Impact of 10 years multimodal country-wide campaigns to promote hand hygiene in Belgian hospitals

« YOU ARE IN GOOD HANDS »
Background

Healthcare-Associated Infections (HCAI)
Worldwide:
1.4 million people affected
→ ↑ hospital stay
→ ↑ hospital costs and excess mortality
→ ↑ long term invalidity

In Belgium*:
- 7.2% of hospitalised patients
- 2500 – 3000 deaths per year
- nearly 400 million euros per year
- 46.9% compliance in 2004 before campaign

Impact on mortality and costs, KCE, 2008, Belgium
Intervention: Nation-wide Hand hygiene campaign

- Organised by the national hand hygiene working group of the federal platform of hospital hygiene and sponsored by the ministry of public health.

- **Objective**: Raising awareness on good hand hygiene (HH) practices and promoting use of alcohol rubs

- **Target population**:
  - HCW having contact with patients hospitalised in acute, chronic and psychiatric hospitals.
  - Patients.
Methodology

1. Pre-campaign
2. Awareness campaign with standardised material to improve HH compliance
3. Measuring impact of the campaign (Pre - Post campaign)
   - HH compliance (soap and/or alcohol / HH opportunities)
   - Alcohol rub consumption (litres alcohol rub / 10000 patient days)
   - Respect of basic hygiene conditions (optional, from the third campaign)

Conforming with hand hygiene recommendations of the Superior Health Council and WHO.
Planning

During 1 month

Invitation to participate + press conference

Measurement of HH indicators

1 month later and for 1 month

Awareness Campaign

First campaign: 2005
Second campaign: 2006-2007
Third campaign: 2008-2009
Fourth campaign: 2010-2011
Fifth campaign: 2012-2013
Sixth campaign: 2014-2015

1 month later and for 1 month

Measurement of HH indicators

2 months later Post-campaign

National Feedback session

Real time hospital feedback
## Campaign messages

<table>
<thead>
<tr>
<th>Campaign</th>
<th>Messages</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>Hand hygiene, just do it ... and with alcohol rubs</td>
</tr>
<tr>
<td>Second</td>
<td>Hand hygiene, do it correctly</td>
</tr>
<tr>
<td>Third</td>
<td>Hand Hygiene, without jewels and with appropriate use of gloves</td>
</tr>
<tr>
<td>Fourth</td>
<td>Doctor, don't forget, it works and you are a role model</td>
</tr>
<tr>
<td>Fifth</td>
<td>Hand hygiene, do it certainly before any contact with the patient</td>
</tr>
<tr>
<td>Sixth</td>
<td>Hand hygiene, together with the patient</td>
</tr>
</tbody>
</table>
Awareness campaign: multi modal

- Reminders (posters)
- Education of HCW
  - standardised powerpoint presentation
  - Interactive quiz
- Distribution of gadgets for HCW or patients
- Promotion of hand rub (posters, black light)
- Feedback of measurement results before campaign
- Clip video
- Implication of patients (leaflets, gadget, website)
Hand hygiene: talk about it to your healthcare provider. Let’s avoid infections together!
Measurement of HH compliance

- Direct (overt or covert) observation
- By trained observers (IC practitioner or reference nurses for hospital hygiene)
- Standardised observation grid (WHO proofed)/mobile tablets
- Observation period of 30 minutes, 24/24, 7/7
- Minimum 150 opportunities for HH per unit
- At least intensive care units
- Same methodology before and after campaign
- Online web tool for data entry and real time feedback
### Participation

<table>
<thead>
<tr>
<th>Campaign</th>
<th>Acute hospitals</th>
<th>Chronic hospitals</th>
<th>Psychiatric hospitals</th>
<th>All hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2005</strong></td>
<td>112/116 (97 %)</td>
<td>19/31 (67%)</td>
<td>NA</td>
<td>131/147 (89%)</td>
</tr>
<tr>
<td><strong>2006</strong></td>
<td>113/116 (97 %)</td>
<td>22/30 (73%)</td>
<td>43/68 (63%)</td>
<td>178/214 (83%)</td>
</tr>
<tr>
<td><strong>2009</strong></td>
<td>110/113 (97 %)</td>
<td>20/28 (71%)</td>
<td>46/67 (69%)</td>
<td>175/208 (84%)</td>
</tr>
<tr>
<td><strong>2011</strong></td>
<td>98/107 (92 %)</td>
<td>16/24 (67%)</td>
<td>41/67 (61%)</td>
<td>156/198 (79%)</td>
</tr>
<tr>
<td><strong>2013</strong></td>
<td>118/120 (98 %)</td>
<td>11/24 (45%)</td>
<td>26/67 (39%)</td>
<td>155/211 (73%)</td>
</tr>
<tr>
<td><strong>2015</strong></td>
<td>123/124 (99%)</td>
<td>11/24 (45%)</td>
<td>18/44 (41%)</td>
<td>152/192 (79%)</td>
</tr>
</tbody>
</table>
Choisir période (Campagne ou Hors-campagne) :
Campange

