Summer Internship Report
At
FORTIS MEMORIAL RESEARCH INSTITUTE, GURUGRAM

(April 4th to June 17th, 2022)

A Report

By
Dr. Versha Yadav

PGDM (Hospital and Health Management)

2021-2023

International Institute of Health Management Research, New Delhi

Certificate of Approval

The Summer Internship Project of titled **"Patient Return To ICU Within 48 Hours "** at **"Fortis Memorial Research Institute ,Gurugram"** is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of Post Graduate Diploma in Health and Hospital Management for which it has been submitted.

It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed, or conclusion drawn therein but approve the report only for the purpose it is submitted.

Name of the Mentor - Dr. Nikita Saberwal

Designation: Associate Dean (Training)
Associate Professor (Hospital Administration)

IIHMR, Delhi

Fortis MEMORIAL
RESEARCH INSTITUTE
GURUGRAM

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June 17, 2022

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Dr. Versha Yadav** has undergone an internship in the **"Department of Quality"** from **April 04, 2022 to June 17, 2022** at **Fortis Memorial Research Institute, Gurgaon.**

During this period, she exhibited a high level of professionalism and a tremendous zest for learning.

We wish **Dr. Versha Yadav** all the best in her future endeavors.

With Best Wishes,

Shivani Dhir
SBU Head-Learning & Development

Fortis Hospitals Ltd. Gurgaon

DR SAYITRA

Head of Department
QUALITY.

FEEDBACK FORM

(IIHMR MENTOR)

Name of the Student: Dr. Versha Yadav

Summer Internship Institution: Fortis Memorial Research Institute

Area of Summer Internship: Quality & Patient safety.

Attendance: Regular.

Objectives met:
- MRD Audit
- Quality Improvement project → Patient Return to ICU within 48 hours
- IPSG Audit

Deliverables:
- Patient safety survey
- Weekly progress updating
- Report draft.

Strengths: Continuous learning, dedication, Taking initiative

Suggestions for Improvement: Keep yourself updated on the latest developments in the industry

Signature of the Officer-in-Charge (Internship)
(Dr. Nikita Saberwal)

Date:

Place (IIHMR, Delhi)

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FEEDBACK FORM

(Organization Supervisor)

Name of the Student: DR. VERSHA YADAV

Summer Internship Institution: FORTIS MEMORIAL RESEARCH INTITUTE

Area of Summer Internship: QUALITY AND PATIENT SAFETY

Attendance: 56/64

Objectives met:
- MRD AUDIT
- QUALITY IMPROVEMENT PROJECT- PATIENT RETURN TO ICU WITHIN 48 HOURS
- IPSG AUDIT
- PATIENT SAFETY SURVEY

Deliverables: MEDICAL RECORDS AUDITS, ANALYSIS, GAP IDENTIFICATION

Strengths: Continuous learner, hard working, Taking initiative, good work ethics

Suggestions for Improvement: Keep yourself updated on the latest development in the industry

Signature of the Officer-in-Charge (Internship)

Date:
Place:

ACKNOWLEDGEMENT

I am grateful to all the senior managers at Fortis Memorial Research Institute, Gurugram, for big-heartedly sharing their treasured insight and valuable time that helped me perform efficiently during my internship. My knowledge and data collection concerning the internship report would not have been fruitful without the guidance of Dr. Savitaa Sharma and Mr. George Thomas. I express my thankfulness towards them for providing supervision, motivation & strong support during my study.

Mentors in IIHMR

We are very grateful to Dr. Sutapa B. Neogi, (Director-IIHMR Delhi) for her encouragement and giving us this learning opportunity and Dr. Nikita Sabherwal (Assistant Dean(Training) and Associate Professor-IIHMR Delhi) for her constant support throughout to strengthen our knowledge and skills. Without their guidance and cooperation, it would not have been possible to conduct this research and complete this training successfully.

