Preventing Needle Dislodgement During Haemodialysis – A Positive Approach to Enhancing Patient Safety

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Project authors - Haemodialysis nurses, Brisbane, Qld: Hannah Butler, Lilian Chen, Eleonora Deak, Marie, Jo Duque, Lisa Gordon, Jamie Gray, Alison Greer, Angela Henson, Rebecca Hickson, Michelle Ludwig, Vicki Makejev, Kylee Mcmahon, Jenny Strow, Helen Tran, Shaini Varkey, Belinda Veziroglu.





TURRBAL
& YAGERA
COUNTRY





Our region

We Present:

1. The Project
2. Objectives: TALE
3. Team Engagement
4. Action
5. Learning
6. Evolving
7. Outcomes & Summary



https://www.hemotekmedical.com/for-patients/

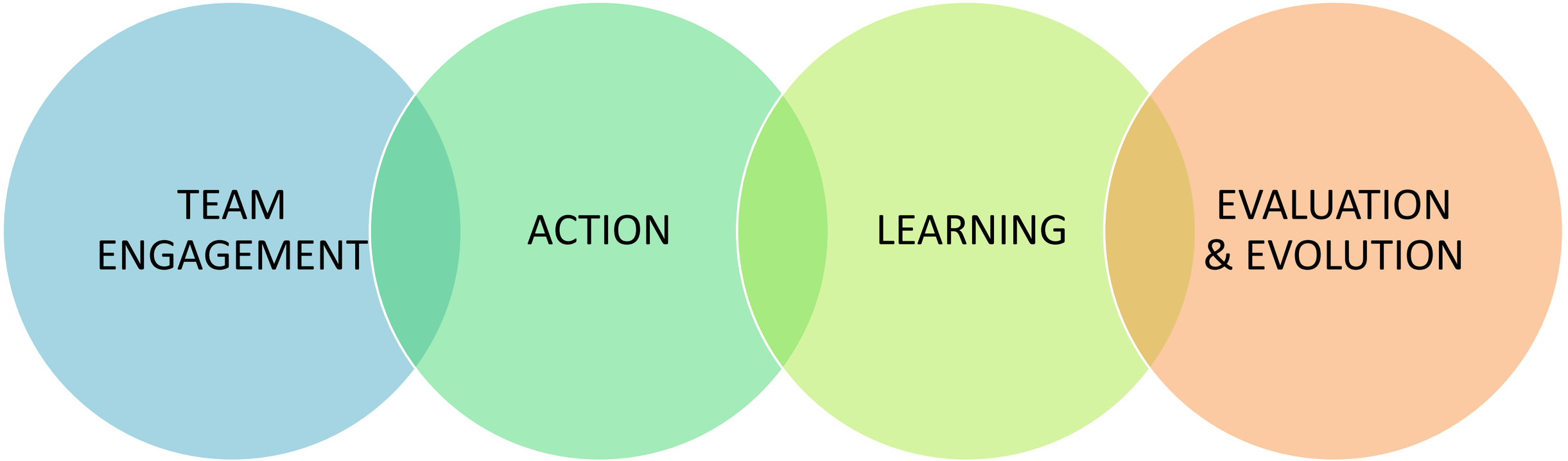
The Project

We noticed an increase in needle dislodgements over a few months.

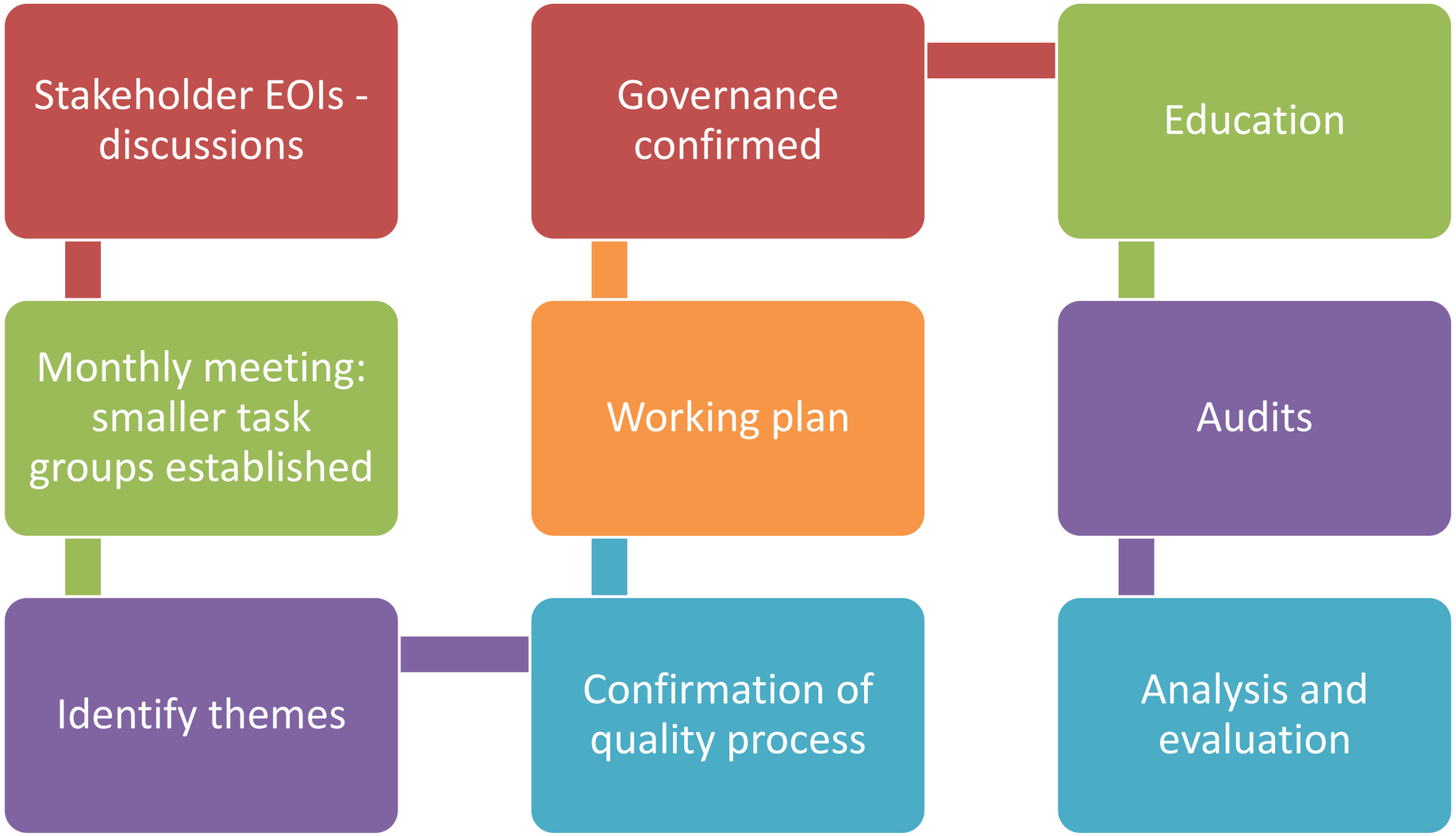
This quality project aimed to:

- Increase awareness amongst patients and staff of where risks for dislodgement lie.
- Promote consistent nursing practice in the unit.
- Ongoing monitoring of incidences and improvements.

