

Evaluation of the medication reconciliation at different stages of the care process in a cohort of geriatric inpatients:

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first steps towards a medication reconciliation tool



Claire Coumau^{1,2,3} – Kristof Major⁴ – Sylvain Nguyen⁴ – Tiffany Bourloud³ – Wanda Bosshard⁴ – Chantal Csajka^{1,2,3}

¹Center for Research and Innovation in Clinical Pharmaceutical Sciences, Lausanne University Hospital and University of Lausanne, Lausanne, Switzerland.

²Institute of Pharmaceutical Sciences of Western Switzerland, University of Geneva, University of Lausanne, Geneva, Switzerland.

³School of Pharmaceutical Sciences, University of Geneva, Geneva, Switzerland.

⁴Service of Geriatric and Geriatric Rehabilitation, Lausanne University Hospital, Lausanne, Switzerland.

Purpose

- **Hospital admission and discharge** are critical transition points in the patient's healthcare pathway.
- **Medication Reconciliation (MR)** is a key and complex element of transition in geriatrics, due to high rates of poly medication, polymorbidity and cognitive impairment.

Aim: to determine the current state of MR in a Swiss geriatric post-acute care rehabilitation facility

Conclusion

- MR in hospital needs to be further improved. Challenges are:
 - lack of a comprehensive and secure source of information
 - treatment modification notification at discharge for primary care physicians.
- The electronic patient record should tackle both challenges, with a unified and unique source of information, available for all the patient's healthcare professionals

Methods

Prospective longitudinal observational study in the geriatric rehabilitation unit of the Lausanne University Hospital (CHUV) during 13 weeks.

- ✓ Collection of patients' medication records at hospital admission, discharge and 1 month post-discharge
- ✓ Sources of information: patients' knowledge, inpatient medical files, primary care physician files and pharmacy's file.

Main outcomes:

- **Availability and accuracy rates** of medication information source on admission, by comparing it to the best medication list, defined as the aggregation of all medication information from each source.
- **Type and rate of medication discrepancies** between rehabilitation stay and discharge orders, and between discharge and one month post-discharge:
 - **Intentional discrepancies** = intentional modifications by prescribing physicians (documented or not in the discharge letter).
 - **Unintentional discrepancies** = medication errors.

Results (92 patients)

Table 1: Availability and accuracy rates of medication information: source on **admission**

Sources	Availability ^a	Accuracy ^b
Pharmacy	84.7 %	80.3 %
Primary Care Physicians	23.9 %	69.1 %
Hospital patient record (Free text ^c)	67.4 %	58.2 %
Hospital patient record (Reconciliation window ^d)	62.0 %	56.0 %
Patient interview	28.3 %	55.4 %

^a Number of times each source was obtained divided by the number of patients

^b Number of total matches between sources and the best medication list

^c Tab of the computerized patient record with the list of home medications in free text.

^d Tab in the computerized patient record with structured list of medications taken at home.

Table 2: Type and rate of unintentional discrepancies between **rehabilitation stay and discharge orders** (N= 38)

Type of discrepancies	
Omissions	60.5 %
Schedule	13.1 %
Frequency of administration	7.9 %
Dosage modification	5.3 %
Galenic form	5.3 %
Therapeutic switch	2.6 %
Duplication	2.6 %
Forgetting to stop treatment	2.6 %

Discrepancies:
94.4% intentional
5.6% unintentional

Table 3: Type and rate of intentional discrepancies not documented between **rehabilitation stay and discharge orders** (N= 378)

Type of discrepancies	
Discontinuation of medication	76.5 %
Introduction of medication	13.2 %
Dosage modification	4.8 %
Change in the frequency of administration	2.4 %
Therapeutic switch	1.3 %
Prescription of the drug regularly or as needed	0.8 %

44% not documented in the discharge letter

Table 4: Type and rate of total discrepancies between **discharge and 1 month post-discharge** (N= 180)

Type of discrepancies	
Discontinuation of medication	40.6 %
Reintroduction of medication compared to admission	26.7 %
New medication	21.7 %
Modification of the galenic form	3.9 %
Dosage modification	3.3 %
Frequency of administration	2.2 %
Therapeutic switch	1.1 %
Discrepancy in treatment plan	0.6 %