TABLE OF CONTENTS

Acronyms/ Abbreviations

COP	Care of patient
ICU	Intensive care unit
HDU	High dependency unit
PC	Partial compliance
NABH	National Accreditation Board for hospital and healthcare providers
QI	Quality Improvement
FC	Full Compliance
CCU	Critical care unit
OP	Out patient
FMRI	Fortis Memorial Research Institute
AF	Atrial fibrillation
MRI	Magnetic Resonance Imaging
NABL	National board for Testing and Calibration Laboratories
ISO	International Organization for Standardization
CQI	Continuous Quality Improvement
JCI	Joint commission international
TT	Tracheostomy tube

Observational Learnings

Introduction:

Fortis Memorial Research Institute

One of the top hospitals in Gurgaon is the multi-superspecialty, quaternary care Fortis Memorial Research Institute (FMRI). Fortis Hospital, Gurgaon has dedicated to consistently fulfilling strict international standards and has undertaken a thorough on-site examination of the quality and safety of the treatment being given. Fortis Hospital, Gurgaon has solidified its position as one of the top hospitals in Gurgaon by using cutting-edge technology and top clinicians to provide the best possible healthcare. Unmatched in the fields of Neurosciences, Oncology, Renal Sciences, Orthopaedics, Cardiac Sciences, and Obstetrics and Gynecology. One of the top healthcare organisations in the nation, Fortis Healthcare, operates the main hospital, Fortis Memorial Research Institute. Currently, Fortis hospitals throughout the nation serve over 3.5 lakh patients annually, depending on recognised doctors, state-of-the-art facilities, and top-tier technology like the Da Vinci robot to guarantee your recovery and safe return home. They range from quaternary care provided by highly specialised specialists performing uncommon and complicated surgery to customised preventative health checkups. It was then, as it is today, "patient first." Fortis Memorial Research Institute, which beat over many other exceptional Medical institutions, was named second among the world's 30 most technologically sophisticated hospitals by "topmastersinhealthcare.com." Together with top technological pioneers Brain Lab and Elekta, the hospital was the first in the world to provide radiation therapy. The hospital also unveiled a 3-Tesla Digital MRI, the very first digital bandwidth MRI in the world. The Fortis Memorial Research Institute in India was the first to introduce the Stem Cell Lab and Open Lab principles. These are only a handful of the contributions made by the institution; there have been many others. Tummy Luck, R&R Lounge, Mediatorial, Holistic Health, Mamma Mia, Retail Therapy, Crèche, Health 4 U, Pevonia, and Forti plex are a few of the hospital's exceptional world-class amenities for patients' companions.

FORTIS VISION

To provide the community with comprehensive care in a caring, honourable, and unique way.

FORTIS MISSION

To be known as the "Mecca of Medicine," the ultimate healthcare destination.

Affiliations & Accreditations

In order to address patient demands and establish industry-wide quality standards, Fortis Memorial Research Institute has been granted accreditation by the National Accreditation Board for Hospitals and Healthcare Providers (NABH). The institute also abides by the board's principles.

On the other hand, the blood bank at FMRI has substantial delivery of services in the relevant domain and is accredited by NABH. The National Certification Board for Testing and Calibration Laboratories (NABL), which strives to offer the government, regulators, and industry with a system of laboratory accreditation through third-party evaluation for formally recognising laboratory technical competence, also accredits lab services. According to International Organization for Standardization (ISO) guidelines, testing, calibrating, and medical laboratories are accredited.

Mode of Data collection:

An Audit tool was created based on sources of records with 11 parameters which included UHID, Bed No, Patient Name, Admitting Speciality, Name of Admitting Doctor, Diagnosis, any deviation from the transfer protocol of ICU, Completeness of transfer instruction, Compliance of transfer instruction in step down unit, Care provision in step down, early stepdown due to overbearing non clinical. The data gathering was done by record of the patient who were returning within 48 hours and patients who were transfer from ICU to ward.

Mode of data collection is “Primary” which was tracked using an audit tool in excel sheet.

General Findings:

While working on the following parameters in accordance to analyse the opportunities for improvement during the step-down of patient from ICU and during transfer and care of patient in the ward there were various factors which were affecting the procedure such as : tachycardia, hypoglycemia, AF, Breathing difficulty, desaturation, Tracheostomy Bleeding , Hypotension, Seizure and aggravation of preexisting risk factors despite of proper treatment ,Incomplete transfer note, doctor visit was not evident in file and Nursing assessment after receiving patient from ICU was not evident. Considering the elements that influenced the return of patient within 48 hours were Incomplete transfer notes without medical history of patient, Physiotherapy notes were not present, RRT form was not present, incomplete information in progress note, Incomplete transfer summary without physician focus. Also, the key concerned area that includes proper documentation of Inhouse transfer form, Care provision in stepdown, Transfer instruction in step down unit were not being identified properly for the patient who were returning to ICU.

