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  Ho MT, Eastwood A, Kuteesa WMA, Short A & Moore KH

• Abstracts: 20th National Conference on Incontinence, Melbourne, 16–19 November 2011

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The *Australian and New Zealand Continence Journal* seeks articles and original research papers from people practising and researching the management and treatment of incontinence and continence health promotion.

Do you need topic ideas? A variety of topics are possible and include, but are not limited to: outcome studies, aged care, paediatrics, pregnancy and childbirth, novel drug therapies, reviews of devices either surgical or non-surgical, assessment articles, literature reviews of continence-related topics, home and community care issues and successes, men’s health, nursing management, physiotherapy management, support by other allied health disciplines (including occupational therapy and social workers), the psychological impact of living with incontinence, ethical issues, cultural issues and collaborative approaches to care.

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Editorial

I welcome our readers, authors and potential authors back for 2012. I was pleased to be asked to become the next editor of the journal to follow on from the excellent work of Peter Dietz and Pauline Chiarelli, who have been the editors whilst I have been on the editorial committee. The committee strives to support publication of relevant research and editorial that, in turn, supports continence in Australia and New Zealand as well as in the wider international continence community.

There are unique features of the two countries’ continence associations: the Continence Foundation of Australia, and the New Zealand Continence Association, that sponsor our own journal; but also commonalities that support the international significance of our work. Ours are both countries with diverse populations, proud of all the various heritages we bring to our nations: Pacific, European, Asian and other international cultures and languages. We also face the challenges of countries with vital and significant Indigenous populations, as well as those populations whose ancestors and immediate family arrived more recently.

There is a free flow of ideas among health communities on both sides of the Tasman which invigorates and benefits both continence communities. In common with the international community, we share the same basic human biology, "the thousand natural shocks/That flesh is heir to"; but have, in my view, a vigorous and inclusive approach to continence, its promotion and management of people with continence problems. I feel it is this vigour and the robust attitude to accepted fact that provides a backdrop on which our continence community can engage in scientific work that aims to improve the health and wellbeing of those with continence problems.

A Māori proverb says:

He aha te iti kahurangi Kit te tūho koe, me he maunga teitei.

Pursue excellence, should you stumble, let it be to a lofty mountain.

The journal welcomes scientific work and debate on continence issues and, from my experience of the editorial committee, works very hard to help novice authors, as well as those with more experience, through to publication of their important ideas.

Whāia te iti kahurangi Kit te tūho koe, me he maunga teitei.

Prof Mark Weatherall
Editor, Australian and New Zealand Continence Journal

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The Australian and New Zealand Continence Journal now offers authors the ability to submit articles via a web-based system.

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Faecal incontinence (FI) is the involuntary loss of flatus or any form of stool. FI can be defined as the recurrent involuntary excretion of faeces in inappropriate places or at inappropriate times. The problem can range from mild incontinence of flatus to loss of an entire bowel movement. The maintenance of normal faecal continence is achieved by the interplay of functional internal and external anal sphincters, which are innervated by the pudendal nerve, S2, S3 and S4, rectal compliance, anorectal sensation and the composition of the faeces. The most common causes of FI are either structural such as sphincter damage associated with childbirth or anorectal surgery, or a degenerative disorder affecting the internal sphincter or the entire pelvic floor.

However, the cause of faecal urgency is not well documented. Hull has suggested the cause may be associated with some element of irritable bowel syndrome. In the context of existing literature, a search of the PubMed Central database revealed no articles published over the last five years relating to faecal urge incontinence or its possible cause or causes.

In my practice, I have long hypothesised that faecal urge incontinence could be associated with pelvic girdle dysfunction such as that involving the sacroiliac joint (SIJ), with many patients who report faecal urge incontinence also presenting with a range of symptoms characteristic for pudendal nerve entrapment (PNE). PNE is a recognised cause of chronic pelvic pain in the regions served by the pudendal nerve, typically presenting as pain in the penis, scrotum, labia, perineum or anorectal region.

The symptoms are often associated with low back pain, with or without groin, buttocks and leg symptoms. Further, patients frequently complain that sitting will either bring on or make the symptoms worse. Ramsden et al. suggest that entrapment can occur between the sacrospinous and sacrotuberous ligaments or in the pudendal (or Alcock's) canal. The Alcock's canal is formed by a split of the fascia of the obturator internus muscle.

It is proposed that if physical stress causes the sacrum to nutate, or the ilium to posteriorly rotate, the pudendal nerve could be compromised by dysfunction of the SIJ. Tension may be placed on the nerve as it moves between the sacrospinous and the sacrotuberous ligaments. Potential mechanisms could involve soft tissue damage, resulting in stiffening of fibrotic scar tissue at the SIJ causing malalignment.

Given the relationship between the nerve and the pelvic ligaments, a change in pelvic girdle biomechanics may alter the strain and/or compression on the pudendal nerve. The suggestion is that the sacrospinous ligament may squeeze the

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Acknowledgement
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pudendal nerve against the sacrotuberous ligament, which may cause sensitisation of the nerve.

In addition to pain in the pudendal nerve innervation area, pain is often reported in the lower back and leg. This could be caused by the close relationship of the pudendal nerve to several of the lumbar nerves. In particular, the posterior femoral cutaneous nerve, inferior gluteal nerve, the tibial nerve, the common fibular nerve and the perforating cutaneous nerve, derive at least one slip from S2, S3 or S4, the same origins as the pudendal nerve. These presentations demand a complete urological investigation by medical specialists. Once tests have excluded prostate, gynaecological, urinary or rectal pathology, patients are then referred for physiotherapy.

The aim of this paper is to propose a treatment option for this proposed pathology and to evaluate its efficacy, describing a case study involving one particular patient.

Case study

A 64-year-old man, weighing 80 kg, presented in December 2009 with a four- to five-year history of bowel problems and faecal urge incontinence. Previously, his bowel movements were normal – once a day or two at the most. Slowly this developed to an urge to defecate four to five times a day. His bowels would move first thing in the morning but he only passed wind (or nothing) at all other occasions. After a year the problem was always on his mind, including at night. He felt he was in constant need to go but still passed nothing. It became all-consuming and his quality of life was suffering.

He stated that he had been reluctant to discuss his problem with his doctor. However, the straining simply got worse. The presence of haemorrhoids exacerbated the problem.

In August 2009, he had two painful bowel spasms or cramps that occurred while he was driving, which led him to finally consult his doctor. He described the pain as being so intense he could not continue driving. The only relief obtained was through analgesic medicines and bed rest for about two hours waiting for the pain to subside.

He was referred to a colorectal surgeon who, after an internal examination, diagnosed a “weakening of the pelvic floor”. He was then referred for physiotherapy treatment.

His past medical history included a chronic, low back pain for 40 years with pain referred to his left buttocks and lateral thigh to his knee, which may have been exacerbated by his work as a pilot. He had not associated these symptoms with his faecal urge incontinence. However, on further questioning, he stated that both the back pain and the bowel symptoms were definitely exacerbated by sitting (and especially driving as he had recently experienced) and both were relieved by lying down.

Assessment

On assessment for SIJ dysfunction, four provocation tests were selected as recommended by Laslett et al.\textsuperscript{10}. Two of the four provocation tests were positive, thigh thrust and sacral thrust, and Gillet's\textsuperscript{11} mobility test was positive. To gain more information, he completed a pelvic pain symptom survey (PPSS), developed at the University of Washington\textsuperscript{12}. The questionnaire revealed he had a total pain score of 15 and he reported he had suffered daily pain during the last 30 days with an average pain score 7.5:10. The total sexuality score was 10 and the total urge score was 12. The pain (distress) during urge was 4:4, which would occur five times a day.

