

Point prevalence audit

Introduction

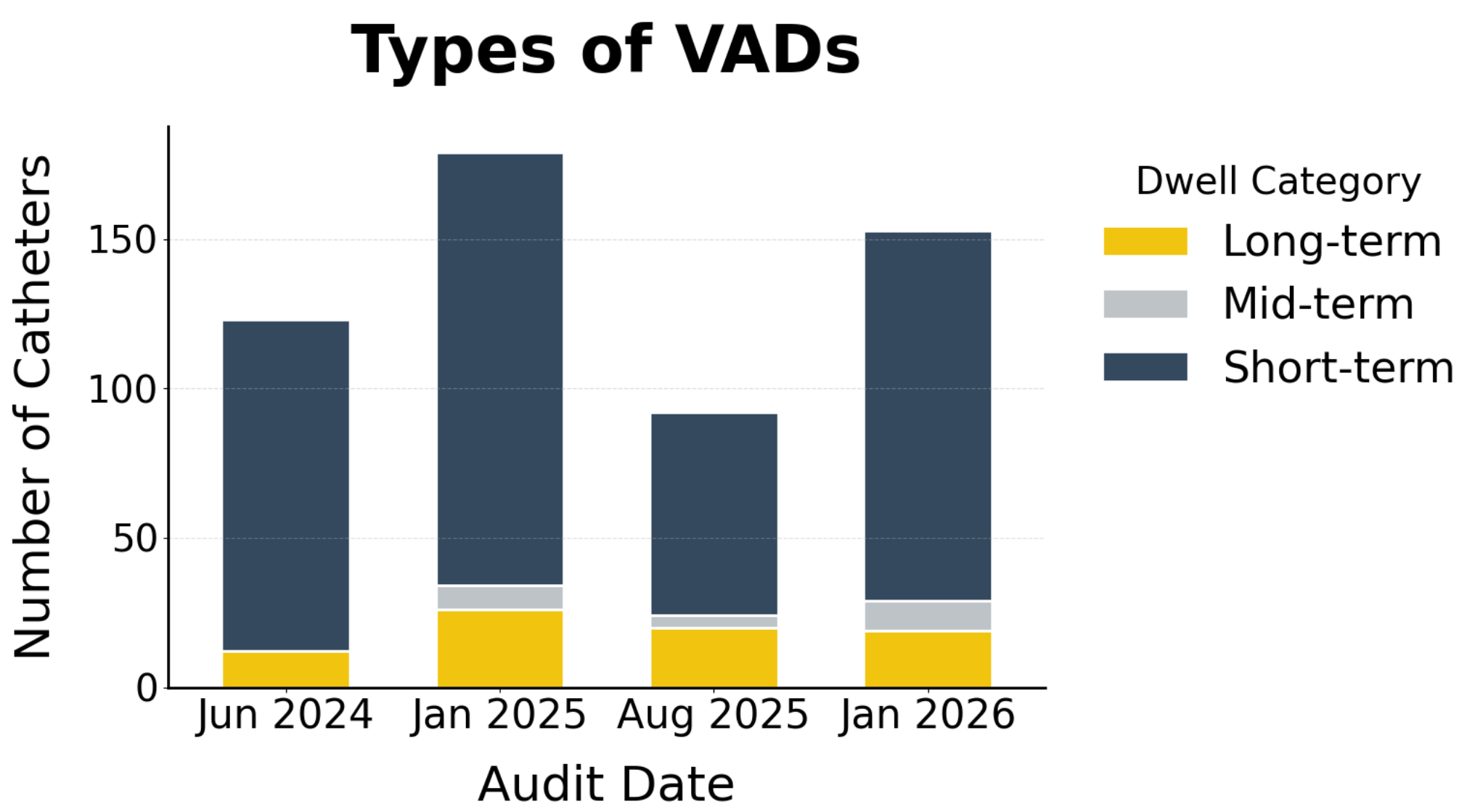
The Children’s Clinical University Hospital (BKUS) is transforming vascular access through the multimodal pilot project 'Piloting Innovative and Modern Vascular Access'. By combining innovative devices with systematic staff education, the project aims to ensure therapy continuity and reduce complication risks.

Objective

To evaluate VAD management practices and the adoption of safety technologies during an 18-month pilot project