PROJECT REPORT
TITLE: Patient return to ICU within 48 hours

Introduction:
Critically ill patients can get complete, life-saving care in the Intensive Care Unit (ICU). When patients have fully recovered from their severe illness, they should be transferred from the intensive care unit to the regular ward. However, intensivists continue to face a considerable difficulty regarding the time of ICU release. Early ICU discharge can prevent patients from developing additional iatrogenic and nosocomial issues during a protracted ICU stay, as well as promote effective ICU use and lower the high ICU cost, but this choice should be cautious. After exiting the ICU, patients would be moved to a lower-acuity unit. Patients may so run the risk of complications and sluggish clinical symptom identification. An ICU relapse during the same hospital stay might come from an early release.

Hospitalization entails the risk of worsening the patient's initial illness process, higher morbidity and death rates, increased duration of stay, and a rise in overall expenses. The unanticipated readmission of these patients to the critical care unit is recognised as a significant quality indicator. Patients who have just been moved from an intensive care unit to a ward are a vulnerable category of patients with complicated care needs who are 'at risk' because ordinary ward staff may lack the expertise or ability to give effective care.
OBJECTIVES:

Primary objectives: to monitor the reason of return of patient to ICU within 48 hours during the period of 2 months.

Secondary objective:
1) To investigate the circumstances that led to the patient's transfer from the ICU, as well as the factors that occurred during the transfer and during the patient's care in the ward.
2) To identify the opportunities for improvement during step-down of the patient from ICU, during transfer and care of patient in the ward.

MODE OF DATA COLLECTION:

- STUDY AREA: - ICU Patients of Fortis Memorial Research Institute, Gurugram
- SAMPLE SIZE: - 33 Patients of ICU

- STUDY DURATION: - 11 Weeks (4th April 2022 – 18th June 2022)
- DURATION OF DATA COLLECTION: - 11 Weeks
- CONTENT OF DATA COLLECTED: - UHID, Bed No, Patient Name, Admitting Speciality, Name Of Admitting Doctor, Diagnosis, Any deviation from the transfer protocol of ICU, Completeness of transfer instruction, Compliance of transfer instruction in step down unit, Care provision in step down, Early stepdown due to overbearing non clinical.

SELECTION CRITERIA

- **Inclusion criteria**- All ICU patients including infants and Paediatrics age group being stepped down to ward.
- **Exclusion criteria:**

1. Patients stepped down from ICU to HDU
2. Patients stepped down from HDU and returning to HDU or ICU
3. Patients stepped down from ICU and stepped up to HDU

DATA ANALYSIS:

The data from 33 patients were analysed using two audit tools. The first audit tool was used for all patients transferred from ICU to ward, and the second audit tool was utilised for patients who returned to ICU within 48 hours. A total of 12 parameters were used to move patients from the ICU to the ward, while 30 characteristics were utilised to return patients to the ICU within 48 hours. For the patients who returned to ICU within 48 hours, a formula was applied in MS Excel, with the numerator being the number of patients who returned to ICU within 48 hours of being transferred from the ward and the denominator being the total number of patients transferred from ICU to ward and the result calculation in MS Excel was as follows: patients returning to ICU within 48 hours of being transferred to ward / total number of patients transferred from ICU to ward.

The scale technique was employed in all 33 cases. The data was collected on a regular basis, and the analyses were performed retrospectively. The checklist was created as per the quality department requirements at Fortis Hospital. The checklist was examined with a focus on the gaps discovered during the investigation.

