

# Leadership is the Key to Quality & Patient Safety:

*“Role of bedside leadership in increasing the competency of staff nurses in safe infusion therapy and reducing the under reporting of complications related to IV therapy”*

## Introduction

The effective leaders supports safety initiatives and create safety culture through out the journey of quality and patient safety.

As NABH Standard HIC 3d mentioned,the organization adheres to the safe injection practices , We Medica Superspecialty Hospital Kolkata, given importance to the role of bedside leadership in increasing the competency of staff nurses in safe infusion therapy and reducing the under reporting of complications related to IV therapy. Even though, our hospital has an average 2000 total admissions & approximately 2500 IV Cannulations/month ,the number of I.V complication tracker documented & received were only 15% (quantitative) & 79.6% (qualitative)in Jan2021.

## Aim/Objective

- \*To enhance the bedside leadership in safe infusion practices in the organization
- \*To improve the competency of Staff nurses in infusion therapy (both theoretical and practical)
- \*To reduce the under reporting of IV complications
- \*To start calculating peripheral line days and average indwelling time accurately
- \*To improve the submission ,analysis & compliance of documentation in the IV infusion therapy complication tracker for the early detection of IV complications.
- \*Ensure patient safety through the reduction in risk of patient harm

# Study design / Methodology



❖ **Data collection Method:** Prospective observational study, PDCA (Plan ,Do, Check ,Act) Model

❖ **The data collection through;**

- IV infusion therapy complication tracker
- Nursing Audits
- Monthly device utilization data on tubes & lines
- Pre & Post test of training session
- Incident reports.
- Daily round observations

❖ **Population:** The patients who have IV Cannula insitu & all staff nurses.

❖ **Study period:** 2yrs (Jan 21-Dec 22)

❖ **Measuring standards:**

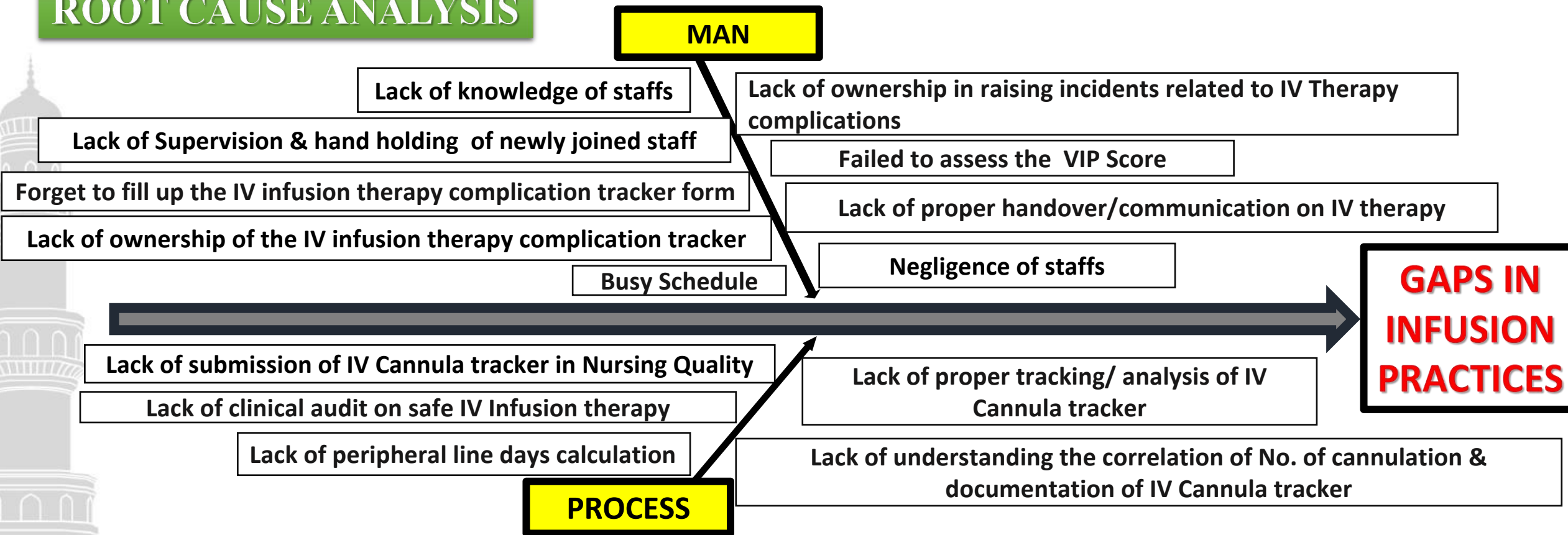
- ✓ Total IV Cannulation done
- ✓ No. of IV infusion complication tracker received
- ✓ No. of attempts in IV cannulation
- ✓ No. of IV complications reported
- ✓ No. of patient complaints regarding safe infusion practices
- ✓ Average indwelling time
- ✓ Knowledge of staffs on safe infusion practices

