitable in our strategic design and planning of the service.

In 2008, the Indian Society of Critical Care Medicine (ISCCM) had taken the initiative, at its executive body meeting, to identify quality indicators for ICU's in India, which will help ICU's in India judge their performance levels and compare them with the national database.

Quality indicators that are included in the study are:-

Table1:- Quality Indicators of PICU and its formula

Infection Control	
Ventilator Associated Pneumonia (VAP)	No. of Patients with VAP X 1000
	No. of days Mechanically
	Ventilated with endotracheal tube
Central Line Associated Blood Stream Infection	No. of Patients Central Line Associated
	Blood Stream Infection X 1000
	Total central line days
Symptomatic Urinary Tract Infection Rate	No. of urinary catheterized
	in patients developing UTI X 1000
	Total no. of urinary catheter days
Errors and Patient Safety	
Re-intubation Rate	No. of re-intubations within
	48 hours of extubation X 100
	Number of Intubations
Percentage of Transfusion Reaction	No. of blood transfusion reaction X 100
	Total number of units issued
Percentage of Medication Errors	Total no. of medication errors X 100
	No. of in patient days
Percentage of Falls	Number of fall X 100
	Total number of in patient days
Percentage of Adverse Drug Reaction	No. of adverse drug reactions X 100
	Number of discharges and deaths
Incidence of Needle Stick Injury	Total No. of needle stick injuries X 100
	Total in patient days
Percentage of unplanned Extubation	Accidental Extubation X 100
	Total number of intubations

Morbidity Parameters	
Pressure Sore Rate	$\frac{\text{Number of Pressure Ulcers} \times 1000}{\text{Number of Cases}}$
Mortality	
Mortality Rate	$\frac{\text{Number of deaths} \times 100}{\text{Number of discharges and deaths}}$
Operational or Process Parameters	
Average Length of Stay (ALOS)	$\frac{\text{Total days of ICU stay of all patients in PICU}}{\text{Total discharges / Deaths/ DAMA from PICU in same period}}$
Return to ICU within 48 hours	$\frac{\text{Number of returns to ICU within 48 hours} \times 100}{\text{Number of discharges/transfers and deaths in the ICU}}$
Average Ventilator Days	$\frac{\text{Total number of ventilator days}}{\text{Total number of patients}}$

Based on the objective of this report, common parameters with their international benchmarks have been selected to address different aspects of patient care operational issues and human resource development. Certain basic data, which as such do not reflect patient care but when used as denominators to the selected parameters, make the parameter more sensitive and meaningful. Example of these denominators are: number of admissions , total patient days in the unit(occupancy), ventilator days, central venous and arterial line days, urinary catheter days etc. In order to avoid confusion and ambiguity of interpretation, it is essential that purpose and usefulness of selected parameters must be understood by the care providers. All the selected parameters, therefore, are described under certain sub headings as given in the table no. 1.

LITERATURE REVIEW

To prevent or reduce the impact of latent adverse events (those caused by flawed systems) a system approach is required, one which not only tries to create defenses against adverse events, but also addresses the flaws in the organization that can cause them.

One such approach is called the Root Cause Analysis, a retrospective approach to error analysis, adapted by the Veterans Affairs National Center for Patient Safety in the U.S.A. Root cause analysis has been used to investigate major industrial accidents, through industrial psychology and human factors engineering where the focus is on the relationship between the person and the machine (Classen et al., 1997). It provides a structured and process-focused framework identifying system and organizational flaws that lead to adverse events (AHRQ, 2001). In 1997, the Joint Commission on the Accreditation of Healthcare Organizations in USA starting requiring accredited U.S. hospitals to use root cause analysis to investigate adverse events (AHRQ, 2001) and it has been implemented in some of the healthcare organizations in Canada as well. According to Joint Commission requirements, RCA should be thorough and credible including human and other factors closely associated with the events. It should include participation from the organization's leaders. All findings should be explained (Boyer, 2001).

Root Cause Analysis has invaluable advantages. It provides an opportunity to build cooperative relationships among physicians, nurses, and other team members. It also provides an excellent learning opportunity for health care professionals. Most importantly, though, it has the potential to help correct system flaws to prevent the recurrence of similar events (Boyer, 2001).