- For Partial Compliance ,5 points were allotted
- For Full compliance ,10 points were allotted

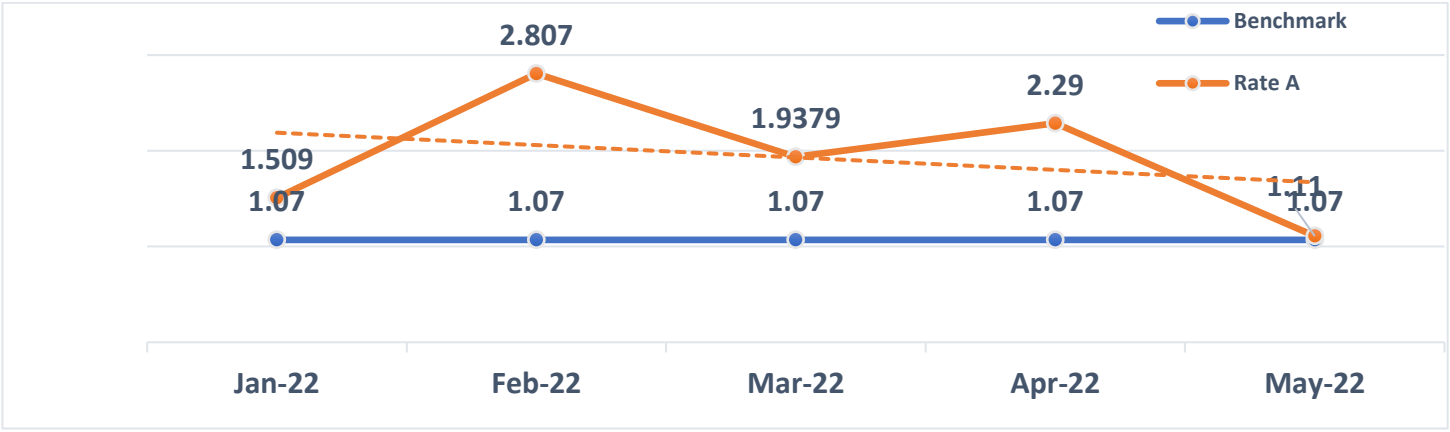
INTERPRETATION AND RESULT

The finding of this study divided into 3 sections

- First section comprises of overall analysis of patient return to ICU within 48 hours after being transferred from ICU to ward

- Taking into consideration, second section comprises of analysis of the patient who transferred from ICU to ward where we took 33 patients of our sample size
- Third section comprises of analysis of 8 patient out of 33 patients, return to ICU within 48 hours from April to May 22.

SECTION 1



Month	Jan-22	Feb-22	Mar-22	Apr-22	May-22
Rate (%)	1.51	2.81	1.94	2.3	1.1
Bench Mark (%)	1.07	1.07	1.07	1.07	1.07
Numerator	4	8	5	6	3
Denominator	265	285	258	262	270

Most commonly identified factors leading to ICU readmissions in these populations from Jan 2022 to May 2022 are tachycardia, hypoglycemia, AF, Breathing difficulty, desaturation, Tracheostomy Bleeding, Hypotension, Seizure and aggravation of preexisting risk factors despite of proper treatment. As it was

found that most of the cases return to ICU in month of Feb 22. Most common gap analysis are :

- physician focus was not mentioned in one case patient came to ward with Tracheostomy tube as there were lack of care in ward, suctioning and monitoring was not done proper as result after some time patient complained with TT (Tracheostomy Tube) bleeding and return to ICU within 48 hours.

