Aims of Study

To date there has been no national register of Australian studies conducted into the clinical arena of urinary or faecal incontinence. Neither has there been a body that compiles the results of national continence research undertaken and makes this information available for consultation by new researchers. Thus it has been difficult to gain an overview of local continence research or prevent duplication of investigation. Similarly, specific aspects of continence care that require priority in terms of initiatives, funding and research support have not been identified.

The aim of this report is to describe all research studies related to urinary or faecal incontinence that have been conducted in Australia over the last 20 years and to tabulate this work by topic and principal investigator. Studies will then be analysed for commonality and the resulting topics reviewed. The final aim of this project is to identify areas of continence care that have been poorly represented by national research to date and to propose a list of recommendations for future research emphasis.

Methodology

Scope of work

Continence research may conceivably be conducted within an educational framework, alternatively as a clinical initiative, perhaps also with the aim of strengthening commercial enterprise or even as a secondary investigation of another disorder. Current, on-going research and unpublished studies will not be identified via MEDLINE and other electronic searches. The project attempts to identify work not accessible via electronic searching. Obviously this adds to results of other search strategies rather than replacing such searches. In keeping with the wide number of disciplines that contribute to continence care it was necessary to seek beyond the membership of the national body, Continence Foundation of Australia Inc, in order to identify all continence research initiatives. To this end a team of research assistants across three states was established to facilitate national representation in the information collection process.
The immediate goal of this team was to identify potential continence researchers and healthcare and community bodies that may have participated in relevant studies. Figure 1 summarises the process of identification of completed research and work in progress. It can be seen that all relevant journals and abstract collections from the meetings of identified scientific societies (Appendix I) were scrutinized for Australian contributions and local authors.
As per Figure 2, each of the continence investigators identified was then located and invited to respond to The Continence Needs Analysis initiative. Upon discussion and consent the Needs Analysis data collection tool was sent and a completed response followed up.

**Data collection**

A two page twelve-item questionnaire was designed to generate an overview of continence research completed over the last two decades or currently in progress (Appendix J). Information requested from investigators clarified the following aspects:

- The service or institution conducting the research
- The year the initiative was completed or was expected to be competed
- The broad aims of the research
- The specific project title
- The status of the research with respect to formal post-graduate education requirements
- Funding source / support of the research
- Extent of communication of findings
Data analysis

Data from completed questionnaires were entered onto a spreadsheet and descriptive statistics applied. Topics of individual investigations were reviewed and grouped according to common themes in order to generate a profile of national research. As the aim of this current project was the identification of Australian continence research, not critical evaluation, at no stage were the compiled studies reviewed for content.

Findings were then discussed by a group of multidisciplinary experts within the field of continence management and a consensus reached with respect to areas perceived to be inadequately represented by the research summary.
Results

The information derived from the questionnaires completed by individuals contributing to continence research in Australia over the last two decades is presented in Tables 1 to 6. As per the steps outlined above, every effort was made to comprehensively identify all national research. In total 267 investigations into aspects of incontinence were identified, of these 58 studies are on-going. Since optimal assessment and management of incontinence involves a multidisciplinary approach and many studies represented the work of a multidisciplinary team of investigators, this report does not specify the qualifications of authors of individual studies. Appendix K, which contains the raw data from questionnaires, does include notation of authors and a contact telephone number of the primary investigator.

From Table 1 it can be seen that 63.6% of investigations were undertaken within hospitals, with private medical or allied health practices accounting for the next most common level of research. Other government services such as community health facilities and universities appeared to generate small numbers of studies. Commercial bodies reported low levels of continence research (1.1%).

