## Appendix I: Conditions That Can Cause Urinary Incontinence in Persons

Co-morbid medical illnesses	<ul> <li>benign prostate hypertrophy</li> <li>chronic pulmonary disease</li> <li>congestive heart failure</li> <li>degenerative joint disease</li> <li>diabetes insipidus</li> <li>diabetes mellitus</li> <li>lower extremity venous insufficiency</li> <li>obesity</li> <li>sleep apnea</li> <li>spina bifida</li> </ul>
Environmental factors	<ul> <li>inaccessible toilets</li> <li>lack of timely toileting assistance</li> <li>poorly identified toilet facilities (i.e., unclear signage)</li> <li>unsafe toilet facilities (e.g., inadequate lighting, unavailability of grab rails or inappropriate toilet seat height)</li> </ul>
Functional impairments	<ul><li>impaired cognition</li><li>impaired mobility</li></ul>
Neurological and psychiatric conditions	<ul> <li>dementia</li> <li>depression</li> <li>multiple sclerosis</li> <li>normal pressure hydrocephalus</li> <li>Parkinson's disease</li> <li>spinal cord injury</li> <li>stroke</li> <li>other progressive neurological conditions (e.g., ALS)</li> </ul>
Obstetric history	<ul> <li>birth weight &gt; 4 kg</li> <li>primiparous delivery</li> <li>use of forceps</li> </ul>

Previous surgeries	<ul><li>hysterectomy</li><li>radical prostatectomy</li></ul>
Other factors	<ul> <li>developmental disabilities</li> <li>hormone replacement therapy</li> <li>long term hospitalization</li> <li>menopause</li> <li>pelvic floor muscle trauma</li> <li>pelvic organ prolapse</li> <li>severe constipation and fecal impaction</li> <li>smoking</li> <li>urinary retention</li> </ul>

Source: Adapted by the expert panel from: Abrams P, Cardozo L, Wagg A, et al., editors. Incontinence [Internet]. 6th ed. Bristol (UK): ICI Books; 2017. Chapter 11, Incontinence in frail older persons; p. 1322-3. Available from: <a href="https://www.ics.org/publications/ici-6/Incontinence-6th-Edition-2017-eBook-v2.pdf">https://www.ics.org/publications/ici-6/Incontinence-6th-Edition-2017-eBook-v2.pdf</a>