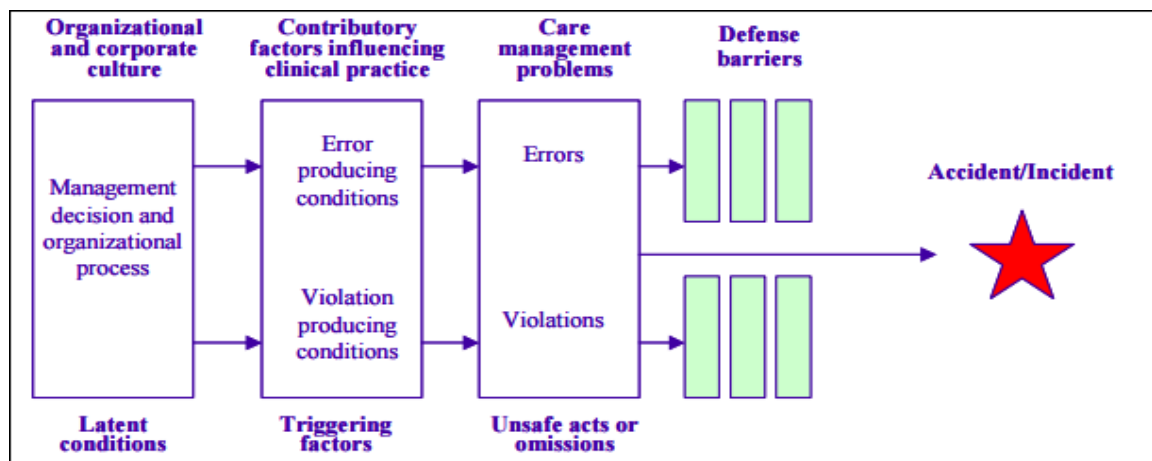


Figure 1 represents a schematic diagram of some of the issues revealed by root cause analysis.

The disadvantage of this strategy is that it requires the time and expertise of multiple specialists and may be viewed as an expensive process; however, it is seen as worth the investment when effectively performed (Boyer, 2001).

Another safety strategy borrowed from high-risk industries is the Failure Mode and Effects Analysis. This technique examines the individual components of a system to determine the ways in which each component could fail and the effect of that failure on the stability of the entire system. It is a risk-assessment guideline, done in advance to estimate the potential for mishaps. A multidisciplinary team comes together to implement the steps, which include: 1) setting up a process flow diagram; 2) re-tracking the process and simulating what can go wrong; 3) deciding how failures can affect the system, 4) ranking the possibility of an adverse event; 5) ranking the severity of adverse events; 6) ranking the likelihood of intercepting the adverse event; and 7) taking action (Fletcher, 1997).

In 2001, the Joint Commission on Accreditation of Healthcare Organizations in the U.S. selected Failure Mode and Effects Analysis as the basis for patient-safety risk assessments. Since 2003, the Commission has required health-care organizations to engage in at least one risk-assessment initiative per year, although they can choose any

risk assessment model that complies with commission standards. Some health care organizations, such as the Veterans Health Administration, have adapted failure mode and effect analysis to create their own models (Spath, 2003) and it is also recommended by the Canadian Institute for Safe Medication Practices because it ensures that plans are made for safe medication use, preventing adverse drug events that can lead to fatalities and debilitating situations (Fletcher, 1997).

In summary, Root Cause Analysis and Failure Mode and Effects Analysis help to identify fundamental system flaws, and assess each component of a system to determine the impact of a particular component failure on the entire system. These processes make it possible to create buffers to stop accidents from happening, and eventually remove error-producing conditions.

RESEARCH METHODOLOGY

AIM: Quality Assurance of PICU in a 150 bedded Tertiary Care Hospital in Hyderabad

OBJECTIVE:

- To identify level of care provided on a time scale. Trend analysis of such data helps in quantifying the standard of care offered in the same setup and compares the same with selected benchmarks.
- To analyze the incidents reported.

3.1 STUDY DESIGN

Analytical study

3.2 STUDY SETTING

Rainbow Hospital for Women and Children, Banjara Hills, Hyderabad

3.3 SAMPLE SIZE

Total sample size: 180

3.4 SAMPLING METHOD

Convenient sampling

3.5 METHOD OF DATA COLLECTION

Primary data was collected from Pediatric Intensive Care Unit.

Tools: Daily Rounds Checklist

Secondary data were collected by studying relevant records in the Hospital.

Tools: Incidence Reports Form and Quality Indicator Register in PICU

3.6 DATA ANALYSIS

Data analysis was done with the help of Graphs.

Root Cause Analysis was done in case of incidence reports

3.7 STUDY PERIOD

Data collection: March 6, 2015 to April 29, 2015

Data entry and Analysis: March 1, 2015 to April 29, 2015

Submission: April 29th 2015

FINDINGS

These findings are in conformity with the data collected by the researcher. The Quality Indicators of PICU was studied. The incidents/ accidents reported in PICU have also been studied by the researcher and various findings and percentages are calculated by her.

