

# Learning Through Action: Reducing SABSI and Strengthening Patient Safety

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# Conflict of interest

I have no conflict of interest to declare

# Problem/ issue

- ▶ Hospitals North, Tasmania noted increased Staphylococcus aureus bloodstream infections (SABSI) rate 2022 -2023
- ▶ July 2020 The Australian Health Ministers' Advisory Council endorsed a new national benchmark for healthcare-associated SABSI for public hospital reporting.

**2022**

**YTD HCA SABSI rate 1.65**  
**April rate 2.49**

**22 HCA SABSI**  
**12 attributed to vascular**  
**access devices**

**2022 4 months rate >2.0**

**2023**

**YTD HCA SABSI rate 1.18**  
**December rate 2.40**

**19 HCA SABSI**  
**12 attributed to vascular**  
**access devices**

**2023 4 months rate >2.0**

# Problem/ issue



Management of  
Peripheral Intravenous  
Catheters Clinical Care  
Standard (2021)



Historically cannulation  
education was provided  
by anyone on ward



Vascular access  
working group



Committee

# What we did to rectify the problem/issue

- ▶ Business case submitted by Chair of Vascular Access Committee - PIVC CNE position

Risk to patient safety

Documentation of PIVC 59%.

SABSI rates

Financial considerations

Management of Peripheral Intravenous Catheters Clinical Care Standard (2021)

No standardised program

Average cost and increased LOS

# What we did to rectify the problem/issue

- ▶ **Employed PIVC Clinical Nurse Educator in September 2023**
- ▶ **PIVC CNE**
  - ▶ Gap analysis with Management of Peripheral Intravenous Catheters Clinical Care Standard
  - ▶ Reviewed
    - ▶ Regional PROTOCOL-Insertion and Management of Peripheral Intravenous Catheters - Adults Hospitals North
    - ▶ Invasive device monitoring form
    - ▶ Peripheral Cannulation Pack
    - ▶ Safety Reporting and Learning Systems (SRLS) for reporting cannula related issues
    - ▶ Measurement, Analysis and Reporting System (MARS) audits

# What we did to rectify the problem/issue

## ▶ Updated

- ▶ PROTOCOL-Insertion and Management of Peripheral Intravenous Catheters - Adults aligned with Peripheral Intravenous Catheters Clinical Care Standard 2021
- ▶ MARS audit aligned with Peripheral Intravenous Catheters Clinical Care Standard
- ▶ Invasive device monitoring form – significantly updated and launched.
- ▶ Peripheral Cannulation packs – standardised, product changes, and promotion

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**PROTOCOL**

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HEALTH  
SERVICE



## Insertion and Management of Peripheral Intravenous Catheters - Adults

|                       |   |
|-----------------------|---|
| <b>SDMS Id Number</b> | P22/124   |
| <b>SDMS Category</b>  | Hospitals North – Standards – Infection Prevention and Control  |
| <b>Effective Date</b> | April 2025  |
| <b>Review Date</b>    | April 2026  |
| <b>Applies to</b>     | Hospitals North clinical staff caring for patients with a peripheral intravenous catheter   |
| <b>Key Words</b>      | Cannula - peripheral access - venous access - peripheral intravenous cannula – PIVC – IVC - peripheral intravenous catheter – Cannulation – drip – IV – Intravenous – Invasive Device -PIVC insertion |

# What we did to rectify the problem/issue

- ▶ **SRLS reporting of VIP in Sept 2023**
  - ▶ VIP 1 or greater SRLS are submitted
  - ▶ Developed 'How to guide' for staff
  - ▶ VIP 3 > immediate review and recommendations actioned

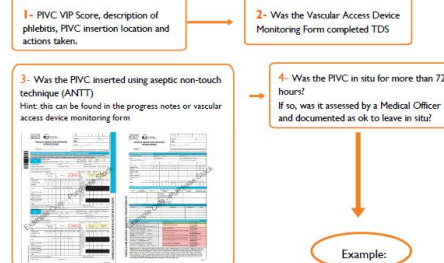


## Logging Peripheral Intravenous Cannula Phlebitis in SRLS

Overview: When logging a SRLS event relating to a phlebitis score please include the following fields to help facilitate and streamline analysis and investigation.

