



SEAM PAT: IMPROVING CONTINUITY OF MEDICATION USE THROUGH PATIENT EMPOWERMENT AND USE OF INFORMATION TECHNOLOGY

Context and Problem

Problem

- Medication discrepancies occur during transitions of care → patient harm, increased use of healthcare resources and increased costs
- Initiatives exist in Belgium to:

(1)document the problem and

(2)implement approaches for optimisation

- Limited work has addressed patient empowerment AND use of information technologies (IT)

Context: the work

- Is performed in the Walloon Region (±3.6 million inhabitants) in Belgium
 - Encompasses all settings of care
 - Is designed as a proof-of-concept
 - Focuses on patients at high risk of discrepancies and willing to participate
- The Regional eHealth network enables communication between HCPs, but communication on medications is infrequent and not all HCPs have access. The research team includes experts in medication safety, IT, law, anthropology, eHealth, healthcare professionals (HCPs) and patient representatives.

Aim

To **define and implement an electronic medication reconciliation (eMedRec)** tool composed of 2 applications: **Patient application** – **MedRec application**.

Assessment of the problem

1

Literature reviews

- To identify existing electronic tools
- To summarize key messages for successful development (systematic review)

10 Focus Groups (FG)

- With patients (n= 6) and HCPs (n = 40)
- To identify problems and explore their views on the tools to develop

2

Results were discussed with representatives of all key stakeholders.

Intervention

Two applications are being developed and integrated in the Regional eHealth network.



Fig 1: 2 applications integrated in the Belgian eHealth network

Starting from a **list of medications previously reported** through the Regional eHealth platform by physicians and pharmacists (in primary and secondary care), patients will document:

- their medication history
- whether they take each medication, how and possibly why for
- additional medications

→ The patient's list will be available for HCPs through eHealth

→ Patients will be encouraged to update their medication list **before any visit** to a doctor

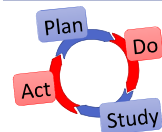
The application will support **MedRec**:

- Medication discrepancies between the medication list of the physician's record, the patient list and medications reported by other HCPs will be highlighted

- **Physicians reconcile** and update their own list

→ The reconciled list will be available to others HCPs through eHealth

Strategy for change and measurement of improvement



Study

Usability testing of the patient application :

- 2 improvement cycles (low and medium-fidelity prototypes)
- 30 patients
- Observation, interviews, and a satisfaction questionnaire.

Fig 2: Iterative participatory design

From low-fidelity to high-fidelity prototypes

Table 1: Patients satisfaction and perceived value

	Agree	Disagree	Uncertain
Improve patient security	28	0	4
Improve HCPs communication	26	0	6
Reduce medication errors	25	2	5
Gain in time for HCPs	24	1	7
Easy to use	26	2	4

Fig 3: Print screen of the Patient Application with improvements

Several opportunities for improvement were identified. (e.g. highlighting of buttons, icons became buttons to add medications)

How we involved patients?

- As representatives (input for developments)
- In focus groups + prototype evaluation

An anthropological analysis is made all along the process.

LESSONS LEARNT

Reviewing the literature and performing focus groups with stakeholders enabled the description of the functionalities of both applications as well as context and workflow issues.

Iterative development and testing is ongoing and will enable refinement of the applications, so as to best meet users' needs, and improve continuity of care.

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