Table2: - PICU Statistics

Number of PICU	1
Number of Beds	15
Number of Isolated Beds	2
Occupancy per day	8
Nurse to patient ratio	1:2/1:3

Table3:- PICU Patient Record

	March	April
Total Cases	90	90
MEDICAL	83 (92.22 %)	85 (94.35 %)
SURGICAL	7 (7.77 %)	5 (5.55%)
TRANSPORT (OUTSIDE)	L-0/S-8	L-2/S-9
MORTALITY	3 (3.48 %)	5 (5.55 %)
DAMA	10 (11.11 %)	6 (6.66 %)

QUALITY INDICATORS

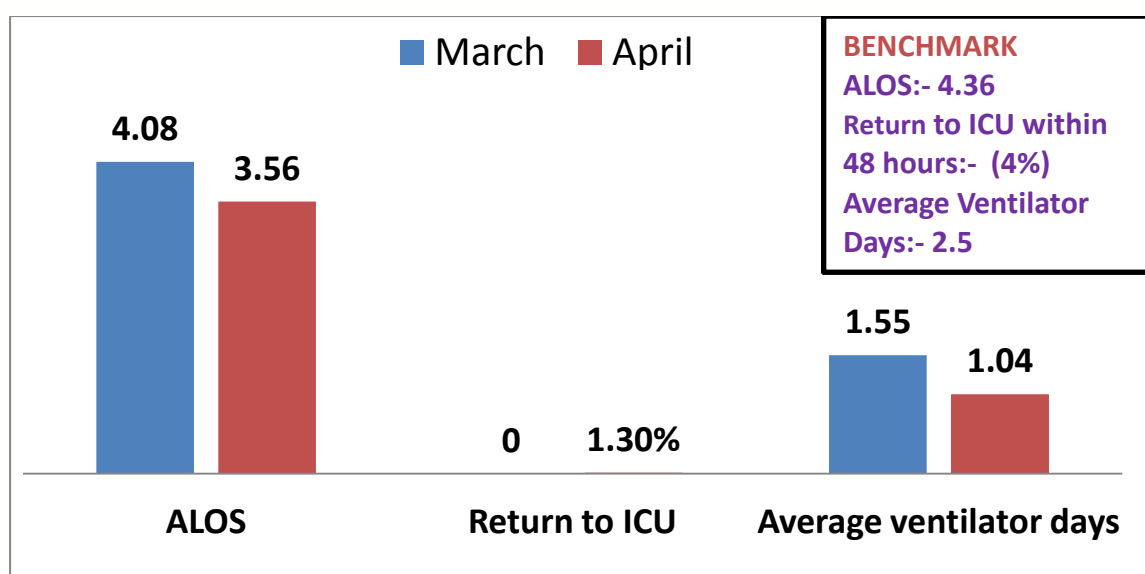
ALOS: - Total hours and days patients managed in the unit with midnight bed occupancy are more accurate than the number of calendar days a patient spends in the ICU.

Return to ICU within 48 hours: - Readmission to the ICU within 24 hrs of transfer during a single hospital stay. This is an indicator of post ICU care.

Average Ventilator Days of Intubation: -

Table4:- ALOS, Return to ICU and Average ventilator days with its source of data and type of parameter

	Source of data	Type of Parameter
Average Length of Stay (ALOS)	ICU data	Outcome
Return to ICU within 48 hours	Hospital Record	Process, Safety of Patients
Average Ventilator Days	ICU data	Outcome



Graph1:- Graph depicting percentages of ALOS, Return to ICU and Average Ventilator days.

The **Graph1** shows ALOS is 4.08 days and average ventilator days is 1.55 days for the month of March and 3.56 ALOS and 1.04 Average Ventilator days for the month of April.

ERRORS AND PATIENT SAFETY

Re-intubation Rate: - Re-intubation within 48 hours of extubation.

Medication Errors: - Medication error could be due to wrong prescription, dosing, and due to communication gap (verbal or written).