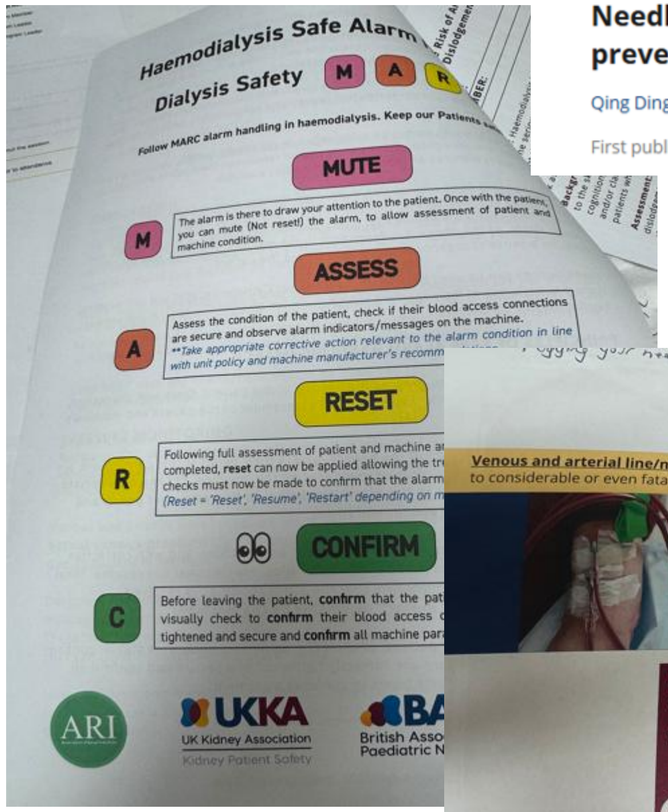
Objectives: TALE

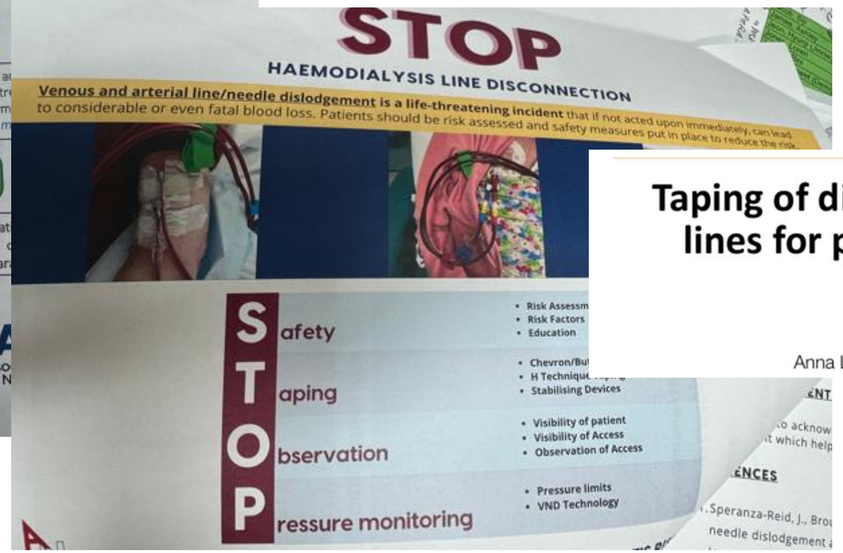


Team Engagement



Action: Reviewing literature & evidence





Hemodialysis International

REVIEW ARTICLE

Needle dislodgement in hemodialysis patients: Progress in prevention and early intervention

Qing Ding ✉, Qinglong Ye

First publish

Venous Needle Dislodgement In Patients on Hemodialysis

Billie Axley
Joan Speranza-Reid
Helen Williams

CNE Continuing Nursing Education

ORIGINAL ARTICLE

Seminars in Dialysis WILEY

Hemodialysis taping styles and their effect on reducing the chance of venous needle dislodgement

Dominic Y. F. Chan[1] | Scott Dobson[2] | Tracie Barber[1]

NNJ NEPHROLOGY NURSING JOURNAL

Venous Needle Dislodgement and Access-Bloodline Separation

, RN, Deborah Brouwer-Maier, RN, CNN, Christina M. Cruz,
e Inglese, MSN, RN

Taping of dialysis needles and securing of lines for patients on haemodialysis — a quality project

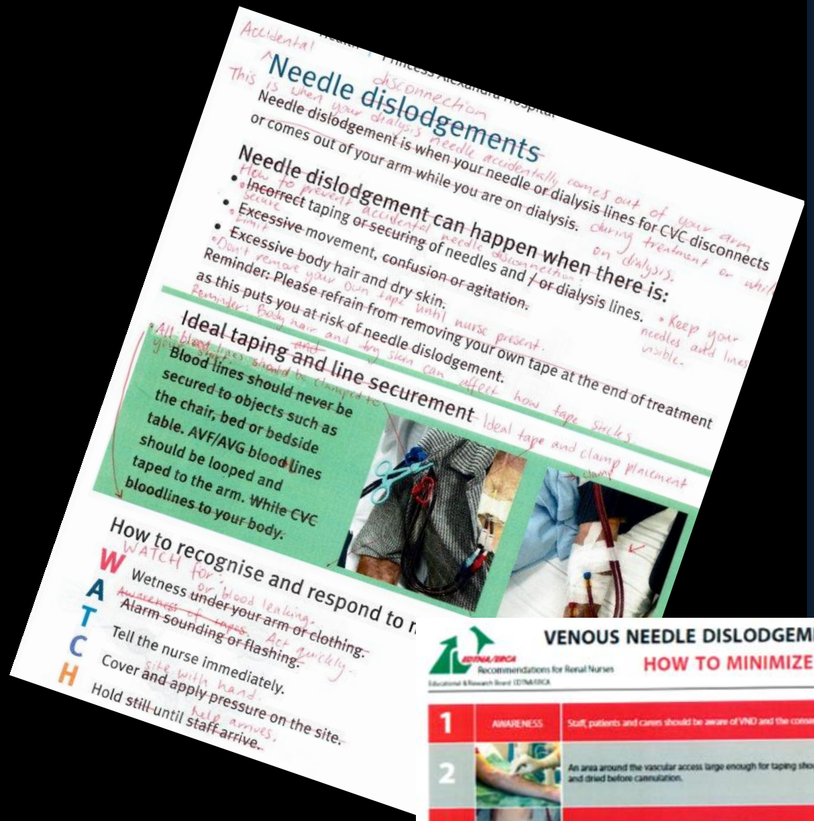
Anna Lee, Kylie Penn, Caroline Hand & Scott Dobson

VENOUS NEEDLE DISLODGEMENT: HOW TO MINIMISE THE RISKS

Jean-Pierre Van Waeleghem[1], Melissa Chamney[2], Elizabeth J. Lindley[3], Jitka Pancírová[4]
[1]Department of Nephrology/Hypertension, Antwerp University Hospital, Belgium
[2]School of Nursing and Midwifery, City University, London, UK
[3]Department of Renal Medicine, Leeds Teaching Hospitals NHS Trust, UK
[4]EDTNA/ERCA, Pilatusstrasse 35, Luzerne, Switzerland

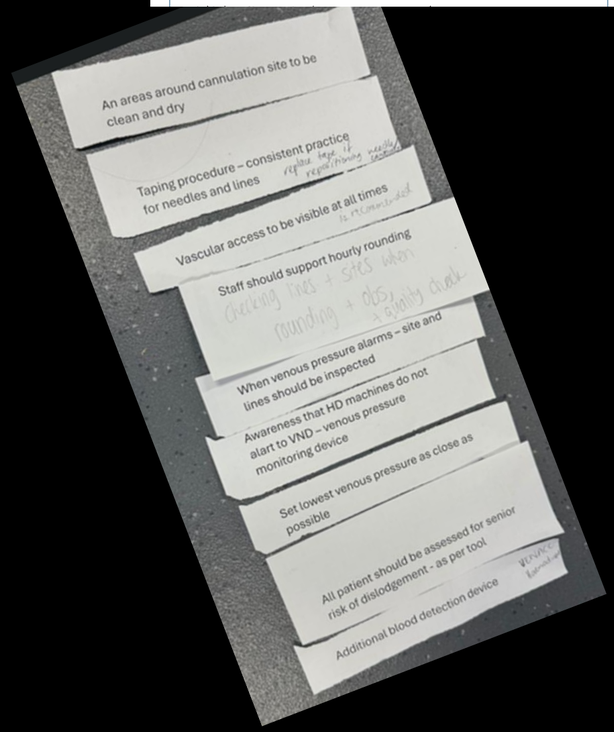
Van Waeleghem J.P., Chamney M., Lindley E.J., Pancírová J. (2008). Venous needle dislodgement: how to minimise the risks. *Journal of Renal Care* **34**(4), 163-168.

