

Patients in charge: why we should implement an online personal health record as a tool for medication reconciliation

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BACKGROUND

- **Medication discrepancies** (MDs), defined as unexplained differences among medication regimens, cause important public health problems with clinical and economic consequences.[1]
- **Medication reconciliation** (MR) reduces the risk of MDs, but is time consuming and its success relies on the quality of different information sources.[2]
- **Online personalized health records** (PHRs) may overcome these drawbacks, but the correctness of the identified MDs with a PHR compared to traditional MR is unclear.

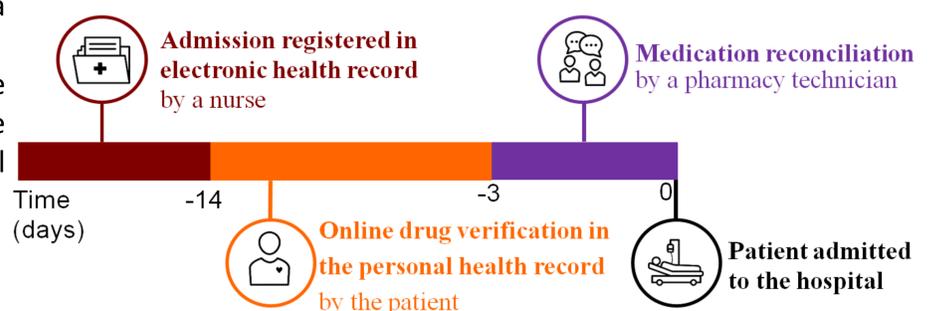
AIM

The aim of this study is to determine the **level of agreement** of identified MDs between traditional MR and an online PHR and the **correctness** of the identified MDs with an online PHR.

METHOD

- A **prospective cohort study** was conducted at the cardiology, neurology and internal medicine department of the Amphia Hospital, the Netherlands.
- Patients updated their medication file in the PHR derived from the Nationwide Medication Record System (NMRS), a digital nationwide network which exchanges medication dispensing data from all pharmacies in the Netherlands.
- A **deviation** was defined as a difference between the drug list made by the patient in the PHR and the drug list derived from MR.
- MDs and deviations classified to National Coordinating Council for Medication Error Reporting and Prevention (NCC MERP) class $\geq E$ were defined as **clinically relevant**.
- The number, type and severity of identified MDs and deviations were analysed.

Figure 1: Timeline before patient's hospital admission



RESULTS

- 155 patients were included (response rate 32%).
- 7% of all detected MDs (with both methods) were **clinically relevant**.
- 77% and 64% of the MDs identified with the PHR and MR respectively were **errors of commission**.

Figure 3: Number of clinically relevant medication discrepancies ((CR)MDs) identified with a PHR and MR

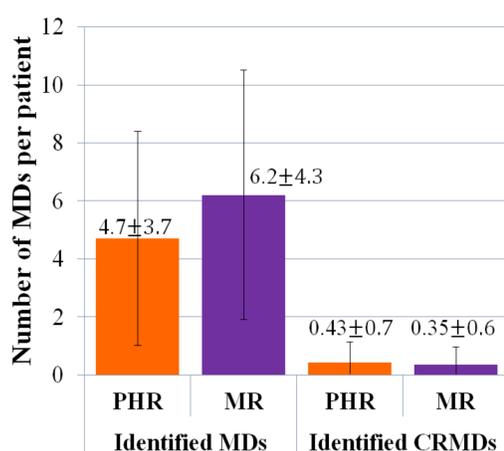


Figure 4: Identified deviations at:
a) patient level (n = 155) b) medication level (n = 1756)

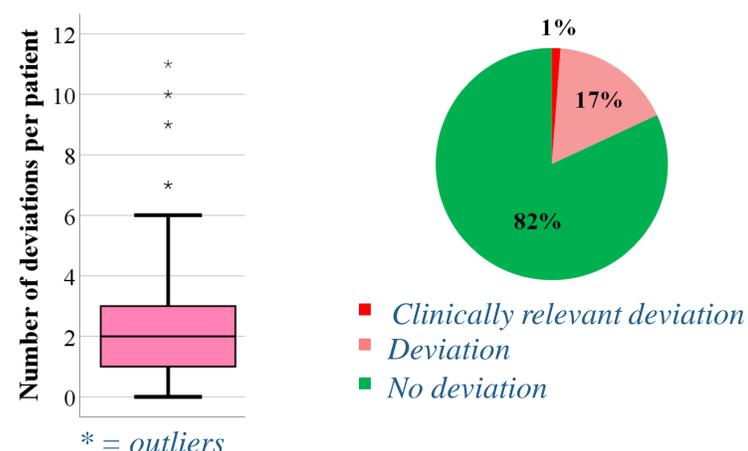
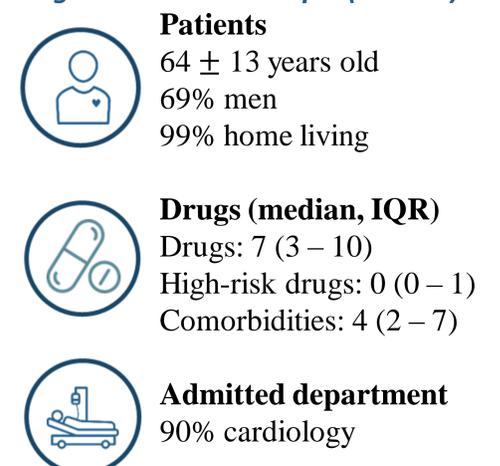


Figure 2: Patient sample (n = 155)



REFERENCES AND ACKNOWLEDGEMENTS

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CONCLUSION

- Patients who used an **online PHR** can **relatively accurately** record a list of their medication.
- Further research is required to explore the level of agreement and the correctness of a PHR in other (larger) hospital(departments).

CONTACT DATA

Disclosure: None of the authors of this study have to disclose any possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this study.

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