## Discussion / Finding

### PLAN

- Data collected by Nursing leaders as the team members for QIP (Nursing Quality, Education, ICNs, Nsg Admin)
- Proper Root Cause Analysis on the problem stated
- Selection & Formation of bedside leadership as IV nurses and Link nurses
- Competency assessment of staffs in safe infusion therapy

# ROOT CAUSE ANALYSIS



## DO

## Man-Training Sessions



Induction classes -31  
Attendees-791



CNE -64  
Attendees-3380



On Job Training -173  
(3 shifts )



Bedside session-69  
Attendees -778



Sessions by supervisors -85  
Staff attended-521



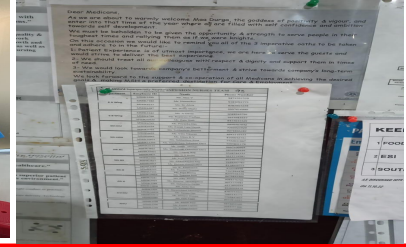
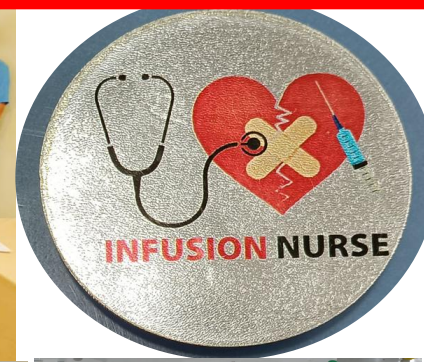
Pretest, Post test & interview

# Process - A.Creating a Bedside Leadership

## 1.IV Nurses team(92)

Covering 3 shift ;3 staffs in each department.Provided with IV nurse badge.

Involving in bedside teaching & in Audit(Peripheral line insertion audit).Conducting Monthly IV meeting to discuss the points regarding safe infusion practices .



## 2. Link Nurses (25)

Involved in bedside teaching & in Audit(High risk audit).Provided with link nurse badge.Conducting Monthly Link Nurse meeting



## 3.Preceptorship

The senior nurse leader hand holding &training the new joined staffs at bedside with preceptorship manual



# Process - A. Creating a Bedside Leadership

## 4. Hands on practice by Nursing Educators / ICNs

Hands on practice on Mannequin - I.V Cannulation procedure



## 5. Competency assessment

The competency of staffs in Safe infusion practices were assessed through a standards competency assessment tool



## 6. Nursing Audit on safe infusion practices prevention



# Process -B. New initiatives in safe infusion practice

**MEDICA SUPERSPECIALTY HOSPITAL KOLKATA**

**INFUSION SAFETY MANUAL**

**POLICIES & PROCEDURES FOR INFUSION THERAPY**

**LINE INSERTION CONSENT FORM**

**MEDICA Superspecialty Hospital**

**PATIENT & FAMILY EDUCATION ON CARE OF INVASIVE CATHETERS / LINES**

**MEDICA Superspecialty Hospital**

**STANDARDS OF CLINICAL GUIDELINES ON INFUSION PRACTICE**

**(ICK 2011, INS 2016, NCC 2017)**

**Use of safety Engineered devices**

**IV Stickers**

**IV Cannulation & Extravasation tray**

**Allergy ID band & Kit**

Infusion safety manual

Consent & patient education

Poster

Use of safety Engineered devices

IV Stickers

IV Cannulation & Extravasation tray

Allergy ID band & Kit

- Selection of IV Tracker champions**

Frequency of submission :Every Saturday

- Data analysis by nursing Quality**

Comparing the selected measuring standards regarding IV infusion therapy

- Presentation of data /report by nursing leaders**

Supervisors monthly quality presentation(floor wise data) & Nursing Quality educator presentation(overall data of selected measuring standards)

