

Improving Patient Safety : The Clinical Impact of Medication Reconciliation at Admission in Orthopedics and Trauma Surgery

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Background and importance

- **High-risk transitions in patient care** : hospital admissions, discharges, and transfers between departments are critical moments where medication errors often occur, leading to preventable adverse drug events (ADEs)
- **Increased risks in surgical settings** : in orthopedics and trauma surgery, medication errors are amplified due to the use of high-risk drugs (e.g., anticoagulants, opioids) and the complexity of treatment adjustments before and after surgery
- **Crucial role of medication reconciliation** : a medication reconciliation at admission is essential to detect and resolve discrepancies, reducing ADEs and ensuring patient safety throughout the perioperative period and at discharge
- **Switzerland situation** : no data available on drug reconciliation in surgical wards so far

Aim and objectives

Aim : Evaluate the prevalence and types of unintentional medication discrepancies (UMDs)

Objectives :

- 1. **Classify** the types of UMDs at admission
- 2. **Assess** the clinical impact of pharmaceutical interventions for UMDs
- 3. **Evaluate** the acceptance rate of proposed pharmaceutical interventions by physicians

Conclusion

- ✓ **Unintentional discrepancies identified** : frequent, mainly omissions and dosage errors (93%)
- ✓ **Clinical impact** : pharmaceutical interventions have a meaningful clinical impact (35%), reinforcing the pharmacist's role in improving patient safety
- ✓ **Intervention acceptance** : the high acceptance (92%) of pharmaceutical interventions highlights their relevance in clinical practice and the strong physician collaboration

Materials and methods

Study design	Patients	MedRec process	Clinical impact
<ul style="list-style-type: none"> ➢ Cross-sectional single-center study ➢ Conducted over two periods : 21/07-05/11/2022 and 20/10/2022-24/08/2023 	<ul style="list-style-type: none"> ➢ Adults at medication risk ➢ Admitted to the Orthopedics and Trauma Surgery Department of a Swiss tertiary hospital 	<ul style="list-style-type: none"> ➢ Best Possible Medication History (BPMH) establishment : a pharmacist compiles the BPMH using 3 information sources ➢ Discrepancy Identification : BPMH is compared with admission prescriptions to detect medication discrepancies ➢ Classification : discrepancies are classified as intentional or unintentional (UMDs) based on medical record and, if needed, physician discussion ➢ Pharmaceutical intervention : conducted for each UMD 	<ul style="list-style-type: none"> ➢ By a panel of experts (orthopedic surgeon, internal medicine physician, and clinical pharmacist) ➢ Using CLEO scale

Results

237 patients included → 67% had at least one UMD at admission → 35% of UMD : significant clinical impact