<table>
<thead>
<tr>
<th>Institution or Service</th>
<th>Number</th>
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<tbody>
<tr>
<td>University</td>
<td>31</td>
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<tr>
<td>Hospital</td>
<td>170</td>
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<tr>
<td>Community Health</td>
<td>17</td>
</tr>
<tr>
<td>Non-governmental</td>
<td>8</td>
</tr>
<tr>
<td>Private practice</td>
<td>42</td>
</tr>
<tr>
<td>Commercial body</td>
<td>3</td>
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<td>Banks</td>
<td>4</td>
</tr>
</tbody>
</table>

Summary of institution or service where research was conducted.
(Note that studies occasionally recruited subjects or collected data from multiple services)
It is clear from the results of the current analysis that national research efforts with respect to incontinence have increased enormously over the last two decades. From Table 2 it is possible to identify an exponential growth in investigative work after 1995. Inspection of the data reveals that from 1985 onward studies were predominantly conducted from hospital services and that it was not until 1996 that research work originating from private practices and universities became more common.

<table>
<thead>
<tr>
<th>Year in which reported investigation was completed</th>
<th>Number of Studies Identified</th>
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<tbody>
<tr>
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<tr>
<td>1980 - 1985</td>
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<td>2000</td>
<td>31</td>
</tr>
<tr>
<td>On going</td>
<td>56</td>
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</table>

Researchers were asked to select one or more of the categories shown in Table 3 to describe the aim of their study. As can be see 267 of the studies identified, i.e. 45%, explored the evaluation of intervention for incontinence. The next most common aims were associated with assessment of incontinence (22.4 %) and identification of the prevalence of the disorder in different population groups (16.5%). Studies that explored
the cost of incontinence, educational initiatives with respect to continence, attitudes toward the symptom and help-seeking behaviour made up the ‘other’ category. Exploration of the psychosocial impact of incontinence on sufferers and caregivers accounted for 13% of studies reported. It should be noted that there was no research dealing with incontinence prevention and only one study that considered the efficacy of continence promotion.

Scrutiny of the researchers’ responses to the question “what was the project investigating?” show that the studies reported have common themes and can be broadly grouped. A summary of individual project topics when grouped according to largely clinical categories follows. Since any analysis of the scope of this work must be considered in the wider context of all reported investigations within the subject area, a consultative process with experts from various clinical areas was added to the observational analysis. Recommendations form the basis of the latter part of the discussion section.

<table>
<thead>
<tr>
<th>Aim of Investigation</th>
<th>Number of Studies</th>
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<tbody>
<tr>
<td>Establish prevalence</td>
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<tr>
<td>Psychosocial impact</td>
<td>35</td>
</tr>
<tr>
<td>Assessment</td>
<td>60</td>
</tr>
<tr>
<td>Current treatment</td>
<td>80</td>
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<tr>
<td>New treatment</td>
<td>40</td>
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<td>Identification of new service</td>
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<tr>
<td>Basic science</td>
<td>13</td>
</tr>
<tr>
<td>Other</td>
<td>41</td>
</tr>
<tr>
<td>Blank</td>
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</tr>
</tbody>
</table>
Prevalence and incidence of urinary incontinence

(Codes alongside study title refers to listing of work in appendix K)

- Incidence of urinary incontinence in Australia (N25f)
- Prevalence of leaking urine in Australian women and associated factors (N2e)
- Prevalence of incontinence during pregnancy in Australian women (N2g)
- Obesity and urinary incontinence (V10a)
- Prevalence of urinary incontinence post radical retropubic prostatectomy (V5)
- Prostate disease patients (N5d)
- Urinary incontinence after radical retropubic prostatectomy (W4c)
- Prevalence of urinary incontinence, QOL and sexuality 18 months after radical retropubic prostatectomy (V13)
- Prospective study of incidence of urinary incontinence in acute care hospital (V20e)
- Prevalence of urinary incontinence in patients admitted to hospital (W4b)
- Prevalence of urinary incontinence in patient population of gynaecology ward (Q8)
- Prevalence, bother, QOL effects of lower urinary tract symptoms after stroke & in normal controls (V31)
- Prevalence of stress incontinence in adolescent females with Cystic Fibrosis (V25)
- Bladder and bowel dysfunction in people with Chronic Lung Disease (W1)
- The prevalence and treatment of UI in Asian women living in Perth (W10)
- Incontinence in women and men with MS (S1b)
- Epidemiology of childhood enuresis in Australia (N18a)
- Prevalence of nocturia and falls in women > 60yrs (W2)
- Prevalence of lower urinary tract symptoms in rural dwelling aboriginals (V14f)
- Prevalence and impact of urinary incontinence on community 65+ year olds (V33)

