Against all odds – saving money by investing in people and energy in Sucha Beskidzka Hospital

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Workshop on environmental sustainability in the health sector
- European practices and Hungarian potential

Budapest, 25.11.2014
Two projects – opportunities and challenges

Sucha Beskidzka Hospital started participation in two EU co-funded projects (EcoQUIP and RES Hospitals) at the same time

- Challenges in running two projects simultaneously:
  - Problems with capacity of the hospital
  - Confusions in distinguishing projects
  - Staff not used to project type of work

- Opportunities:
  - CEO’s involvement (higher motivation of management)
  - Potential synergy effect (in the future)
  - Previous experience in running European projects gained through LCB-Healthcare project
Sucha Beskidzka Hospital
Searching for an unmet need

- Search for unmet need started in December 2012
- Biggest difficulty – identification of genuine need
- Mistakes most often made:
  - Attempts of purchasing traditional solutions through innovative procurements
  - Confusing innovative procurement with innovative product (just being offered on the market)
  - Confusing ’innovative’ with ’not essential’
  - Unwillingness to spend more time and work on something that may or may not turn out to work (in more general terms: risk aversion)
  - Belief that today’s solutions are going to work tomorrow
Searching for an unmet need

ACTIONS TAKEN

- Discussions with hospital management (through meetings).
- Discussions with hospital’s staff (through workshops)
- Setting an ‘Evaluation Group’ aimed at:
  - walking around the hospital
  - talking to personnel and patients
  - searching for ideas for improvement
- Going through ‘next to purchase’ lists in search for a product suitable for innovative procurement.
- Peer Learning Visit in the UK
EcoQUIP and RES Hospitals synergy

- RES Hospitals workshops (February – June 2013)
  - 8 projects developed and run by hospital’s staff
  - amongst those a project concerning patients’ exposure to sunlight
- Decree of Minister of Health from June 2012:
  *Patients’ rooms exposed to excessive sunlight are (should be) protected by specially fitted shading equipment*
- Effective 2016 – future unmet need
- Early July 2013 – decision to develop this idea and define it as the hospital’s unmet need

**Improvement of thermal comfort of patients and personnel of Sucha Beskidzka Hospital with the lowest (zero) exploitation costs.**
Current situation and solutions

- **Hospital**
  - 442 beds in 19 hospital wards
  - Majority of patients' rooms (68%), ICU, post-operation rooms and stroke unit situated in the southern part of the hospital

- **Currently used solutions**
  - Shutters and internal blinds (which cause shading but not significant decrease of temperature)
  - Air conditioning in some rooms
## Current situation

**Temperature in patients’ rooms exposed to excessive sunlight [°C] – 26th till 28th July 2013**

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>temp. outside</td>
<td>room temp.</td>
</tr>
<tr>
<td></td>
<td>1 PM</td>
<td>4 PM</td>
</tr>
<tr>
<td>Surgical</td>
<td>26.6</td>
<td>29.6</td>
</tr>
<tr>
<td>Orthopaedic</td>
<td>24.9</td>
<td>26.6</td>
</tr>
<tr>
<td>Neonatal</td>
<td>25.2</td>
<td>25.8</td>
</tr>
<tr>
<td>Cardiology</td>
<td>26.1</td>
<td>25.6</td>
</tr>
</tbody>
</table>

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**Estimated annual costs of using air-conditioning in over-lit rooms:**

93,050 PLN (23,260 EURO)
Required outcomes

- Solution that provides:
  - reduction of excessive sunlight in patients rooms,
  - thermal comfort for patients and personnel of Sucha Beskidzka Hospital,
  - energetic self-sufficiency of a solution,
  - meeting health and safety standards,
  - comfort of usage.