### How to enter these events into SRLS?

In the 'Description of event' enter the following information for PVC phlebitis patient safety events



\* Description of event  
Describe the event and any actions taken. Be as objective and factual as possible.

PVC in left cubital fossa VIP score 2, erythema, pain 5/10 near IV site. PVC removed, MO notified to re-site. 4/24 889 monitoring - no temperature / vs temp. If feasible.

Inserted using ANTT: Yes  
Vascular Access Devices Monitoring form completed TDS: yes  
PVC in situ more than 72 hours, assessed by MO and documented as ok to leave in situ: Yes

Quality Patient Safety Service

| Visual Infusion Phlebitis (VIP) Score For score 1 - 5 document in patient notes and lodge SRLS   |   |   |  |
|--|---|---|--|
| Intravenous (IV) site appears healthy  | 0 | No signs of phlebitis   | Observe catheter                                     |
| One of the following is evident:<br>• Slight pain near IV site • Slight redness near IV site   | 1 | Possible first signs of phlebitis   | Re-site catheter<br>Lodge SRLS                       |
| Two of the following are evident:<br>• Pain near IV site • Erythema • Swelling   | 2 | Early signs of phlebitis<br>CVAD will need assessment by MO prior to removal                              | Re-site catheter<br>Lodge SRLS                       |
| All of the following are evident:<br>• Pain along path of cannula • Erythema<br>• Swelling   | 3 | Medium stage of phlebitis<br>CVAD will need assessment by MO prior to removal                             | Re-site catheter<br>Consider treatment<br>Lodge SRLS |
| All of the following are evident and extensive:<br>• Pain along path of catheter • Erythema<br>• Induration • Palpable venous cord           | 4 | Advanced stage of phlebitis or start thrombophlebitis<br>CVAD will need assessment by MO prior to removal | Re-site catheter<br>Consider treatment<br>Lodge SRLS |
| All of the following are evident and extensive:<br>• Pain along path of catheter • Erythema<br>• Induration • Palpable venous cord • Pyrexia | 5 | Advanced stage of thrombophlebitis<br>CVAD will need assessment by MO prior to removal                    | Re-site catheter<br>Initiate treatment. Lodge SRLS   |

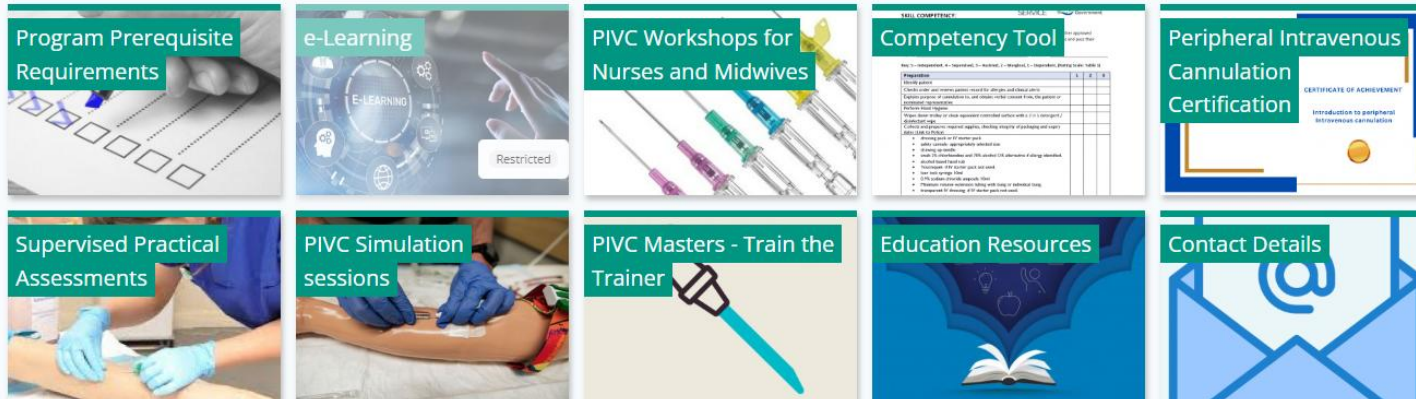
# What we did to rectify the problem/issue