Psychosocial impact

- Construct validity of a questionnaire examining the effects of incontinence on everyday function (V19)
- Incontinence in Australian women: symptoms, coping strategies, change in symptoms (N2c)
- Literature review of research on help-seeking behaviour of woman with urinary incontinence (V26)
- Impact on context of people's lives of urinary incontinence -risk, reluctance, reversibility (S4b)
- Local resources and education for UI management; sufferers’ perceptions of urinary incontinence (Q2)
- Study of urinary incontinence in older well woman (Q11)
Impact on patients before and after undergoing surgery (N16a)
Lived experience of bladder training in younger women with urge/mixed urinary incontinence (N21)
Quality of life in incontinent patients before and after treatment (N8a)
Impact of incontinence on quality of sex life (N8b)
NSW Urological and Incontinence Nurses - Do they care for themselves? (N26b)
The relative importance of workplace descriptors on stress among nurses (N26c)
Determination of attitudes, behaviours, and perceptions to treatment of urinary incontinence (S4a)
Attitudes of different migrant groups toward incontinence (N14f)
Qualitative study of issues of concern to older men (S12a)
TURP outcome: quality of life and symptom scores (N9)
Prostate disease (N5b)
Health related QOL in Australian men remaining disease free after radical retropubic prostatectomy (W12)
Investigation of how continence is constructed as a problem by health care staff and subsequently managed (S12b)
Urinary incontinent patient's perception of continence services (Q2a)
Quality of life measures to assess the needs of people with Parkinson's Disease (N37)
Impact of incontinence on older spousal carers (V38)

Pregnancy, peri and post partum
Prevalence of incontinence during pregnancy in Australian women (N2g)
Role of pre-existing bladder neck mobility as risk factor for postpartum stress incontinence (N33)
Management of perineal trauma in post partum women (N2a)
Promotion of incontinence in post partum women (N2f)
Post partum urinary problems (Q4e)
Prevalence of bladder/bowel dysfunction and perineal pain in postpartum women at risk (W9a)
Development of checklist to assess bowel symptoms following childbirth (V3b)
Anal sphincter injury secondary to childbirth (S2)
Bowel dysfunction(including faecal incontinence) following vaginal obstetric delivery (V3a)
Anal sphincter injury and faecal incontinence after childbirth (V23)
Evaluation of 3rd & 4th degree tears & role of various health professionals (S9)
- Mothers’ perceived needs in relation to continence promotion (N2h)
- Prevalence of health problems 6-7 months after birth (V30)
- Range of pelvic floor dysfunction with respect to gender, age, parity, mode of delivery (S10)
- 7 year follow-up of 2000 women after a normal vaginal delivery (V14k)
- Prevalence and aetiology of LUTS in chronic insulin dependent diabetics (V14i)
- Prevalence of LUTS among rural dwelling Aborigines (V14f)
- Association between stress incontinence and parity (Q5)
- The measurement of perineal elevation as an indicator of pelvic floor muscle function (N2d)
- The use of diagnostic ultrasound as a tool for measuring pelvic floor dysfunction (V2b)
- Correlation between postnatal incontinence, pelvic floor muscle strength and risk factors (N30)
- Prospective trial of pelvic floor retraining in patients with faecal incontinence
- Role of abdominal muscle in response to pelvic floor recruitment (Q4a)
- Activation of pelvic floor during isometric abdominal exercise (Q4b)
- Relationship between urethral pressure and abdominal muscle activity (Q4c)
- Voluntary abdominal exercise and pelvic floor activity (Q4d)
- Pelvic floor dysfunction and excretory disorders (Q12)
- Compliance with pelvic floor exercises after childbirth (N14j)
- Comparison of pelvic floor outcome in women 20-24 versus 35-39 (N14m)
- Post natal education in new mothers (V37)

