Which pressure ulcer preventive measures are used in Dutch nursing homes: a longitudinal study from 2005-2014.

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CONFLICT OF INTEREST DISCLOSURE

I have no potential conflict of interest to report
Background

• Pressure Ulcers are an important and distressing care problem in nursing homes
  - painful
  - negative impact on quality of life
  - expensive (materials, nursing care time)

• The use of evidence based preventive measures is very important
Causal and risk factors of PUs

- **Causal factors:**
  - Pressure
  - Pressure in combination with shear

- **Possible contributing risk factors:**
  - Mobility problems
  - Skin condition (dry or wet, temperature changes, anatomical changes)
  - Nutritional status
  - Age
Prevention of PUs

- Integral approach
  - Risk assessment
  - Skin assessment/care
  - Assessment/optimisation of nutritional status
  - Pressure relief and shear prevention
  - Repositioning
Aim of study

- Which PU preventive measures are used in Dutch nursing homes?
- Can we do better?
Method

- Secondary analysis of LPZ-data of Dutch nursing homes 2005-2014

- Three risk groups:
  - Patients at low risk (Braden score of 17-19)
  - Patients at medium/high risk (Braden score <17)
  - Patients with a PU cat 2, 3 or 4
Method

• Use of preventive measures assessed via LPZ:
  
  – Skin protection (use of emollients)
  – Management dehydration/malnutrition
  – Floating heels/heel devices
  – Pressure redistributing mattresses
  – Repositioning
# Results:

## Characteristics residents

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td><strong>Number of patients</strong></td>
<td>6400</td>
<td>7392</td>
<td>11096</td>
<td>6756</td>
<td>7345</td>
<td>6165</td>
<td>3710</td>
<td>2442</td>
<td>1493</td>
<td>1553</td>
<td>1620</td>
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<tr>
<td><strong>Number of institutions</strong></td>
<td>90</td>
<td>108</td>
<td>148</td>
<td>92</td>
<td>175</td>
<td>163</td>
<td>89</td>
<td>64</td>
<td>39</td>
<td>38</td>
<td>46</td>
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<tr>
<td><strong>Mean age</strong></td>
<td>82.4</td>
<td>82.6</td>
<td>82.2</td>
<td>81.9</td>
<td>83.6</td>
<td>83.4</td>
<td>83.8</td>
<td>83.9</td>
<td>82.8</td>
<td>81.8</td>
<td>82.7</td>
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<tr>
<td><strong>Mean % females</strong></td>
<td>73.3</td>
<td>74.9</td>
<td>73.4</td>
<td>73.3</td>
<td>76.8</td>
<td>76.8</td>
<td>74.1</td>
<td>72.6</td>
<td>69.8</td>
<td>70.5</td>
<td>69.8</td>
</tr>
<tr>
<td><strong>Mean Braden Score</strong></td>
<td>15.2</td>
<td>15.0</td>
<td>15.0</td>
<td>14.9</td>
<td>15.4</td>
<td>15.6</td>
<td>15.4</td>
<td>15.4</td>
<td>15.5</td>
<td>15.7</td>
<td>15.6</td>
</tr>
<tr>
<td><strong>Mean Care Dependency</strong></td>
<td>*</td>
<td>*</td>
<td>33.3</td>
<td>31.6</td>
<td>34.3</td>
<td>33.1</td>
<td>31.8</td>
<td>32.2</td>
<td>33.0</td>
<td>35.0</td>
<td>35.9</td>
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</table>
Prevalence of Pressure Ulcers (cat 2,3 and 4) in Dutch Nursing Homes
Skin protection

![Graph showing skin protection trends from 2005 to 2015 for low risk, medium/high risk, and PU.](image-url)
Management of Dehydration/Malnutrition

- Low risk
- Medium/high risk
- PU
Floating heels/heel devices

- Low risk
- Medium/high risk
- PU

Year: 2006 to 2015
Pressure redistributing mattresses

- Low risk
- Medium/high risk
- PU
Repositioning
Conclusions

• Improved use over the years:
  - Skin protection (61%)
  - Management dehydration/malnutrition (63%)
  - Care heels (56%)

• Stable use over the years:
  - Repositioning (37%)
  - Pressure redistributing mattresses (89%)
General conclusion:

Although the prevalence of PUs in Dutch nursing homes has declined considerably in the last years, PU prevention still can be done better.
Possible reasons

• Care complexity of nursing home residents is expected to rise because of the aging in place policy in The Netherlands.

• Problems to get enough qualified nursing staff.

• PU prevalence is no longer a care quality indicator anymore, which leads to decrease of awareness and already to a (slight) rise of the prevalence again.
What do we need to perform better?

- Better implementation of (less complex) guidelines
- Coaching on the job
- Better support of nursing staff by management
- Evidence about which combination of PU preventive measures is the best and how to tailor PU prevention to the individual patient
National Prevalence Measurement of Quality of Care

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