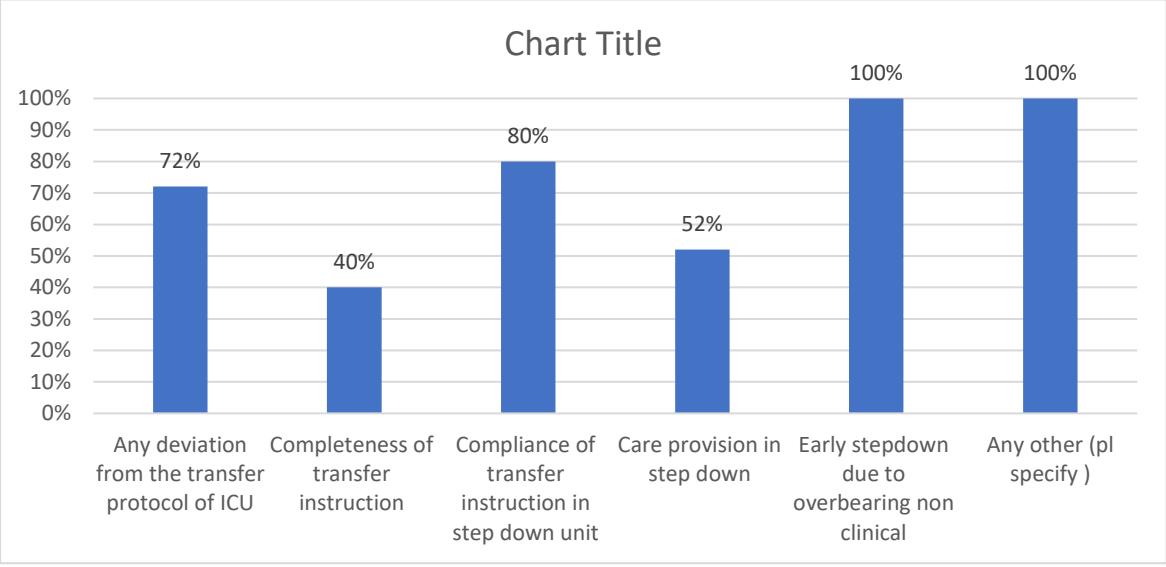
- As nurses were not confident while handling the patient in ward due to lack of training.
- Periodic reassessment not done -Patient not assessed regularly after transferred from ICU to ward.
- Cross Consultant requested but not seen by specialist specially BMT and respiratory specialist
- Lack of communication between ICU and ward staff

Others documentation error:

- Incomplete transfer note
- Doctor visit was not evident in file
- Nursing assessment after receiving patient from ICU was not evident

SECTION 2

- analysis of the patient who transferred from ICU to ward where we took 33 patients of our sample size

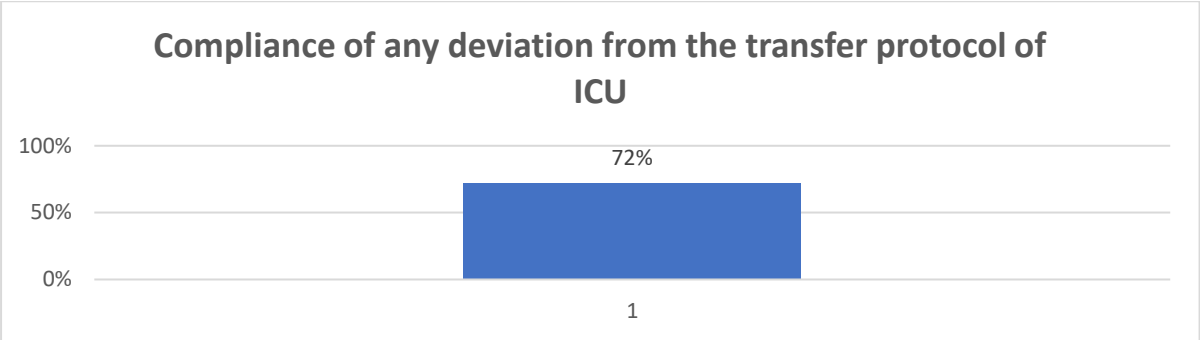


Out of 12 parameters which includes patient name, bed no, Name of Admitting Doctor, Diagnosis, Any deviation from the transfer protocol of ICU, Completeness of transfer instruction, Compliance of transfer instruction in step down

unit , care provision in step down, early stepdown due to overbearing non clinical reason and any other reason. Out of 12 parameters 6 parameters includes the patient general information and out of other 6 parameters there were 4 parameters that were partially compliance (PC) and 2 parameters were fully compliance (FC)