**Bowel dysfunction and faecal incontinence**

- Bowel dysfunction (including faecal incontinence) following vaginal obstetric delivery (V3a)
- Development of checklist to assess bowel symptoms following childbirth (V3b)
- Effect of endoanal stimulation on anorectal function and faecal incontinence (V4c)
- Effect of unilateral sacral nerve stimulation on anorectal function (V10o)
- Transanal repair corrects obstructed defaecation not associated with anismus (V10n)
- Prevalence of constipation (N2b)
- Faecal ooze in males and relationship to anismus (V16a)
- Anorectal physiology testing before and after successful sphincter repair (V16b)
- Rectocele and unsuspected anal sphincter defects (V16d)
- Association between LUTS and faecal incontinence and obstructed defaecation (V14j)
- Faecal incontinence in women, QOL, role of biofeedback (V14k)
- Faecal incontinence after lateral sphincterotomy and sphincter defects (V16e)
Prospective trial of pelvic floor retraining in patients with faecal incontinence (S7)
Evaluation of 3rd and 4th degree tears and the role of various health professionals (S9)
Anorectal physiology testing for bowel dysfunction in spinal cord injury (V16c)
Effect of surgery for uterovaginal prolapse on bowel function (V14g)
Management of constipation (S15)
Two interventions for bowel function in elderly patients (Q13)
Pelvic nerve function in women with prolapse and incontinence (N38b)
Pudendal nerve motor latency with defecation and straining (N38c)
Faecal incontinence associated with reduced pelvic sensation (N38d)
Internal anal sphincter in neurogenic faecal incontinence (N38e)
Asymmetrical pudendal nerve damage in pelvic floor disorders (N38f)
Current treatment for faecal incontinence (V41)

Menopause
Association between menopause and urinary incontinence (V2a)

Aged care
Study of urinary incontinence in older well woman (Q11)
Improving management of urinary incontinence in geriatric centres and nursing homes (V20d)
Assessment of constipation in residential and extended care (V15b)
How long carers can cope with incontinence (N32)
Examination of health problems associated with dementia (N34)

Cost of incontinence
The direct costs of incontinence (N5a)
Costs of pad provision for managed incontinence (V20a)
Cost effectiveness of 5 urogynaecological treatments (N4f)
Cost effectiveness of treatments of urinary incontinence (N4a)

Assessment of incontinence
Causation, pathogenesis and evaluation of women with urinary dysfunction (W6)
The sign of stress incontinence (V11a)
Evaluate repeatability of 1 hr pad test using natural fill (N15g)
Efficiency of a screening tool for incontinence in a rural menopause clinic (N11)
To determine the optimum method information using frequency volume charts (V29a)
Comparison of simple and multichannel cystometry (V20b)
Patient acceptance of UD’s and the role of prophylactic antibiotics (V14h)
Change in number of urodynamic investigations performed over a 9 year period ((N6b)
Correlation of symptoms with urodynamic findings (N1)
Analysis of detrusor after-contraction (N25o)
Urethral pressure profile and ultrasound parameters (N19a)
Quantification of prolapse by ultrasound (N19b)
Investigation of diagnostic ultrasound as a tool for pelvic floor dysfunction (V2b)
Translabial colour doppler to image in urogaenecology (N19c)
Behavioural urge scale to assess urge incontinence (N4c)
Test for reliability and usefulness of urgency scales in adults (N18e)
Frequency volume chart in children (N18b)
Investigation of urgency scales in children (N18c)
Investigate accuracy and reliability of the bladderscan (N15h)
To develop a set of clinical criteria to confirm faecal loading on X-ray (V29b)
Transvaginal ultrasound imaging of the anal sphincter (V21)
Development of checklist to assess bowel symptoms following childbirth
The reliability and validity of the MS Disability Profile (Q9)
Correlation between digital and perineometrical pelvic floor assessment (Q3c)
Development and pilot of assessment tool for carers and patients (V20h)
75+ health assessment (S14)