- ▶ **Developed PIVC workshops for nursing staff 3 times/yr**
  - ▶ Utilised B Braun- nationally recognised, come down for a week and provide education to all 3 regions in Tasmania
  - ▶ Now have constituency across all Tasmanian regions

This THEO page outlines the Adult Peripheral Intravenous Cannulation (PIVC) insertion program for THS Clinicians employed within THS Hospitals North.

#### The PIVC program for THS Clinicians encompasses the following:

- Meet the program requisite requirements as listed below
- Completed contemporary eLearning modules for Hand Hygiene and ANTT *(You will be unable to progress in this course until this is complete)*
- Complete eLearning module on external site and upload evidence of completion *(You will be unable to progress in this course until this complete)*
- Attend a **Simulated Learning Workshops OR PIVC Simulation Session** as outlined below *(Booking details are inclusive. AGAIN, you will be unable to progress in this course until one of these complete)*
- Supervised assessment for competence in practice as outlined below and upload evidence of completion *(Booking details are inclusive)*



# What we did to rectify the problem/issue

- ▶ **Developed medical student education UTAS (5<sup>th</sup> year)**
- ▶ Aim to provide consistency - no previously provided standardise practice for medical staff
  - ▶ 3hr face to face
  - ▶ Protocol
  - ▶ PIVC packs
  - ▶ Aseptic Technique
  - ▶ Simulations
  - ▶ Attend Day Procedure Unit(DPU) to complete assessment and competency sign off
  - ▶ This is not an 'attend and you pass' situation



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# What we did to rectify the problem/issue

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## SKILL COMPETENCY:



### Insertion of Peripheral Intravenous Cannula Device

To be deemed competent nurses, midwives, medical students, medical officers, and other approved healthcare workers must independently complete 3 successful, witnessed cannulations and pass their cannulation competency with 100% compliance.

Name: \_\_\_\_\_ Location: \_\_\_\_\_

Key: 5 – Independent, 4 – Supervised, 3 – Assisted, 2 – Marginal, 1 – Dependent, (Rating Scale: Table 1)

| Preparation   | 1 | 2 | 3 |
|---|---|---|---|
| Identify patient  |   |   |   |
| Checks order and reviews patient record for allergies and clinical alerts   |   |   |   |
| Explains purpose of cannulation to, and obtains verbal consent from, the patient or nominated representative  |   |   |   |
| Perform Hand Hygiene  |   |   |   |
| Wipes down trolley or clean equivalent controlled surface with a 2 in 1 detergent / disinfectant wipe   |   |   |   |
| Collects and prepares required supplies, checking integrity of packaging and expiry dates (Link to Policy)  |   |   |   |
| <ul style="list-style-type: none"> <li>• dressing pack or IV starter pack</li> <li>• safety cannula- appropriately selected size</li> <li>• drawing up needle</li> <li>• swab 2% chlorhexidine and 70% alcohol OR alternative if allergy identified.</li> <li>• alcohol-based hand rub</li> <li>• Tourniquet- if IV starter pack not used.</li> <li>• luer lock syringe 10ml</li> <li>• 0.9% sodium chloride ampoule 10ml</li> <li>• Minimum volume extension tubing with bung or individual bung.</li> <li>• transparent IV dressing- if IV starter pack not used.</li> <li>• sharps container</li> <li>• Waste bin</li> </ul> |   |   |   |

## ▶ Competency assessments in DPU

- ▶ Assessment completed by PIVC CNE in DPU for JMO/ RMO/Medical observers and Nurses
- ▶ Some need to attend more than once
- ▶ This is not an 'attend and you pass' situation