Action:
Contextualising and Prioritising

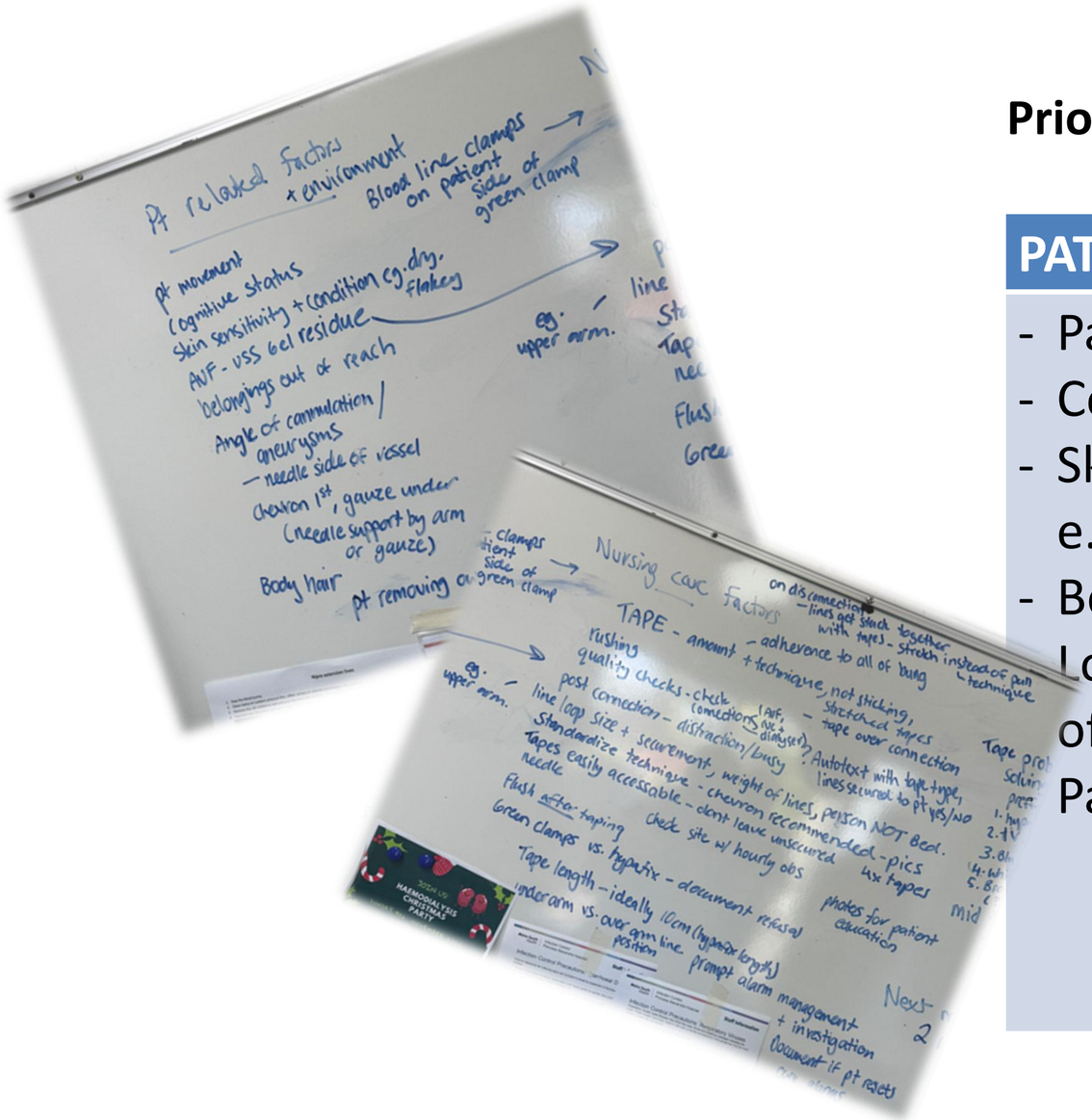








Action: Identifying themes

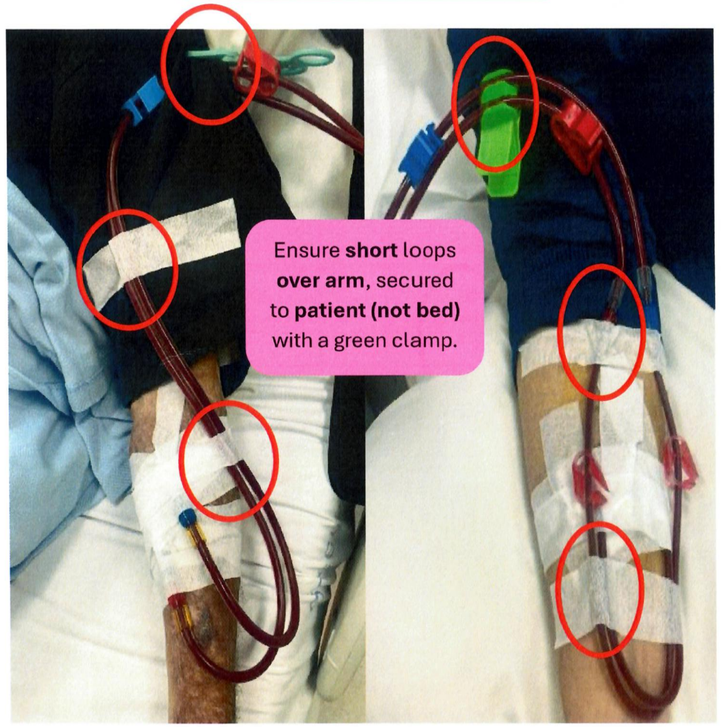


Priority issue found to be TAPING

PATIENT FACTORS	ENVIRONMENTAL FACTORS
- Patient movement - Cognitive status - Skin sensitivity & condition e.g. dry/flaky/Body hair - Belongings out of reach Location, shape and depth of vessel – e.g. aneurysm Patient removing own tapes	- Green clamps: location and type of clamp - Line loop size - Lines getting stuck together with tapes on disconnection when undoing them. - Retaping of connections after having to readjust. - Type of tape (strength & stickiness) - Quality checks

Action: Identifying TAPING

LINE SECUREMENT



TAPING

- Check allergies/sensitivities before cleaning and taping.
- Tape length should be ~15cm (hypafix length).
- Clean off USS gel completely before taping (if applicable).
- Tape **before** flushing and ensure tape is accessible to avoid leaving cannula unsecured.
- Replace tapes after adjusting (due to stretching).
- If tape sticking to itself on removal, stretch tape rather than pulling.

MONITORING

- Promptly attend alarms.
- Document if patients reset their own alarms and encourage them not to.
- Check connections at access and dialyser hourly and during quality checks.
- Utilise updated auto text and document pt refusal or variations to policy.

PATIENT FACTORS

- Ensure pt belongings and table in reach to avoid excessive movement.
- Assess cognitive status and provide extra securement for confused/agitated/restless patients.
- Provide education on potential risks and consequences of VND.
- Ask pt "Do you have emergency pack?" (What to do if fistula bleeds). If no, refer to VAN.
- Complete Riskman for incidents or near misses.