Conservative management

Long term subjective benefit of conservative treatment for incontinence (N17)
Objective and subjective outcome of conservative management of urinary incontinence (V20c)
Primary care treatment of urinary incontinence (V22c)
Review of timed voiding and habit retraining (V8b)
Urodynaminc, symptomatic, psychodynamic results of bladder re-education (N25e)
Predictors of long term outcome following bladder re-training (N25g)
RCT of Nurse Continence Adviser versus urogynaecologist in continence management (N15d)
Effect of caffeine ingestion on urinary urgency and frequency (N5c)
Audit of efficacy of physiotherapy management of urinary incontinence (S8)
- Effect of physiotherapy intervention on pelvic floor dysfunction in postpartum women (W9b)
- 12/12 follow up of patient's SUI + UI after physiotherapy intervention (N16b)
- Current physiotherapy treatment of stress incontinence (S5a)
- Interferential Therapy in the treatment of urinary stress incontinence (N25h)
- Investigate effect of surface neuromodulation on DI and sensory urgency (N18d)
- Managing incontinence in women with multiple sclerosis (S3)
- Effect of endoanal stimulation on anorectal function and faecal incontinence (V4c)
- Effect of unilateral sacral nerve stimulation on anorectal function (V10o)
- Management of constipation (S13)
- Evaluate bladder neck support prosthesis for combined GSI and DI (N15c)
- Evaluate bladder neck support prosthesis for GSI (N12) (N15e)
- Efficacy and acceptability of Femassist urethral occlusive device (N5b)
- Bladder neck support prosthesis for stress incontinence (N4b)
- After-effects of removal of bladder neck support device (N4e)
- New method of application of penile sheaths (T36)
- EMG investigation of pelvic floor/abdominal muscle interaction (S5b)
- Use of progesterone to change urinary flow (N14d)
- Comparison of progesterone and bethanecol in the treatment of low pressure voiding (N14e)
- Evaluation of nursing care for patients who are incontinent (N24)
- Continence management for the stroke patient (N23)
- Investigation of a new device for management of acontractile bladder (N27)
- Effect of pelvic muscle exercise on post micturition dribbling on males (S4c)

**Catheterisation**

- Quality of life for people with long term catheters insitu (V8a)
- Need for premature changing of indwelling urethral catheters (V9)
- Complication rates of first and subsequent catheter changes (N7)
- First suprapubic catheter change in the community (N22a)
- Hospital staff's knowlegde of urinary catheters (N22b)
- Catheter management post TURP (W5a)
- Need for catheterisation after non continence vaginal surgery (Q3b)
- The effect of catheters in the 2nd stage of labour (N36)
Pharmacology

- Trial of Monodral versus Probanthine in treatment of detrusor instability (N25m)
- Oxybutynin pm versus taken three times daily (N14a)
- Trial of Penthenate versus Oxybutynin in treatment of detrusor instability (N25n)
- Evaluate safety and efficacy of Tolterodine versus placebo in detrusor instability (N15f)
- Efficacy and safety of prolonged Tolterodine capsules for treatment of detrusor instability (N25b)
- Tolterodine: prolonged versus short release versus placebo (N25a)
- Clinical and urodynamic efficacy of Tolterodine (N25c)
- Efficacy of Tolterodine compared to placebo (N25q)
- Prazosin—a cause of genuine stress incontinence (V10d)
- Management of intractable detrusor instability by phenol injection (N25k)