# What we did to rectify the problem/issue

- ▶ **Developed ultrasound guided PIVC education package for medical and nursing staff**
  - ▶ Ultrasound guided PIVC education package and competency for medical and nursing staff
  - ▶ Aim to provide consistency
  - ▶ Developed assessment competency tool
  - ▶ Working on consistency of equipment

Tasmanian Health Service - North



## SKILL COMPETENCY:

### Ultrasound Guided Peripheral Intravenous Cannulation (USGPIVC)

Name & Designation: \_\_\_\_\_ Location: \_\_\_\_\_

- 3 successful directly supervised USPIVC insertions and scans should be performed in the USGPIVC workshop on a training phantom (insertion) and a live model (scanning) prior to independent practice.
- 2 of the USGPIVC insertions with the workshop facilitator can be utilised for teaching, coaching & for providing feedback as education is appropriate for assessment.
- All clinicians must also independently demonstrate the ability to discuss and complete 1 successful witnessed USGPIVC training with 100% compliance against the USGPIVC Competency tool prior to independent practice.

Key: I – Independent S – Coached C – Teaching T

| Pre-Scanning Vessel Assessment:  | 1 | 2 | 3 |
|--|---|---|---|
| Gain consent from patient, provides education, and performs DIVA assessment  |   |   |   |
| Performs Hand Hygiene  |   |   |   |
| Disinfects the ultrasound machine prior to use and transducer using LLD if not received HDL prior to procedure. *If transducer received HDL prior to procedure place tracking sticker in patients file and complete necessary paperwork. |   |   |   |
| Performs hand hygiene  |   |   |   |
| Position patient and equipment ergonomically (line of sight)   |   |   |   |
| Optimises the image - (adjust depth/gain settings)   |   |   |   |
| Explores the arm in transverse   |   |   |   |
| Differentiates vein from artery using pressure differential  |   |   |   |
| Identify an appropriate vein for cannulation, including assessment of size and   |   |   |   |



## Program Prerequisite Requirements

### THS Clinicians must meet the following:

- Current employee of Hospitals North OR Northwest
- Has been nominated to complete the USGPIVC course which has been discussed and endorsed with their manager AND Nursing director (if a Registered Nurse).
- Has discussed the application with their manager and determined a role requirement of USGPIVC.
- Abilities to work in self-directed ways.
- Willing to act as a resource within an area of practice on completion.
- Can complete the supervised competence assessment & logbook requirements.
- Is considered to have advanced skills in PIVC insertion.
- Has maintained recency of practice in PIVC.
- Can maintain recency of practice in USGPIVC.
- Completed THEO THS Hand Hygiene course (if you have not completed click below)
- Completed THEO Aseptic Technique course (if you have not completed click below)
- Completed THEO Aseptic Technique Competency Assessment (if you have not completed click below)

### Prerequisite courses

please click on these links to access the course if you have not completed/are not compliant in the hand hygiene or required Aseptic course.



[Hand Hygiene](#)



[Aseptic Technique](#)



[Aseptic Technique Competency Assessment](#)