Alarm Management:

M — **MUTE** (Not reset!) the alarm, to allow assessment of patient and machine condition.

A — **ASSESS** patient condition and check connections.

R — **RESET** alarm.

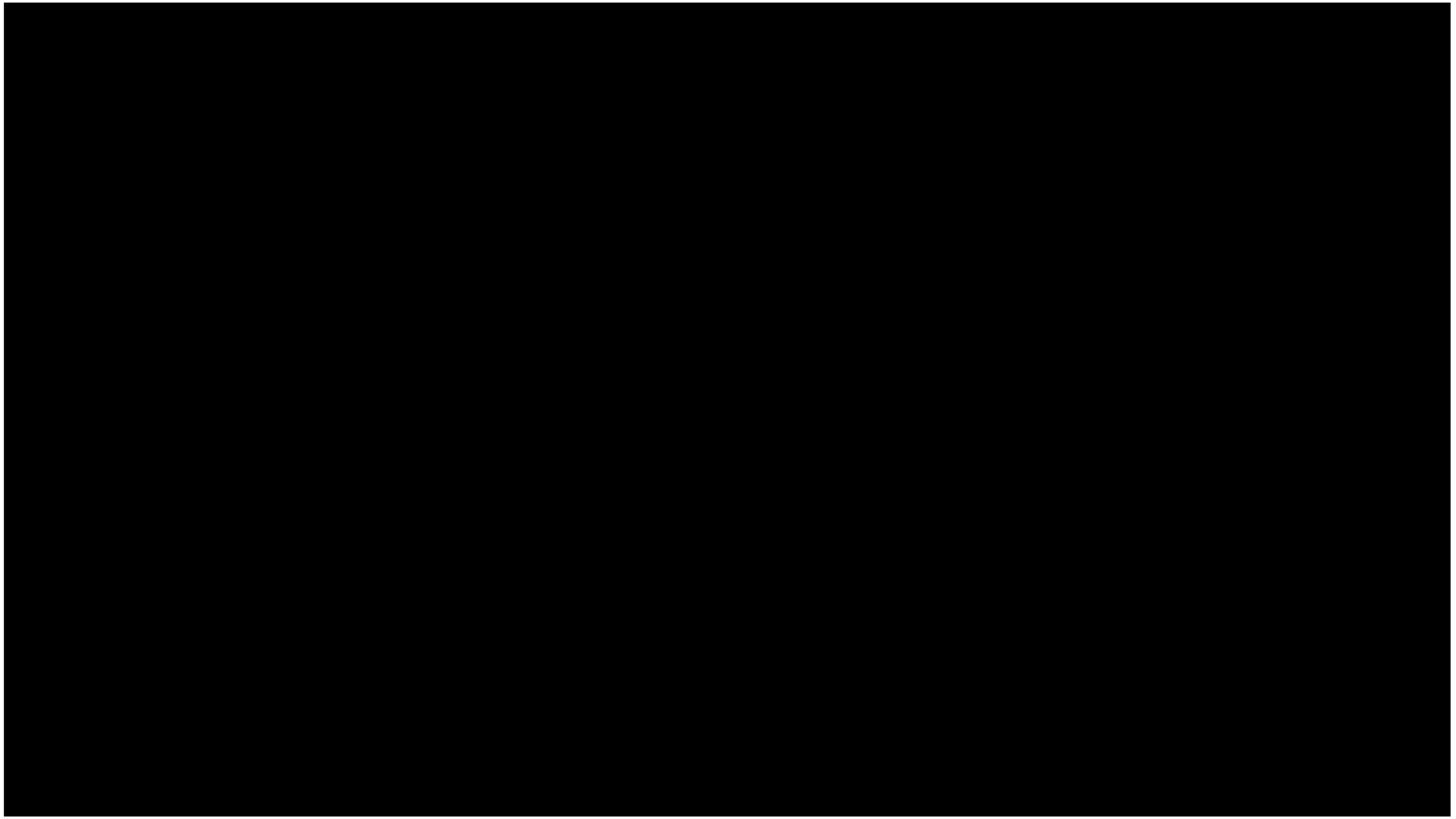
C — **CONFIRM** patient condition, connections and machine parameters.

Adapted from UK Kidney Association "Haemodialysis Safe Alarm Handling"

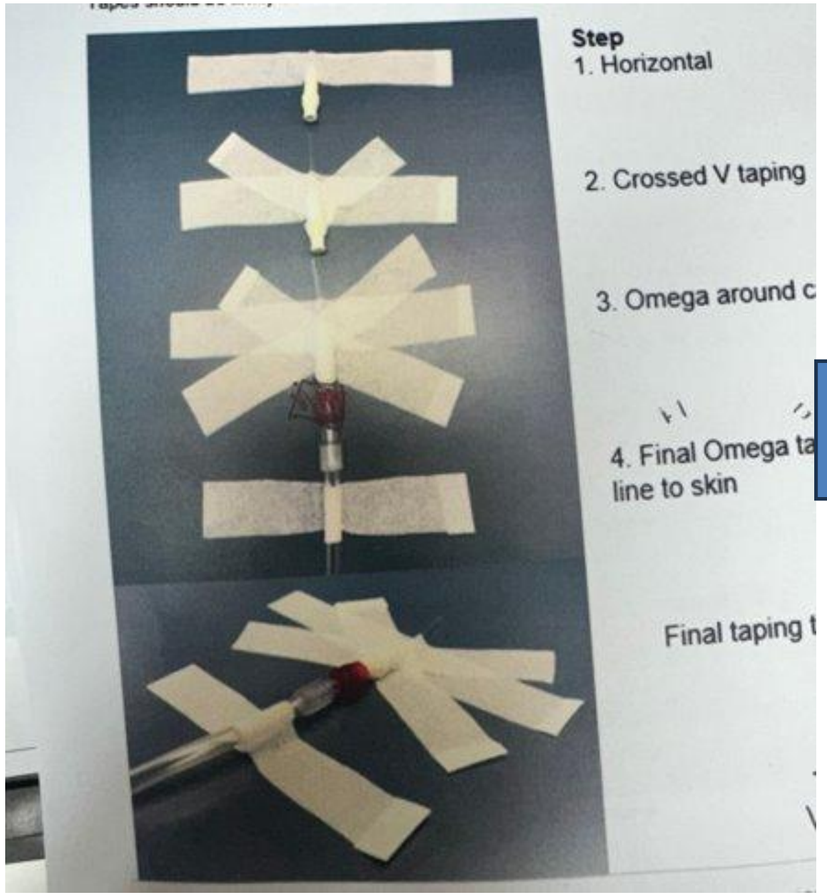
Priority issue found to be TAPING

Standardised taping technique implemented and monitored.

