

Tools for Assessing and Monitoring Urinary Incontinence: The Revised Urinary Incontinence Scale (RUIS)

Background

The RUIS is a short, reliable and valid five item scale that can be used to assess urinary incontinence and to monitor patient outcomes following treatment. It was originally developed by selecting the best performing urinary incontinence items (selected from standardised measures such as the Urogenital Distress Inventory 6 and the Incontinence Severity Index) which were included in a large community survey of 2,915 Australians in 2006. The RUIS has recently been validated in clinical settings (Sansoni et al., 2006; 2011) with support from the Australian Government Department of Health and Ageing. These studies have shown that the RUIS is a valid and reliable measure of urinary incontinence. Internal consistency reliability is Cronbach's alpha $\alpha = 0.73$ (urinary incontinence sample, $N = 195$), $\alpha = 0.84$ (all incontinence patients $N = 254$) and $\alpha = 0.91$ (community sample $N = 2,915$). It has high and statistically significant correlations with other measures of urinary incontinence and other clinical indicators of incontinence severity and has better measurement properties than comparable measures (Sansoni et al., 2011). With only 5 items the RUIS is short and simple to use and score. Most patients will only take a minute to complete it.

Why Use a Standardised Measure of Urinary Incontinence?

This means you are using the same yardstick to assess all patients. This combined with your clinical judgement will help to inform the best treatment for the patient. The use of such measures can also provide effective feedback to clinicians concerning the effectiveness of their treatments, can facilitate the systematic review and monitoring of patients, and can assist in identifying ways to improve practice. It is also useful information to demonstrate the effectiveness of your service.

Continence clinics treating incontinence patients or aged care assessors should find it easy to use it both as assessment measure and as an outcome evaluation measure for routine practice.

The **RUIS** contains the following items:

Do you experience and if so how much are you bothered by:

1. Urine leakage related to the feeling of urgency

- | | |
|--------------------------------------------|---|
| <input type="checkbox"/> <i>Not at all</i> | 0 |
| <input type="checkbox"/> <i>Slightly</i> | 1 |
| <input type="checkbox"/> <i>Moderately</i> | 2 |
| <input type="checkbox"/> <i>Greatly</i> | 3 |

2. Urine leakage related to physical activity, coughing or sneezing

- | | |
|--------------------------------------------|---|
| <input type="checkbox"/> <i>Not at all</i> | 0 |
| <input type="checkbox"/> <i>Slightly</i> | 1 |
| <input type="checkbox"/> <i>Moderately</i> | 2 |
| <input type="checkbox"/> <i>Greatly</i> | 3 |

3. Small amounts of urine leakage (drops)

- | | |
|--------------------------------------------|---|
| <input type="checkbox"/> <i>Not at all</i> | 0 |
| <input type="checkbox"/> <i>Slightly</i> | 1 |
| <input type="checkbox"/> <i>Moderately</i> | 2 |
| <input type="checkbox"/> <i>Greatly</i> | 3 |

4. How often do you experience urine leakage?

- | | |
|--------------------------------------------------------|---|
| <input type="checkbox"/> <i>Never</i> | 0 |
| <input type="checkbox"/> <i>Less than once a month</i> | 1 |
| <input type="checkbox"/> <i>A few times a month</i> | 2 |
| <input type="checkbox"/> <i>A few times a week</i> | 3 |
| <input type="checkbox"/> <i>Every day and/or night</i> | 4 |

5. How much urine do you lose each time?

- | | |
|------------------------------------------------|---|
| <input type="checkbox"/> <i>None</i> | 0 |
| <input type="checkbox"/> <i>Drops</i> | 1 |
| <input type="checkbox"/> <i>Small splashes</i> | 2 |
| <input type="checkbox"/> <i>More</i> | 3 |

Scoring

The RUIS total score is then calculated by adding up a person's score for each question. Adding the score for each of the five questions results in a possible score range of 0 - 16.

Interpreting Scores

The average score for patients receiving treatment for urinary incontinence is 10.92 (N = 195). The mean RUIS scores for female urinary incontinence patients was 10.90 and for males it was 11.07. By contrast the average RUIS score in a large community survey was 1.74 (N = 2,915); for females the mean was 2.47 and for males it was 0.70.

A score of less than 4 indicates that the patient has no urinary incontinence or very mild incontinence symptoms.

Patients with a score of 4 in screening surveys may require further assessment by a continence practitioner. To obtain these scores one would need to endorse 'slightly' or 'rarely' on most incontinence items.

Based on the distribution of scores in the clinical sample and comparisons with other clinical indicators, a score of 4-8 is considered mild, a score of 9-12 is considered moderate and a score of 13 or above is considered severe.

The cut points are supported by clinician and patient ratings of incontinence severity. The clinician pre-treatment ratings indicated that a RUIS score of 9 or below was considered 'mild', a score of 11 was considered 'moderate' and a score above 12 was classified as severe which provides some clinical confirmation for the suggested cut points. At post-treatment a score of 3 or less was classified as 'normal' by clinicians and patients.

Sensitivity to Detecting Improvement and Change in Patient Incontinence

The RUIS is sensitive to change as a result of treatment and is equally or more sensitive than comparable measures. In the clinical study (Sansoni et al., 2011) it was shown that there was a significant improvement ($p < 0.01$) of an average of 4 RUIS scores following treatment across all types of treatment (continence advising, physiotherapy and surgery). You can easily demonstrate that you have made a difference to patient outcomes. You can also easily identify those patients that have not improved or are deteriorating and this can be very useful for patient review and referral.

Further Information

The above is a very brief summary concerning the RUIS. Further Information can be found at www.bladderbowel.gov.au where copies of the *Validation Report* and the *Technical Manual* can be found. This instrument is copyright to the University of Wollongong with a license to the Commonwealth of Australia and the University of Melbourne. This instrument is available free of charge but permission for use should be sought from the authors by contacting Associate Professor Jan Sansoni at janet.sansoni@grapevine.com.au.

Relevant Reports

Sansoni J, Hawthorne G, Marosszeky N, Moore K, Fleming G and Owen E. (2011), *The Technical Manual for the Revised Incontinence and Patient Satisfaction Tools*. Centre for Health Service Development, University of Wollongong

Sansoni J, Hawthorne G, K Moore, Marosszeky N, Fleming G, and Owen E (2011), *Validation and Clinical Translation of the Revised Continence and Patient Satisfaction Tools: Final Report*. Centre for Health Service Development, University of Wollongong.

Sansoni J, Marosszeky N, Sansoni E and Hawthorne G (2006), *Refining Continence Measurement Tools (Final Report)*. Centre for Health Service Development, University of Wollongong and the Department of Psychiatry, University of Melbourne.

Hawthorne G, Sansoni J, Hayes L M, Marosszeky N and Sansoni E (2006), *Measuring Patient Satisfaction with Incontinence Treatment (Final Report)*. Centre for Health Service Development, University of Wollongong and the Department of Psychiatry, University of Melbourne.

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