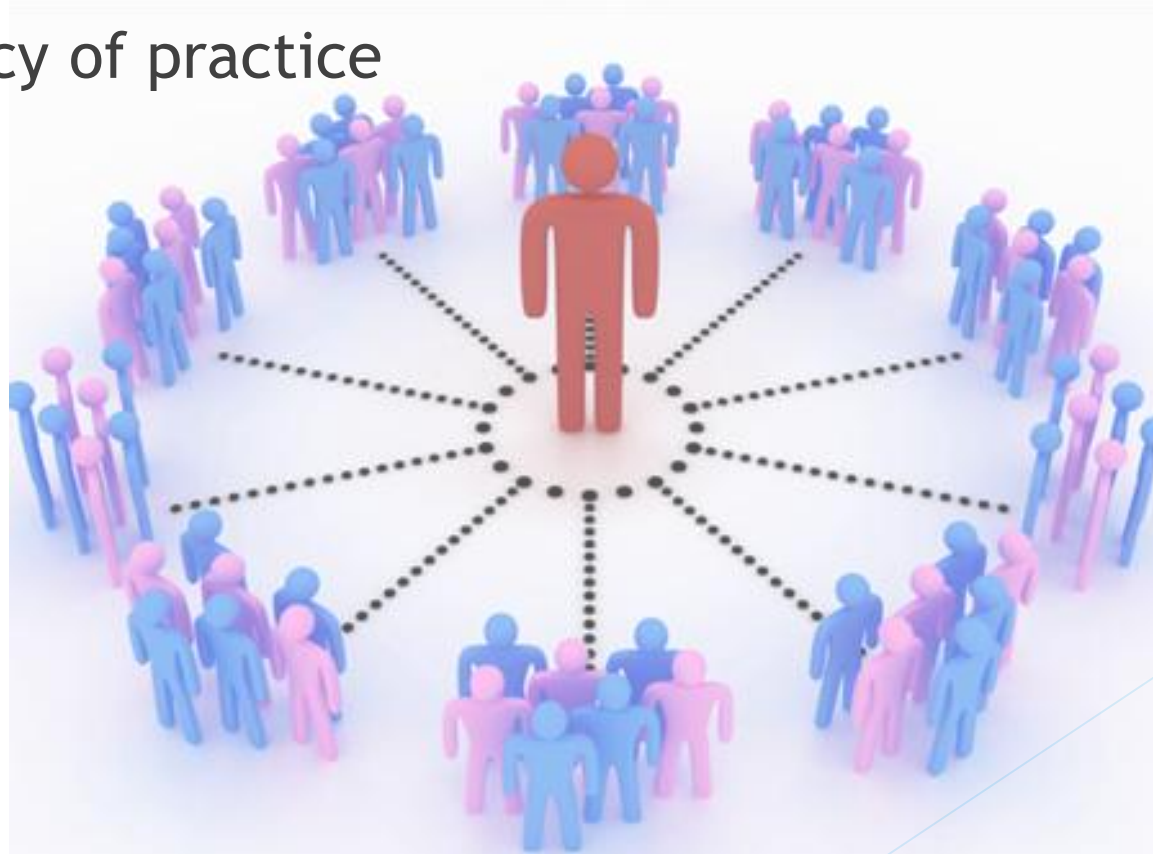
### REQUIRED ACTIVITY



[prerequisite completion question](#)

# What we did to rectify the problem/issue

- ▶ **Train the trainer workshops**
  - ▶ Staff completing competency assessment.
  - ▶ 90min education session, run 4 a year.
  - ▶ Ensures consistency of practice



# What we did to rectify the problem/issue

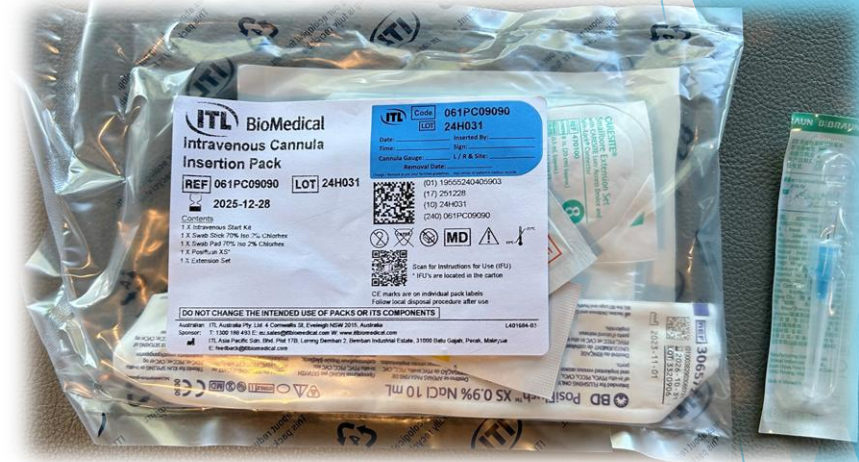


- ▶ **Standardised PIVC trolley throughout Launceston General Hospital**
  - ▶ Simplify and consistency for staff
  - ▶ No matter where staff work the PIVC trolley will be the same

