Management of Accidentally Disconnected Labour Epidural Catheters:

A Canadian Modified-Delphi Consensus Study

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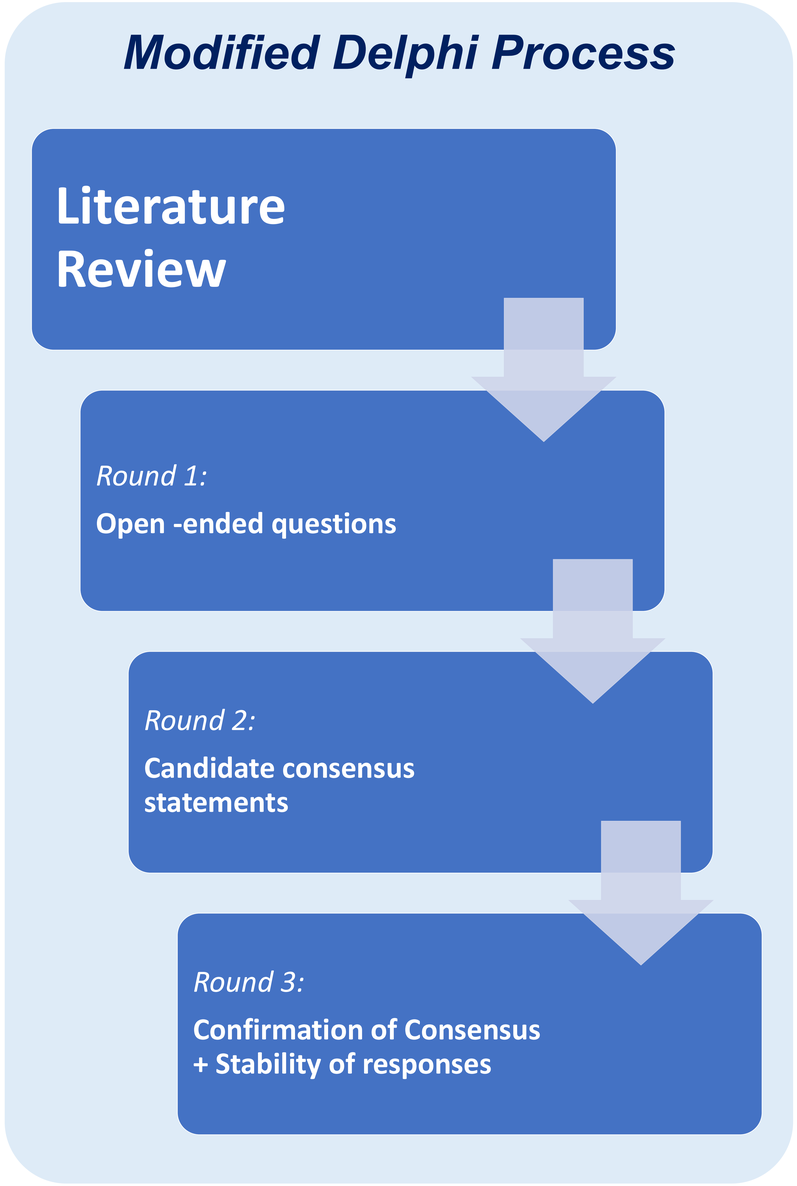
Background

- Reconnection vs. infection risk
- Wide practice variation across Canada
- We aimed to develop consensus recommendations and a standardized management protocol



Experts

- Representation from across Canada
- Obstetric anesthesia fellowship training AND >5 years clinical experience OR
- >10 years clinical experience

Consensus threshold

- ≥70% agreement or disagreement

RESULTS

- 18 experts
- 12 academic centers across 7 provinces
- Consensus achieved for 16/17 statements

Statement	Round 2 AGREE	Round 3 AGREE	Consensus
Replace filter & tubing if distal disconnection	89%	—	Yes
Disinfect & cut catheter if proximal disconnection	83%	—	Yes
Imminent cesarean delivery influences decision	94%	—	Yes
Do NOT reconnect if bedding visibly soiled	94%	—	Yes
Reconnect if fully dilated & no time to replace	67%	78%	Yes
Do NOT reconnect unwitnessed disconnection (adequate block)	67%	83%	Yes
Isopropyl alcohol acceptable	61%	78%	Yes
Chlorhexidine 0.5% acceptable	50%	45%	No
Chlorhexidine 2% acceptable	67%	83%	Yes
Cut before reconnection	89%	—	Yes
Cut at first window (spring catheter)	78%	83%	Yes
Do NOT Cut <= 5 cm from tip	89%	—	Yes
Cut > 5 cm from tip	83%	—	Yes
Do NOT Disinfect the same length as cutting	83%	—	Yes
Disinfect ≥ 5 cm beyond cut	72%	89%	Yes
Daily inpatient follow-up until discharge	89%	—	Yes
Do NOT follow-up daily post-discharge for 2 weeks	61%	78%	Yes

CONCLUSIONS

- **Disconnection location determines management**: replace filter/tubing if distal to adapter; disinfect & cut if proximal
- **Clinical context guides reconnection**: C-section urgency, dilation status, and soiled bedding → key decision factors; unwitnessed disconnection = do NOT reconnect
- **Disinfection & cutting protocol**: isopropyl alcohol or chlorhexidine 2% acceptable; cut >5 cm from tip; disinfect ≥5 cm beyond cut site (chlorhexidine 0.5% = unresolved)
- **Follow-up**: daily in-hospital monitoring until discharge; post-discharge follow-up limited to ≤2 weeks and/or phone.

DISCUSSION

✓ First national Canadian guidance for disconnected epidural catheters

✓ Foundation for standardized institutional protocols

Areas Requiring Future Research

➢ Optimal disinfection solution (chlorhexidine 0.5% vs alternatives)

➢ Cutting length thresholds — prospective validation needed

➢ Post-discharge surveillance duration

➢ Factors influencing reconnect vs. replace decision