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A SCOPING REVIEW OF BARRIERS AND FACILITATORS TO IMPLEMENTATION OF INTRAVENOUS CARDIOVASCULAR TREATMENTS IN AMBULATORY SETTINGS

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Background and Objectives

- Intravenous (IV) therapies to treat patients with cardiac amyloidosis[1] and heart failure[2] have changed the landscape of chronic cardiovascular (CV) disease management
- This study aimed to identify facilitators and barriers influencing implementation of current IV therapies

Methods

- This was a systematic scoping review using a methodological framework developed previously[3]
- MEDLINE, EMBASE, CINAHL and Scopus databases were searched for studies published from inception to September 2023; the search strategy and study eligibility are outlined in **Table 1**
  - Additional hand searches of included study reference lists and grey literature such as conference proceedings, theses, government reports and unpublished data were performed
- Two independent reviewers screened titles and abstracts, followed by full-text articles

Table 1. Eligibility Criteria and Search Strategy

Parameter	Eligibility Criteria
Participants	• HCPs • Ambulatory patients • Caregivers
Intervention	• IV cardiovascular therapies
Comparator	• None
Outcomes	• Perceived barriers and facilitators to uptake of therapies
Search strategy	
"Barrier" OR "Obstacle" OR "Hindrance" AND "Facilitator" OR "Enabler" OR "Promoter" AND "Intravenous" OR "IV" AND "Patients" OR "Caregivers" OR "Family" OR "Carers" AND "Facilitators" OR "Barriers" OR "Perspectives" OR "Needs" OR "Expectations" AND "Acute" AND "Ambulatory" OR "Outpatient" AND "Cardiovascular Care" OR "Heart Care"	

HCP, healthcare professional; IV, intravenous

Figure 1. Facilitators and Barriers for Implementing IV Therapies in the Ambulatory Setting

	Facilitators	Barriers
Patient level	• Engagement in decision making • Self-care & education • Positive patient experience • Reduced risk of hospital infection	• Suboptimal home safety / cleanliness • Patient anxiety about home IV • Non-adherence • Adverse drug effects • IV-related infections
Clinician level	• Practitioner education training • Perceived utility • Experience with IV cannulation	• Safety profile of IV medication • Lack of qualified personnel • Lack of clear guidelines / protocols • Time constraints
Institution level	• Cost effectiveness • IV infusion protocols / guidance • Safe setting / monitoring • Stock availability	• Liability concerns • Staff / equipment shortages • Complex logistics of administration • Triage delays
Healthcare system level	• Existing practice policies • Guideline recommendations • Favorable insurance coverage	• Financial / cost constraints • Limited care / administration services

IV, intravenous

Conclusions

- **There are a variety of challenges and opportunities associated with the implementation of IV therapies for CV conditions from the perspectives of patients, clinicians, institutions, and healthcare systems**
- **Pre-emptively addressing barriers and capitalizing on facilitators will maximize the success of implementation efforts and may improve clinical outcomes**

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Results

- A total of 360 articles were identified, from which 15 studies reporting on IV therapies for CV conditions met the eligibility criteria
  - Studies were primarily conducted in North America and Europe; characteristics of the included studies are listed in **Table 2**

Table 2. Characteristics of Included Studies

Study characteristic		
Origin	• USA (n=5) • United Kingdom (n=3) • Australia (n=2) • Germany (n=1)	• Ireland (n=1) • Malawi (n=1) • Norway (n=1) • Sweden (n=1)
Type	• Prospective cohort (n=3) • Retrospective cohort (n=3) • Cluster RT (n=1) • Systematic review (n=1)	• Review (n=1) • Online survey (n=1) • Qualitative study (n=1) • Policy document (n=1)
IV Therapy	• Iron (n=5) • Diuretics (n=4) • C1 esterase inhibitor (n=1)	• Blood products (n=1) • Antibiotics (n=1) • Thrombolytics (n=1)

IV, intravenous; RT, randomized trial

- The facilitators and barriers for implementation of IV therapies identified in this review are outlined in **Figure 1**
  - Patient/clinician education, perceived comfort during care and utility of the treatment were considered facilitators at the patient and clinician level
  - Institutional/healthcare system facilitators included treatment guidelines and favorable insurance policies
- Safety concerns and challenges related to administration of IV therapies were commonly reported as barriers to administration at the patient and clinician level, as were financial constraints and lack of services for delivery at the institutional/healthcare system level

References:
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3. Levac D, et al. Implement Sci. 2010;5:69.

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