# What we did to rectify the problem/issue

## ▶ PIVC insertion packs

- ▶ User friendly
- ▶ Changed dressing- from feedback
- ▶ Cost savings and mindful of sustainability
- ▶ Reviewed and standardised bungs



## ▶ Reusable Torniquets from single use

- ▶ Sustainability initiative



**DO NOT  
THROW  
AWAY!**



# What did IPCU do to support process

- ▶ Infection Prevention and Control Unit at LGH
  - ▶ Surveillance
  - ▶ Reporting
  - ▶ Representative in Vascular Access Committee
    - ▶ Supportive of recording all VIP's >1

## Tasmanian Infection Prevention and Control Surveillance Report

Annual report 2024



- ▶ 2023 IPCU CNE's provide education for all **line associated blood stream infections** including District hospitals, MPC's and Community nursing services.

# Education 2025

## **PIVC workshops**

B.Braun PIVC  
workshops  
commenced in March  
2024

**185 Nurses have  
received education**

## **Ward Education**

30-minute presentation

- Cannula care
- Statistics
- Complications
- SABS
- Prevention

**14 sessions in 2025**

## **RMO workshops**

commenced in  
March 2023

**179 RMO's have  
received PIVC  
training**

## **DPU Practical Assessments**

**Sessions (2 - 3 times a  
week)**

4 hours booked time  
in DPU with PIVC CNE to  
obtain PIVC competency

**53 sessions 2025**

TTP education session

Surgical Smart day  
**30-minutes**

TTP study day  
**60-minutes**

Student RN Education  
Basics in PIVC care  
45- minutes

**1 session 2025**

# Education 2025

## **Nursing and Midwifery Grand rounds**

PIVC & SABS case study

## **Clinical trials**

Haines Silicone Tourniquet

Sorba View Shield

IVC Trolley

## **PIVC Masters :**

Train the Trainer workshops

3-hour sessions

0800-1100hrs

1200-1500hrs

covering :

- Refresh on in Aseptic Technique and insertion techniques
- Competency assessment tool
  - Simulation