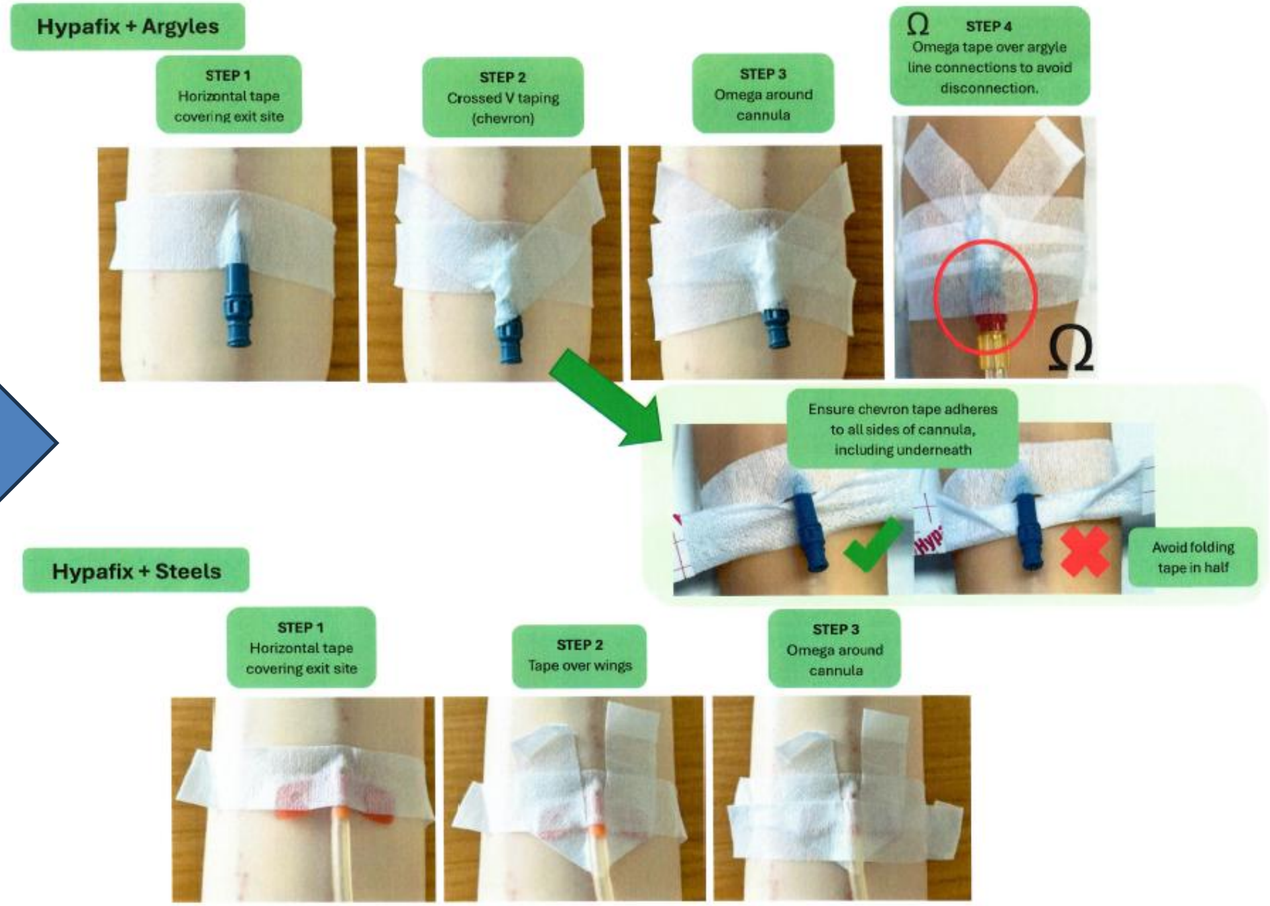
Clear expectation of how secure lines should look



Learning: Taping



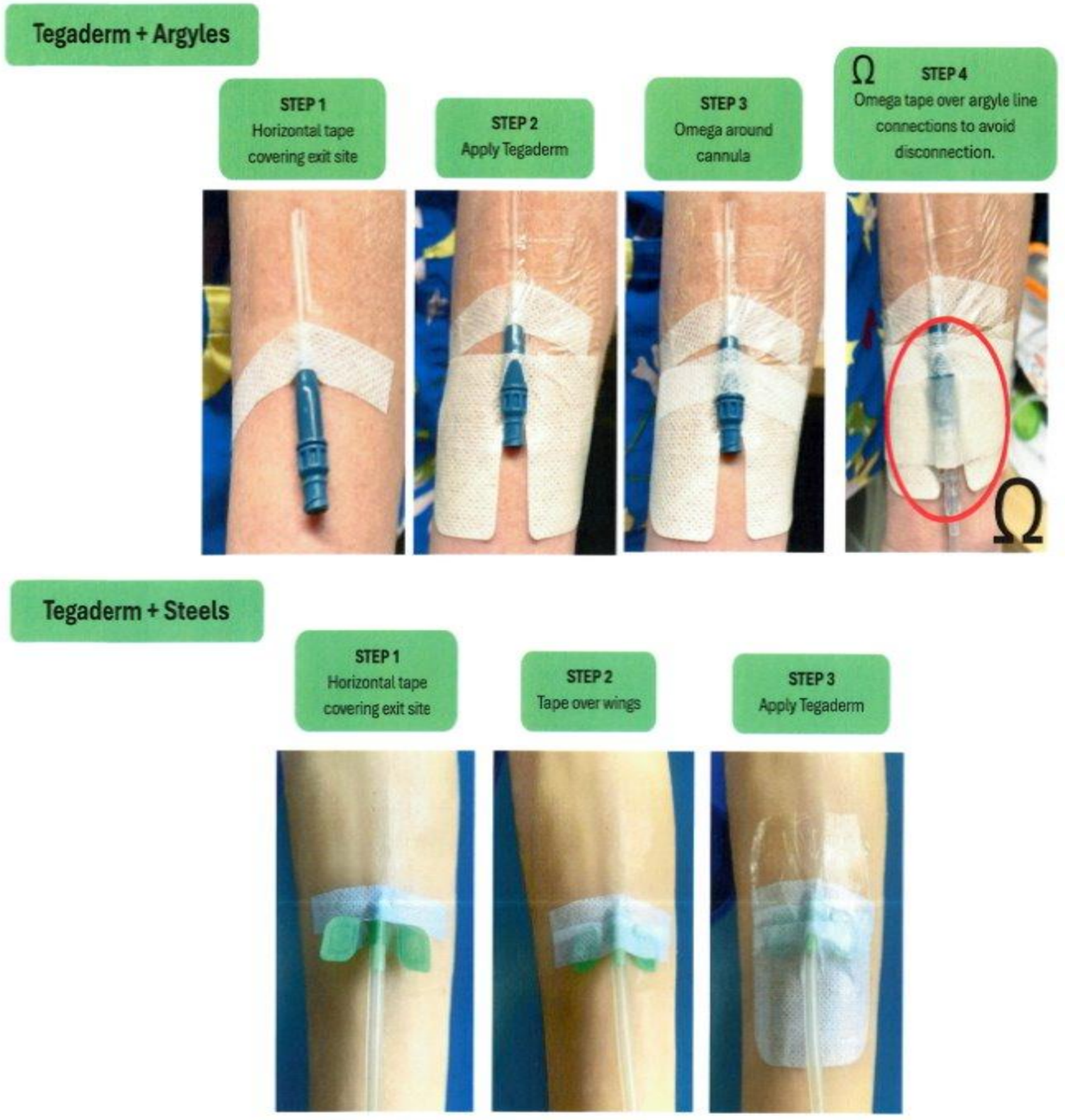
Step-by-step how to tape



How taping should look for argyle and steel cannulas

Learning: Taping Alternatives

- *Sensitive skin options:*
  - *Tegaderm (later option)*
  - *Blue tape (last line)*



Learning: Marketing and Launch





Nurses lead new needle security initiative

A passionate group of nurses from the PA Hospital Haemodialysis Unit are championing an awareness campaign and staff education resources to reinforce safety and prevent needle dislodgement.

Kidney Services Nurse Educator Angela Henson said the team is dedicated to providing the best possible care to patients undergoing haemodialysis.

Learning: Consumer Education

Community language brochures

Sự cố ngắt kết nối kim tiêm

Đây là trường hợp kim lọc máu của quý vị vô tình bị tuột ra khỏi cánh tay trong quá trình điều trị hoặc khi đang lọc máu.

