

Alternative catheter locking solutions in paediatric cancer care: strategies for successful implementation

Elouise Comber, Amanda Ullman, Victoria Gibson, Mari Takashima, Joshua Byrnes, Samantha Keogh

Please connect via LinkedIn or email if you would like to speak further

e.comber@uq.edu.au

LinkedIn:


AIM

To explore the **implementation context of changing catheter locking solution practice** in paediatric cancer care and identify appropriate strategies to enhance uptake of innovative solutions.

METHODS

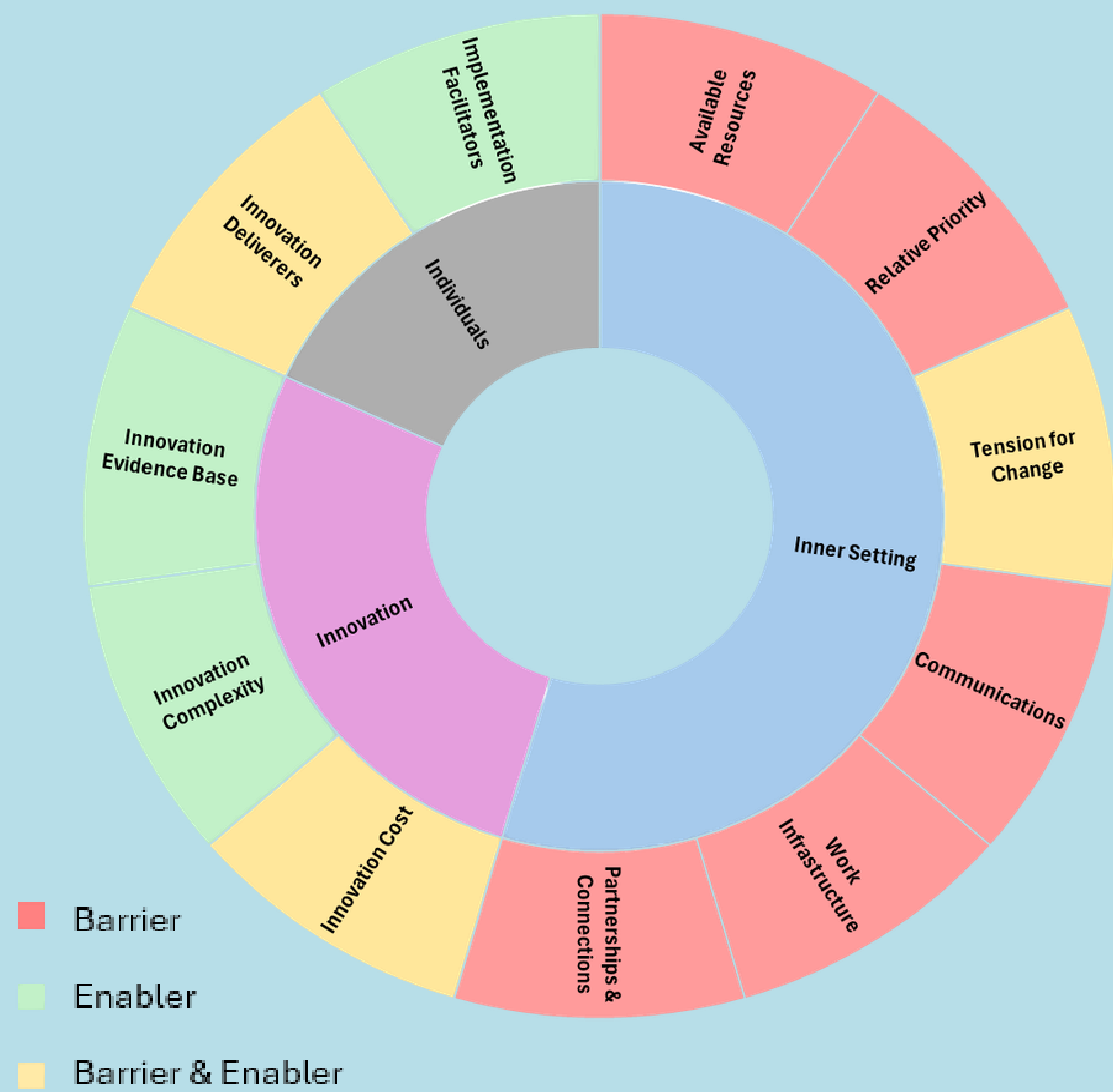
Qualitative multi-site study as part of a broader clinical trial (ANZCTR: 12622000499785)1

Semi-structured interviews were undertaken with clinicians, purchasers, key decision makers (N=23) structured using the Consolidated Framework for Implementation Research (**CFIR**)2

The **CFIR-ERIC** matching tool3 was used to match **implementation barriers** with **implementation strategies**

The **Cost-IS tool**4 was used to determine the **activities, resources and resource costs** associated with each implementation strategy

KEY THEMES/CONSTRUCTS



IMPLEMENTATION STRATEGIES & ASSOCIATED COSTS

Based on the constructs in Figure 1, the following implementation strategies are recommended, assuming an implementation period of 2 years:

Implementation Strategy	Associated Activities	Cost (USD)
Prepare change champions	1 individual per site – 4 hours per week	\$4,932
Access funding	Preparation of economic feasibility report	\$1,873
Build a coalition	Training on the intervention, Build an interdisciplinary team – initial weekly meetings, transitioning to monthly	\$11,621
Develop academic partnerships	Quarterly check in sessions with the implementation team & researchers to share recent findings	\$466
Promote network weaving	Meetings across wards & hospitals – initial monthly meetings, transitioning to quarterly	\$1,837

Total cost of implementation per hospital site: \$20,729

KEY TAKEAWAYS

Targeted efforts are needed to strengthen networks, empower change champions, and secure funding.
Providing implementation cost data allows healthcare systems to allocate the appropriate resources for efficient and sustainable implementation.

1 Ullman A, Takashima M, Gibson V, Comber E, Borello E, Bradford N, Byrnes J, Cole R, Eisenstat D, Henson N, Howard P, Irwin A, Keogh S, Kleidon T, Martin M, McCleary K, McLean J, Moloney S, Monagle P, Moore A, Newall F, Noyes M, Rowan G, St John A, Wood A, Wolf J, Ware R (2024) Preventing adverse events during paediatric cancer treatment: protocol for a multi-site hybrid randomised controlled trial of catheter lock solutions (the CLOCK trial) BMJ Open 14: e085637; 2 Damschroder LJ, Reardon CM, Widerquist MAO, Lowery J (2022) The updated Consolidated Framework for Implementation Research based on user feedback Implementation Science 17: 75; 3 Waltz TJ, Powell BJ, Fernández ME, Abadie B, Damschroder LJ (2019) Choosing implementation strategies to address contextual barriers: diversity in recommendations and future directions Implementation Science 14: 42; 4 Donovan, T., Abell, B., McPhail, S. M., & Carter, H. E. (2025). Development of an instrument (Cost-IS) to estimate costs of implementation strategies for digital health solutions: a modified e-Delphi study. Implementation Science, 20(1), 13.