Surgical management

- Position of urethrovescical junction before and after successful surgery (V10c)
- Prognostic factors for continence following insertion of trans vaginal tape (TVT) (V4a)
- Stamey Martius procedure for GSI secondary to urethral failure (V10b)
- Urinary incontinence following radical hysterectomy (V10e)
- Prespinous iliococcygeal vaginal suspension for vault prolapse (V10j)
- Non-absorbable sutures, a cause of morbidity following surgery for GSI (V10k)
- Clinical and UD follow up of women with incontinence after radical hysterectomy (V10h)
- Bilateral prespinous iliococcygeal fixation for vault prolapse (V11g)
- Effect of Burch Colposuspension on coital incontinence (V11e)
- Suture injury to urinary tract in urethral suspension procedures for GSI (V10k)
- Burch Colposuspension for recurrent stress incontinence (V10m)
- Transanal repair corrects obstructed defaecation not associated with anismus (V10n)
- Burch or pubovaginal sling in low urethral pressure stress incontinence (V10q)
- Effect of suture rectopexy in patients with complete rectal prolapse (V16f)
- Randomised, multicentre comparison open vs laparoscopic Burch Colposuspension (V11e, N14b)
- Randomised, multicentre trial of donor fascia sling, TVT, laparoscopic Burch Colposuspension (V11f)
- Urodynamic results one year after 100 laparoscopic colposuspensions (N14i)
- Randomised controlled trial of laparoscopic versus open colposuspension; 3 year and 5 year follow-up (N14g; N14h)
Comparison of Raz versus laparoscopic bladder neck suspension for SUI in women (V32)
- Rectus fascial sling for GSI (N6e)
- Urethral teflon injection in the treatment of SUI in females (N25i)
- 5 year follow-up of Stamey procedure for SUI (N25p)
- Urodynamic study post TVT and colposuspension (N14l)
- Trend of continence surgery: suprapubic versus vaginal approach (N6c)
- Retropubic urethrolysis with omental graft for post op voiding dysfunction (V14a)
- Efficacy of sacral nerve stimulation for treatment of dysfunctional voiding (N25r)
- Review of macroplastique for treatment of GSI (V14b)
- Free vaginal polypropelene mesh sling in women with GSI (V14c)
- Role of connective tissue defects in uterovaginal prolapse (V14d)
- A new technique for pubovaginal slings (V14e)
- Association between autoimmune CT disease & GSI or prolapse (V14l)
- Surgical management of anal incontinence (N38a)
- Artificial bowel sphincter in severe faecal incontinence (V36)

**Basic science**
- Tachykinin N2 receptors in the human urinary bladder (N15a)
- Tachykinin N2 receptors in the child urinary bladder (N15b)
- Effect of tachykinin antagonist SR49868 on idiopathic detrusor instability (N15i)
- Localization of gene peptide receptors in the adult urinary bladder (N15j)
- Response of the detrusor of children with RUTI / wetting to carbachol (N15k)
- Electron microscopy of detrusor instability and controls (V10i)
- Role of human detrusor muscle intercellular junctions (V11c)
- Is there a morphological basis to impaired detrusor contractility in women? (V11d)
- Is there an Ultrastructural basis for the unstable bladder (V11b)
- Classes of nerve terminals that encircle intrinsic neurons in the bladder (S11a)
- Evaluation of acupuncture on detrusor instability in non-human primates (N25j)
- Basic science of the sphincter mechanism (N13)
- Anatomical relationship between urethra and clitoris (V22a)
- Female urogenital anatomy, cavernosal nerve (V22b)
**Voiding dysfunction**
- Urinary tract infection and impaired bladder emptying in women (V10f)
- Role of suprapubic vibration in the management of bladder emptying problems (V17a)
- Effect of total bladder volume on flow rate (S11c)
- Effect of flexible cystometry on uroflowmetry (W5b)
- Impaired bladder emptying in women (V10g)
- An investigation of the effect of various factors on flow rate in women (N6a)
- Effect of catheters size on flow rate (N6d)
- Effect of postural change on voiding function (Q3a)
- Reproducability of voiding in normal male population (N6f)

