POST-IMPLANTATION PATIENT EDUCATION ON IMPLANTABLE MEDICAL DEVICES BY HOSPITAL PHARMACISTS: A SYSTEMATIC REVIEW

C. BOUGHANEM[1], M. PIEYRE[1], M. ANTIGNAC[1,2], S. MICARD[1]
[1]LA PITIÉ-SALPÊTRIÈRE HOSPITAL, PHARMACY, PARIS, FRANCE
[2]PARIS CITÉ UNIVERSITY - INSERM- PARCC-F-75015 PARIS, TEAM INTEGRATIVE EPIDEMIOLOGY OF CARDIOVASCULAR DISEASES, PARIS, FRANCE

BACKGROUND AND IMPORTANCE

Pharmaceutical consultation: structured pharmacist–patient exchanges to collect information and provide counseling

Relevant for patients with implantable medical devices, as in post-operative settings

Empower patients to manage their condition and understand their disease and their medical care

AIM AND OBJECTIVES

Evaluate the content, feasibility, and impact of hospital pharmacist-led education provided to patients after implantation of medical devices.

MATERIAL AND METHODS

Criteria for considering studies

- Population: Patients receiving implantable medical devices
- Intervention: Post-surgery pharmacist-led interventions
- Comparison: Patient knowledge with vs. without pharmacist intervention
- Outcome: Information provided to patients

Database screening

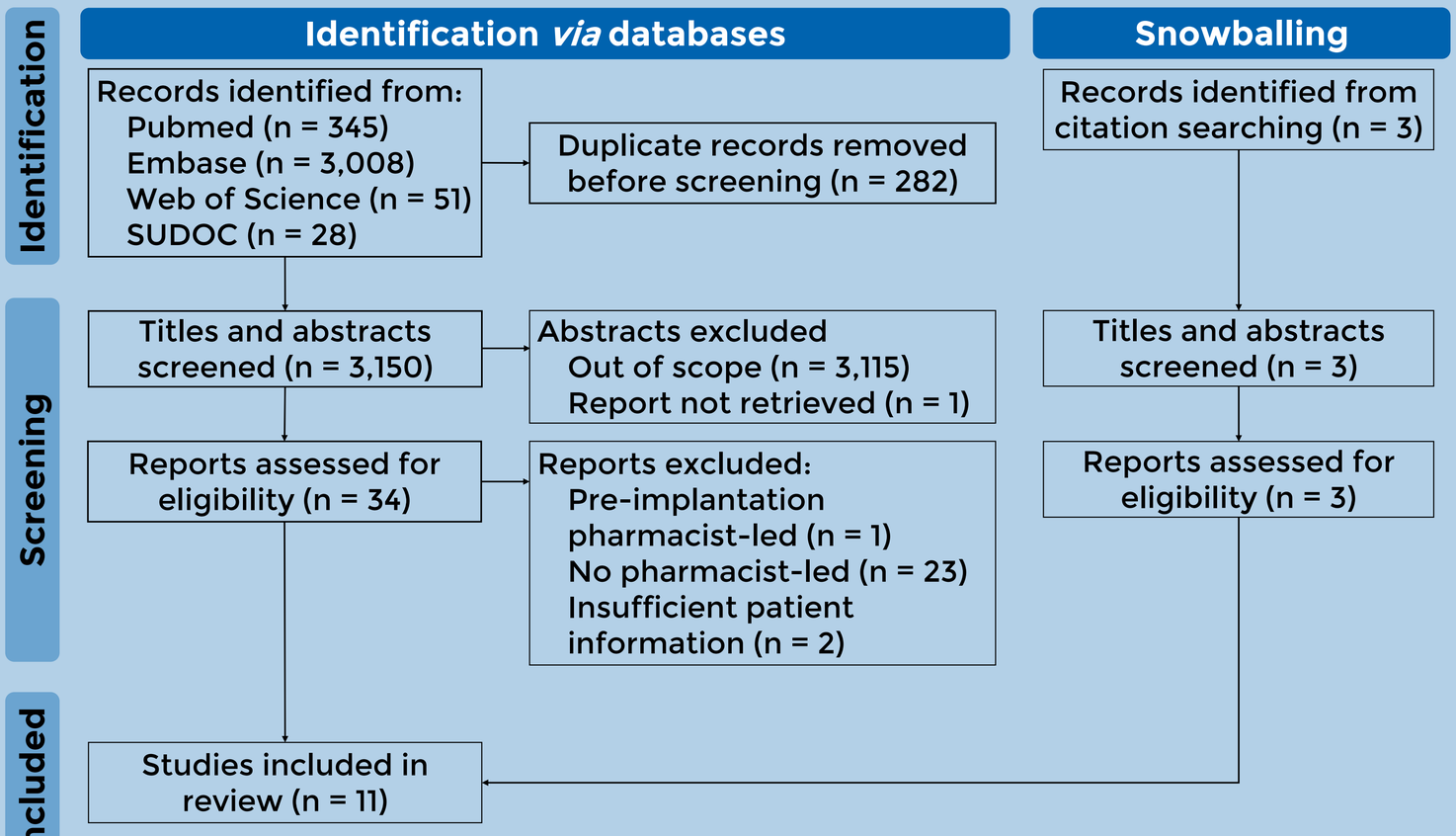
- Databases: PubMed, Embase, Web of Science and the French University Documentation System (SUDOC)
- Studies published in English or in French
- Conducted in June 2025, covering the past 20 years
- Following PRISMA guidelines

