The financial burden of Patient Safety Incidents and cost-effectiveness of patient safety interventions

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The financial burden of PSIs

- OECD report:
  - the financial burden coming from all categories of PSIs occurring in hospitals varies from 1.3% to 32% of public hospital spending

- EU report:
  - PSIs are responsible of 1% - 6% of all healthcare expenditures
The extent of the problem

*How many patients are affected by Patient Safety Incidents (PSIs)?*

- Estimates vary

- \(\approx 10\%\) of the hospitalized patients are harmed

- 30 – 70\% of the PSIs are estimated to be preventable
The distribution of PSIs by incident location

The development of the total number of closed cases of PSIs from 2004-2016

The development of the number of closed cases of PSIs from 2004-2016 (by incident location)
Frequent PSIs

- The most used category is:
  - Medication

- The second most used categories are:
  - Treatment and care
  - Test, examination and answers

<table>
<thead>
<tr>
<th>Danish Patient Safety Database classification</th>
<th>Hospital</th>
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</thead>
<tbody>
<tr>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>Ambulances, helicopters and more</td>
<td>0</td>
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<tr>
<td>Other patient safety incident</td>
<td>2685</td>
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<tr>
<td>Treatment and care</td>
<td>5853</td>
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<tr>
<td>Blood and blood products</td>
<td>302</td>
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<tr>
<td>Gasses and air</td>
<td>133</td>
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<tr>
<td>Referral, hospitalisation/discharge and medication lists</td>
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<tr>
<td>Infections</td>
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<tr>
<td>IT, infrastructur, buildings and more</td>
<td>807</td>
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<tr>
<td>Surgical treatment incl. ECT, anesthesia and more</td>
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<tr>
<td>Medication incl. fluids</td>
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<tr>
<td>Medical equipment, help supplies, x-ray and more</td>
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<td>Information hand over, responsibility, documentation</td>
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<tr>
<td>Patient identification</td>
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<tr>
<td>Patient accidents including fall and fire damage</td>
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<tr>
<td>Pre-hospital treatment</td>
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<td>Tests, examinations and test answers</td>
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<tr>
<td>Self harm and suicide</td>
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<tr>
<td>Visitation and telephone consultation</td>
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<tr>
<td>Not filled</td>
<td>222</td>
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<tr>
<td>Total</td>
<td>42797</td>
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</table>
The (potential) consequences of PSIs

*For the patient… and the system*

- Additional medical procedures, treatments and diagnostics
- Incapable of working
- Rehabilitation
- Personal consequences
- Admission or readmission to the hospital
- Extension of the length of stay

⇒ Requires additional resources that exert a financial burden on the healthcare system
Prevention of Patient Safety Incidents

Is it cost-effective?
OECD snapshot survey

*Prevention of PSIs – Is it cost-effective?*

- Expert panel chose between interventions from three categories
  - 1 System-level patient safety strategies
  - 2: Organisational and institutional level patient safety programs
  - 3: Clinical level patient safety practices
OECD snapshot survey

Prevention of PSIs – Is it cost-effective? INDIVIDUAL RATING

• How would you rate the benefit of the given intervention?
  • Benefit = reducing patient harm
  • Scale: 1-5 (1=low impact on reducing patient harm, 5=high impact)

• How would you rate the costs of the given intervention?
  • Cost = impact on the aggregate healthcare budget
  • Scale: 1-5 (1=low impact on the aggregate healthcare budget, 5=high impact)

• Clinical interventions were rated most cost-effective
OECD snapshot survey

Prevention of PSIs – Is it cost-effective? **PACKAGE RATING**

- List up to seven interventions that would – as a package applied across entire healthcare systems – generate the most impact per dollar invested.

- 6 of the 8 most selected interventions were from category 1

- 2 of the 8 most selected interventions were from category 2
Conclusion

• Many PSIs can be prevented

• Combination of system/organisation- and clinical interventions assessed as most cost-effective

• Reporting system is the groundwork of local clinical interventions

• Division of roles makes cost-effective learning and patient safety
Thank you