Choisir une période :
Post Campange 2014

Choisir données pour tout l'hôpital, toutes les unité, ou pour une unité spécifique :
Unité

Choisir unité :
441

Type du fichier :
RTF

Globale percentage van handhygiënecompliantie

<table>
<thead>
<tr>
<th>Periode</th>
<th>Aantal geobserveerde eenheden (n)</th>
<th>Aantal geobserveerde opportunitieiten (n)</th>
<th>Totale observatieduur (Uren)</th>
<th>Observatieduur/10 opp. (Minuten)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014 Vóór</td>
<td>2</td>
<td>639</td>
<td>22.1</td>
<td>21</td>
</tr>
<tr>
<td>2014 Na</td>
<td>2</td>
<td>190</td>
<td>3.0</td>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Periode</th>
<th>Aantal geobserveerde opportunitieiten (n)</th>
<th>Handhygiëne Alcohol + zeep (n)</th>
<th>Globale percentage van compliantie (%)</th>
<th>Handhygiëne Alcohol (n)</th>
<th>Percentage alcohol/alcohol+zeep (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014 Vóór</td>
<td>639</td>
<td>408</td>
<td>64</td>
<td>383</td>
<td>94</td>
</tr>
<tr>
<td>2014 Na</td>
<td>190</td>
<td>130</td>
<td>68</td>
<td>126</td>
<td>97</td>
</tr>
</tbody>
</table>
### Number of observed opportunities

<table>
<thead>
<tr>
<th>Campaigns</th>
<th>Number of opportunities</th>
<th>Before campaign</th>
<th>After campaign</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-2005</td>
<td></td>
<td>73 663</td>
<td>72 705</td>
</tr>
<tr>
<td>2006-2007</td>
<td></td>
<td>88 480</td>
<td>84 883</td>
</tr>
<tr>
<td>2008-2009</td>
<td></td>
<td>107 653</td>
<td>109 826</td>
</tr>
<tr>
<td>2010-2011</td>
<td></td>
<td>89 583</td>
<td>79 369</td>
</tr>
<tr>
<td>2012-2013</td>
<td></td>
<td>123 204</td>
<td>115 599</td>
</tr>
<tr>
<td>2014-2015</td>
<td></td>
<td>117 411</td>
<td>104 186</td>
</tr>
</tbody>
</table>
HH compliance before vs after campaign

HH compliance %


Compliantie voor campagne  Compliantie Na campagne

68.1%  69.5%  69.1%  72.9%  75.8%  69.1%

+19%  +16.3%  +11.1%  +10.6%  +11.7%  +8.6%

+3.6%  +4.8%  +4.3%  +1.8%  +5%

77.7%
Campaigns were successful:

- High participation rate
- Increase of HH compliance at short and long term
- Alcohol rub is widely used
- Physician compliance increased during IVth campaign

To be improved:

- HH compliance before contact (70% min to be reached)
- Patient empowerment
- HH improvement has to become an institutional project
Limitations of methodology

1. Variability of measurements between observers
   → tackled with training:
     - by national workshop for observers
     - by standardised powerpoint presentation
     - by online quiz

2. Observation bias (« Hawthorne effect ») difficult to eliminate

3. Rates of HCAIs were not evaluated
The Hand Hygiene working group

Francine De meerleer
Aldo Spettante
Patricia Taminiau
Roger Haenen
An Willems
Tina Debeer
David De Wandel
Michiel Costers
Boudewijn Catry
Sylvanus Fonguh
Anne Simon
Thank you.

NL: https://www.youtube.com/watch?v=EpO5kfU0EdU

FR https://www.youtube.com/watch?v=6r63HXUMn1g