Cách phòng tránh tình trạng kim tiêm bị tuột khỏi tay ngoài ý muốn:

- Dán băng dính cố định đường kim tiêm.
- Hạn chế di chuyển.
- Không tự ý tháo băng dính cho đến khi có y tá bên cạnh.
- Giữ kim và các dây truyền tĩnh mạch ở vị trí dễ nhìn thấy.

Lời nhắc nhở: Lông trên cơ thể và làn da khô có thể ảnh hưởng đến độ bám dính của băng dính.



Vị trí đặt băng dính và kẹp lý tưởng

Tất cả các dây truyền máu nên được kẹp vào áo của quý vị .
Các dây này cần được vòng lại và cố định bằng băng dính vào cánh tay của quý vị.

Cách nhận biết và xử lý khi kim tiêm bị tuột khỏi tay

Lưu ý:

W Hiện tượng ẩm ướt hoặc rò rỉ máu.

A Hành động nhanh chóng

Miss Thanh Thuy Pham
CPN9WU16C
English > Vietnamese
Digitally Authenticated by NAATI

Accidental needle disconnection

This is when your dialysis needle accidentally comes out of your arm duri
treatment or while on dialysis.

How to prevent accidental needle disconnection:

- Secure taping of needle lines.
- Limit movement.
- Do not remove your own tape until nurse is present.
- Keep your needles and lines visible.

Reminder: Body hair and dry skin can affect how tape sticks.

Ideal tape and clamp placement

All blood lines should be clamped to your shirt.
Lines should be looped and taped to your arm.



How to recognise and respond to needle disconnection

Watch for:

W Wetness or blood leaking.
A Act quickly.
T Tell the nurse immediately.
C Cover site with hand.
Hold until help arrives.

Nila ua faafuasei ona pa'u I fafo

(O le nila ua faafuasei ae le'i fuafuaina, ona pa'u mai i fafo ma lou lima a'o fai lau faamama toto, po'o nisi o togafitiga.)

Puipuiga e fai ina ia aua nei faafuaseia ona pa'u mai i fafo le nila:

- Faamau lelei i lalo mea faapipi (tape) o loo faamau ai le nila.
- Aua le soona gaioioi lou lima o loo iai le nila.
- Aua e te aveeseina e oe lava ia le mea o loo faapipii ai le nila i lou lima, vagana ua iai le teine/tama fomai.
- Aua le ufiufiina le nila ma laina o lau faamama toto.

Manatua: O fulufulu ole tino ma le pa'u matutu e faigata ona mau lelei ai mea faapipii (tape) i lou tino.



Mo le faamauina o tape ma clamp, ina ia pipii mau, o mea nei e ao ina e faia:

- O laina uma o loo faaaogaina, ia mautinoa o loo tavi'o lelei ma faapipii lelei i lou lima.
- Mautinoa ia faaaoga le clamp e faapipii ai laina uma i lou ofu.

A e faalogoina pe ete vaaia tulaga nei ete iloa ai ua pa'u i fafo le nila ma lou lima, o mea nei e ao ona faavave ona e faia:

- Pe a e faalogoina le susu o lou lima.
- Ia vave ona e faia mea nei:
- Ia vave ona logo le teine poo le tama fomai.
- Ia vave ona tuu le isi ou lima i le mea sa iai le nila, ma oomi i lalo ina ia taofi ai le sau i fafo ole toto mai le mea sa iai le nila.
- O'omi ai pea i lalo lou lima seia o'o mai le teine/tama fomai e fesoasoani ia te oe.

