

REDUCCTION: REDUcing the burden of dialysis Catheter ComplicaTIONS: a National approach

Introduction and unit identification

Thank you for time and interest. Please read the PDF file accompanying the introductory email before beginning.

Please answer to the best of your knowledge. If you are unable to answer a question, simply leave the question unanswered and continue.

* 1. What is the name of your renal unit?

2. What is your job designation or role within your dialysis unit?

3. How many nephrologists have patients dialysing at your unit (including satellite units)?

* 4. How many satellite units are covered by this response?

Satellite dialysis units

5. Please enter the names of all satellite units covered by this response.

1.

2.

3.

4.

5.

6.

6. If you need more space to identify more satellite units please click 'More units', if not, click 'Proceed'.

☐

More units

☐

Proceed to next question

Satellite dialysis units

* 7. Please list all the satellite units covered by this survey response.

Predialysis pathways

8. Does your unit have a formalised predialysis pathway with expected time-points (eg eGFR cut-offs, predicted dialysis start date) at which to arrange patient education and/or dialysis access?

- ☐ Yes
- ☐ No (you may proceed by clicking 'Next')

9. If you have a formalised predialysis pathway, do you audit adherence to the guideline?

- ☐ Yes
- ☐ No

Predialysis education

10. Does your unit run formalised pre-dialysis education sessions (i.e. in addition to information provided by the treating nephrologist in the course of routine care and to the provision of information brochures/pamphlets)?

- ☐ Yes
- ☐ No (you may proceed by clicking 'Next')

11. How is pre-dialysis education performed? Please tick all that apply

- ☐ Group education seminars delivered by nurses, allied health staff, patients, or doctors
- ☐ Individual one on one sessions with an educator (not the treating nephrologist)
- ☐ Other (please specify)

12. Do you train patients for home haemodialysis?

- ☐ Yes
- ☐ No

Vascular access support

13. Do you have a dedicated vascular access nurse

☐ Yes

☐ No

14. Do you have a regular and dedicated multidisciplinary dialysis access clinic (must include at least 2 of the following: vascular surgeon, interventional radiologist, vascular access nurse, nephrologist, general surgeon)?

☐ Yes - on-site at our unit

☐ Yes - but we refer patients to another renal service

☐ No

Access to surgical input

15. Do you have an on-site vascular access surgeon(s) (i.e. available on the same campus as your unit or accessible to your patients without significant travel)?

- ☐ Yes
- ☐ No (you may proceed by clicking 'Next')

16. How many surgeons at your site are creating vascular access (ie: new arteriovenous fistulae (AVF) or grafts (AVG))?

17. Does your unit have access to a dedicated (protected) operating theatre list for dialysis access?

- ☐ Yes
- ☐ No
- ☐ Unsure

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Vascular access procedures

18. Who inserts/performs access procedures for your unit? Tick all that apply.

| | Nephrologist | Vascular surgeon/registrar | Other surgeon/registrar (eg. General surgeon, Transplant surgeon) | Nephrology Trainees | Intensive Care Unit | Radiology Department | Anaesthetics Service |
|---|--------------------------|-------------------------------|--|--------------------------|--------------------------|--------------------------|--------------------------|
| Non-tunnelled catheters | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Tunnelled catheters | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Peritoneal dialysis catheters | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| AVF creation | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| AVF thrombectomy/salvage | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| AVF fistuloplasty (stenosis correction) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Please indicate other personnel performing any of the above procedures

AV fistula/grafts

19. In the case of AVF/AVG stenosis without thrombosis, what is the usual initial method used to deal with the stenosis?

- ☐ Angioplasty +/- stenting
- ☐ Surgical revision

20. Are back-up AV fistulae routinely requested in patients with PD catheters?

- ☐ Yes - always
- ☐ Yes - if not suitable for transplant
- ☐ Yes - if prognosis acceptable
- ☐ Sometimes - physician decision
- ☐ No
- ☐ Never

21. What method of vascular access monitoring does your unit use? Tick all that apply

- ☐ Fistula blood flow rate monitoring using a dedicated BFR measuring device
- ☐ Fistula blood flow rate monitoring using a haemodialysis machine fitted measuring device
- ☐ Regular fistula ultrasound
- ☐ Venous and arterial pressure monitoring during dialysis
- ☐ Recirculation studies by urea-based method
- ☐ Routine clinical examination
- ☐ Other (please specify)