Data Analysis & Collection

- Analysis in Microsoft Excel®
- Information collection
  - Study characteristics (location, language, journal, publication year, study type, duration)
  - Type of implantable medical device
  - Intervention characteristics (time, investigator, timing after surgery)
  - Documents given to patient
  - Content
  - Patient evaluation
  - Patient satisfaction

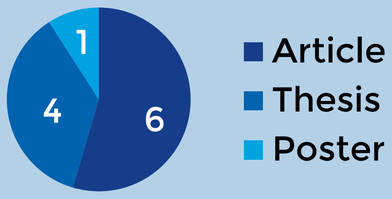
RESULTS

Study selection by PRISMA flow diagram

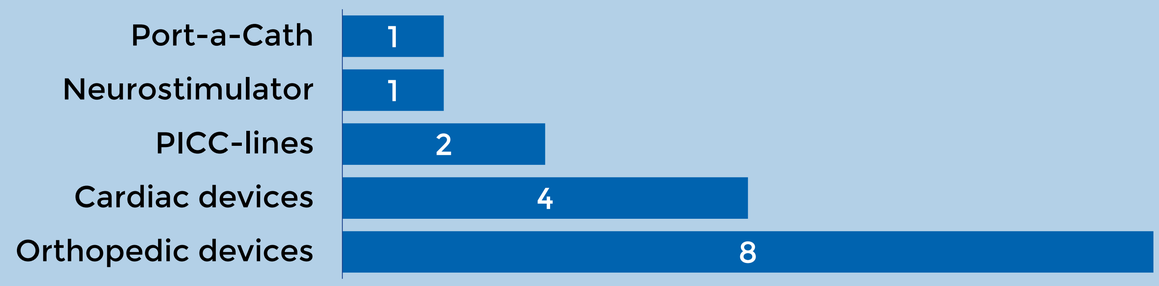


Study characteristics

- Prospective single-center study (11), comparative (4)
- All studies conducted in France
- Duration: 3 to 6 months



Type of implantable medical device



Pharmacist-led post implantation

- Eligible: 91 patients [18-166]
- Included: 48 patients [18-94] = **39%**
- Age: 64 years [27-80]

- Timing: D+1 to D+7
- Duration: 44 minutes [18-105]
- Investigators: 10 residents, 3 pharmacists
- Prosthesis information booklet and medical device ID card delivered (100%)

- Medical device presentation (11)
- Associated treatment (8)
- Complication (8)
- Prevention (8)
- Post-surgical follow up (6)

- Quiz: 6-40 items
- Evaluation: D+2 to M+3
- Before: 44% (7) vs After: 77% (8)

Patient satisfaction : 95%

LIMITATIONS

- Recent French publications (> 2018), few in English (2)
- Methodological heterogeneity: lack of standardization, and varying study objectives
- Article selection challenging: many post-operative studies focused only on medication (analgesics, anticoagulants)

CONCLUSION AND RELEVANCE

- Clinical pharmacy applied to medical devices is a recent discipline : pharmacists play a key role in device management, traceability, and regulatory compliance
- Post-implantation pharmacist-led education is feasible, well accepted, and appreciated by patients, particularly for post-operative care and associated treatments
- Knowledge improvement is modest and pharmacist availability is limited
- Standardized educational approaches are needed to optimize the pharmacist's role and evaluate clinical

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cecile.boughanem@aphp.fr