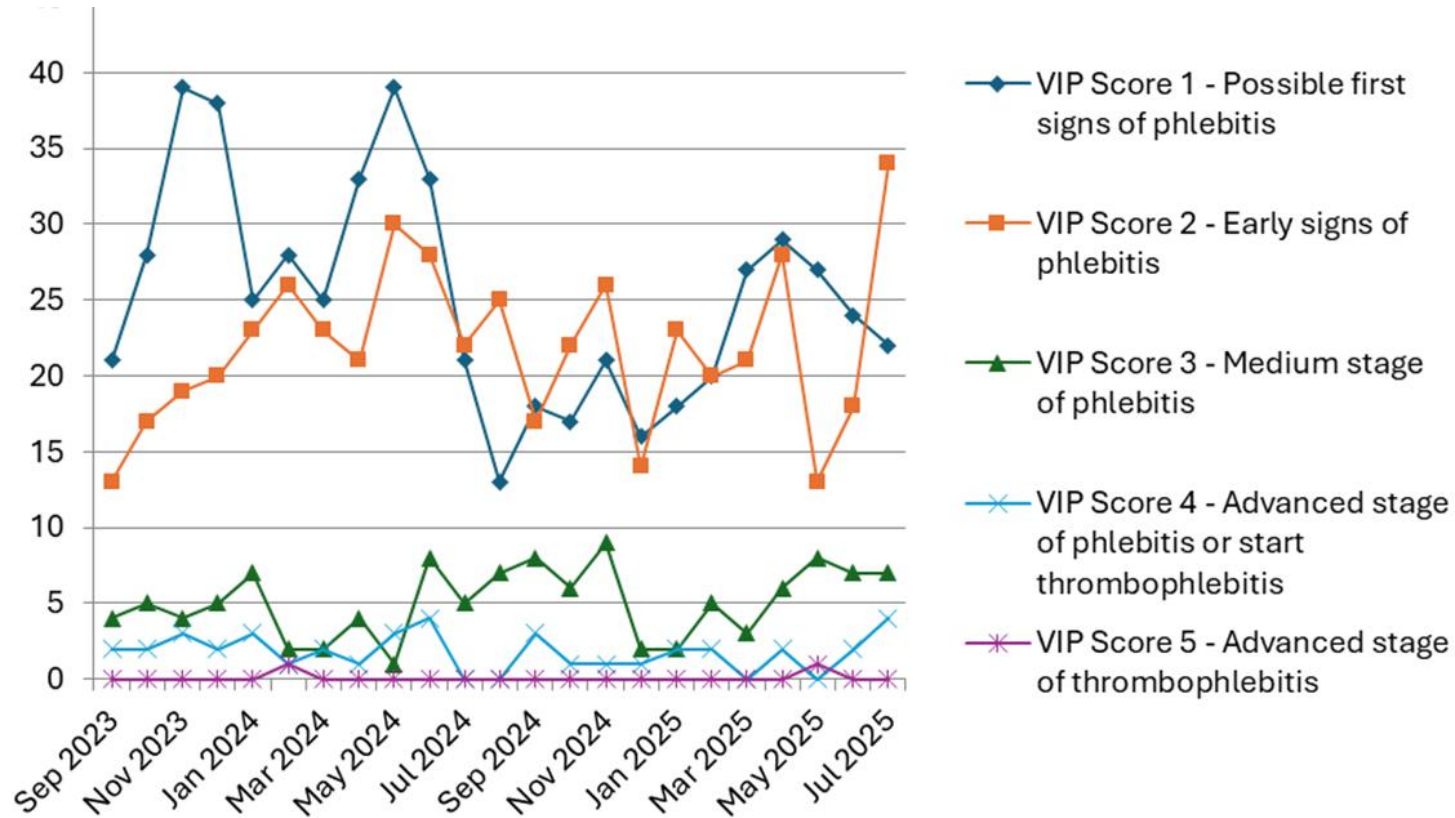
**4 sessions 2025**

# The results

▶ PIVC Monitoring form post launch data

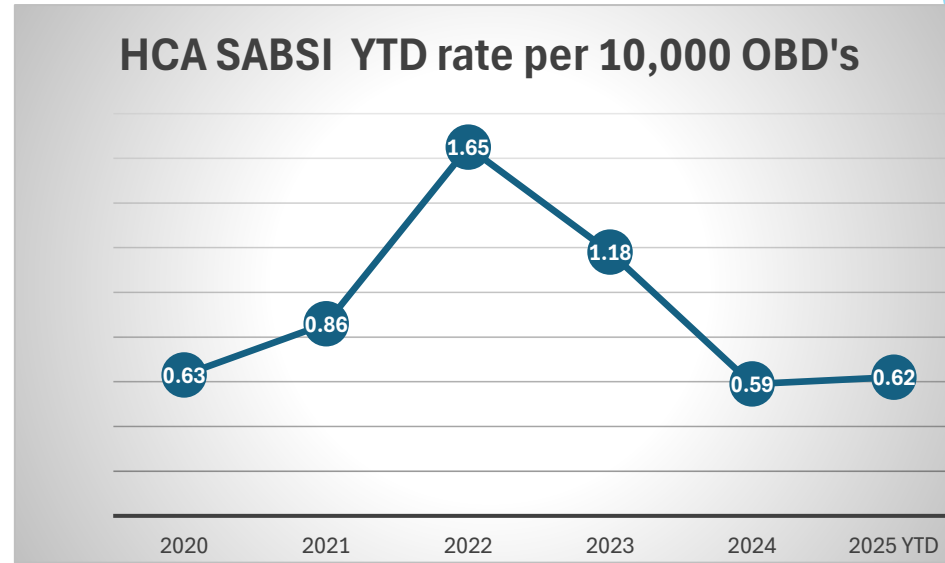
▶ Annual savings of **\$125,045.13**

▶ SRLS data



# The results

- ▶ Improved patient outcomes by reinforcing safety standards and protocols.