At the time of catheter insertion - skin preparation

22. What is your standard skin preparation prior to insertion of non-tunnelled catheters?

- ☐ Povidone-iodine solution
- ☐ Chlorhexidine 0.1% solution
- ☐ Chlorhexidine 2% solution
- ☐ Chlorhexidine 4% solution
- ☐ Chlorhexidine 0.5% in alcohol 70% solution
- ☐ Chlorhexidine 2% in alcohol 70% solution
- ☐ Chlorhexidine-based but unsure of concentration
- ☐ Unsure
- ☐ Other (please specify)

23. What is your standard skin preparation prior to insertion of tunnelled catheters?

- ☐ Povidone-iodine solution
- ☐ Chlorhexidine 0.1% solution
- ☐ Chlorhexidine 2% solution
- ☐ Chlorhexidine 4% solution
- ☐ Chlorhexidine 0.5% in alcohol 70% solution
- ☐ Chlorhexidine 2% in alcohol 70% solution
- ☐ Chlorhexidine-based but unsure of concentration
- ☐ Unsure
- ☐ Other (please specify)

At the time of catheter insertion - prophylactic antibiotics

24. Do you give prophylactic antibiotics at the time of insertion of tunnelled catheters?

- ☐ Yes
- ☐ No (you may proceed by clicking 'Next')
- ☐ Unsure (you may proceed by clicking 'Next')

25. What prophylactic antibiotic(s) is first choice at the time of insertion of tunnelled catheters? Tick all that apply.

- ☐ First-generation cephalosporin (eg. cephalothin, cephazolin)
- ☐ Vancomycin
- ☐ Gentamicin
- ☐ Unsure
- ☐ Other (please specify)

Locking solutions - NON tunnelled catheters

26. What is your standard locking solution for non-tunnelled catheters? Choose one only.

- ☐ Normal (0.9%) saline
- ☐ Heparin only
- ☐ Trisodium citrate only
- ☐ Antibiotic based (eg. gentamicin, vancomycin, taurolidine, minocycline, cephalosporins, cefotaxime)
- ☐ rTPA (eg. alteplase)
- ☐ CMBP (sodium citrate, methylene blue, methylparaben and propylparaben)
- ☐ Tinzaparin
- ☐ Ethanol
- ☐ Ethanol + citrate
- ☐ Unsure
- ☐ Other (please specify)

Use of heparin as locking solution - NON tunnelled catheters

27. Which concentration of heparin do you use?

- ☐ 1000U/mL
- ☐ 5000U/mL
- ☐ Other (please specify)

Use of citrate as locking solution - NON tunnelled catheters

28. Which concentration of trisodium citrate do you use?

- ☐ 4%
- ☐ 10%
- ☐ 30%
- ☐ 46.7%
- ☐ Other (please specify)

Use of antibiotic locks - NON tunnelled catheters

29. Which antibiotic-based lock do you use?

- ☐ Gentamicin + heparin
- ☐ Gentamicin + trisodium citrate
- ☐ Gentamicin + cephalazolin + heparin
- ☐ Gentamicin + vancomycin + heparin
- ☐ Cefotaxime + heparin
- ☐ Taurolidine + citrate (Taurolock)
- ☐ Minocycline + EDTA
- ☐ Other (please specify)

Use of rTPA as locking solution - NON tunnelled catheters

30. Which type of rTPA do you use?

31. How often per week do you administer it?

- ☐ Weekly
- ☐ Twice weekly
- ☐ Three time per week
- ☐ Other (please specify)

32. What dose of rTPA do you use? Please indicate mg per mL of lumen volume.

Tunnelled catheter locking solutions

33. What is your standard locking solution for tunnelled catheters? Choose one only.

- ☐ Normal (0.9%) saline
- ☐ Heparin only
- ☐ Trisodium citrate only
- ☐ Antibiotic based (eg. gentamicin, vancomycin, taurolidine, minocycline, cephalosporins, cefotaxime)
- ☐ rTPA (eg. alteplase)
- ☐ CMBP (sodium citrate, methylene blue, methylparaben and propylparaben)
- ☐ Tinzaparin
- ☐ Ethanol
- ☐ Ethanol + citrate
- ☐ Unsure
- ☐ Other (please specify)

