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Developing and Refining Outcome Measurement Suites: An Example from the National Continence Management Strategy



An Australian Government Initiative

Abstract:

This paper provides a brief overview of the *Australian National Continence Management Strategy* with respect to its activities related to the assessment of incontinence, the use of measures to evaluate the outcomes of incontinence treatment interventions, and the production of Australian prevalence and burden of disease estimates.

It highlights the *Continence Outcomes Measurement Suite* (COMS) project, in particular, which has moved through a number of developmental stages. Stage 1 involved the scholarly review of commonly used self-report and clinical assessment measures for both urinary and faecal incontinence against the current definitions provided by the International Continence Society (Thomas, et al., 2006).

The recommended instruments for urinary incontinence included: the Urogenital Distress Inventory-6 (Uebersax, et al., 1995) and the Incontinence Severity Index (Sandvik, et al., 2000); as well as the Wexner Faecal Continence Grading System (Jorge & Wexner, 1993) for faecal incontinence.

Stage 2 of the project incorporated the recommended instruments in a large scale field trial, the 2004 South Australian Health Omnibus Survey (n = 3015).

The trial results and subsequent psychometric analyses identified some problems with the recommended instruments and led to their revision and adaptation.

These revised instruments were then piloted in a number of continence clinics to obtain some preliminary clinical data for stage 3 of this project.

Finally, in tandem with this work, measures of patient satisfaction with incontinence treatment were reviewed and then assessed in a clinical study with incontinence patients and a new short patient satisfaction scale was also developed.

Introduction

The National Continence Management Strategy recently funded a substantial body of research to examine ways to monitor the health outcomes of continence patients.

The purpose of the *Continence Outcomes Measurement Suite* (Thomas, et al., 2006) was to develop a set of recommended measures/tools for routine use in the assessment, diagnosis,

screening and outcomes monitoring of continence conditions, and for the evaluation of treatments that are applicable for the Australian health care context.

By developing a set of recommended measures it was hoped to standardise the assessment and evaluation procedures used in this field to enhance comparability of findings across research and practice settings.

The *Continence Outcomes Measurement Suite* examined all the instruments and indicators that were currently used to assess patients suffering from both faecal and urinary incontinence.

This report systematically reviewed clinical indicators such as bowel and bladder charts, examined measures of symptoms of incontinence and also reviewed those measures that are used to assess the health related quality of life in patients with this condition.

A related project, the *Review of Patient Satisfaction Measures* (Hawthorne, 2006a), examined available patient satisfaction measures. Although both of these projects made recommendations concerning the best measures to use it was thought that some of the recommended tools could be improved and a program of research was advised.

Materials and Methods

In 2004 it was decided to include a number of the recommended incontinence measures in the 2004 South Australian Health Omnibus Survey (Harrison Health Research, 2004).

This is a community population survey with more than 3000 participants. Inclusion of the recommended instruments (Incontinence Severity Index, Urogenital Distress Inventory-6, and the Wexner Faecal Continence Grading System) would not only provide current prevalence estimates of incontinence in the community but would also serve as a field trial of some of the recommended measures from the Continence Outcomes Measurement Suite.

This work was reported in *Measuring Incontinence in Australia* (Hawthorne, 2006b). The data derived from this study was also used by the AIHW in their report *Australian Incontinence Data Analysis and Development* (AIHW, 2006) which provides prevalence and burden of disease estimates for incontinence in the Australian population.

Measuring Incontinence in Australia indicated there were some problems with some of the items used in the recommended measures to assess incontinence. For example, the Wexner Scale includes items on leakage of solid and liquid stool but also includes an item on leakage of gas (flatus) and these items are equally weighted in this scale.

It was found that the flatus item is commonly endorsed in the community by those without any other symptoms of faecal incontinence and thus including such an item in a faecal incontinence scale will lead to overestimates of the number of patients with faecal incontinence both in the community and in clinical settings.

Similar problems were noted with some of the items included in the Urogenital Distress Inventory-6 – that is, some items may be endorsed by those who do not experience urinary incontinence.

As a result of these findings a project was undertaken to improve the measurement properties of the measures used to assess incontinence.

In the Patient Satisfaction with Incontinence Treatment study (Hawthorne, et al. 2006) a number of patient satisfaction questionnaires were assessed using a clinical sample of 178

females who were recently treated for urinary incontinence with either surgical or physiotherapy or mixed interventions.

The patient satisfaction questionnaires included: the Client Satisfaction Questionnaire (CSQ-18), the Consultation Satisfaction Questionnaire (Consult SQ), the Patient Satisfaction Index (PSI), and the Genito-Urinary Treatment Satisfaction Scale (GUTTS), and the coverage of these measures was assessed against Donabedian's model of patient satisfaction.

This model postulates that satisfaction is based on the patient's judgment on the quality of care, particularly in regard to their interpersonal relationships with clinicians.

Results and Discussion

The project *Refining Continence Measurement Tools* (Sansoni, et al., 2007) further examined the measurement properties of all the incontinence items included in the 2004 SAHOS using Classical Test Theory approaches.

A new scale for assessing urinary incontinence - the *Revised Urinary Incontinence Scale (RUIS)* - was developed by selecting the best performing items from the Incontinence Severity Index (Sandvik, et al., 2000) and the Urogenital Distress Inventory-6 (Uerbersax et al., 1995).

A new scale for assessing faecal incontinence - the *Revised Faecal Incontinence Scale (RFIS)* - was developed by selecting the best performing items from the Wexner Faecal Continence Grading System (Jorge and Wexner, 1993) and from some additional faecal incontinence items that were included in the 2004 SAHOS.

Using iterative Mokken and partial credit Item Response Theory (IRT), the questionnaires in the patient satisfaction with incontinence treatment study, were examined to produce a short, responsive and uni-dimensional scale that was consistent with Donabedian's model of patient satisfaction.

This scale is made up of 7 items and is known as the *Short Assessment of Patient Satisfaction (SAPS)*.

Conclusions

This program of research demonstrates there is more to the design of outcome measurement suites than the selection of the leading instruments.

Recommended instruments need to be tested in the Australian context, their psychometric properties should be examined, and in some cases these instruments may need to be refined.

The new incontinence instruments (RUIS, RFIS) are currently being trialled in clinical settings and the initial data presented indicates these new instruments work well in assessing incontinence status.

The new patient satisfaction scale (SAPS) shows considerable promise as a generic patient satisfaction measure for use with incontinence patients but it is also applicable for more general use.

It is now recommended that these instruments are routinely used by clinicians and practitioners for both the assessment of symptoms and the monitoring of the health outcomes of patients with incontinence.

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