Physiotherapy assessment indicated pelvic dysfunction leading to PNE symptoms.

Treatment

He had six treatments over four weeks, which included a manual mobilising technique (Figure 1). This technique involves the patient lying prone, close to the edge of the table, the therapist supporting the anterior aspect of the distal thigh with one hand and lifting the hip into extension, while the posterior superior iliac spine of the innominate is palpated with the heel of the other hand. To reach the limit of anterior rotation of the innominate the clinician passively extends the hip with one hand and applies an anterior rotation force to the innominate with the other hand. For this patient the pressure was held for 15 seconds and repeated three times per session\textsuperscript{11}.

![Figure 1. Manual mobilising technique.](image-url)
An exercise regimen prescribed by the author was recommended and instructions provided (Figure 2). This included:

- **Hip rolls** (exercise 1): the patient lies supine, legs hip-width apart and then lifts the buttocks to a long diagonal line between the shoulders, hips and knees. The patient then rolls or glides the pelvis to one side and then back to the middle, and repeats this for the other side, then returns to the middle and lowers buttocks to the floor. Our recommendation is 10 repetitions.

- **Lower back stretch** (exercise 2): the patient lies supine and uses two hands to draw one thigh and knee to the chin, keeping the other leg flat and extended. Hold the thigh in this position for five seconds and then release. Our recommendation is for five repetitions, each leg.

- **Full spine strengthening** (exercise 3): the patient kneels, palms on the floor, hands underneath the shoulders, knees under the hips. Flex and stretch one knee towards the chin, then extend head and leg. Our recommendation is 10 repetitions each leg.

- **SIJ stretch** (exercise 4): the patient kneels, with palms on a strong table. One leg (knee) is positioned over the edge of the table and hooked over the other leg for support. The aforementioned leg is stretched fully below the table edge and held here for five seconds, then lifted fully higher than the table edge and held here for five seconds. Our recommendation is 10 repetitions each leg.

- **Abdominal (core) exercises** (exercise 5): the patient lies supine, with knees flexed, feet flat on the floor, hands behind the head and supporting the neck. Draw the naval to the floor to flatten the abdomen and then raise the head and shoulders, (as in ‘crunches’), for a recommended six repetitions each side.

After four weeks the patient was reassessed. His follow-up PPSS questionnaire revealed his total pain score had dropped to 7, he had experienced 15 days’ pain out of a preceding 30 days, with an average pain score of 4:10. The total sexuality score was now 5 and the total urge score was 7. The pain (distress) during urge had reduced and was rated as 2:4 and occurred three times a day, two or more times a week. He was advised to continue with the prescribed exercises at home and to be constantly aware of maintaining correct low lumbar curve posture, particularly when sitting.

At the three-month review in March 2010, he reported he was virtually symptom-free. Another follow-up PPSS questionnaire revealed improvements in all areas. He had a total pain score of 1. He experienced a pain level of 1.5:10 six times the previous 30 days. His total sexuality score was 4, and the total urge score was now at 3. The pain (distress) during urge was now 1:4, which would occur once a day, once a week. At this review, he also
stated that the treatment had produced positive effects on his back symptoms, weight loss and increased general fitness (Table 1). He reported he could now exercise without pain, even doing such activities as lawnmowing and bowling. Overall, he claimed he had regained his quality of life, was maintaining the exercises on a continuing basis, and felt "fit and healthy", stating, “My life has been turned around”.

Discussion

This case indicates that specific manual mobilisation techniques and motor control exercises for the lumbar-pelvic region can produce a positive influence in a specific patient presenting with symptoms of PNE. By reviewing the treatment of patients and outcomes as a case study, we have sought to improve clinical treatment models used in practice and to look at what regimens have produced notable symptomatic improvement in all recorded domains: pain, sexual dysfunction and faecal urge incontinence. A specific home maintenance exercise programme was found to be beneficial.

Because the patient had demonstrated symptoms of SIJ dysfunction and the treatment was directed to these conditions, it is reasonable to expect that SIJ dysfunction was implicated in the cause of the patient’s symptoms.

By reviewing treatment in this case study, it is suggested that this type of conservative treatment offers a valid method of managing this presentation of faecal urge incontinence.

Conclusion

Physiotherapists and musculoskeletal practitioners are well trained to both diagnose and manage this aspect of PNE in the clinical setting. The results encourage the need for future research.

Table 1. PPSS questionnaire results.

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Initial assessment</th>
<th>Discharge</th>
<th>Three-month review</th>
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<tbody>
<tr>
<td>Total pain score</td>
<td>15</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Daily pain</td>
<td>30 days</td>
<td>15</td>
<td>6</td>
</tr>
<tr>
<td>Average pain</td>
<td>7.5:10</td>
<td>4:10</td>
<td>1.5:10</td>
</tr>
<tr>
<td>Total sexuality</td>
<td>10</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Total urge score</td>
<td>12</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Distress during urge</td>
<td>4:4</td>
<td>2:4</td>
<td>1:4</td>
</tr>
<tr>
<td></td>
<td>5x day</td>
<td>3x day</td>
<td>once a day</td>
</tr>
<tr>
<td>Weight</td>
<td>80 kg</td>
<td>78.5 kg</td>
<td>77 kg</td>
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References

Peer review

Incontinence after childbearing: long-term analysis of direct costs of conservative and surgical therapy

Abstract

The aim of this study was to measure the short-term and long-term direct costs of conservative and surgical management of childbirth-related stress and mixed urinary incontinence (UI). Women aged 25–75 years, who had presented with a main complaint of post-childbirth stress incontinence between 1992 and 1999, were surveyed. In the 150 women, costs per treatment episode during conservative and surgical management were related to cure. At follow-up, six to 13 years after the first visit, personal and treatment (“direct”) expenditure was measured using a modified Dowell Bryant Incontinence Cost Index (DBICI) questionnaire. At median 5.5 years since separation, 82 women had known addresses; 45% were lost to follow-up and 43 (32%) returned the survey. Of those who participated, 46% remained cured. The median “direct” costs for the total group was A$885.80 per capita per annum (IQR 338–2,589).

The long-term outcome of post-childbirth incontinence is variable, owing to a variety of influences, and can be associated with prolonged costs.

Keywords: childbirth, post-natal, stress incontinence, treatment costs.

Introduction

Although many women first become incontinent in pregnancy or the puerperium, they often do not seek help until the condition becomes truly bothersome later in life. As the influx of ‘baby boomers’ increases the proportion of our older population the number of women with childbirth-related incontinence who seek help is likely to substantially rise. Incontinence creates a major financial burden for both individuals and health care systems. Globally, there has been a steep rise in expenditure on incontinence, which outstrips inflation.

Previous studies have investigated the costs of untreated incontinence in a range of patient groups. The National Continence Management Strategy (NCMS) fostered several studies to investigate the financial costs of incontinence, in a project entitled “Development of a Framework for Economic and Cost Evaluation for Continence Conditions”. However, the costs of treating childbirth-related incontinence in women aged 40 to 65 were not targeted in any of those studies.

The aim of this study was to evaluate the short-term and long-term economic impact of stress and mixed urinary incontinence (UI) related to childbirth, from the perspective of the health economics unit.
care sector and the patient, and to gain an overall picture of the economic “burden of disease” for childbirth-related incontinence. The personal and treatment costs (known as the “direct costs”), borne by those patients six to 13 years after their first visit were estimated.

Methods
This study was undertaken at a tertiary urogynaecology unit in a 550-bed teaching hospital, and comprises a short-term active treatment period, then a long-term follow-up period.