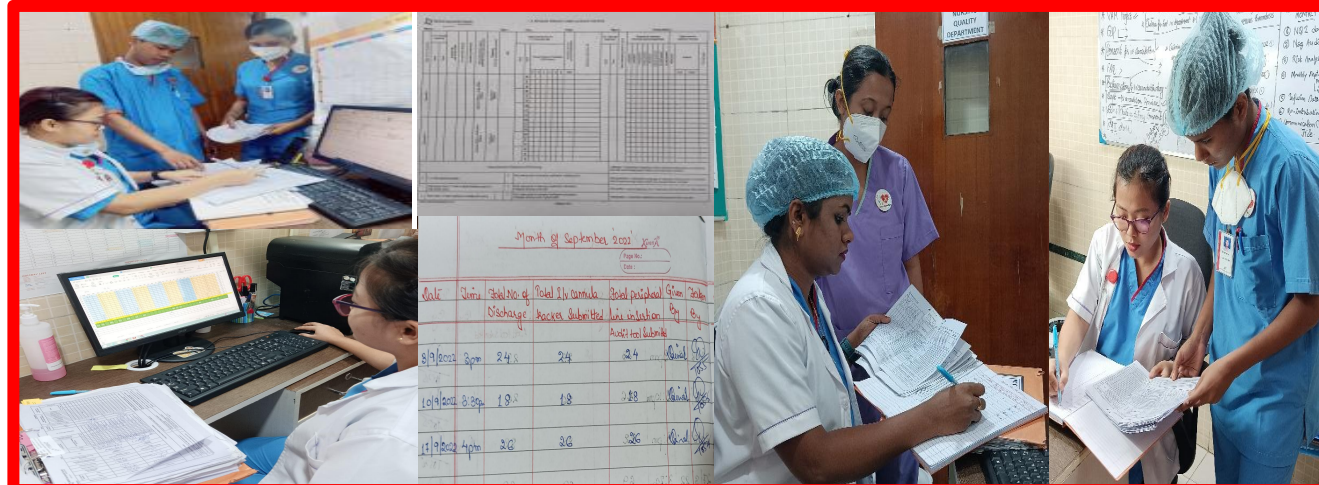
- Staff Felicitation :**

Monthly recognition of Best Department following safe infusion practices & Best IV Nurse with predefined criteria.

- Certification On Safe Infusion Therapy**

- \* INFUZE Audit -INS

- \* VAM Project



# CHECK

## STATISTICAL ANALYSIS OF PRE DATA (JAN 21 - DEC 21)

MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Total admission	1706	1625	1957	1932	1496	1219	1723	1977	2123	2020	2173	2214
Total IV Cannulation done	1500	1523	1798	1875	1408	1171	1689	1795	2275	1802	2244	1706
Total No.of IV Cannula tracker received	230	326	872	1007	1009	1099	1522	1522	1522	1522	1522	1522
No.of IV Complications reported	0	0	1	0	0	2	5	6	3	5	3	3
No of attempts in IV Cannulation >1	99	263	496	319	319	319	352	247	363	204	223	168
Total No.of Patient complaints regarding IV Cannulation /safe injection practices	12	9	11	6	8	12	10	7	8	9	7	6
Average indwelling Time	1.2	1.62	2.2	1.1	2.3	1.6	1.7	2.6	1.7	1.9	1.5	2.3
Knowledge of staffs on Safe IV infusion practices (%)	16	20	14	28	30	36	42	53	40	55	59	62

## STATISTICAL ANALYSIS OF OUTCOME DATA (JAN 22-DEC 22)

MONTH	JAN	FEB	MAR	APR	MA	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Total admission	2111	2012	2472	2317	2526	2719	2841	2904	2913	2620	2777	2777
Total IV Cannulation done	2000	1994	2396	2148	2000	2635	2337	2797	2372	2340	2942	1712
Total No.of IV tracker received	1941	1887	2233	2195	1969	2635	2336	2797	2372	2338	2942	1710
No.of IV Complications reported	12	14	16	24	19	25	13	11	10	14	9	10
No of attempts in IV Cannulation	91	86	66	41	39	31	22	19	16	17	12	10
Total No.of Patient complaints regarding IV Cannulation /Safe infusion practices	1	0	0	0	0	0	0	0	0	0	0	0
Average indwelling Time	1.9	2.4	1.5	2.4	3	2	2.8	2.3	2.6	2.3	2.1	3
Knowledge of staffs on Safe IV infusion practices (%)	74	83	88	86	92	86	93	93	100	99	99	100

# ACT

- Consolidate the gains achieved
- Keep monitoring for gaps & need for training of newly inducted nurses
- Keep exploring to magnify further opportunity for improvement

# Results

- The staff competency (both knowledge & practical) in safe infusion practices improved from 16% to 100%
- Early detection and management of IV complications evidenced with IV infusion therapy tracker & Reduction in under-reporting of the IV infusion therapy related incidents
- The compliance of IV Cannula tracker submission (quantitative) improved from 15% to 99.7% & the compliance of IV tracker documentation (Qualitative) improved from 79.6% to 99.5%
- Increased average indwelling time 29.1Hrs (1.2days) to 71.07Hrs (3days)
- Reduction in patient complaints related to Infusion therapy & Increased patient satisfaction leads to patient safety & reduction in risk of patient harm

## Conclusion

The key interventions implemented in this project have been adopted as a standardized protocol to maintain safe infusion practices in the organization. The involvement of enthusiastic bedside leadership led the study effectively which helped in attaining the best outcome.

The study reveals that leadership in nursing is important as it directly impacts the flow and progression of healthcare organization even through bedside leadership in providing high quality nursing care and patient safety without risk of harm.

**THANK YOU**