Willingness to work of hospital staff in disasters: A pilot study in Belgian hospitals

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NO CONFLICT OF INTEREST
Background

- **Sudden oversupply of disaster victims**
  - Expected - Unexpected

- **Hospital capacity?**
  - Beds - Material - Staff

- **Hospital Surge Capacity**
  - The 4 ‘S’ (Staff, Stuff, Space, System)

- **Health sector: image of great engagement?**
Objectives of the study

- **Willingness to work of hospital staff in disasters?**
  - Differences in willingness to work depending on type of disaster?
  - Which facilitators do have influence?

- **Willingness to work in various disaster situations and how do hospitals cope with disaster management in daily circumstances?**
  - Role of the hospital disaster coordinator?
Methods

Mixed Method: explanatory sequential study design

- **Phase 1: quantitative approach**
  - Online cross-sectional survey (CREEC - KUL)
  - 22 hospitals
  - 4 groups: physicians - nurses - administration - supportive services
  - Measuring knowledge of incidents and intention to work
  - 11 potential disaster scenarios

- **Phase 2: qualitative approach**
  - Focusgroups (2)
  - Semi-structured interviews (7)
Results: Quantitative research (1)

Figure 1: How do you feel about working in these conditions - all hospitals (n=10,474)

- natural disaster: 1.4% refusal, 6.8% in doubt, 66.1% conditions, 25.7% unconditionally
- bombing: 3.4% refusal, 16.0% in doubt, 56.2% conditions, 24.4% unconditionally
- influenza: 0.9% refusal, 8.2% in doubt, 45.9% conditions, 29.1% unconditionally
- mexican flu: 1.9% refusal, 16.2% in doubt, 52.8% conditions, 29.1% unconditionally
- SARS: 3.5% refusal, 21.4% in doubt, 51.6% conditions, 23.5% unconditionally
- EBOLA: 8.0% refusal, 27.8% in doubt, 53.3% conditions, 29.0% unconditionally
- smallpox: 2.5% refusal, 15.2% in doubt, 54.4% conditions, 26.6% unconditionally
- chemical incident: 3.9% refusal, 15.1% in doubt, 53.9% conditions, 21.8% unconditionally
- biologisch incident: 4.5% refusal, 19.8% in doubt, 49.0% conditions, 24.5% unconditionally
- nuclear incident: 8.3% refusal, 24.5% in doubt, 50.9% conditions, 18.2% unconditionally
- dirty bomb: 6.5% refusal, 21.4% in doubt, 50.9% conditions, 21.3% unconditionally
Results: Quantitative research (2)

Figure 2: Response rate of four groups of hospital staff: working unconditionally - all hospitals (n=10,474)

- Administration (n=1894): 23.1%
- Supportive staff (n=2248): 28.1%
- Physicians (n=1095): 33.8%
- Nurses (n=5237): 23.6%
Results: Quantitative research (3)

- **Local evaluation 3 hospitals:**
  - Majority works under conditions
  - Unconditionally: pandemics
  - Refusal to work: ebola, nuclear incident
  - Hospital B: working unconditionally - education

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<th>A</th>
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<tr>
<td>Majority</td>
<td>40</td>
<td>-&gt;</td>
<td>60%</td>
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<tr>
<td>Unconditionally: pandemics</td>
<td>57,4%</td>
<td>52,1%</td>
<td>58,3%</td>
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<tr>
<td>Refusal</td>
<td>19,2%</td>
<td>41,2%</td>
<td>20,4%</td>
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<td>Ebola, Nuclear</td>
<td>21,7%</td>
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<td>Hospital B</td>
<td>overall high %</td>
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- **Most important facilitators**

  Personal Protective Equipment (PPE) / Insurance family - kids are safe / Feedback on evolution incident / Previous training - education
Results: Qualitative research (1)

- Theme 3: Hospital disaster management
- Subtheme 2: The role of the hospital disaster coordinator

"... Is that function required by law? If a contingency plan is required by law, the coordinator should also be required ...

(Hospital C, Focus Group 2)

"... So anyway, I think that he cannot sit just on a desk to write a paper plan, he must keep in touch with the daily operations of the hospital, and maybe not only the emergency department, because it seems the most logical. Just to practise disaster coordinator without being doctor or nurse I do not think that's a good idea, he must remain familiar with the daily operations of the hospital and see where the problems are, because if there are problems in daily situations, you bring them along in disaster circumstances…”

(Hospital B, Interviewee 3)
Results: Qualitative research (2)

- Subtheme 3: Hospital disaster management → a daily concern?

"... This is a shame, because I'm going to say this, if there had been no accreditation than probably the contingency plans would still be in the same phase as 5 years ago. I've been contacting everybody, on wards, the ER, talked to the management, they only said: a disaster ... that will never happen here ..."

(Hospital C, Interviewee 2)

"... Before I could invest a lot of working hours to the disaster plan, but now that I'm alone, it is now with bits and pieces that I can work on the plan. And I'm sure if I do not get any help, this is going to become a real mission impossible ..."

(Hospital C, interviewee 2)
Discussion

- Limitations
  - Response rate
  - Survey list administration
  - Reporting bias

- Characterization of the study (according to literature)
  - National
  - All in one
  - Qualitative part in addition: original perspective
  - Integration of ‘disaster nursing’
Conclusion

- Willingness to work depending on type of disaster
- Four important facilitators
- Important role of the hospital disaster coordinator
  - Awareness and Preparedness
  - Identification hospital function
- Hospital disaster management
  - More than accreditation and legal obligations
  - Reflection on quality and safety policies
- Need for more well grounded research
Questions – Remarks?

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  - Prof. Dr. Lieve Peremans, my promotor
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