Part 1: Active treatment phase
Clinical methods: From patients referred to the unit from January 1992 to December 1999, we selected women with a main complaint of stress or mixed UI, who nominated childbirth as the sole precipitating factor, with onset of symptoms up to one year after delivering an infant (by any route or method). We excluded women with a main complaint of urge incontinence, prolapse without incontinence, voiding dysfunction (that is, poor flow rate with increased residual volume) or proven recurrent urinary tract infections.

At the first visit, all patients had a full continence assessment, assessment of pelvic floor muscle strength, and review of a three-day frequency volume chart (FVC), that included leakage episodes. For women who presented with pure stress incontinence, a written pelvic floor muscle (PFM) training programme was given, with physiotherapy referral. For women who could not contract their PFM, electro-stimulation was advised. Postmenopausal women with vaginal atrophy were prescribed local application of oestrogen cream. If these treatments were not curative, patients were offered a vaginal continence ring or surgery. We offered open or laparoscopic colposuspension, abdominovaginal sling, tension-free vaginal tape (TVT) and periurethral collagen injections (as they became available between 1992 and 1999). Cystoscopy costs were included in the continence procedure.

Patients with coexistent urge incontinence (not the main complaint) were given detailed bladder training instructions with videotape. Anticholinergic therapy was prescribed and the first-line agent at that time was oxybutynin chloride.

Cystometry with ultrasound or x-ray imaging was undertaken if conservative therapies were not curative. In mixed incontinence, anticholinergic dose was increased as tolerated, and imipramine or tolterodine were prescribed. Surgery was not offered for the stress incontinence component in mixed patients, until the urge component was substantially improved on the FVC.

As per standard unit practice, at follow-up patients were asked to estimate their degree of improvement compared to the symptoms at their first visit. This estimation was done with the clinician, based upon the current FVC alongside the baseline FVC. Women were asked to regard their incontinence at the first visit as “100% severe/bad”, then to estimate the percentage difference at follow-up. These outcomes were defined as: cured (no further leak) or socially continent (>90% improvement with no further lifestyle impairment), partial response (50%–90% improvement), and treatment failure (<50% improvement)7. Separation from the unit was either due to patient discharge, referral to other specialities or persistent defaulting of appointments (“did not attend”, DNA). All details of all patient visits were obtained from the unit database, which had been entered prospectively since the inception of the unit and checked with the source data.

Economic methods for active treatment phase: Patients were described in four categories: 1) stress incontinence with conservative management; 2) stress incontinence with surgical management; 3) mixed incontinence with conservative management; and 4) mixed incontinence with surgical management. Using Access spreadsheets (Microsoft Access 2002), costs for each patient were calculated from the number of investigations, physiotherapy, clinic appointments, surgeries and other treatments. Unit prices were attached to each intervention, taken from previous studies (Table 1)8 adjusted for 2005 prices. Unit prices for medical consultations and diagnostic tests were derived from the Medical Benefits Schedule (2005). Drug costs were obtained from the Pharmaceutical Benefits Scheme (2005). Costs for surgical procedures were derived from standard national Diagnosis Related Group (DRG) cost weights for 2005 with advice from the medical coding and case mix units of the study site and the state Hospital Cost Data Collection [NSW Department of Health, 2005] (Table 1). In patients who had surgery, the additional costs of the preceding failed conservative therapy were added in. All costs are given in Australian dollars (A$1=US$0.77 in 2006) and were a summation of the total treatment costs (not a per annum cost).

To define the “cost per cure”, the costs for patients who were cured, or 90% dry with no social impairment, were totalled to...
The denominator comprised the total number of study patients.

**Part 2: Long-term follow-up phase**

**Clinical methods: Construction of postal questionnaire and data collection**

In the long-term phase of our study, we used a self-administered questionnaire distributed via post. The questionnaire was a modification of the Dowell Bryant Incontinence Cost Index (DBICI). We asked about incontinence severity and what the patients spent to manage their leakage in the last 12 months. This included treatments received, travel costs to see health professionals, laundry and disposable pad expenditure and costs of work absence. If patients recorded the item but not the cost, research staff obtained retail costs for common products. To calculate an annual personal cost, the cost per week was multiplied by 52. The draft questionnaire was revised three times and tested on 12 women at the unit who were asked (by AS) about any difficulties completing the questionnaire. A second version resulted from this feedback. Test-retest evaluation in 34 patients at the unit who had post-natal incontinence but were not study participants was performed: 11 returned the repeat test (completed in nine). The median difference between Test 1 and Test 2 was A$35 (IQR 12–75), that is less than two standard deviations of the mean in 66% of cases, a satisfactory result.

The final version of the questionnaire, a covering letter and a stamped return envelope were then posted to 150 women. Addresses were checked for currency via hospital records and the phone book. For those questionnaires returned as ‘address unknown’, the woman’s last known general practitioner (GP) was contacted and asked to assist with questionnaire distribution; however, many of the GPs were also not at the last stated address.

To check for bias in the non-responders, we telephoned 10% (n=11) randomly selected non-responders to ask the reasons for non-response and their current continence status. Demographic features of the questionnaire regarding responders and non-responders were compared.

**Statistical methods:** Data not normally distributed are reported as median values with interquartile ranges (IQR). Comparisons of demographic data between survey responders and non-responders were made with the Mann-Whitney U test.
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Chi Square test was used where variables were expressed as percentages.

Approval for the study was obtained from the University of New South Wales and South Eastern Sydney Area Health Service Human Research Ethics Committees.

**Results**

**Part 1: Active treatment phase**

From January 1992 to December 1999, there were 1,477 women treated at the unit, of whom 795 (54%) had a main complaint of stress or mixed incontinence. Of these, 153 (19%) noted childbirth as the precipitating factor and met the study criteria. Their median age was 43 years (IQR 36–53). Median duration of incontinence at their first visit was nine years (IQR 4–16). Older patients had a longer duration of symptoms (r=0.632, p<0.001). Three case notes could not be retrieved.

The 150 patients made a total of 776 visits to the unit during active treatment. Median duration of therapy was seven months (IQR 3–17 m), using a median of three treatment modalities (IQR 1–4). Women had a median of three visits (IQR 2–7). Figure 1 shows the breakdown of pure stress and mixed incontinence, and their treatments. Overall, 127 patients (85%) had conservative treatment only. The remaining 23 (15%) had conservative followed by surgical management. If incontinence was treated conservatively, a median of two visits occurred (IQR 1–4), whereas surgical treatment consumed seven visits (IQR 4.5–10).

In the conservative treatment cohort, 66 patients (52%) failed to attend (DNA), compared to two (9%) of the surgical group. Referral to other specialists (for example, colorectal surgeon) occurred in 19 (13%) women.

Thirty-two patients who had conservative treatment reported they were cured, compared to 18 patients (78%) in the surgical group. There were 68 DNA patients (45%). When the cure rate was recalculated to include the DNA group (which was coded as failed treatment), conservative therapy achieved cure in 39% (32/82 women). Note that 12 of these 82 women (9%) were still incontinent after conservative treatment but declined surgery.

Table 2 shows median treatment costs by diagnostic group, along with treatment duration and “cost per patient cured”. In general, surgical treatments cost about tenfold greater than conservative treatments (for example, A$6,870 versus A$658 for stress incontinence). The cost per patient cured for surgery was two- to fourfold greater than conservative therapy.

Overall, in the conservative management group, physiotherapy constituted 65% of the costs and medicines comprised only 2–3% of total costs. Surgical patients incurred 85% of their costs from the procedure: surgical complications yielded less than 0.5% of costs.