- If possible the purchased solution will improve thermal comfort in winter time

**Improvement of thermal comfort of patients and personnel of Sucha Beskidzka Hospital with the lowest (zero) exploitation costs.**

**To be kept in mind:** Whole life cycle costing
Communication with market (technical dialogue, allowed in Poland since 2013)

- **Preparation**
  - Identification of possible market ready solutions
  - Building data base of potential providers (153 Polish companies, 56 foreign companies)

- **Dialogue announcement**
  - 12 December 2013 – Polish Procurement Journal, hospital www, European Journal TED
  - 17 February 2014 – application deadline

Participation of 19 Polish and foreign companies

All companies contacted directly by mail and phone
Technical dialogue outcomes

- Various proposed solutions
  - Differentiated in used technology, costs, degree of 'invasiveness' in hospital infrastructure
  - Price range: 34,011 EURO to 783,488 EURO

- Challenges
  - Not all participants understood idea of technical dialogue - some companies used it as a chance to present catalogue products (similar experience of the LCB Healthcare project)
  - Most of proposed solutions were originally not comprehensive enough to meet hospital need
Technical dialogue outcomes

Identification of three groups of solutions

1) **Solutions and devices limiting sunlight exposure in rooms.**

2) **Solutions of cooling, heating and rotation of air in rooms.**

3) **Solutions regarding use of renewable sources of heat energy which will supplement the solution from group 2.**

Procurement of a solution from group 1 was announced in **October 2014**
RES Hospitals workshop
(Engaging hospital personnel in searching for energy solutions)

Saving energy – improving processes

Finding solutions
- No-investment or low-investment solutions
- Saving energy
- Reducing CO₂ emissions
- Eliminating waste

Rising awareness
- Changing behaviour patterns
  - Through learning
  - Through projects
- Providing knowledge concerning renewable energy sources
RES Hospitals workshop

- 50 participants
- 8 teams working on chosen projects
- 6 months (I – VI 2013)
- 13 workshop meetings
- Lectures
- Group effort
- Quality management
- Problem-based thinking
- Project financing
- Team effort
- Innovative ways of working on projects
- Individual effort
- Games
Eco-friendly procurement

### Problem addressed
Public procurements focus on price criteria

### Aim
Include eco-friendly and CO₂ requirements

### Means
Create a tool that can be used by procurement department (finding a ground for a comparison)

Methodology in being discussed with procurement department to be used as a default way of procurement in the hospital

### Problem addressed

Public procurements focus on price criteria

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**Problem addressed**
Hot water used to prepare tea and coffee is not produced efficiently

**Aim**
Identify the best way of preparing hot drinks in the hospital

**Means**
Compare possible ways of preparing hot drinks

**Convince management to buy them**

**Convince staff to use them**

**Potential annual savings:**
- 10,675 kWh
- 5,130 PLN (~1,300 EURO)

**Options for heating water**

<table>
<thead>
<tr>
<th>Options for heating water</th>
<th>Gross cost in 6 days (348 hot drinks) [PLN]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>One cup</td>
</tr>
<tr>
<td>600 W heating / cooling column</td>
<td>10,8</td>
</tr>
<tr>
<td>700 W microwave</td>
<td>9,0</td>
</tr>
<tr>
<td>1 500 W kettle</td>
<td>5,6</td>
</tr>
<tr>
<td><strong>2 200 W kettle</strong></td>
<td><strong>9,4</strong></td>
</tr>
<tr>
<td>2 750 W kettle</td>
<td>11,5</td>
</tr>
<tr>
<td>Gas stove</td>
<td>(more than 6,3)</td>
</tr>
</tbody>
</table>
Workshop ending

14 June 2013

Teams presented outcomes of their work to hospital’s management, to RES Hospitals project representatives and to each other.

‘Please make sure that we include these ideas in the hospital’s next strategic plan’

- Marek Haber, Sucha Beskidzka Hospital CEO
Outcomes

- Operation clothes are to be purchased by the end of the year
- New procurement methodology is to be used by the hospital
- Patient thermal comfort is the fundament of hospital’s innovative procurement (EcoQUIP Project)
- **But the most important: the change in staff behaviour**
We are seeking partners for future projects
For further information:
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- ICT-24(d): Robotics in areas of public interest including healthcare
- ICT-8(a): Boosting public service productivity/services via cloud computing
- ICT-36: Call open to any area of public interest needing ICT based solutions
- PHC-21-2015 Advancing active and healthy ageing with ICT: Early risk detection and intervention
- PHC-25-2015 Advanced ICT systems and services for integrated care
- PHC-30-2015 Digital representation of health data to improve disease diagnosis and treatment
- ...
...and: ENERGY!