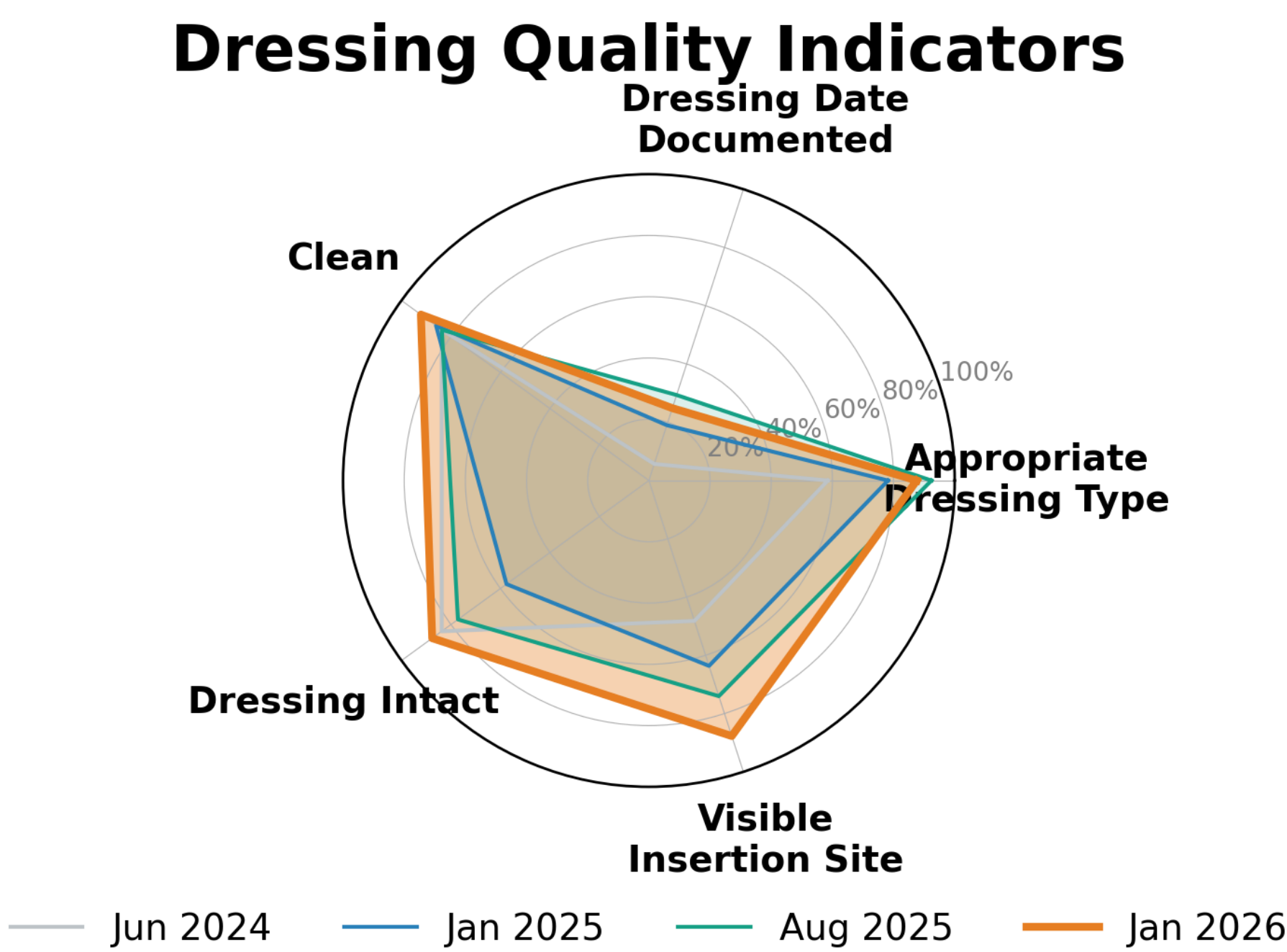
Methods

- Study Design: Four point-prevalence audits were conducted at six-month intervals (June 2024 – January 2026).
- Catheters, dressings and infusion setup was evaluated in-situ
- Intervention: Comprehensive nursing training on VAD care and expert-level training for long-term catheter insertion.
- Dwell Category Definitions: To analyze the evolution of practice, devices were categorized as follows:
 - Short-term: Standard peripheral intravenous catheters (PIVC) with or without upper ports, arterial catheters, short term CVCs, umbilical catheters
- Medium-term: Midlines and extended-dwell peripheral catheters.
- Long-term: Peripherally inserted central catheters (PICC), totally implantable ports, and tunneled central venous catheters.



Results

- A total of 390 catheters were audited across 353 patients in 4 point prevalence audits. On average, 47.6% of hospitalized patients were identified as having at least one vascular access device during the point-prevalence audits. This proportion remained relatively stable throughout the pilot project, ranging from a 40.2% to a 54.0% by the final assessment in January 2026.
- Trend toward increased utilization of long-term devices was observed.
 - Short-term: Remained the primary access type, though its relative proportion stabilized as other options were utilized.
 - Medium-term: Use grew from 0 units in June 2024 to 10 units (3 Midlines, 7 Extended PIVC) by January 2026.
 - Long-term: Use of PICCs and tunneled catheters nearly doubled, increasing from 12 units to 19 units.
 - Quality of Care Indicators:
 - Appropriate Dressing Type: Increased from 58.5% to 97.6%.
 - Insertion Site Visibility: Improved from 34.1% to 66.0%.
 - Dressing Date Documentation: Quadrupled from 5.7% to 24.8%.
 - Technology adoption:
 - Needle-free Connectors: Utilization rate rose from 22.0% to 43.8%.
 - Passive Disinfection Caps: Use on NFCs increased from 40.7% to 77.6%



Conclusion

- The usage toward medium- and long-term catheters increased although short-dwell cannulas are still the majority reflecting short hospital stay of most pediatric patients.
- Significant improvements in dressing quality and site visibility were observed
- Regular audits serve as a critical instrument for identifying persistent gaps, such as documentation accuracy, and providing direct feedback to clinical staff

