

Title: A multicenter observational study is being conducted across six units of Sahyadri Hospitals in Maharashtra, India, to examine the maintenance and care practices of Peripheral Intra Vascular Cannulation. The aim is to identify and recommend best practices for Intravenous Maintenance Care based on the findings of this investigation.

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Aims :

The primary aim of this study is to analyze the existing gaps in Peripheral Intra Vascular Cannulation (PIVC) maintenance practices within all units of SSHPL. The specific objective is to enhance Nurses' compliance with the PLABSI Bundle guidelines, thereby improving patient outcomes and reducing the incidence of Primary Bloodstream Infections (PLABSI).

Objectives :

1. Examine the PIVC maintenance practices at bedside.
2. Compare the PIVC maintenance practices with PLABSI Bundle points.
3. Identify the gaps in Peripheral Intravenous Catheter maintenance practices.
4. Determine the rate of re-site of Peripheral Intravenous Catheter
5. Analyse the VIP score at the time of re-site.
6. Investigate the reason for frequent re-site.
7. Assess all Peripheral Intravenous catheter for IV complications.
8. Investigate the factors contributing to the development of IV complications.
9. Assess the skills and knowledge of staff regarding PLABSI Bundle care.

Methodology & Design:

Surveillance audit was planned on National IV Nurse Day at all 9 units of Sahyadri Super Speciality Hospital to find out the gaps and re-strengthen the best practices of PIVC maintenance and care.

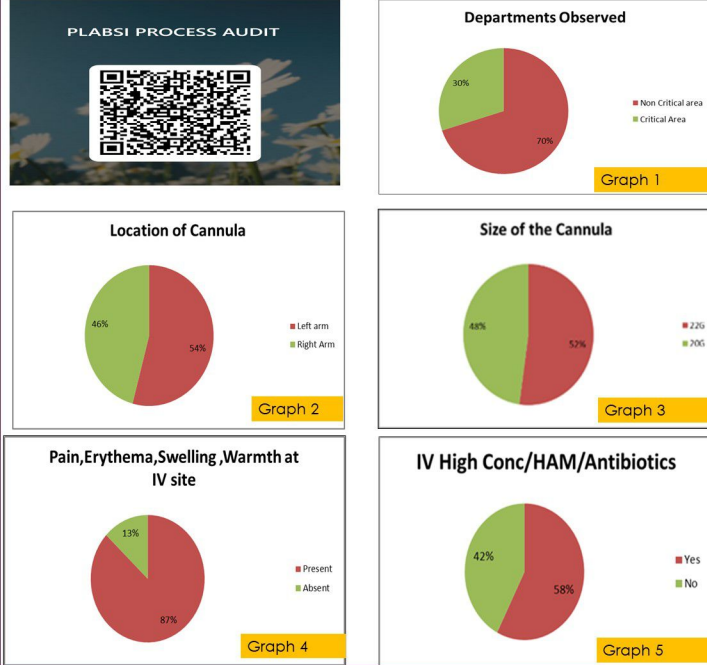
Data Collection and Tool :

Corporate Educators prepared the link-based checklist for audit which included following characteristics about PIVC insertion site assessment, condition and type of dressing, documentation, flushing and maintenance practices, PIVC re-site days and VIP score documentation with infection control practices (Aseptic Non touch technique (ANTT), scrub the hub, Hand hygiene. Audit was conducted by team of Nurse Educators on 25 Jan 24.

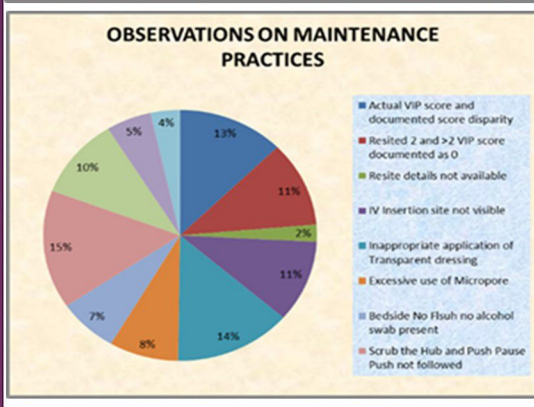
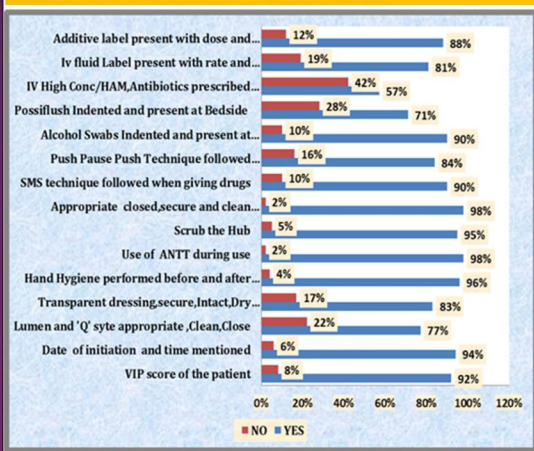
Discussion and Findings:

- The Investigator observed the following during the study.
1. Total samples were 238 (n=238).
 2. Out of these 238 samples 70% were from Non-Critical areas. (Graph -1)
 3. Placement of canula we found left arm 54% and Right arm 46%. (Graph 2)
 4. Size of canula we found 22 G were comprised of 52% and 20 G in 48%. (Graph-3)
 5. There was clinical signs and symptoms of phlebitis were present in 13% cases.
 6. 58% received Higher antibiotics and HAM. (Graph 5)
 7. There were inaccurate scoring of Visual Infusion Phlebitis score (13%) by the staff. (Graph 4)
 8. Documentation errors (11%) observed during the course of study.
 9. Insertion site was not visible for 11% cases.
 10. Inappropriate transparent dressing was found in 22% cases.
 11. Bedside Alcohol Swab and saline flush were absent in 7% of cases.
 12. Scrub-The –hub and Push Pause Push technique were not followed by 16% cases
 13. SMS technique not followed in 10%.
 13. ANTT was not followed in 2%.
 14. Hand Hygiene was not followed in 4% Cases.

Graphical Presentations:



Summary of The Observational Study :



Training of Staff :

Visual Infusion Phlebitis Score	0	No signs of phlebitis OBSERVE CANNULA
IV site appears healthy	1	Possible first sign of phlebitis OBSERVE CANNULA
One of the following is evident: • Slight pain at IV site • Redness near IV site	2	Early stage of phlebitis RESITE THE CANNULA
Two of the following are evident: • Pain • Erythema • Swelling	3	Medium stage of phlebitis RESITE THE CANNULA CONSIDER TREATMENT
All of the following signs are evident: • Pain along the path of the cannula • Erythema • Induration • Palpable venous cord	4	Advanced stage of phlebitis RESITE THE CANNULA CONSIDER TREATMENT
All of the following signs are evident and extensive: • Pain along the path of the cannula • Erythema • Induration • Palpable venous cord • Pyrexia	5	Advanced stage of thrombophlebitis INITIATE TREATMENT RESITE THE CANNULA



Conclusion: In conclusion, strategic interventions such as educational video modules and post-audits have been deployed to bolster adherence to optimal practices in peripheral intravenous catheter care. These initiatives are designed to fortify the consistent implementation of improved protocols among nursing staff, with the overarching goal of elevating patient outcomes and mitigating complications linked to catheter management.