COST EFFECTIVENESS ANALYSIS OF PATIENTS’ SELF-ADMINISTRATION OF MEDICATION (SAM) DURING HOSPITALISATION IN A CARDIOLOGY UNIT

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1 Aim
To evaluate the cost-effectiveness of “Self-administration of medication” (SAM) during hospitalisation in a Danish Cardiology Unit

2 Conclusion and Relevance
SAM is cost-effective since:
• SAM seem to cost less, however, the results were not statistically significant
• There were fewer dispensing errors in SAM when compared with dispensing by nurse

3 Background and Importance
What we know:
Healthcare is moving towards systems with more patient involvement, including SAM during hospitalisation. SAM enhances patients’ independence, knowledge and empowerment and may ease the current strain on healthcare ressources.

What we don’t know:
The risk of dispensing errors in SAM is unclear and a full health economic evaluation of SAM is lacking.

4 Materials and methods
A randomised controlled trial (RCT) was performed in a Cardiology Unit. Included patients were capable of SAM and ≥18 years.

Intervention group: patients were instructed about medication, and self-administered their medication during hospitalisation. New medication and medication not brought to hospital was delivered from the medicine room.

Control group: medication was dispensed and administered by nurses at the ward.

A cost analysis on micro-costing level (hospital perspective) was performed alongside the RCT and included costs for medication, materials and nursing time spend on dispensing, administration, SAM start-up activities and discharge preparation.

Effectiveness was explored as the proportion of ward-level dispensing errors registered through disguised observation of dispensing performed by the patient (intervention) in the patient room or the nurse (control) in the medicine room.

Dispensing errors were defined as deviations between the prescription and the dispensed medication (e.g. wrong dose)

Error proportion = \frac{Dispensing\ errors}{OEs} \times 100\%

Opportunities for error (OEs) were defined as any dose dispensed plus any dose prescribed but omitted

5 Results
250 patients recruited from August 2017 to September 2018; 11 patients withdrawn (discharged prior to observation).

66% men; mean age was 64.2 years (SD: 12.2). No statistical significant differences between groups.

<table>
<thead>
<tr>
<th></th>
<th>Intervention group n=119 patients</th>
<th>Control group n=120 patients</th>
<th>P-value</th>
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</thead>
<tbody>
<tr>
<td>Cost</td>
<td>Total cost per patient, 2018 € (95% CI)</td>
<td>49.9 € (46.7 - 53.1 €)</td>
<td>52.6 € (47.1 - 58.1 €)</td>
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<tr>
<td>Effectiveness</td>
<td>Error proportion (95% CI) (total errors, OEs)</td>
<td>9.7 (7.9 - 11.1) (100 errors, 1033 OEs)</td>
<td>12.8 (10.9 – 15.0) (132 errors, 1028 OEs)</td>
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1 Wilcoxon Ranksum test; 2 Chi test

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