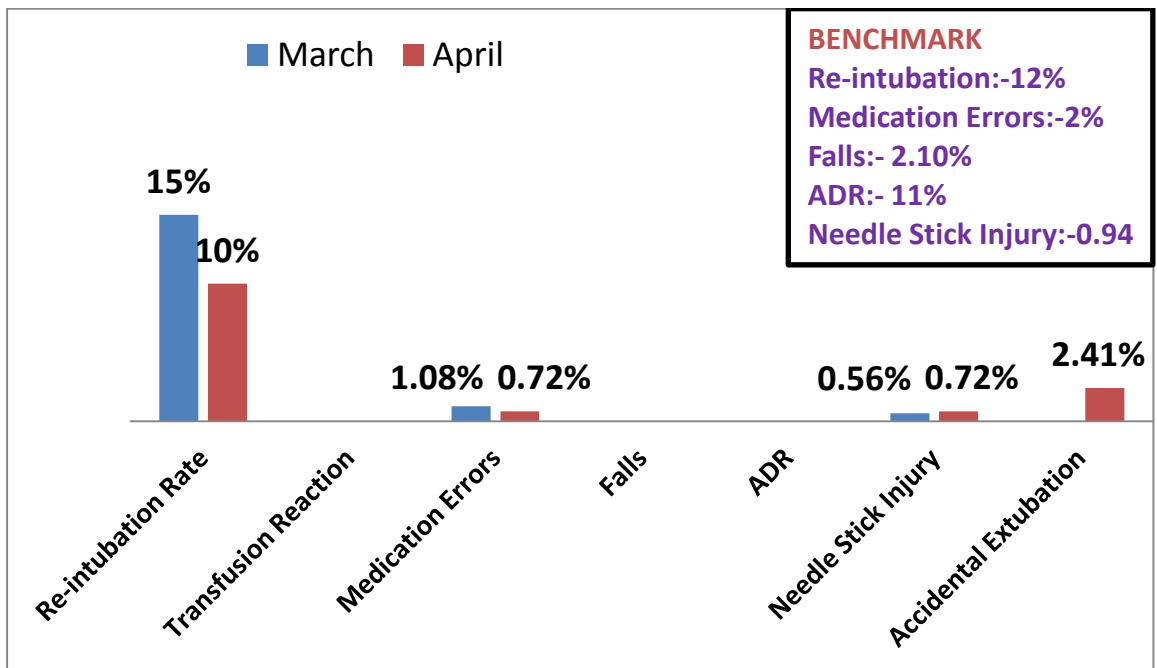
Falls: - An untoward event which results in the patient coming to rest unintentionally on the ground or on other lower surface

Adverse Drug Reaction: - Common ICU errors are related to treatment, procedure, ordering or carrying out medication orders, reporting or communication, and failures to take precautions or follow protocols.

Needle Stick Injury: - A penetrating stab wound from a needle (or other sharp objects) that may or may not be associated with exposure to blood or other body fluids.

Table5:- Errors and patient safety Quality Indicators with Sources of data and types of parameters.

	Source of data	Type of Parameter
Re-intubation Rate	ICU Record	Morbidity, Safety
Percentage of Transfusion Reaction	ICU Record	Morbidity, Safety
Percentage of Medication Errors	ICU Record	Patient Safety
Percentage of Falls	ICU Record	Safety and Morbidity
Percentage of Adverse Drug Reaction	Medical Record	Patient Safety
Incidence of Needle Stick Injury	ICU Record	Safety (Healthcare Worker)
Percentage of Accidental Extubation	ICU Record	Safety and Morbidity



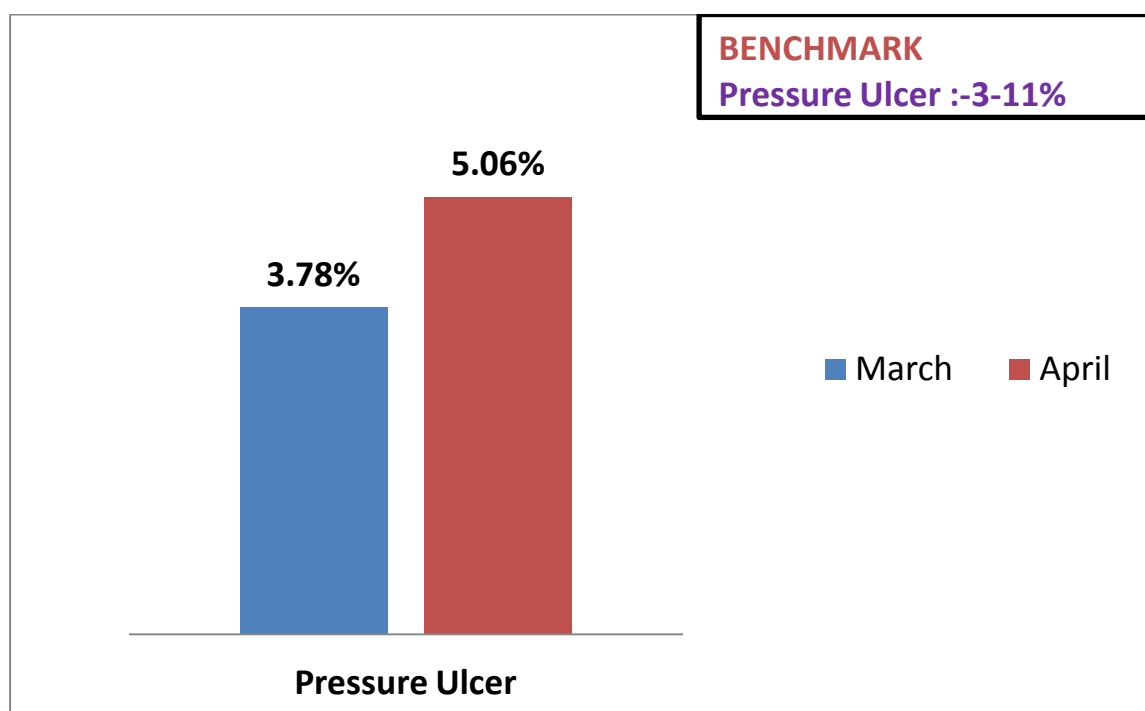
Graph 2:- Graph depicting percentages of errors and patient safety Quality Indicators.