Learning: Consumer Education

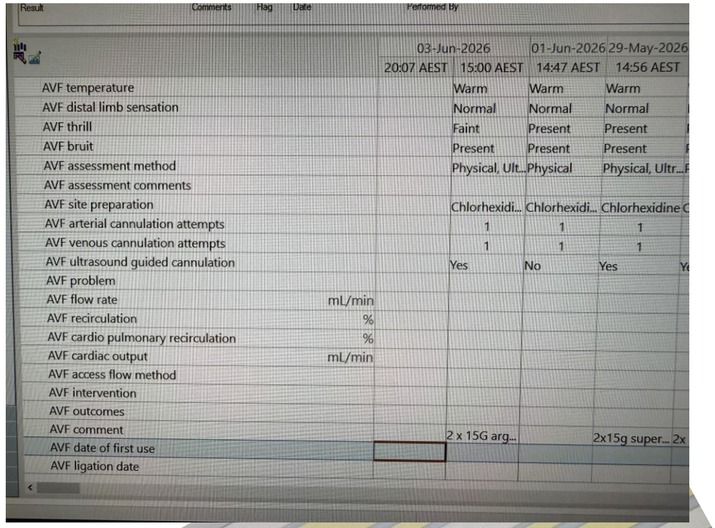


Learning: Staff Education

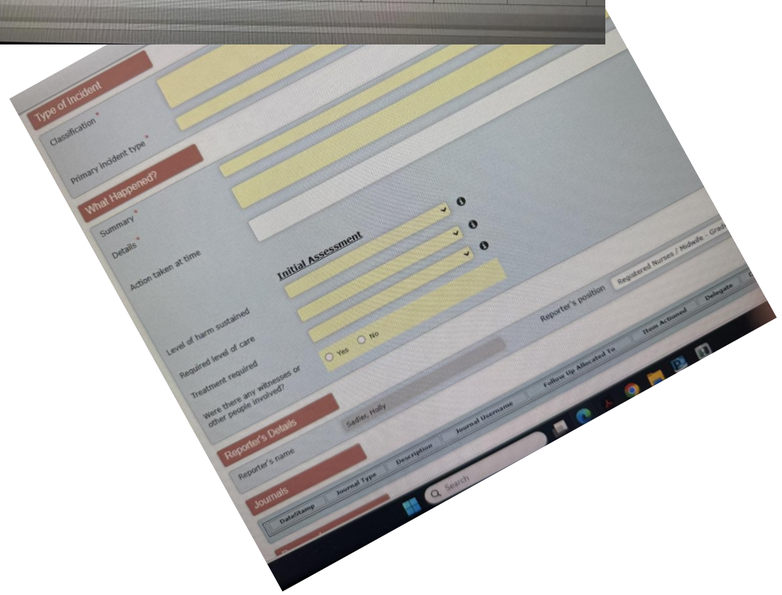
Education packs for staff

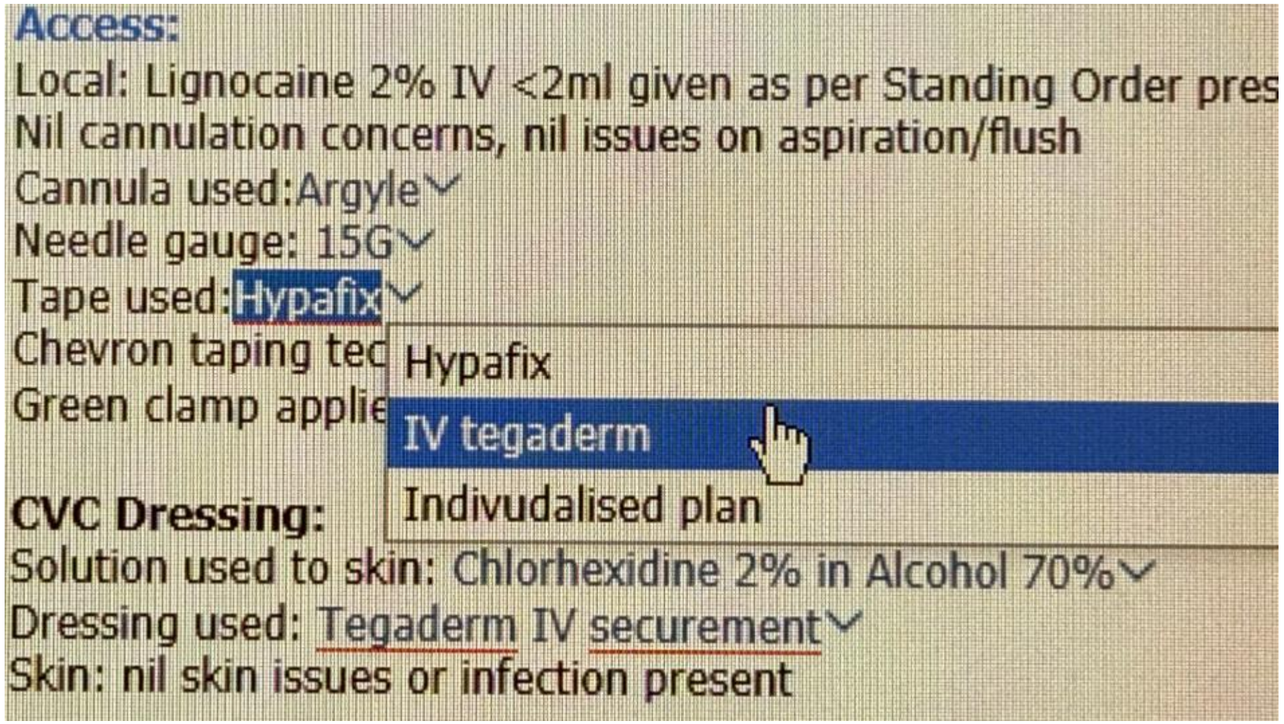


Evaluation: Documentation



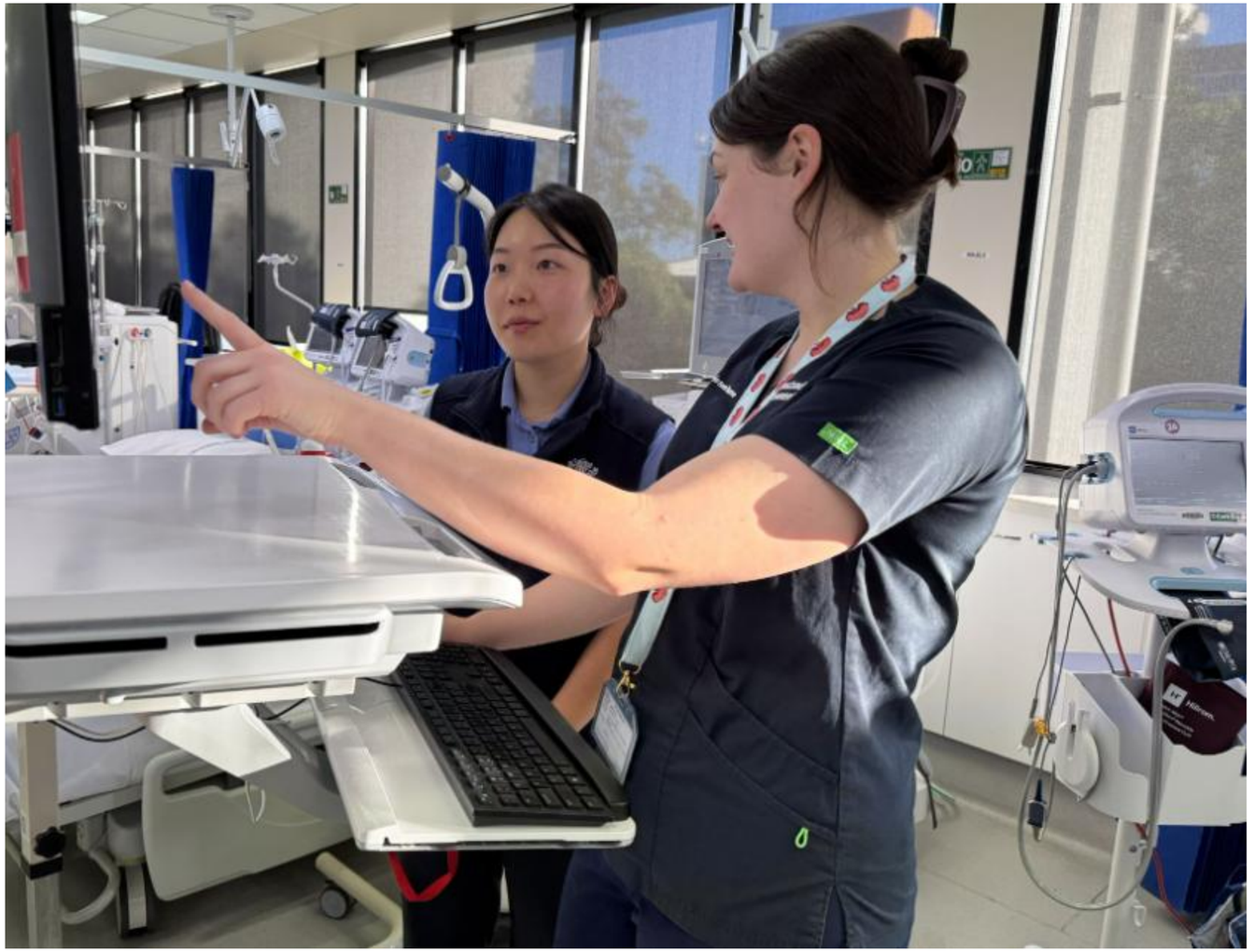
Result	Comments	Flag	Date	Performed by			
				03-Jun-2026 20:07 AEST	03-Jun-2026 15:00 AEST	01-Jun-2026 14:47 AEST	29-May-2026 14:56 AEST
AVF temperature					Warm	Warm	Warm
AVF distal limb sensation					Normal	Normal	Normal
AVF thrill					Faint	Present	Present
AVF bruit					Present	Present	Present
AVF assessment method					Physical, Ult...	Physical	Physical, Ultr...
AVF assessment comments							
AVF site preparation					Chlorhexidi...	Chlorhexidi...	Chlorhexidine G
AVF arterial cannulation attempts					1	1	1
AVF venous cannulation attempts					1	1	1
AVF ultrasound guided cannulation					Yes	No	Yes
AVF problem							
AVF flow rate			mL/min				
AVF recirculation			%				
AVF cardio pulmonary recirculation			%				
AVF cardiac output			mL/min				
AVF access flow method							
AVF intervention							
AVF outcomes							
AVF comment					2 x 15G arg...		2x15g super... 2x
AVF date of first use							
AVF ligation date							



