

Safer pacemaker replacements: rapid translation of evidence into practice

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Introduction: Generator replacement represents more than 25% of all cardiac implantable electronic device (CIED) procedures and carries a substantially increased risk of infection compared with de novo implantations (up to 2–4 times higher). A randomized clinical trial in JAMA Cardiology including 427 patients demonstrated that the use of iodinated adhesive drapes reduced bacterial contamination from 9.9% to 2.9%, corresponding to a relative risk reduction of nearly 70%. This finding emphasizes a simple, evidence-based modification with direct implications for patient safety.

Results: Immediately after publication, our center introduced iodinated adhesive drapes in all pacemaker and defibrillator replacements. The adoption was nurse-led, integrated into the existing workflow without prolonging patient preparation, and involved negligible additional cost. In the first two months after introduction, adherence was 100%, with seamless incorporation into sterile field preparation and no negative impact on procedural logistics. Nursing staff ensured protocol standardization, education, and real-time monitoring of compliance.

Conclusion: The introduction of iodinated adhesive drapes for CIED replacements demonstrates how rapid translation of evidence into practice can significantly improve patient safety. Beyond infection prevention, this change highlights the importance of developing advanced nursing competencies, accepting new technologies, and continuously enhancing standards of care.

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