A national guideline for the prevention of pressure ulcers
Request from the SPF Santé Publique – FOD Volksgezondheid

In collaboration with

• Academic teams UGent/KULeuven
• National Clinical Guideline Centre (NCGC) who produces a guideline on behalf of NICE
• Wound care organisations (CNC vzw, WCS, AFISCeP.be)
Rationale

Resulting from an external mechanical load (pressure and/or shear)

High prevalence: 12% in Belgian hospitals (Category I-IV)

Pressure ulcer prevention: very frequent nursing intervention

Various settings: hospitals, nursing homes, homecare
### Topics: clinical effectiveness

<table>
<thead>
<tr>
<th></th>
<th>• Risk assessment: + predictive value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>• Skin assessment: + predictive value</td>
</tr>
<tr>
<td>3.</td>
<td>• Skin massage</td>
</tr>
<tr>
<td>4.</td>
<td>• Repositioning</td>
</tr>
<tr>
<td>5.</td>
<td>• Re-distributing devices</td>
</tr>
<tr>
<td>6.</td>
<td>• Re-distributing devices heels</td>
</tr>
<tr>
<td>7.</td>
<td>• Nutrition or hydration</td>
</tr>
</tbody>
</table>
Methods

- Clinical effectiveness: (Systematic review of) RCTs
- Prognostic questions: (Systematic review of) Prospective cohort studies
- GRADE: level of evidence and strength of recommendations
- Best practices: high-quality guidelines + experts and stakeholders
Results in general

Body of evidence
- Low to very low quality

Frequent problems
- Heterogeneity
- Under-powered studies
- Lack of blind – or independently verified outcome assessment
- Patients free from pressure ulcers at baseline: not reported
- Poor description of standard care and co-interventions
1. • Risk assessment: + predictive value
2. • Skin assessment: + predictive value
3. • Skin massage
4. • Repositioning
5. • Re-distributing devices
6. • Re-distributing devices heels
7. • Nutrition or hydration
Results: risk & skin assessment

**RISK SCALE**

• No tool outperforms the others in assessing the risk of pressure ulcer development

**SKIN**

• Thermography and non-blanchable erythema have a better predictive value than blanchable erythema

**Combined?**

• Start preventive measures based on a combined approach of risk and skin assessment
3. Skin massage: beneficial or harmful? no evidence

4. Repositioning: effective, no clear differences between schemes

5. Re-distributing devices:
   1. Constant low pressure and alternating devices
   2. Operation overlay system

6. Re-distributing devices heels: Devices that ensures heels are free of the surface of the bed + redistributing mattress

7. Nutrition or hydration: no clinically important effect of nutritional supplements
Discussion

An important health problem BUT lack of high-quality research on how to prevent them

Absence of evidence is not the same as evidence of absence

Variability between organisations

Indications that comprehensive programs are successful
Clinical recommendations

- Structured, combined approach for risk & skin assessment
- Repositioning protocol
  - Pressure redistributing mattresses
  - Use devices that ensure heels are free of the surface of the bed
- Pressure redistributing overlays on the operating table
- Tailored interventions: level of risk, skin status, general health status, comfort, overall plan of care
## Policy recommendations

<table>
<thead>
<tr>
<th>Category</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Research System</td>
<td>• Assessment for need of update</td>
</tr>
<tr>
<td>Federal Council on the quality of the Nursing activities</td>
<td>• Process and outcome indicators based on the content of this guideline and aligned with existing initiatives</td>
</tr>
<tr>
<td>FOD / SPF</td>
<td>• To transform and disseminate in a user-friendly format for daily use. This should be done in close collaboration with professional organisations.</td>
</tr>
<tr>
<td>Providers &amp; institutions</td>
<td>• To integrate comprehensive programs for preventing pressure ulcers (e.g. bundles of best-practices, staff education, awareness campaigns, skin care resource nurses, multidisciplinary pressure ulcer prevention committees) in the global quality improvement policy</td>
</tr>
</tbody>
</table>
Colophon

- **Author(s):** Koen Van den Heede; Sabine Stordeur
- **Publication date:** 14 January 2013
- **Domain:** Good Clinical Practice (GCP)
- **MeSH:** Pressure ulcer; Practice Guidelines; Prevention and control
- **NLM Classification:** WR 598
- **Language:** English
- **Format:** Adobe® PDF™ (A4)
- **Legal depot:** D/2012/10.273/102
- **Copyright:** KCE reports are published under a “by/nc/nd” Creative Commons Licence
  [http://kce.fgov.be/content/about-copyrights-for-kce-reports](http://kce.fgov.be/content/about-copyrights-for-kce-reports).

*This document is available on the website of the Belgian Health Care Knowledge Centre.*