

# Identification of risk factors for medication-related hospital readmissions – a scoping literature review

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## Background

**Medication-related problems** after hospital **discharge**:

- Can lead to hospital **readmissions**
- Can be positively influenced by services provided by **clinical pharmacists**

➤ **Limited clinical pharmacist resources** in hospitals make **prioritization** of patients necessary



## Objectives

- ✓ Identify **risk factors** for **readmissions** associated with **medications**

➤ This allows **prioritization** of patients for clinical pharmacy services before or at hospital discharge

## Methods

We conducted a **scoping literature review** in the Medline, Embase and CINAHL databases

**Question:** **Risk factors** for 30-day **readmissions** associated with **medication**?



## Results

Screened: **1159** titles and abstracts

Inclusion: **50 articles**

**Risk factors:** can be divided into:

1. **Patient characteristics**
2. **Medication groups**
3. **Medication therapy problems**

### Medication groups

- **Antithrombotics**
- **Opioid** analgesics
- **Insulins**
- **Diuretics**
- Prescription of potentially inappropriate medications (**PIMs**)

### Medication therapy problem

- **Adherence problems**
  - Erratic use
  - Difficulty using dosage form
- **Prescribing problems**
  - **Underprescribing**
    - Underdose or overdose
    - Drug-drug-interactions
    - Suboptimal medication selection
  - Overprescribing
- **Transition of care problems**
  - Insufficient ambulatory monitoring
- Overly **complex medication regimes** (MRCI index)
- Excessive **medication changes** during hospital stay

### Patient characteristics

- **Polymedicated**
- **Increasing age**
- **Help-dependent**



Risk factors most often mentioned in the literature

## Conclusion

Risk factors **for medication-related readmissions** described in the literature include but are not limited to;

- Advanced **age**
- **Polypharmacy** and **complexity** of medication regimen
- Excessive **medication changes**, **transition of care** problems, and **non-adherence** with medication
- Specific **high-risk medications**
- **Underprescribing** and **underdose**

## Outlook

The identified risk factors will be **programmed** into an **electronic algorithm** to flag patients at highest risk

- Additional **sociodemographic factors** will be considered
- Risk factors will be tested for feasibility and completeness in a **Delphi study**



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