The **Graph 2** shows the errors and the patient safety, where, Re-intubation rate is 15% higher than the benchmark.

Pressure Ulcer: - Decubitus ulcer and pressure sore are synonyms. Decubitus is derived from Latin word *decumbere*, means "to lie down. Since pressure sore can develop from other positions, it is called —Pressure sore. Prolonged uninterrupted pressure over bony prominences causes necrosis and ulceration. Depending upon tissue damage ulcers are classified in 4 stages. Stage 1 indicates superficial color change, stage 2 represents partial thickness skin loss ,Stage 3 full thickness skin loss, and stage 4 denote deep and extensive tissue damage involving muscle, tendon or bone. Hip and buttock sores represent 67% of all pressure sores.

Source of data: - Hospital Record

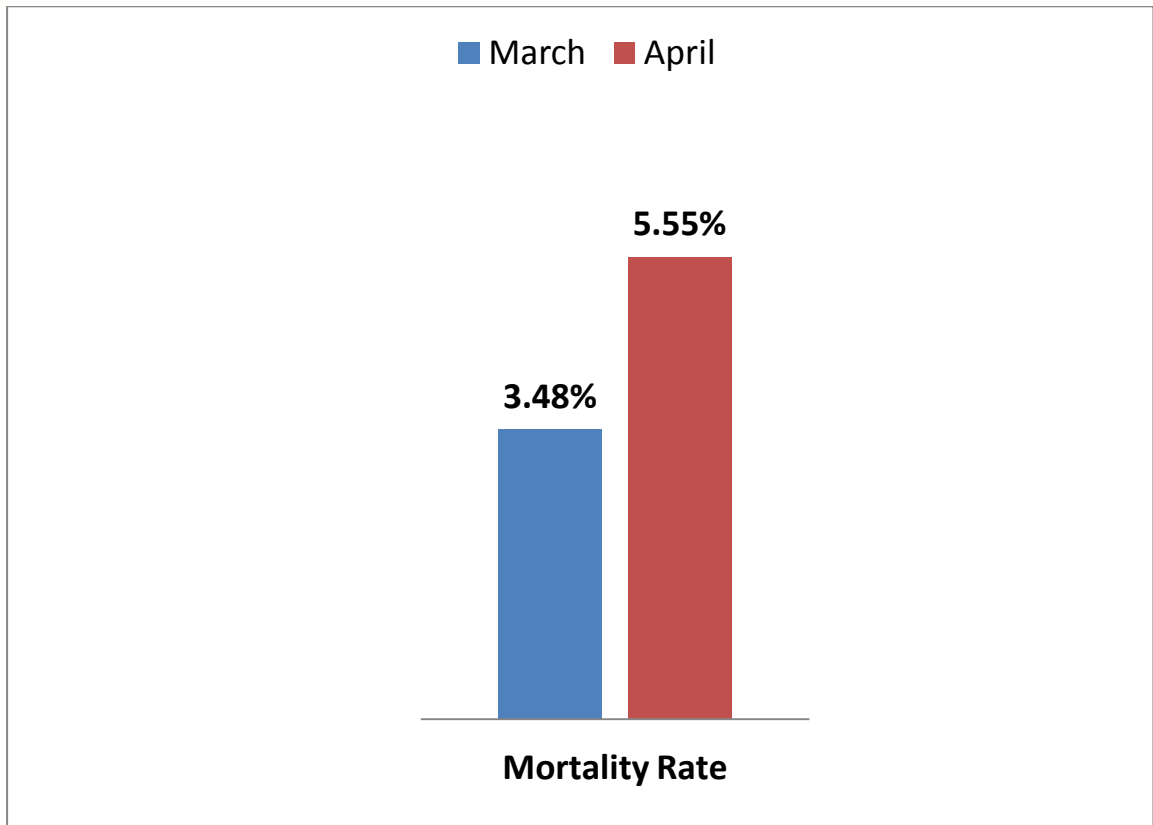
Type of Parameter: - Morbidity, Safety of Patients