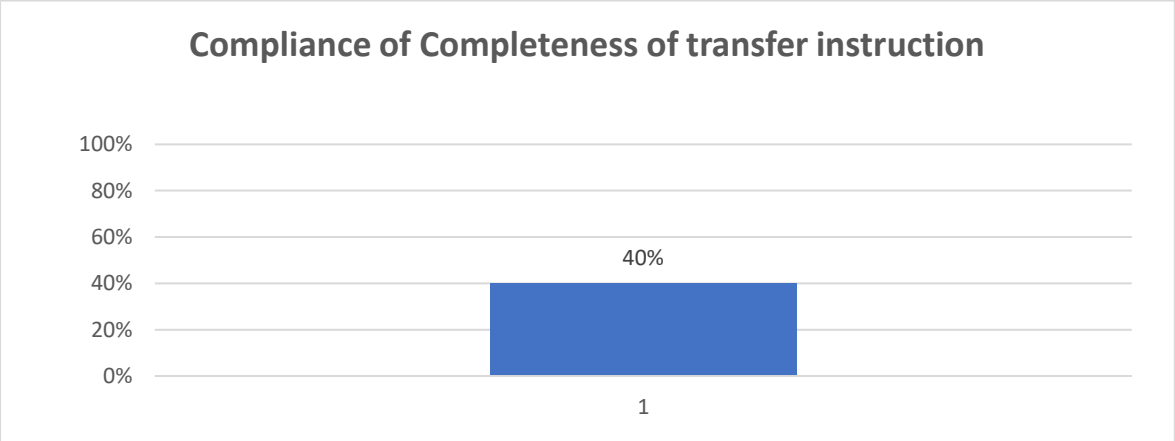
- **PARAMETERS**

A) Any deviation from the transfer protocol of ICU



72 % compliance was present in transfer protocol of ICU but in 28% of cases there were noncompliance due to incomplete documentation of patients

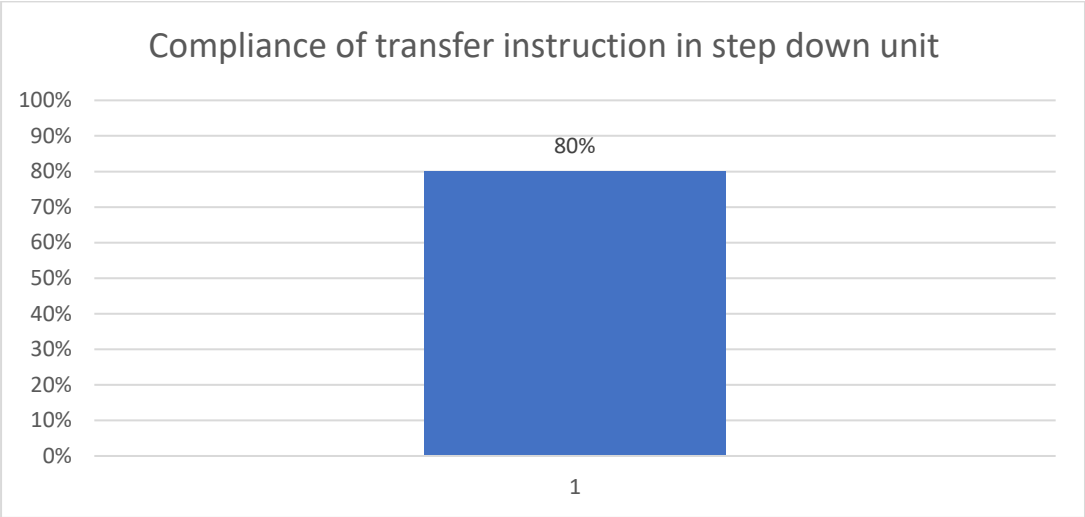
B) Competeness of transfer instruction



C)