Figure 1. Diagnostic categories and treatment methods for acute phase patients.
Part 2: Long-term follow-up phase

**Longitudinal survey results:** Of the 150 patients who were posted a questionnaire, 68 (45%) were no longer at their original address. Of the remaining 82 participants, 43 (52%) questionnaires were completed and returned. To check for bias among these participants, 11/107 non-responders were followed up by telephone (10%). Ten had been treated conservatively. Five were cured or socially continent, two did not attend any follow-up appointments. None of these proportions is significantly different (p=0.05, Chi-squared) from the overall sample. Regarding non-response in these 11 women, three said they didn't receive the questionnaire, two did not reply to three phone calls, four found the survey too long or difficult, one had language difficulties and one didn't believe it applied to her. The demographic features of responders and non-responders were not significantly different in relation to age, parity or diagnosis. The responders had attended more visits at the unit (median 5, IQR 1.5–8) than the non-responders (median 1, IQR 1–4), but percentage cure rates were equal in both groups.

Most questionnaire participants (30, 69.8%) had pure stress UI. Of the 10 (23.3%) women who were treated surgically, seven had pure stress UI. Of the 33 conservatively treated patients, 23 (69.7%) had pure stress UI (data not shown). The median time since last attending the unit was 67 months, or 5.5 years (IQR 41.5–87 months). Thus, our earliest patients (for example, those first seen in 1992) were not well represented. The time since last visit did not differ between the stress and mixed group.

In women with stress UI, the median time since the last visit (“separation”) for those who underwent surgery was 49 months, compared to 74 months for conservatively treated patients (p=0.01). In patients with mixed UI, the mean times were 28 versus 71 months (p=0.008). Thus, surgically treated women separated more recently than the conservatively treated group. This may arise because the duration of surgical treatment follow-up was significantly longer.

**Economic outcomes for longitudinal survey participants**

Of the 43 questionnaire participants, 20 (46%) were cured, five (12%) remained improved, nine (21%) were unchanged, five (12%) were worse and four (9%) had undergone surgery since separation from the unit, but not in the past year. Of the 20 women who were cured, 15 had no expenses for incontinence,
but five still used some treatment (for example, topical oestrogen or anticholinergic medicines).

In the year prior to the questionnaire date, four (9%) respondents still took medication, 19 (44%) still used incontinence pads, 14 (33%) patients had sought treatment elsewhere. The direct costs since separation in relation to leakage severity are shown in Figure 2.

**Discussion**

To our knowledge, this study represents the first detailed account of the outcomes and costs for childbirth-related stress or mixed UI. During active therapy in the unit, patients with stress UI treated conservatively incurred a median cost of A$658 per capita compared to a median cost of A$6,870 per capita for surgical treatment. A similar cost difference was seen in those with mixed incontinence (Table 2).

Overall, at six to 13 years after the first visit, the median personal and treatment cost incurred was A$885.80 per annum (IQR 338–2589) per capita. The median costs were directly related to the severity of incontinence (Figure 2). Pads and laundry accounted for the majority of consumables (75%) in the 12 months of the long-term follow-up study. Medicines constituted 12% of personal and treatment costs, in keeping with the 9% of survey participants (20%) who had mixed UI.

Most prior publications deal with a single research-based episode of care, such as one surgical procedure followed for six to 18 months, or one course of physiotherapy followed over 12 months. In contrast, the present study provides a “slice of life”, as it features a consecutive group of women who developed incontinence after childbirth, follows them through a range of treatment options until separation from the unit, then reassesses their costs at six to 13 years after initial consultation.

**Figure 2. Questionnaire responders’ direct costs since separation.**

<table>
<thead>
<tr>
<th>Participants</th>
<th>n=43 (28.7%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Still cured</td>
<td>n=20 (46%)</td>
</tr>
<tr>
<td>Improved</td>
<td>n=5 (12%)</td>
</tr>
<tr>
<td>No change</td>
<td>n=9 (21%)</td>
</tr>
<tr>
<td>Worse</td>
<td>n=5 (12%)</td>
</tr>
<tr>
<td>Surgery after separation</td>
<td>n=4 (9%)</td>
</tr>
<tr>
<td>Time since sep.</td>
<td>Median 5 yrs (IQR=3-6)</td>
</tr>
<tr>
<td>Time since sep.</td>
<td>Median 8 yrs (IQR=7-8)</td>
</tr>
<tr>
<td>Time since sep.</td>
<td>Median 5 yrs (IQR=4-7)</td>
</tr>
<tr>
<td>Time since sep.</td>
<td>Median 5 yrs (IQR=2-8)</td>
</tr>
<tr>
<td>Time since sep.</td>
<td>Median 8 yrs (IQR=7-8)</td>
</tr>
<tr>
<td>$0.00</td>
<td>(IQR=$0-$101)</td>
</tr>
<tr>
<td>$132</td>
<td>(IQR=$41-$224)</td>
</tr>
<tr>
<td>$246</td>
<td>(IQR=$122-$770)</td>
</tr>
<tr>
<td>$972</td>
<td>(IQR=$517-$1,001)</td>
</tr>
<tr>
<td>$3,431</td>
<td>(IQR=$3,191-$5,211)</td>
</tr>
</tbody>
</table>
Our DNA rate was particularly surprising, at 45% of the total sample. One reason may be that our unit had a long-established track record of providing conservative treatment as first-line therapy. Patients may have felt that they could opt out of the treatment programme when it required more effort than they wanted to commit. In women who were caring for a family, the threshold for opting out may have been lower than in other patient groups. Also our unit provides care in the public hospital setting, so that motivation to comply may be affected by the “free of charge” service. We could find little information in the literature about comparative DNA rates.

The relatively small percentage of patients who took up the offer of continence surgery must be viewed in light of the time frame of this study and other comparative studies. Most patients in this cohort were seen prior to the introduction of the TVT in Australia (which occurred in 1999). For women who are caring for young children, the colposuspension with its transverse abdominal incision may not be appealing. Collagen or Macroplastique™ injections were offered only to patients with a fixed urethra, owing to budgetary constraints. If this study were to be repeated today, the time taken to progress to surgery may have declined since the advent of the TVT.

One methodological issue arose during this study. The average DRG costs assigned to surgical procedures under the DRG classification of “surgery for female stress incontinence” could be criticised. While the operating time and recovery period for a TVT is different to that of an abdominovaginal sling, the same average cost is assigned to these two operations under the DRG framework, which takes into account use of operating theatre, materials and average length of in-patient stay for all continence procedures.

This study was not a prospective interventional trial. Thus the “slice of life” captured here from the prospectively compiled database represents ordinary clinical activity; there was no special encouragement to attend all appointments (such as often happens in a research trial). Thus the cure or 90% benefit rate for the conservative groups of 25% (which was quite carefully defined) may seem disappointing, but represents “real life” in this patient sample. If the DNA patients are excluded, the cure rate for conservative therapy becomes 39%, which is in keeping...
with the cure rate of several other studies about conservative therapy.

Surgery is clearly more expensive than conservative therapy\(^{14,15}\). In our study, the surgical patients had a greater median number of visits than those treated conservatively. This was partly because the surgical patients had already had conservative therapy, but also, the time spent on the surgical waiting list was included. The finding that the median duration of treatment for surgical patients was 902 days (compared to 156 days for conservative treatment) suggests that patients may decline surgical therapy, until, literally, all else had failed (Table 2).

The participation rate for the long-term questionnaire was low because 68 of the 150 women were no longer at their original address (in keeping with the mobility patterns of all Australians)\(^{16}\); however, a 52% reply rate is considered reasonable for a six-page questionnaire. Our demographic data and other data were not significantly different between responders and non-responders, except that responders were more likely to have undergone surgery at the unit and been under its care for longer; they may have felt more inclined to return the questionnaire.