Graph 3:- Graph depicting percentages morbidity parameters

The **Graph 3 shows** the morbidity parameters, where, Pressure sore rate is 3.78% and 5.06% for the month of March and April respectively, which falls under the range of benchmark.

MORTALITY RATE



Graph 4:- Graph depicting percentage Mortality.

The **Graph 4** shows the mortality rate, which is 3.48% and 5.55% for the month of March and April respectively.

INFECTION CONTROL

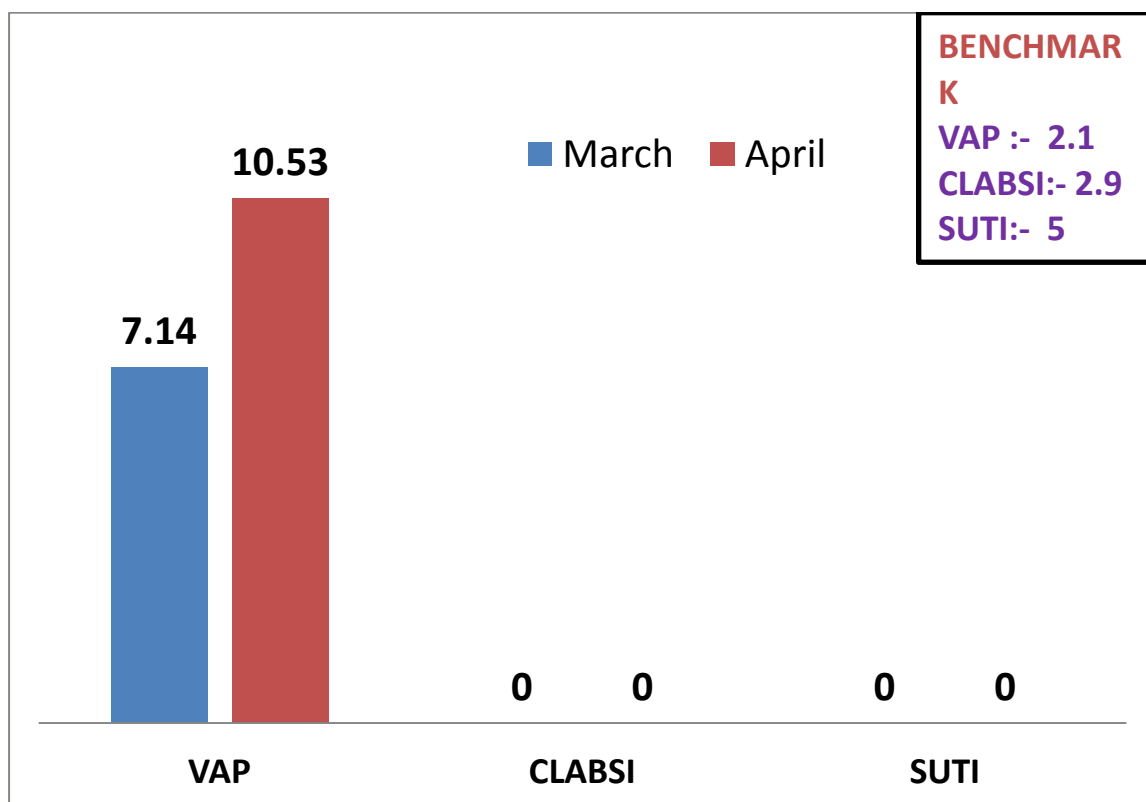
VAP: - Ventilated patient developing new opacity and also fulfilling criteria of VAP

CLBSI: - Blood stream infection rates = number of central line related BSI per 1000 central line-days.

SUTI: - Incidence of UTI per 1000 catheterized day in patients catheterized in the unit but was not infected on the day of catheterization.

Table6:- Infection Control Quality Indicators with its source of data and type of parameter.

