

# Shifting towards the collection and use of ePROMs solely from the electronic health record in the Dutch hospital MST



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## Rationale

In Medical Spectrum Twente (MST) (part of Santeon hospitals) patient-reported outcome measures (PROMs) were collected using 8 different web-based applications with accompanying costs and application management. PROMs were implemented in MST mainly because of benchmarking within the Santeon hospital group or because of mandatory data deliveries for outcome registries. In a hospital-wide project we aimed for better integration within the electronic health records workflow, reduce the use of external apps and reduce costs and application management. Within the project, the web-based applications were phased out and electronic PROMs (ePROMs) were implemented in Chipsoft Hix 6.3.

## Results

Within a timespan of 9 months, 26 different PROM trajectories were technically implemented in Chipsoft Hix 6.3. Many PROMs that were used in the web-based applications and generic PROMs were made available in Chipsoft Hix 6.3, enabling the use of PROMs in the consulting room, enabling patients to fill in PROMs in the patient portal and build integrated PowerBI dashboards (figure 1). We successfully phased out 4 web-applications. Two web-applications had not been restarted after the implementation of Chipsoft Hix 6.3, so did not need to be phased out. For two applications other functionalities that are currently used in patient care have also to be made available in Hix 6.3 first to make sure the applications can stop. Dispatching PROMs can be done manually or automatically in a custom sequence. The automatically send PROMs are triggered by appointment codes, diagnoses and surgery tags. We found that success factors for this project were weekly multidisciplinary project meetings, attributed formation and low-key consultation of the project board members. These interventions were found valuable to keep progress and overcome barriers relatively quickly. In the future, evaluation of PROMs in MST is needed by using e.g. response rates to assess the integration of PROMs within the clinical workflow and whether patients and healthcare professionals are facilitated to yield shared decision making. The aim is to better facilitate healthcare professionals in the use of PROMs during consultation. Furthermore, we would like to extend the use of ePROMs to patients-like-me dashboarding.

## Methods

We systematically transferred PROMs from 8 different apps to Chipsoft Hix 6.3 within a project structure. First, a business case was written. After management approval, a multidisciplinary project group was set-up. The group consisted of application managers, an information analyst, a project leader, a PROM coordinator, value-based healthcare professionals and data-analysts. The project scope consisted of (1) technically enabling the PROM process in Hix and the MST patient portal 'MijnMST', (2) building integrated PowerBI dashboards in Hix, (3) making generic PROMs available in Hix 6.3, (4) facilitate other functionalities from the external apps, such as PROM data delivery for outcome registries, and (5) trigger the shift towards the use of generic ePROMs by discussing with departments to measure at least one generic ePROM construct.

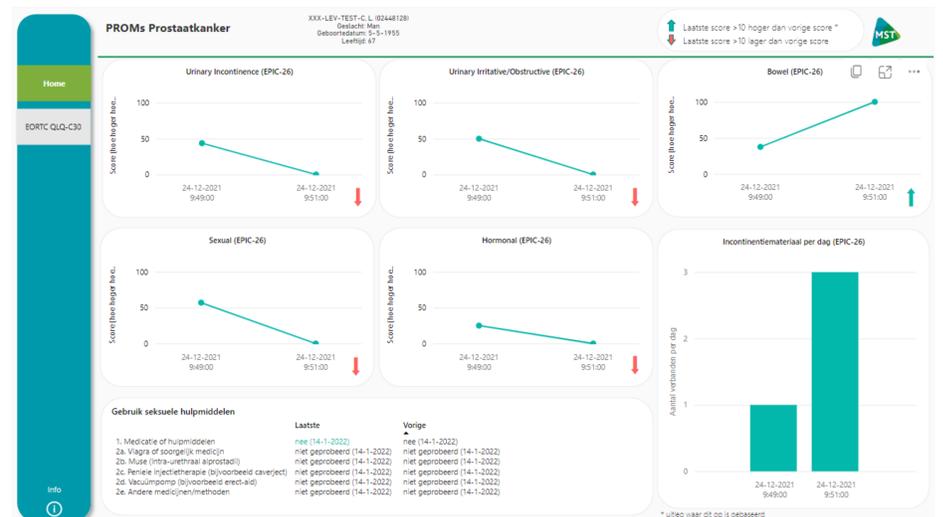


Figure 1: Example of a PowerBI Dashboard

## Conclusions

Central collection of electronic patient-reported outcome measures (ePROMs) via Chipsoft Hix 6.3 was achieved. In the past, PROMs were used in MST mainly because of benchmarking or outcome registries. Because of this history, shifting towards the use of a hospital wide set of generic PROMs was not yet an option. In a follow-up project, we aim to work towards the use of a hospital wide set of generic PROMs to stimulate benchmarking of PRO-constructs within the hospital across specialties and to other (worldwide) organizations.



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