The original DBICI questionnaire\(^9\) was designed to be administered by trained nurse continence advisors. Despite modification and re-testing, our postal version did encounter difficulty. The page length of the survey may have been a factor in the low response rate. Certainly patients who agreed to perform the test-retest analysis found it tedious. Nevertheless, the data for those who did respond and return the completed test appeared quite complete.

After separation from the unit, patients reported a median cost of A$885 per capita per annum, with 75% of expenses due to laundry costs and continence pads. As seen in Figure 2, the costs were clearly related to continence status (ranging from nil for patients cured, to A$972 for those who were worse). Another Australian study reported similar median total direct costs in a cohort of 100 older women\(^8\) and this is in keeping with data from the USA\(^{17}\), in which a similar trend towards increasing cost with increasing severity of leakage was seen\(^{17}\).

Regarding the long-term costs and cure rates for surgical versus conservative therapies, there is little published data. Ramsey and colleagues deduced that four years of routine care costs (such as pads) were equal to the cost of one surgical treatment\(^{18}\). Our study casts a question upon the extent to which women with post-natal incontinence are prepared to comply with usual management advice. As mentioned, the Ramsey model\(^{18}\), which was based on United States Department of Health and Human Services Agency for Healthcare Research and Quality (AHICPR) Clinical Practice Guidelines, was calculated on the basis that patients would undergo surgery once conservative therapy had failed. Our results suggest that this may not be the case and the cost of conservative therapy may be inflated by a patient’s tendency to pursue it well beyond the usual six months.

So how do we reconcile our knowledge that surgery has double the cure rate of conservative therapy, with the desire of these post-childbirth women to avoid surgery, even when they have not been cured by conservative means? A large prospective study to create a risk scoring system, for the likelihood of conservative failure, would be useful. The issue of patient motivation to comply with some or all therapies should be investigated further.

**Acknowledgement**

This study was funded by the University of New South Wales, Faculty of Medicine Research Grants.
References


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March 2 - Abstract submission opens
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Bladder sensations: Can I go or can I stay?
Gillespie J
Newcastle University, Newcastle on Tyne, UK

Going to the toilet is an everyday occurrence. However, for some it can be problematic going many more times than normal and experiencing sudden strong sensations of need that, if they go unchecked, may lead to incontinence. We now have some new insights into the nature of this problem. We now know that it is almost certainly not associated with defects in the detrusor muscle. Rather, the problem appears to be associated with the generation of sensations in the bladder and how these are handled by the central nervous system. Information from the bladder appears to be carried to the brain by multiple systems operating in the bladder wall: pain fibres, stretch receptors, urothelial mechanisms and the local micro-contractions operating as a sensory motor system. The mechanisms generating this afferent noise are becoming better understood and components, such as the motor sensory system appear to be the target for the therapeutic anti-cholinergic and the adrenergic drugs.

The major problem we now face is to determine how these physiological systems contribute to the clinical problems of frequency, urge and incontinence. Here, there are difficulties. The nature of ‘afferent noise’, a gradual build-up of information as the bladder fills, does not easily map to the current definitions of episodic bladder sensations, first awareness, first desire and strong desire. In this lecture it will be argued that the descriptions and definition of perceived sensations are in error and too simplistic. The events leading up to a void are complex and can be considered to involve an awareness of the bladder and an integration of this into cognitive processing of our surroundings. If this is so, then going to the toilet is driven more by cognition rather than sensations of a desire to void. Sensations at the time of void may even be different, being intensified by the cognitive processes after the decision to void is made. This lecture will introduce the concept of ‘cognitive voiding’ and discuss the implications of the approach for diagnosis and therapy. Also, the lecture will discuss the consequences that result from embracing the concept of ‘cognitive voiding’ for evaluating previous research; for example, with voiding diaries and cystometry and the design of further studies and clinical trials.

Changing practice on the basis of evidence
Bo K
Norwegian School of Sport Sciences, Oslo, Norway

Sackett defined evidence-based medicine (practice) as the, ‘conscientious, explicit and judicious use of current best evidence in making decisions about care of individual patients’. The ‘gold standard’ design for research questions about effectiveness of treatment of preventive interventions is the randomised control trial (RCT). This is due to the strength of this design to control for threats to internal validity such as: history, maturation, testing, instrumentation, statistical regression towards the mean, selection biases, experimental mortality, selection maturation interaction and expectancy. The problem today seems to be the understanding of the term evidence and the use of any evidence as a reason to change practice.

As a rule, clinical experience and results from small experimental studies or associations found in epidemiological studies should not change practice directly, as cause and effect cannot be ruled out. For example, epidemiological studies may find association between low back pain, or respiratory disease, and urinary incontinence. However, all these conditions are prevalent and coexistence does not mean that one is causing the other, or that abdominal or respiratory exercise can be used in the treatment of incontinence. Since the 1980s, there has been an increasing body of RCTs in all areas of physiotherapy with more than 15,000 registered trials in the PEDro database in 2011. However, one could question whether this body of evidence has reached clinical practice, or whether ideas, theories and anecdotal knowledge are still the major sources for changes in physiotherapy practice. In 1981, McKinlay described the seven stages of the career of a medical innovation and Wall adopted the model to explain the development of new surgeries for stress urinary incontinence.

1. A surgeon develops a new procedure and writes a clinical report based on a few cases.
2. Professional and organisation adoption of the intervention.
3. The public accepts the innovation, third party pays for it.
4. The procedure becomes a standard procedure and gets into the textbooks.
5. Somebody conducts an RCT. The procedure is not effective as “experienced”.

Volume 18 Number 1 – Autumn 2012
6. Professional denunciation.
7. Erosion of professional support, discredit.

Today there is Level 1, Grade A evidence for strength training of the pelvic floor muscles to be effective in the treatment of stress urinary incontinence. In addition to the numerous RCTs in the area, there is a body of knowledge from experimental studies, case control and cohort studies supporting results and explaining how it may work. Nevertheless many physiotherapists seem to treat patients with “transversus abdominis training” respiration exercise and attempts to change body posture. One could argue that the seven stages, listed above, apply directly to today’s physiotherapy practice in some and that this may be considered as a direct threat to the credibility of our profession. There is a need for a better understanding of the hierarchy of evidence and how different research designs can and cannot be used to change clinical practice.

A prospective “bottom up” study of the direct personal and investigation costs of faecal incontinence in ambulatory men and women in relation to severity

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St George Hospital and University of New South Wales
Sydney, NSW

Introduction: In the past decade, studies regarding the cost of faecal incontinence have mainly employed previously collected databases1,2, or focused upon inpatients3, subjects with constipation as the main complaint1, or women with faecal incontinence after obstetric injury4. Few conducted face-to-face direct enquiry of the personal costs of leakage of faeces1. Most did not employ a validated measure of severity4-4. Thus, we aimed to conduct personal interviews with a broad sample of ambulatory, home-dwelling patients who presented with faecal incontinence to a tertiary unit, and to collect cost data prior to the onset of treatment in relation to baseline severity

Materials and methods: Patients attending a tertiary outpatient clinic with a main complaint of faecal incontinence were interviewed, using a three-page questionnaire, modelled on the DBICI questionnaire for urinary incontinence5. Interviews were conducted face-to-face, taking approximately 15 minutes each. The information collected included basic personal hygiene costs (pads, laundry, wipes, cleansers), medication costs (loperamide, creams and stool bulking agents and so on) and diagnostic costs (including medical attendance, anorectal physiology, colonoscopy). Following each interview, the personal hygiene items used by patients were costed from known tables compiled by visiting local pharmacies and suppliers. These costs were further broken down into personal “out of pocket” expenses, Medicare-subsidised costs, and health fund rebated expenses over the preceding 12 months. Costs were recorded in Australian dollars. Also at this visit, the patients completed a St Mark’s score6 to gauge severity of faecal incontinence (maximum score 24).