	Source of data	Type of Parameter
Ventilator Associated Pneumonia (VAP)	Hospital Record	Infection, Outcome, Safety
Central Line Associated Blood Stream Infection	Hospital Record	Infection, Outcome, Safety
Symptomatic Urinary Tract Infection Rate	Hospital Record	Infection, Outcome, Safety



Graph 5:- Graph depicting percentages of Ventilator Associated Pneumonia, Central line associated Blood Stream Infection and Symptomatic Urinary Tract Infection Rate.

The **Graph 5** shows the Infection Control Quality Indicators in PICU, where, Ventilator Associated Pneumonia is 7.14 and 10.53 for the month of March and April respectively is higher than the benchmark.

Incidents Reported

Table9:- Incidents Reported

S.no	Type of incident	Details of Incident	Corrective action taken
1	Pressure sore	Because of C-PAP Baby is having pressure sore on the nose.	Wound cleaned and T-BAT applied. Sister told about C-PAP care and proper handover
2	Medication Error	Doctor advised to give Inj. Medazolam infusion slowly but Midazolam 5 mg given to repeated as infusion over half an hour. Wrong medication administration.	Child monitored hemodynamically and neurologically.
3	Medication Error	Instead of Ns bolus mistakenly administered NaCl.	Advised to stop 3% NaCl bolus and after 1 hour to send serum electrolytes.
4	Fall on floor	Floor was wet while entering slipped and fell down.	Changed the department of concerned Housekeeping staff.
6	Accidental removal of tube	Accidental removal of Freka tube	Reinsertion of NG tube and restrain improved.
7	Accidental removal of tube	Accidental removal of NG tube	Reinsertion of NG tube and restrain improved.
8	Pressure sore	Pressure sore on the back i.e., above the buttocks due to immobilization of child	Air bed to be arranged.
10	Pressure sore	Pressure sore on the back side of the head	Dressing was done, pressure sore care and position changed within every 2 hours.
11	Medication Error	Meropenem dose was given double the dose required	Medication started at regular dose.
12	Pressure Sore	Pressure sore in the neck region (Back side)	T Bact ointment applied and position changed
13	Pressure sore	Pressure sore on ear because of NRM mask	Prevention of bed sore and education of nurse
14	Medication Error	When Inj. Acyclovir was given a vascular eruption on left aspect of forearm	Stop the drug and change of site of cannula
15	Accidental Extubation	Accidental extubation due to excessive movement of child	Re-intubated and connected to ventilator

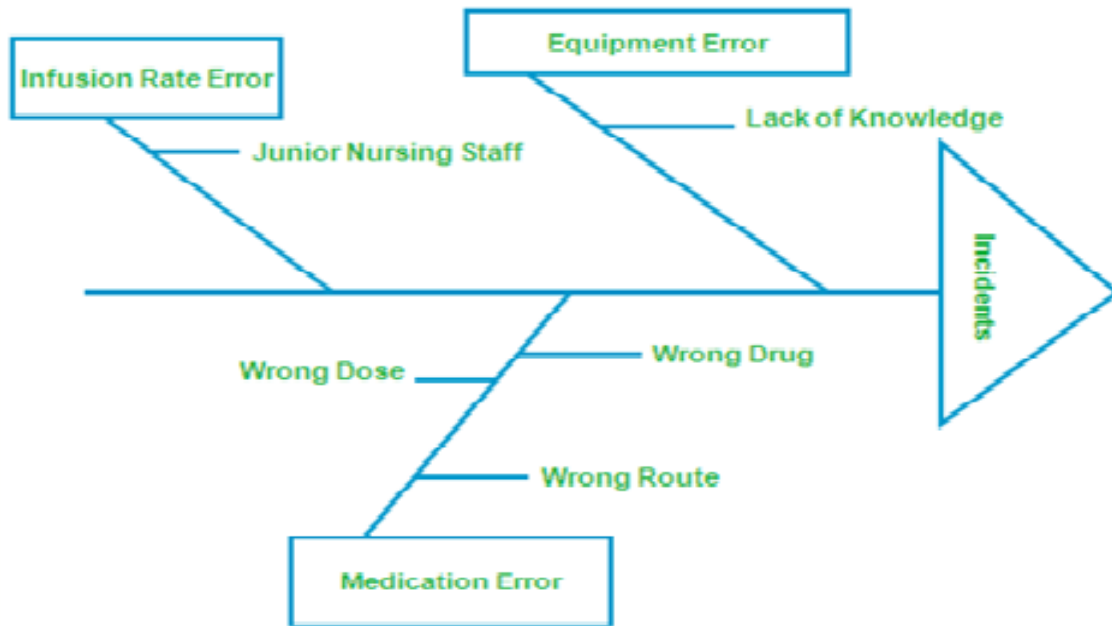


Figure2:- Root Cause Analysis of Incidence Reported

The **Figure 2** shows the Root Cause Analysis for the incidents reported

Corrective and preventive actions were taken accordingly to prevent this in future.