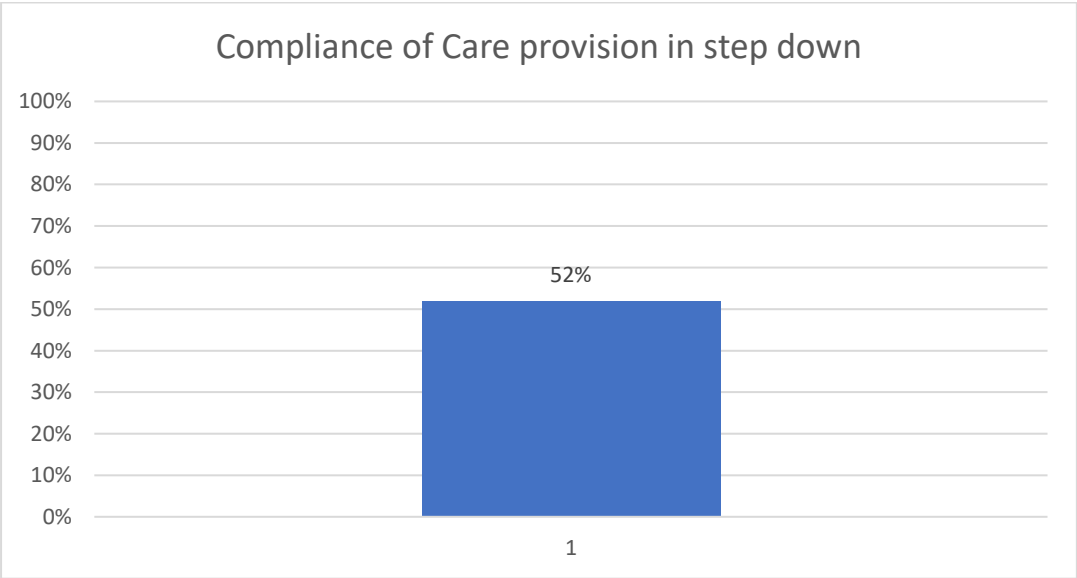
Unit, physician focus, speciality was not mentioned, Reason of transferred out, date and time of step down not mentioned, procedure done on, allergies not mentioned
nurses note was not present during the stepdown, patient handover was incomplete, transfer note not present in physician note, patient re assessment time before the shift out was mentioned, time was not mentioned in discharge note

C)Transfer instruction in step down



Analgesics was not monitored , patient received with IV cannula to ward but not mentioned in IV cannula insertion and monitoring record .Receiving note not present .
Vitals were not mentioned any where after patient were stepdown from ICU to ward

D) **CARE PROVISON IN STEP DOWN**

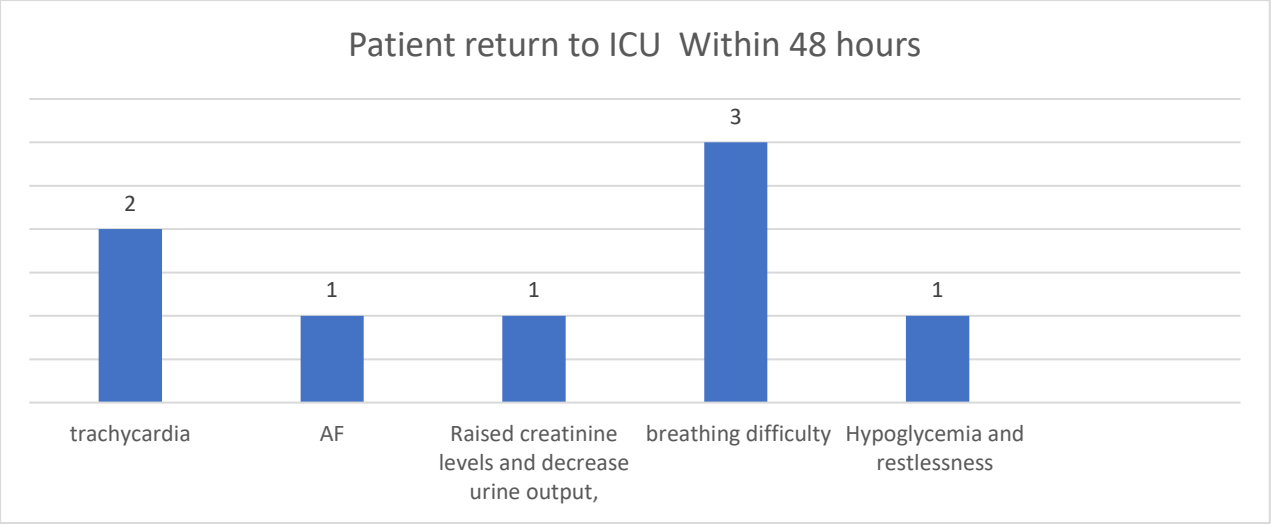


In some cases, vitals were mentioned but time were not mentioned (whether patient was re- assessed within one hour after the step down)
Physician focus was on physiotherapy but physiotherapist note was not present in physician note
Pain assessment not mentioned (site location and intensity)

one of the patients was transferred at 12.30pm but patient was re assessed at 3.45pm as per progress note
In one case PICC monitoring were not done

