

Coroner McGregor
Coroners Court of Victoria
6 Kavanagh Street
SOUTHBANK VIC 3006

BY EMAIL team2@courts.vic.gov.au

Dear Coroner McGregor,

Back in August 2022, Safer Care Victoria responded to your findings and recommendation into the tragic death of Susan Mary Royals. We have written today to inform you of the outcome of this recommendation.

You then recommended *Safer Care Victoria develop a standardised approach for CVC insertion which encourages the use of ultrasound guided insertion (and other methods of confirming venous placement) to reduce the likelihood of instances of arterial puncture.*

Safer Care Victoria was pleased to accept the recommendation, and engaged our branches to investigate ways in which we could implement Your Honours recommendation. After extensive consultation with our branches and their networks, and discussions with the Victorian Perioperative Consultative Council (VPCC), we concluded most statewide health care services already have local protocols, guidance, or training in place. Additionally, any independent development of this type of guideline would be protracted, and for two key reasons; there is not a good evidence base to guide safe practice, and the procedure is undertaken by a broad range of medical specialties and developing a guideline would need representation and *agreement* from all speciality craft groups.

Instead, SCV (Safer Care Victoria) collaborated with the VPCC to inform clinicians of the issue of arterial puncture complications. This involved extensive deliberation at multiple Council meetings that resulted in advice, endorsed by VPCC, and disseminated by SCV's Clinical and Professional Leadership Unit in late 2023 (See attachment 1). This included VPCC's recommendations for correct vessel access during Central Venous Catheter (CVC) insertion and for clinician to consider:

1. CVC catheterisation should only be undertaken by, or under the direct supervision of, an appropriately trained and credentialed practitioner.
2. Guidelines/ protocols and training for CVC catheter insertion should include steps to verify that the correct vessel has been accessed which ideally should occur before vessel dilation occurs and before the definitive catheter or sheath is inserted.

In addition, *The Anaesthesia Subcommittee of VPCC* identified several key factors that clinicians must consider when performing the procedure, these included:

- Mechanical complications of central lines, usually caused by insertion of the line into an adjacent artery occur too often are associated with significant morbidity and mortality,
- Despite the problem of mechanical line complications, there is not a good evidence base to guide safe practice. The best level of evidence is probably expert opinion.
- Expert opinion suggests ultrasound should be used wherever possible to guide the percutaneous insertion of central lines and venous placement must be confirmed before dilatation and line placement,

- Confirmation of venous cannulation must employ more than one strategy which may include: the colour of blood aspirated, pressure measured from the insertion cannula or needle, blood gas sample analysis of aspirated blood and / or ultrasound visualisation of the wire in the vein lumen,
- A credentialling process should be in place to ensure that practitioners inserting central venous access have the appropriate training and experience and those who lack credentials are appropriately supervised, and
- The placement of central venous access is undertaken by a broad range of medical specialties and any guidelines developed would need to seek representation from these stakeholders.

SCV continues to monitor this issue in collaboration with the VPCC and commit to informing the sector when opportunity arises. We thank the Court and Coroner McGregor for highlighting this important safety issue.

Should you have any further queries, please contact Jodyanne See, Senior Project Officer, Safer Care Victoria,
[REDACTED]

Yours sincerely,



Professor Andrew Wilson

Chief Medical Officer, Safer Care Victoria

Date: 14 / 05 /2024

VPCC Recommendations

Correct vessel access during Central Venous Catheter (CVC) insertion

VPCC Meeting: 21 Sep. 23

Background

Recommendation in response to a request to VPCC for advice from the SCV Recommendations Management Committee regarding a recommendation from the Victorian Coroner for SCV to produce guidelines for central line insertion. This advice relates to the coroner's case in question (COR 2019 002666) and previous cases considered by VPCC and focuses in particular on vascular complications related to percutaneous central venous catheter insertion.

Recommendations to verify correct vessel access during Central Venous Catheter (CVC) insertion.

1. CVC catheterisation should only be undertaken by, or under the direct supervision of, an appropriately trained and credentialed practitioner.
2. Guidelines / protocols and training for CVC catheter insertion should include steps to verify that the correct vessel has been accessed which ideally should occur before vessel dilation occurs and before the definitive catheter or sheath is inserted.

The Anaesthesia Subcommittee of VPCC (11/9/2023) identified the following issues:

1. There are appropriate existing guidelines describing the prevention of central line associated infections, a local example has been produced by ANZICS and can be accessed at <https://www.anzics.com.au/clabsi/>
2. Mechanical complications of central lines, usually caused by insertion of the line into an adjacent artery occur too often and are associated with significant morbidity and mortality.
3. Despite the problem of mechanical line complications there is not a good evidence base to guide safe practice. The best level of evidence is probably expert opinion.
4. Expert opinion suggests that ultrasound should be used wherever possible to guide the percutaneous insertion of central lines and that venous placement must be confirmed before dilatation and line placement.
5. Confirmation of venous cannulation must employ more than one strategy which may include: the colour of blood aspirated, pressure measured from the insertion cannula or

needle, blood gas sample analysis of aspirated blood and/or ultrasound visualisation of the wire in the vein lumen.

6. A credentialling process should be in place to ensure that practitioners inserting central venous access have the appropriate training and experience and those who lack credentials are appropriately supervised.

7. The placement of central venous access is undertaken by a broad range of medical specialties and any guidelines developed would need to seek representation from these stakeholders.