

## Appendix G: Risk assessment tools

The following are examples of pressure injury risk assessment tools, however this list is not an exhaustive. These tools were identified, by the expert panel and **external reviewers**<sup>G</sup> or through the systematic review process. The most common, valid, and reliable wound assessment tools for use in adults are the following (not in order of importance):

- Braden scale;
- Norton scale;
- interRAI Pressure Ulcer Risk Scale (PURS) and
- Waterlow scale.

**Table 21** below provides an overview of these validated pressure injury risk assessment tools and includes a comparison of the risk factors included in each tool, as well as validation studies and sources.

**Table 21: Overview of validated pressure injury risk assessment tools**

RISK FACTORS	BRADEN SCALE	NORTON SCALE	INTERRAI PRESSURE ULCER RISK SCALE (PURS)	WATERLOW SCORE
<b>Components and comparison of risk factors included in tools</b>				
<b>Activity and mobility limitations</b>	<ul style="list-style-type: none"> <li>▪ mobility</li> <li>▪ activity</li> <li>▪ friction-shear</li> </ul>	<ul style="list-style-type: none"> <li>▪ mobility</li> <li>▪ activity</li> </ul>	<ul style="list-style-type: none"> <li>▪ bed mobility</li> <li>▪ walking</li> </ul>	<ul style="list-style-type: none"> <li>▪ mobility</li> </ul>
<b>Skin status</b>	not included	not included	prior pressure ulcer	skin type (in visual areas, partial measure of skin status)
<b>Perfusion and oxygenation</b>	not included	not included	dyspnea	special risk (partial measure of perfusion)
<b>Poor nutritional status</b>	nutrition	<ul style="list-style-type: none"> <li>▪ food intake</li> <li>▪ fluid intake (modified scale)</li> </ul>	weight loss of 5% or more in last 30 days or 10% or more in last 180 days	<ul style="list-style-type: none"> <li>▪ appetite</li> <li>▪ build (weight for height)</li> </ul>
<b>Increased skin moisture</b>	moisture	incontinence	bowel continence	continence
<b>Advanced age</b>	not included	not included	not included	gender/age
<b>Sensory perception</b>	sensory perception	not included	frequency with which person complains or shows evidence of pain	neurological deficit
<b>General health status</b>	not included	<ul style="list-style-type: none"> <li>▪ physical condition</li> <li>▪ mental condition</li> </ul>	not included	<ul style="list-style-type: none"> <li>▪ major surgery/trauma</li> <li>▪ medications</li> </ul>

RISK FACTORS	BRADEN SCALE	NORTON SCALE	INTERRAI PRESSURE ULCER RISK SCALE (PURS)	WATERLOW SCORE
<b>Further resources</b>				
<b>Validation studies</b>	<p>Bergstrom, N., Braden, B., Kemp, M., et al. (1998). Predicting pressure ulcer risk: A multisite study of the predictive validity of the Braden scale. <i>Nursing Research</i>, 47(5), 261–9.</p> <p>Kring, D.L. (2007). Reliability and validity of the Braden Scale for Predicting Pressure Ulcer Risk. <i>J Wound Ostomy Continence Nurs</i>, 34(4), 399–406.</p> <p>Garcia-Fernandez, E. P., Pancorbo-Hidalgo, P. L., &amp; Agreda, J. J. (2014). Predictive capacity of risk assessment scales and clinical judgement for pressure ulcers: A meta-analysis. <i>J Wound Ostomy Continence Nurs</i>, 41(1), 24–34.</p>	<p>Garcia-Fernandez, E. P., Pan-corbo-Hidalgo, P. L., &amp; Agreda, J. J. (2014). Predictive capacity of risk assessment scales and clinical judgement for pressure ulcers: A meta-analysis. <i>J Wound Ostomy Continence Nurs</i>, 41(1), 24–34</p>	<p>Carreau, L., Niezgoda, H., Trainor, A., et al. (2015). Pilot study compares scores of the Resident Assessment Instrument Minimum Data Set version 2.0 (MDS 2.0) Pressure Ulcer Risk Scale with the Braden Pressure Ulcer Risk Assessment for Patients in Complex Continuing Care. <i>Advances in Skin and Wound Care</i>, 28(1), 28–33.</p> <p>Poss, J., Murphy, K. M., Woodbury, M. G., et al. (2010). Development of the interRAI Pressure Ulcer Risk Scale (PURS) for use in long-term care and home care settings. <i>BMC Geriatr</i>, 10(67). doi:10.1186/1471-2318-10-67</p>	<p>Garcia-Fernandez, E. P., Pancorbo-Hidalgo, P. L., &amp; Agreda, J. J. (2014). Predictive capacity of risk assessment scales and clinical judgement for pressure ulcers: A metaanalysis. <i>J Wound Ostomy Continence Nurs</i>, 41(1), 24–34.</p>
<b>Website</b>	<a href="https://www.in.gov/health/files/Braden_Scale.pdf">https://www.in.gov/health/files/Braden_Scale.pdf</a>	<a href="https://www.mdapp.co/norton-score-for-pressure-ulcer-risk-calculator-235/">https://www.mdapp.co/norton-score-for-pressure-ulcer-risk-calculator-235/</a>	<a href="https://tctoolkit.rnao.ca/sites/default/files/resources/pressure-ulcer-AssessmentTools/AppedixkPUBPG.pdf">https://tctoolkit.rnao.ca/sites/default/files/resources/pressure-ulcer-AssessmentTools/AppedixkPUBPG.pdf</a>	<a href="https://www.cgakit.com/waterlow-score">https://www.cgakit.com/waterlow-score</a>

Source: Table adapted from Prevention and Treatment of Pressure Ulcers/Injuries: Clinical Practice Guideline. The International Guideline 2019. interRAI PURS Pressure Ulcer Risk Scale (PURS) from Canadian Institute for Health Information. interRAI Home Care (HC) Outcome Scales [job aid]. Ottawa, ON: CIHI; 2024