Tunnelled catheter - heparin use

34. Which concentration of heparin do you use?

- ☐ 1000U/mL
- ☐ 5000U/mL
- ☐ Other (please specify)

Tunnelled catheter - citrate use

35. Which concentration of trisodium citrate do you use?

- ☐ 4%
- ☐ 10%
- ☐ 30%
- ☐ 46.7%
- ☐ Other (please specify)

Tunnelled catheter - antibiotic locking solutions

36. Which antibiotic-based lock do you use?

- ☐ Gentamicin + heparin
- ☐ Gentamicin + trisodium citrate
- ☐ Gentamicin + cephazolin + heparin
- ☐ Gentamicin + vancomycin + heparin
- ☐ Cefotaxime + heparin
- ☐ Taurolidine + citrate (Taurolock)
- ☐ Minocycline + EDTA
- ☐ Other (please specify)

Tunnelled catheter - rTPA use

37. Which type of rTPA do you use?

38. How often per week do you administer it?

- ☐ Weekly
- ☐ Twice weekly
- ☐ Three time per week
- ☐ Other (please specify)

39. What dose of rTPA do you use? Please indicate mg per mL of lumen volume.

Exit site prophylaxis

40. What is your standard topical prophylaxis for non-tunnelled catheters?

- ☐ Nil
- ☐ Topical mupirocin
- ☐ Topical MediHoney
- ☐ Topical povidone-iodine ointment
- ☐ Polysporin ointment
- ☐ Other (please specify)

41. What is your standard topical prophylaxis for tunnelled catheters?

- ☐ Nil
- ☐ Topical mupirocin
- ☐ Topical MediHoney
- ☐ Topical povidone-iodine ointment
- ☐ Polysporin ointment
- ☐ Other (please specify)

Catheter dressings

42. What is your standard dressing for non-tunnelled catheters? Tick all that apply

- ☐ Transparent sterile dressing only
- ☐ Chlorhexidine patch (Biopatch)
- ☐ Silver-alginate coated dressing
- ☐ Other (please specify)

43. What is your standard dressing for tunnelled catheters? Tick all that apply

- ☐ Transparent sterile dressing only
- ☐ Chlorhexidine patch (Biopatch)
- ☐ Silver-alginate coated dressing
- ☐ Other (please specify)

Use of nasal mupirocin

44. Please indicate your routine use of nasal mupirocin in each of the three following groups.

| | Yes | No | Unsure |
|--|-----------------------|-----------------------|-----------------------|
| Patients with <u>non-tunnelled</u> catheters | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Patients with <u>tunnelled</u> catheters | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Patients colonised with <i>Staphylococcus aureus</i> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

45. Does your unit provide verbal education regarding caring for catheters?

- ☐ Yes
- ☐ No

46. Does your unit provide written information (eg. brochure) to patients regarding care of catheters?

- ☐ Yes
- ☐ No

Monitoring complications (1)

47. Does your unit routinely measure dialysis catheter complication rates (eg. catheter associated bacteraemia or CAB)?

- ☐ Yes
- ☐ No (proceed to the end of the survey by clicking 'Next')

48. How are catheter complication rates measured?

- ☐ Retrospective data collection by Renal Unit staff
- ☐ Prospective data entry by Renal Unit staff as catheters inserted and as complications occur
- ☐ Automated reporting of complications by affiliated hospital or Department of Health
- ☐ Other (please specify)

Monitoring complications (2)

49. What is the rate of catheter associated bacteraemia (CAB) for your unit in the most recent reporting period (provided this is within the past 12 months)? Please indicate a rate of CAB per 1000 catheter days. If you are unsure, leave blank.

Overall rate (all catheters)

Non-tunnelled catheters

Tunnelled catheters

50. How are data on CAB reported? Tick all that apply.

- ☐ Hospital/health service administration
- ☐ Head of Department
- ☐ Senior medical and nursing members informed
- ☐ All renal unit staff informed
- ☐ Not reported
- ☐ Unsure
- ☐ Other (please specify)

Monitoring complications (3)

51. Does your unit compare its catheter infection rates with those from other units?

☐ Yes

☐ No

52. In general, do clinicians believe these comparisons are valid?

☐ Yes - both medical and nursing staff

☐ Yes - nursing staff do

☐ Yes - medical staff do

☐ No