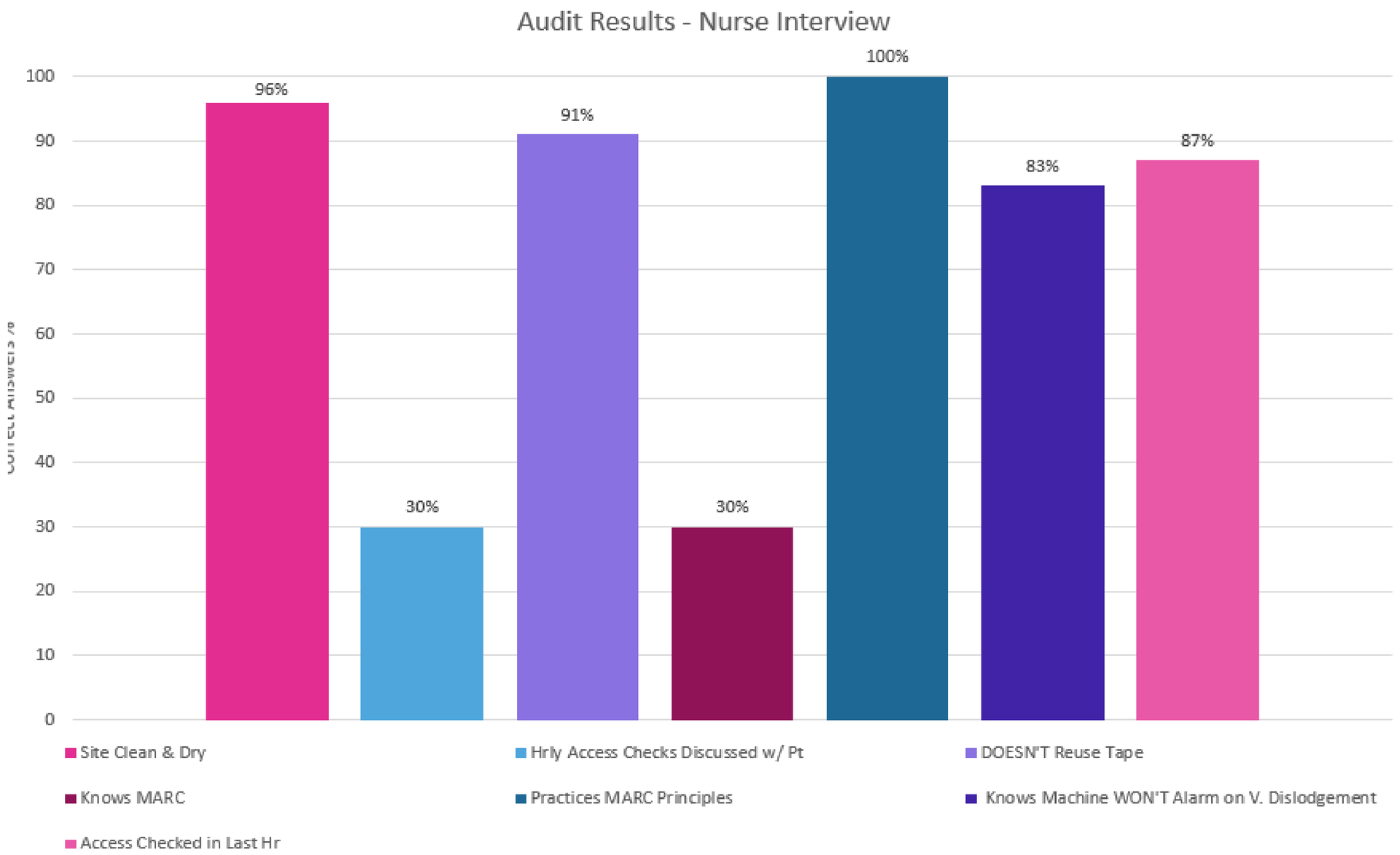


Evaluation: Audits

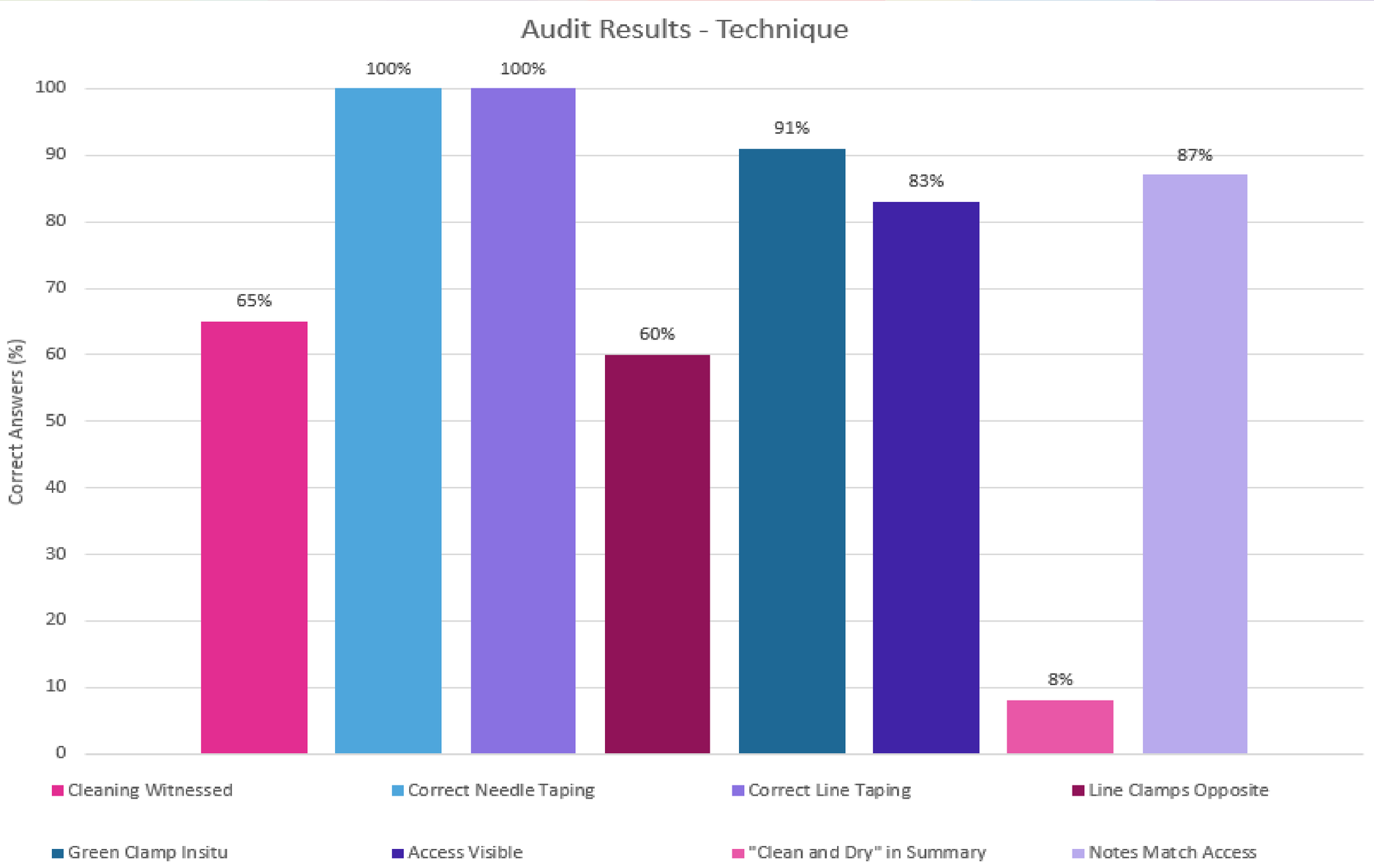
Auditing of staff practices: questionnaire



Evaluation: Audits



Evaluation: Audits



Summary & Outcomes

7. MEASURES OF SUCCESS

OUTCOME MEASURES	PROCESS MEASURES
• Reduction in needle dislodgement incidents over 6-month period • Improvement in completion of riskman data • Process established and included in procedure	• Number and outcome of education audit • Consistent documentation process (audit) • Staff feedback (evaluate education?) • Patient feedback on brochures

Insert pre-data timeframe	Insert post-data timeframe	Insert post-data timeframe	Insert post-data timeframe
Commenced Sept 2025 AH	Sept 2026	Sept 2025	Sept 2026

8. TIMEFRAMES AND DELIVERABLES

Plan & Prepare Explore & Understand	Design & Prioritise	Test & Implement Evaluate & Report
Sept 25 to Dec 25	Jan 26 to April 26	April to Sept 26
Develop consistent reporting Collate riskman/incidences Monthly development meetings Identify risks and prioritise actions Literature review and adjust	• Staff education resources developed and delivered • Patient education resources developed and delivered • Consistent taping approach established	Staff resources to be evaluated Documentation audit Patient brochure evaluated and amended Process developed for 6 monthly education Riskman data regularly reviewed

Summary & Outcomes