Results: A sample of 54 consecutive patients (five men, 49 women, aged 35–91 years with a median 69.42, IQR 61.48–73.98) completed the Faecal Cost Questionnaire and the St Mark’s score. Figure 1 shows the breakdown of all personal and investigation costs in relation to whether Medicare subsidy (black), private health (grey) or “out of pocket” (silver) costs were sustained.

In terms of patient “out of pocket”, costs the major expense overall was for pads and personal hygiene items (median 70.89 per annum, IQR 0.63–310.68). The bulk of Medicare costs included medical consultation and rebates for physiology testing and endoscopy (median $576.92 IQR). Figure 1 showed no relationship between these overall costs and incontinence severity.

Therefore, we analysed the subset of personal costs alone, since we hypothesised that these costs should directly relate to severity.

The Spearman rank correlation showed no significant relation between total personal costs and severity (r=0.21). When we drilled down into the costs just for pads and creams alone, a relationship became apparent (r=0.34, p=0.5).

![Figure 1. Histogram of incontinence expense by severity group.](image1)

![Figure 2. Total personal costs vs incontinence severity St Mark's score.](image2)
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Interpretation of results

In this face-to-face study of personal and medical costs of patients presenting for the first visit with faecal incontinence, the total costs of all personal items and investigations (regardless of the payer) did not directly relate to severity. This arises because the costs of investigation are largely fixed.

However, the total Personal Costs of hygiene items increased with severity of incontinence, as would be expected

Concluding message

To our knowledge, this is the first report of detailed costs for faecal incontinence in ambulatory, home-dwelling men and women, obtained by personal interview. The relationship between severity and expense is indeed multifactorial.

Acknowledgements

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References


Neuromodulation: How does it work? What goes up must come down

Gillespie J
Newcastle University, Newcastle on Tyne, UK

In patients with an overactive bladder (OAB) who do not respond to conservative approaches, behavioural therapy or anticholinergic pharmacology, the final recourse is often stimulation of the sacral nerves (S3) via implanted devices. For those patients in this category, the effects of nerve stimulation are profound with a high satisfaction rate in alleviating the symptoms of OAB. Alternatives to the implantation of a stimulator; for example, peripheral nerve stimulation, are also demonstrated to be beneficial. Despite the effectiveness of direct nerve stimulation, why this approach works is still poorly understood. For neuromodulation, current thinking suggests that stimulation of the sensory nerves in S3 directs volleys of impulses into the spinal cord. There, the activity stimulates the nerve cell bodies of ascending fibres as well as local circuits. Such activity leads to the gene-regulated changes in the circuitry and its responsiveness, resulting in altered transmission of sensory information to higher centres. In this way the perception of the bladder might be modulated. However, recently applied imaging techniques are suggesting that peripheral nerve stimulation can affect regions in the brain stem, mid brain and the sub cortex. This suggests that additional changes and systems might be involved in the therapeutic mechanisms. Indeed, recent work suggesting that higher centres and cognitive processes play a critical role in the time and place of voiding suggests that peripheral nerve stimulation may also be working on these cognitive processes.

All of the ideas relating to the mechanisms affected by neuromodulation have centred on the idea that stimulation works by orthodromic actions nerve impulses travelling up into the spinal cord and beyond. However, the nature of the stimulus given in the middle of an effect axon bundle also results in antidromic volleys; impulses travelling in the wrong direction down in the bladder. Many of the bladder afferents are known to release neurotransmitters (calcitonin-gene-related-peptide, substance P, acetylcholine inter alia) upon stimulation.

The effects of these afferent neuro-transmitters released in the periphery on bladder function and ultimately sensation must now be considered. Indeed, antidromic stimulation releases calcitonin-gene-related-peptide (CGRP) that may reduce bladder sensation by altering local reflexes in the bladder wall that are involved in generating afferent noise and sensation. These organ-based antidromic mechanisms have not been considered previously but they deserve further consideration. They may represent a further possible mechanism for the mode of action of neuromodulation. All of these possible mechanisms will be illustrated and discussed.

The female pelvic floor – a difficult compromise

Clara Shck
University of Sydney, NSW

The female pelvic floor serves a number of very different priorities: support of abdominal organs; evacuation of liquid and solid wastes; and reproduction. Reproduction in particular is a problem. The puborectalis/pubovisceralis muscle has to stretch up to threefold during vaginal delivery. Trauma to the levator ani may occur as a result. It may take the form of "macroscopic" injury or levator avulsion and "microscopic" injury, or irreversible over-distension of the levator hiatus. Levator injury is likely to be important in the pathogenesis of pelvic floor dysfunction especially female pelvic organ prolapse. Research effort to identify preventative intervention and corrective measures should be a high priority considering that our population is rapidly ageing, which will inevitably result in a rising incidence of pelvic floor dysfunction.
Evidence and evidence gaps in the investigation and management of adult faecal incontinence

Faecal incontinence (FI) has been a relatively neglected topic, even among continence professionals. Many opportunities for active case-finding, such as during consultations for bladder symptoms, are missed and patients are reluctant or too embarrassed to discuss bowel function. This is a great pity as the majority can be helped.

A baseline assessment will include the obvious elements of history and examination, with consideration of “red flag” symptoms such as bleeding or weight loss which might indicate serious bowel pathology. The contribution of invasive tests to the assessment of FI has yet to be firmly established. Anal ultrasound imaging of the sphincter complex is probably the most useful test, with the role of anorectal physiology tests as supportive rather than diagnostic as there is no evidence that the results change management. Some tests such as measurement of pudendal nerve latencies are not recommended, although use is still common.

A step-wise approach to treatment is recommended, trying the simplest things first in most cases and, only if these fail, progressing to more invasive investigations and treatments such as biofeedback, electrical stimulation or surgery. Diet can be manipulated to change stool consistency and loperamide has a grade A recommendation from the International Consultation on Incontinence. The evidence base for exercises and biofeedback has been poor until recently, but recent well-conducted studies are likely to change these conclusions. Irrigation has attracted renewed interest, with purpose-designed equipment and some evidence for efficacy.

Surgery is an area of rapid development. While simple sphincter repair often does not last, our understanding of sphincter anatomy may lead to more sophisticated repairs. Sacral nerve stimulation is becoming more widely used. Sphincter bulking procedures have not lived up to early promise, but new materials may lead to better results.

There are major evidence gaps in all aspects of investigating and treating FI. We are only just beginning to give this life-limiting condition the serious attention that it deserves.

References

Australian news

National Conference on Incontinence

The Scientific Committee, chaired by Dr Michael Whishaw, did an outstanding job bringing the conference together and the success was confirmed by the delegate attendance across the program including the workshops. More than 700 people attended the 20th National Conference on Incontinence, making it the most successful event in its 22-year history.

Highlights from the four-day conference included presentations by Professor Christine Norton, who gave the Robert Taylor Memorial Address. Professor Norton is a leading UK continence nurse, who spoke on evidence and evidence gaps around the investigation and management of faecal incontinence, and the way forward in treating people with faecal incontinence as a result of bowel procedures or radiation therapy for lower-abdominal cancers.

