Costs in Value-Based Health Care Dashboards: A Qualitative Study on Stakeholder Objectives and Requirements

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From budget-driven to value-driven hospitals

Outcomes
Costs

Patient value

Silo 1
Silo 2
Silo 3
Silo 4

Councils
Directorates
Board
Value dashboard for orthopedic surgery

What are stakeholder objectives and requirements for the use of costs in VBHC dashboards?
## Methods

**Study design and data collection**

- Organ transplant center
- Semi-structured interviews
- Requirements analysis (Alexander and Beus, *Discovering Requirements* (2009))
- Purposeful sampling:

<table>
<thead>
<tr>
<th>Management</th>
<th>Health care professionals</th>
<th>Finance and IT</th>
<th>Patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Division</td>
<td>Medical specialist (in training)</td>
<td>Financial advisor</td>
<td>Member</td>
</tr>
<tr>
<td>Departments</td>
<td>Nurse practitioner</td>
<td>IT manager</td>
<td>patient panel</td>
</tr>
<tr>
<td>MT transplant center</td>
<td>Nurse</td>
<td>IT developer</td>
<td></td>
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<tr>
<td>Quality and patient safety</td>
<td>Physician assistant</td>
<td></td>
<td></td>
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<tr>
<td>VBHC steering committee</td>
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</tbody>
</table>
Thematic analysis and deductive coding by two researchers

Example of coding transcript

Q: Could you describe a scenario of how would you use the dashboard?
A: “Well, I think what you should do is to collectively review the dashboard once a month or once every two months. So, within the group...”
Results
Participants

Invited n=56
Response n=15

Health care providers (n=6) 40%
Management (n=4) 27%
Finance & IT (n=3) 20%
Patients (n=2) 13%

Clinicians
Nurse practitioners
Physician assistant
Division head
Member management team
Organizational manager
Quality advisor

IT advisor
Clinical informatics specialist
Financial advisor
“In the first year, I hardly ever thought about what it all costs. About what is involved. You are in such a rollercoaster that you absolutely do not care.”

**Patient-relevant costs discussed**

- Productivity costs (e.g. salary, income)
- Out-of-pocket expenses
1. Identify costs and resources
   “Well what does it cost, you know? A liver transplant patient? I would find that quite interesting.” HCP1

2. Evaluate the value of care
   “Are we going to add something to the care pathway or are we going to remove something from it? And does it have an impact on the quality of care or not?” M3

3. Monitor financial viability
   “…the financial assurance that there is sufficient income to cover the costs. That should be included, and you should also have a point of reference for when to stop if it falls below a certain threshold.” F&IT2
In total, 32 requirements across five themes. Some highlights:

Who
• Care team and relevant advisors, including a financial expert and someone responsible for the continuous improvement process

Data
• The costing model used should accurately capture all costs in the care pathway and should be validated.
• An organizational structure in themes surrounding disease areas will support appropriate data collection of all relevant indicators.

Interface
• The dashboard should have a signaling function for improving and declining performance.
### Discussion

- Sensitive nature of cost data
- The role of health insurers
- Patient-relevant costs are not available in the hospital financial administration

### Conclusion

- Actionable objectives and requirements
- The functionalities of a VBHC dashboard should be aligned with the objective
- Future research should further explore the role of patient-relevant costs