Through the Root Cause Analysis it was found that 60% of the nurses in PICU are junior nurses. Therefore, HR Meeting was conducted. In the meeting it was decided that not more than 20% of the junior nurses will be recruited.

Proper Education and training given to junior nursing staff.

RECOMMENDATIONS

➤ **Infection Control**

Non-invasive positive pressure ventilation (NPPV), sedation holidays, weaning trials, avoiding re-intubation, and early tracheostomy have all been studied as methods to decrease time of mechanical ventilation and therefore, decrease the risk of VAP.

➤ **Errors and patient safety**

- **Re-intubation**

Strategies for identifying patients at high risk for extubation failure are essential to improve the management of weaning and extubation.

- **Medication Error**

Provider Order Management (POM) is an electronic order system through which physicians and other providers enter orders for patient medication, diagnostic treatment and admissions. Its benefits include timely submission and implementation of orders, as well as improved accuracy for an overall increase in patient safety. In addition to eliminating medication errors due to illegible handwriting, the system screens for drug allergies, drug interactions and proper dosages. Implement computerized physician order entry systems with clinical decision support to alert doctors about drug interactions and other medication issues.

➤ **Morbidity Parameter**

- **Pressure Sore**

Pressure relief, moisture management, and nutrition support, should be instituted. Skin inspection should occur on each shift or more often in patients at risk of pressure ulcer development.

RESULT & CONCLUSION

The study shows that the errors and the patient safety when assessed showed results lesser than the international benchmarks but re-intubation rate were found to be higher than the benchmark i.e., 15%.

Process indicators such as length of ICU stay was found to be 4.08 days, duration of mechanical ventilation 1.55 days for the month of April.

The outcome indicators showed good results, i.e., mortality rate was 3.48% for March. Number of unplanned extubation was 0%.

After Root Cause Analysis it was found that errors that took place were due to lack of knowledge or lack of qualification of nursing staff.

Quality indicators act as the yard stick to measure the level of care offered in a unit over a period of time. Variation in care in the unit and among different units with similar case mix can only be done if indicators are compared on regular basis. Quality of care in ICU depends on the complex interaction between patient, machine and care providers. Process driven and protocol based management should eliminate ambiguity and ensure better outcome. Such approach is not possible unless care provided is quantified and gap between current level and desired level is assessed followed by improvement initiatives taken to bridge the gap. Selection of indicators and monitoring the same should, therefore, be considered the most vital and challenging task to bring continuous improvement in the performance level of the unit.

A multidisciplinary approach with adequate ICU personnel and staffing pattern combined with ongoing training and need based skill development and measurement of institutional outcomes is necessary to provide quality critical care.

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- <http://medind.nic.in/iad/t08/s1/iadt08s1p663.pdf>
- <http://www.ncbi.nlm.nih.gov/books/NBK2662/>
- <http://www.providence.on.ca/wp-content/uploads/2012/05/Change-Foundation-Improve-Patient-Safety.pdf>

ANNEXURES

	PICU	10 pts.
1	Doctors notes	√
2	Initial assessment done by the Doctor	√
3	Countersigned by the Consultant	
4	Drug Chart Legible	√
5	Signed by the consultant	√
6	Signed by two nursing staff	√
7	Nursing Care plan	√
8	Multi dose vail policy	
9	Narcotic policy	√
10	Emergency Drugs	√
11	Medication policy	√
12	Consents(General Consent, Surgery consent,High risk consent, Special Procedure consent	√
13	Financial Estimation sheet given to patient	
14	No of Intubations	3
15	No of Re intubated	x
16	Change of plan if any, if Yes financial counselling	x
17	PD	
18	HD	
19	Ventilator to HFO	
20	Biopsy consent	
21	Re counselled for finacial estimation and documented in doctors notes	√
22	Interview attendenders regarding re counseling of financial estimation	
23	Blood Transfusion consent	
24	Blood Transfusion Reactions if any	x
25	Medication Errors	x
26	ADR	x
27	Accidental removal of tubes	x
28	Haematoma	x
29	Bed Sore	x
30	Falls	x
31	Restraint patients and consent	
32	Infection control bundles	√
33	Sedation consent	
34	Reintubations	
35	Fire Extinguisher	√