## Analysis/ Investigation of Peripheral Intravenous Cannula Phlebitis in SRLS

Overview: When completing the analysis/ Investigation of a SRLS event relating to a phlebitis score please include the following to help streamline the process.

### How to Analyse/Investigate Phlebitis in SRLS?

In the 'Summary of Analysis/Investigation' enter the following information for PIVC phlebitis patient safety events



Example:

#### Summary of Analysis/Investigation

Provide a brief summary of what has been done to manage the event, any corrective and preventive actions identified and/or put in place.

PIVC left cubital fossa, VIP score 2, pain 5/10 near IV site. PIVC was removed. Patient was Afebrile, observations continue 4/24.  
**Yes**, PIVC was inserted using ANTT. **Yes**, the Vascular Access Device Monitoring Form was completed TDS. **Yes**, PIVC was in situ for less than 72 hours and a medical officer documented ok to leave in situ

If **No** to any of the above Questions

Further investigation may be required to identify system issue.  
 System issue – identify improvement opportunity/ short term actions.

If all **Yes** to ab

Select 'no system issue'

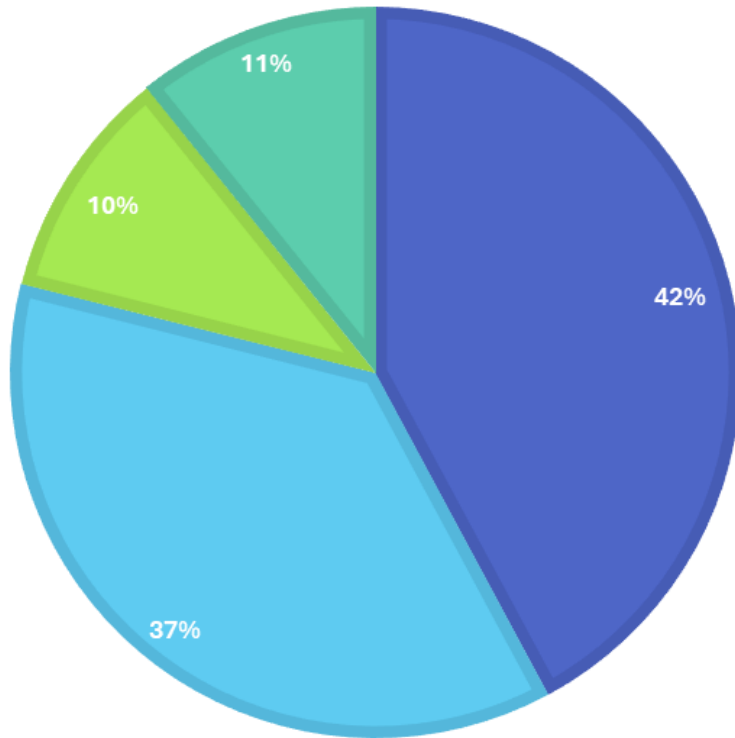
## Lessons learnt

- ▶ Can make a difference to our SABSI rate and line associated BSI rates?
- ▶ NUM's increased workload closing SRLS's
- ▶ Education and competency

# Lessons learnt

## SITE OF PHEBITIS

■ CF ■ Forearm ■ Wrist ■ Hand



- ▶ There is still work to be done!
  - ▶ DIVA pathway
  - ▶ PIVC placement
  - ▶ Removing unused PIVC
  - ▶ Removing PIVC VIP >1
  - ▶ ‘Leave line in and watch’
  - ▶ Paediatric policy being reviewed

## Special thanks to

- ▶ Vascular access committee chair
- ▶ PIVC CNE's
- ▶ Vascular access committee
- ▶ NUM's
- ▶ Staff