Norway's Professor Kari Bø presented research to show the importance of pelvic floor muscle training in preventing and treating incontinence. Other international speakers included Professor James Gillespie, who introduced us to the concept of Cognitive Voiding, Professor Alan Cottenden who spoke about evidence based guidelines for the selection and use of continence management products. The variety of presentations included Dr Yves Héloury who presented on posterior urethral valves and Beth Wilson, who is Victoria’s Health Services Commissioner, who managed to have the audience singing along with her by the end of her talk.

Psychiatrist and geriatrician Ian Presnell also presented an interesting discussion about the relationship between incontinence and mental illness, posing the notion that one can be an indicator of the other.

The association between incontinence and mental health was the topic presented by psychologist Heather Siddons, who counsels prostate cancer patients in the Department of Urology at the Royal Melbourne Hospital. Ms Siddons spoke about the depression and drop in self-esteem that often occurs in men suffering incontinence and erectile dysfunction after the operation to remove the cancer.

Carer of the year

Another highlight of the national conference was the presentation of the 2011 Carer of the Year award, presented to Mulgrave father-of-three Tony Saffigna. Many of those attending the presentation dinner were moved to tears after hearing of Mr Saffigna’s struggles as the sole carer of his twin daughters, who have multiple disabilities.

The now 13 year-old twins were born 14 weeks premature, after an ultrasound diagnosed twin-to-twin syndrome, where blood passes from a single placenta disproportionately from one identical twin to the other. As a result, both were born with mental and physical disabilities. Tegan, who weighed just 601g at birth, suffered a brain injury in utero and is legally blind. Glenys had a cerebral bleed, lost a kidney and then both feet. Mobility, eating, communicating and continence are daily issues and the girls will need full-time care for the rest of their lives.

Mr Saffigna was nominated for the award by Queensland nurse Leonie Mulheran, who met the family on a flight six years ago and has maintained a long-distance friendship through phone calls and occasional visits. Mr Saffigna and his son were able to attend the Conference dinner to accept the award.

Every Body’s Business

The final Every Body’s Business for 2011 was held in Perth on Friday October 14. The event was attended by 77 fitness professionals and provided a fantastic opportunity for fitness professionals to learn more about the pelvic floor and its interaction with exercise.

The enthusiasm shown by the attendees demonstrated how much we have achieved in terms of raising awareness of this important topic among the fitness industry and the need for education in this area.

We would like to make special mention to Emma Boucher and Judith Thompson for their outstanding presentations that were engaging, interactive and practical. We would also like to extend a special thanks to CFA WA Branch and the Continence Advisory Service of WA for all of their hard work and assistance in coordinating this event.
In 2012 Every Body's Business is headed to Darwin, Melbourne, Hobart and Toowoomba. For information on these events please email education@continence.org.au

**Healthy Bladder and Bowel Habits in Schools Project**

This year the CFA is giving special priority to the Healthy Bladder and Bowel Habits in Schools project, which aims to raise awareness of healthy bladder and bowel habits within school communities.

A key initiative of the project has been the development of the Toilet Tactics Kit (based on the UK Bog Standard with permission from ERIC). The aim of the kit is to raise awareness of healthy bladder and bowel habits in schools and to improve or maintain the standard of school toilets across Australia.

The draft Toilet Tactics Kit is being piloted in Victoria and South Australia in Term 1, 2012 and is available to view on the CFA website at www.continence.org.au under Hot Topics. The Kit will be officially launched during World Continence Week in June 2012, and subsequently made available to all Australian primary schools. If you would like to receive project updates please email media@continence.org.au.

**Paediatric Continence Education**

On 14 October 2011, the CFA held a successful “Daytime Bladder Dysfunction in Children” workshop in Melbourne. This event was a one day event attended by a range of health professionals including continence nurse advisors, continence and women’s health physiotherapists, occupational therapists, doctors, practice nurses, registered nurses, school nurses and psychologists. The program covered a wide variety of topics including anatomy and physiology, dysfunctional voiding in children, current drug therapy and psychological issues in childhood incontinence.

This event was one of a series of workshops that will be rotated across Australia covering the topics of bowel dysfunction, bladder dysfunction and nocturnal enuresis.

The next event is being held on Friday 30 March in Adelaide covering Nocturnal Enuresis. To find out more about these events, email education@continence.org.au.

**World Continence Week**

The national office is in full planning phase for World Continence Week, 24-30 June 2012. CFA will liaise closely with all key stakeholders over the next few months in preparation for the events that will take place during that week.

The theme this year for World Continence Week 2012 is ‘Healthy bladder & bowel habits’. This theme is a key element of the integrated promotional effort for the current CFA special project, Healthy Bladder and Bowel Habits in Schools. The CFA will also be launching the Australian Continence Exchange (ACE) website during World Continence Week.

**Australian Continence Exchange (ACE) update**

The Australian Continence Exchange (ACE) website contains a comprehensive list of resources, news and events from a variety of organisations. Specifically designed to assist continence health professionals in providing the best possible support to their clients and practice, it also provides the opportunity for the sharing of ideas while strengthening professional networks.

The trial site was successfully launched at the 20th National Conference on Incontinence, receiving support and positive feedback from all those who visited the ACE booth. The need for ACE was strongly confirmed by the enthusiasm the ACE team received from delegates.

The testing phase has now commenced, with a combination of remote useability software and focus groups. The feedback gained from these activities will help finalise the look, feel and functionality of ACE before the website goes live at the launch during World Continence Week in June 2012.

To find out more about remote useability testing or to learn more about ACE, go to: www.continenceexchange.org.au.

**Continence Support Forum**

The Continence Foundation of Australia launched a new online forum in late 2011. The Continence Support Forum provides a friendly, respectful and safe place for people to talk about their health and connect with others who have similar experiences. Family and friends who provide care and support to people with incontinence are also invited to connect online and receive the support and information they need.

People can now anonymously talk openly about the issues of bladder and bowel control. To understand that they are not alone and that support is available. Health professionals are encouraged to promote the Continence Support Forum to their clients – it will provide them with the added support and opportunity to connect with others and share their stories.


*Barry Cabill, CEO CFA*
New Zealand news

Welcome to 2012. It has been a variable start, with wet and windy weather in the North, flooding for some and perfect in the south we hear. We do envy you southern people! However, we hope you all had a break and are ready for a full year.

We look forward to the NZCA 2012 Conference in Wellington, 1–3 November. You will have received a survey of your preferences for the conference for this year. We will analyse these and incorporate as many of your ideas as possible. We do hope that you will encourage as many people as you know to attend so that it will be a valuable event. Please consider if you would like to present at the conference, especially if you are trialling programmes in your area that you think would interest others. We will ask for free papers, but feel free to contact us in advance if you would like to discuss ideas.

The theme for Continence Awareness Week, to be held on 24–30 June this year, is Healthy Bladder and Bowel Habits in Schools. We published the Wee Secret last year, an illustrated cartoon book on bedwetting. We will have a second book on soiling available prior to Continence Awareness Week and will publicly launch them both as part of the child continence focus for the week. We would like to see them in every primary school in New Zealand.

Jan Zander, CEO NZCA

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NZCA Conference 2012

1-3 November 2012
Wellington NZ
venue James Cook Hotel, Grand Chancellor
information www.continence.org.nz
Experts from the disciplines involved in continence treatment, management and promotion and those who are expert in research methods and statistical analysis are invited to nominate to join the Australian and New Zealand Continence Journal Peer Review Panel.

The journal is proud to promote Australian and New Zealand scholarship.

For details regarding the Peer Review Panel, please email Jacinta Miller jacmil@bigpond.com
THE NATIONAL CONTINENCE HELPLINE

A team of continence consultants providing free and confidential advice about bladder and bowel control problems, plus local referrals, free brochures and product information.

