The Effect of Continuation of Home Medication on Economic Value of Wasted Medication and Patient Satisfaction

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Introduction

- Most hospitalised patients use medication at home.
- On admission this medication is often changed to the hospital’s formulary.
- Results in: medication waste, errors and potential harm. It opposes the possibility for patients to participate in their pharmaceutical treatment.
- The use of Home Medication During Hospitalisation (HMDH) may improve this.

Objective
The aim of this study is to investigate the effect of HMDH on economical value of wasted medication and patient satisfaction.

Methods

- Multicenter quasi-experimental study with a pre-post design
- Conducted at seven different Dutch nursing wards, including both surgical and non-surgical wards.
- Data were collected during two months.
  - Medication waste: all disposed medications and their value (€) were determined.
  - Patient satisfaction: questionnaire about patient’s perception and beliefs towards HMDH were completed.
- Data analysis:
  - Medication waste: descriptive.
  - Patient satisfaction: statistically tested (t-test).

Results

- Economic value (€) of wasted medication per ward per month during pre and post-implementation of HMDH.

![Economic value graph](image)

- Patients’ perceptions and beliefs towards HMDH (n=912 patients)

<table>
<thead>
<tr>
<th>Perception</th>
<th>Pre</th>
<th>Post</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>I prefer HMDH</td>
<td>65%</td>
<td>81%</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>I prefer self-administration of HMDH</td>
<td>50%</td>
<td>67%</td>
<td></td>
</tr>
<tr>
<td>I think by HMDH medication errors will decrease</td>
<td>67%</td>
<td>75%</td>
<td></td>
</tr>
</tbody>
</table>

Discussion and Conclusion

- HMDH leads to a decrease in mean economical value of wasted medication.
  - This may be an underestimation because implementation of HMDH was challenging:
    - Not all patients admitted on a study ward participated,
    - Multiple stakeholders in outer setting with different views and needs were involved,
    - Inner setting compatibility, resources, and communication.
- Patients’ perception and beliefs improve due to HMDH.
  - Recognition of medication,
  - Increased sense of safety,
  - Improved patient participation.
- Future perspectives: patients are enthusiastic about self-administration.
  - Further research is needed to examine the effect of self-administration of HMDH.

Conclusion
Implementation of HMDH decreases costs associated with medication waste and increases patient satisfaction.

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