SECTION 3

Third section comprises of analysis of 8 patient out of 33 patient ,return to ICU within 48 hours from April to May 22



In eight of the 33 cases, patients were returned to the ICU within 48 hours. The majority of patients are admitted to the ICU owing to respiratory difficulties, AF, tachycardia, AF, hypoglycemia, restlessness, tachycardia, elevated creatinine levels, and decreased urine output. In one example, a diabetic patient's sugar level was not monitored on a frequent basis, and as a result, her sugar level dropped below 40mg dL, prompting RRT and her return to the ICU within 48 hours. In certain situations, vitals were not monitored within 1 hour of the patient being transferred from ICU to ward, resulting in inadequate care provision There was also documentation error since there was a form (inhouse transfer summery) when the patient was transferred from ICU to ward that had all of the patient's details but was incomplete because the physician's focus was not specified, and the reason for the transfer was also missing.

RECOMMENDATION

- Training of floor nurses on tracheostomy care, form should be made to evaluate the practical knowledge of ward staff in tracheostomy care.
- Any transfer from ICU to Ward, duty doctor from ward will accompany the patient and take handover from ICU doctor in order to ensure the completeness of transfer instruction and discharge criteria
- Medical superintendent and HOD of Quality – Discussion with clinical team and counselling refer to transfer criteria of ICU patient
- Any transfer from ICU to Ward, duty doctor from ward staff accompanies the patient and take the handover from ICU doctors in order to ensure the completeness of transfer instructions
- The transfer process from the neuro-ICU may benefit from an enhanced interdisciplinary handoff process for these elevated patients, and improved patient care may result from increased focus by doctors, nurses, and respiratory therapists on medical needs specifically related to neurological conditions.
- Education regarding the value of effective handover to the nurses and Doctors.
- The significance of ward employees obtaining the specialised skills needed to care for post-ICU patients as a crucial method for lowering readmission rates Involving ICU and ward personnel in the ICU discharge planning has been shown to improve patient outcomes and prevent unfavourable occurrences like as readmission.

CONCLUSION

- Tachycardia, hypoglycaemia, AF, breathing difficulty,s seizure, and aggravation of pre-existing risk factors were the most frequently described factors leading to ICU readmissions in these populations from January 2022 to May 2022.
- Respiratory failure was the most prevalent reason for ICU readmissions. To lower readmission rates, a specialised group of respiratory therapists responsible for care for post-ICU patients on the floors, as well as supportive respiratory therapy such as suctioning, percussion, and postural draining, might be implemented.
- ICU readmission is related with unfavourable outcomes such as increased mortality and prolonged hospitalisation. The severity of the disease and the underlying malignancy are both independently linked with ICU readmission mortality.
- Key risk factors for ICU readmission may not be changeable or susceptible to improved care standards. Co-morbidities and functional disability become more common as people get older. As a result, aged individuals are less able

to handle the physiological demands of critical illness. Because age is not adjustable in care processes, there will always be a risk of older post-ICU patients requiring additional ICU care, hence maintaining the readmission rate (as most of the patient return to ICU above 45 years of age)

- It was also discovered that only select ICUs employed written patient discharge instructions, a critical aspect of the discharge procedure because inhouse transfer reports were not filled out in the majority of cases.

- Post-ICU patients are more prone to adverse events because to the complexity of their sickness and the complexity of the therapy required. Patients who are discharged from the intensive care unit before they become ready are more likely to be readmitted because wards may lack the resources to provide the greater standard of care that post-ICU patients still require.

Reference

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TABLE : AUDIT TOOL

SL.NO	Parameters	RESPONSES
1	UHID	
2	Bed.No	
3	Patient area	
4	Admitting Speciality	
5	Name of Admitting Doctor	
6	Diagnosis	
7	Any deviation from the transfer protocol of ICU	
8	Completeness of transfer instructions	
9	Compliance to transfer instructions	
10	Care provision in step down unit	
11	Early step down due to overbearing non clinical reasons	
12	Any other (please specify)	