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Monday to Friday
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The Helpline is funded under the Australian Government’s National Continence Management Strategy and managed by the Continence Foundation of Australia

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The Editors and the Editorial Board of the *Australian and New Zealand Continence Journal* have specified guidelines for prospective authors to follow when compiling an article they wish to submit to the journal.

**Terms of submission**

The editors accept submissions in the form of research findings, clinical papers, case studies, reports, review articles, letters and product appraisals. Each submission is evaluated on its timeliness, relevance, accuracy, clarity and applicability to the journal. Submissions will be accepted from any country but must be written in English. Accompanying each submission must be a competing interest statement (see form on CFA website and Cambridge Media website). Once a paper is accepted for publication, all authors must sign the author statement and copyright assignment form which will be provided by the production editor. Once it is published, the article and its illustrations become the property of the journal, unless rights are reserved before publication.

All work is sub-edited to journal style. The editors reserve the right to modify the style and length of any article submitted, so that it conforms to journal format. Major changes to an article will be referred to the author for approval prior to publication. The *Australian and New Zealand Continence Journal* provides assistance to first time authors and may be contacted by email.

**Authorship**

All listed authors should have made a substantial contribution to the manuscript and may be required to indicate their contribution. Participation solely in the acquisition of funding, the collection of data or supervision of such does not justify authorship and such contributions should be listed in acknowledgements which will be printed under the author details. All participating authors must be acknowledged as such; proof of authorship may be requested. The first-named author is responsible for ensuring that any other authors have seen and approved the manuscript and are fully conversant with its contents. It is the responsibility of the author to obtain written permission from a copyright holder to reproduce copyrighted work; a copy of that permission must be provided to the journal prior to publication and a full citation of the source must be provided.

**Conflict of interest:** It is the responsibility of the submitting author to disclose to the Editor any significant financial or other interests they may have pertaining to their manuscript. Conflicts of interest should be disclosed using the ANZCJ author competing interests form. If an interest exists, publication of that interest is at the Editor’s discretion.

**Ethics**

Investigations in human and animal subjects must conform to accepted ethical standards. Authors must provide a statement within the text that the research protocol was approved by a suitably constituted ethics committee of the institution within which the work was carried out and that it conforms to the Statement on Human Experimentation or the Statement on Animal Experimentation by the NH&MRC.

**Manuscript type**

*The Australian and New Zealand Continence Journal* welcomes original research articles for peer review and general articles regarding the achievements of people working in the disciplines pertaining to the management of incontinence, clinical issue updates, book reviews and general project information.

**Discussion:** Presentation of information from more than one viewpoint (for example, for and against) and usually ending with a recommendation or opinion based on the evidence presented.

**Literature review:** Narrative – describes and evaluates the current knowledge of a subject, identifies gaps or inconsistencies and includes critical evaluation with recommendations for future research. Systematic – describes planned analysis and evaluation of all available research studies on a particular clinical issue, conducted in accordance with scientific principles and may include recommendations for future research.

**Research report:** Presentation of study results in an ordered fashion, based on common practice. Research reports are expected to follow the Uniform requirements for manuscripts submitted to biomedical journals, as published by the International Council of Science Journal Editors www.icmje.org.

**Case study:** Combination of recount (retelling of events as they occurred) and information report (classification and description of something). Can be presented in different ways to give a cohesive account.

**Exposition (including letter to the Editor):** Putting forward of a particular viewpoint, justification of a particular argument.

**Narrative:** An informative account of a meeting or conference, or a review of a book, journal article or relevant website.

**Preparation of manuscripts**

Manuscripts are to be no more than 4000 words and include an abstract of no more than 250 words. Manuscripts should be created in a Word document using minimal formatting and typed double spaced in 12 point Times Roman font. Include total word count and up to five keywords. Include title of work on the abstract page and first page of introduction. In the introduction, include key points on what is already known on the topic and what your manuscript contributes. Define abbreviations and acronyms on first mention in the text.
Tables are to be presented on separate pages, one per page. Tables should be clearly typed, showing columns and lines. Number tables consecutively using Arabic numerals in the order of their first citation in the text and supply a brief title for each. Place explanatory matter in a legend under the table, not in the heading. Explain in the legend all non-standard abbreviations used in each table.

Photographs and figures may be included in the submission and should be supplied in a graphic format such as jpeg at a resolution of 300 dpi. Illustrations and figures must be clear, well-drawn and large enough to be legible when reproduced. The title and legend for figures should be on a separate page after the references. Each figure must include its place, its number and the orientation of figure. Patients or other individual subjects should not be identifiable from photos unless they have given written consent for their identity to be disclosed; this must be supplied.

Referencing guidelines
The referencing format is based on the Vancouver style, the main feature of which is the use of numbers at the point of reference so as not to interfere with the flow of words. Each number corresponds to a single reference provided in the reference list at the end and, once assigned a number, a reference retains that number throughout the text, even if cited more than once. If more than one work is quoted in a reference, each work must be assigned a number. At any point in the text, the reference may be one or several numbers. Following are some examples of references from different sources:

**Journal:** A complete journal reference includes: name(s) of author(s), title of article, journal name, year of publication, volume and edition number and inclusive page numbers.


**Book:** A complete reference to a book includes name(s) of author(s) or editor(s), book title, edition number, name of publisher, place of publication, year of publication, specific page numbers and internet reference if applicable.


It is the author’s responsibility to ensure that all references are correct. Please double check all citations with an electronic database to ensure accuracy in the reference list. Manuscripts submitted with multiple errors will be returned for correction before being accepted for peer review.

Submission of manuscripts
Manuscripts are accepted as an electronic submission with an attachment as a Word document. The manuscript must be accompanied by a covering letter indicating that the manuscript has not been submitted elsewhere.

Manuscripts submitted via the Cambridge Manuscript Management System:
- Go to the publisher’s Web www.cambridgemedia.com.au
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- Create and account if first time using the system – this will be retained for future enquiries and submissions
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Follow the steps for submitting an article
- Step 1 – Type the title, type of paper and abstract. ANZCJ requires an abstract for all submissions. Select publication – Australian and New Zealand Continence Journal.
- Step 2 – Confirm author. Add co-author details (all fields) if applicable.
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- Step 4 – Add any comments for the editor.
- Step 5 – Review your information then click submit.

Once submitted, the manuscript is reviewed by the editor and, if acceptable, sent for peer review. You will be notified by email once your manuscript has been selected for peer review.

Peer-review process
All manuscripts are initially reviewed by the Editorial committee and those deemed unsuitable (insufficient originality, serious scientific or methodological flaws, or a message that is too specialised or of limited interest to the journal readership) are returned to the author(s), usually within four weeks. If the manuscript does not conform to the submission guidelines, the author will be asked to amend it prior to peer review.

All manuscripts are reviewed by content and writing peers for relevance, construction, flow, style and grammar. This process can take eight weeks. Reviewers spend considerable time in reviewing the manuscripts and providing feedback to the authors. The length of time of the publication process may vary and depends on the quality of the work submitted. Several revisions may be required to bring the manuscript to a standard acceptable for publication. The Editorial team undertake the final review and may have different questions for the author/s to consider. Proofs of articles about to be published will be sent in PDF format to the corresponding author for review. The final decision about publication is made by the Editor.
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To learn more about HARTMANN continence pads, please call 1800 805 839 or visit www.hartmann.com.au

1. Beguin et al; “Improving diaper design to address incontinence associated dermatitis”, BMC Geriatrics 2010, 10:86

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