**Interstitial Cystitis**
- Microvascular changes in Interstitial Cystitis (V12a)
- Pain of Interstitial Cystitis (V12b)
- Urinary kinin excretion in women with Interstitial Cystitis (V12c)
- Histology, microvasculature, neurotransmitters and receptors (V7)
- Kallikrein & bradykinin receptor expression in normal & Interstitial Cystitis bladder (V12d)
- Bladder microvasculature in woman with Interstitial Cystitis (V12e)
- Low dose methotrexate in treatment of refractory Interstitial Cystitis (V11f)
- Activation of the kallikrein kinin system in Interstitial Cystitis (V10p)

**Sexual dysfunction**
- Urinary leakage during coitus in woman (V10l)
- Impact of incontinence on quality of sex life (N8b)
- Effect of Burch Colposuspension on coital incontinence (V11e)

**Education**
- Investigate Australian General Practitioner knowledge of urinary incontinence (N15l)
- Evaluation of General Practitioner education package on incontinence (N25l)
- General Practitioner knowledge of diagnosis and treatment of incontinence (N31b)
- Use of Fm radio and questionnaires to educate General Practitioner about enuresis (N31a)
- Survey of knowledge of staff about urinary incontinence (V20f)
- Nurses knowledge, assessment, treatment of incontinence in hospital setting (N28)
■ Nurses knowledge of bowel management (N26a)
■ Efficacy, compliance and satisfaction of ‘Women’s Waterworks’ forum (N20)
■ Evaluation of pilot consumer newsletter on incontinence (S11b)
■ Support and education groups for people with incontinence (S1a)
■ Needs analysis for health promotion activities (N3)
■ Education and support model for assistants in nursing and enrolled nurses in aged care (V20g)
■ A continence educational package for younger women (N35)
■ The gym as a site for health promotion of urinary incontinence in women (V34)
■ Manuals for continence care in adolescents with spina bifida (V35)
■ Provision of clinical expertise to remote / rural locations (V38b)
■ Video and verbal continence education to rural women (V39)

Other
■ Response to full ward testing of urine (V15a)
■ Urinary Tract Infection association with detrusor instability (N4d)
■ Ultrastructural changes in detrusor hypocontractility (N8c)
■ Adult nocturnal enuresis (N18f)
■ Evaluate management in enuresis resistant to “standard” Treatment (V17b)
■ Community response to enuresis service and response to treatment (V17c)
■ Assessment, management and QOL of disabled client in institutional care (W4a)
■ Effect of a cold environment on urine temperature during bladder filling (N14c)
■ Cost of suprapubic catheter use for an MS patient (T1)
■ Audit of the efficiency of physiotherapy management of urinary incontinence (S8)
■ Impact of Royal district Nursing Service continence advisors (V40)

Of the 249 responders to the inquiry as to whether the research study reported was part of postgraduate education requirements, only 76 authors indicated this to be the case, that is 31%. The majority of continence investigations were therefore unrelated to a formal education process. Thus the majority of continence research to date is volitional rather than a requirement of the formal education / specialisation process. The information related to sources of research funding is shown in Table 4 and indicates that most Australian studies have been funded by the workplace or an outside body. Research associated with external
funding was overwhelmingly classified by authors as investigating treatment, and on inspection related to pharmacological products or treatment devices. There were few unsupported or institutionally funded studies that considered new or current treatment options.

In regard to the dissemination of information gained by Australian continence researchers, it can be seen from Tables 5 and 6 that the majority of work produced was communicated nationally and internationally rather than restricted to local disclosure.
This project did not attempt to determine whether studies reported as presentations at scientific meetings had been accepted as podium papers or poster or abstract inclusions. It can be inferred from Table 5 that work presented internationally was also communicated at national meeting as well. The large number of blank responses to the inquiry about presentation of findings relates to investigators who chose to send a curriculum vitae in place of completing a questionnaire for each study undertaken.

From Table 6 it can be observed that 64% of studies identified were published, with the majority of work accepted by peer reviewed journals. There were no further questions within the survey to clarify why the reported 23% of investigations did not go onto publication. A complete list of the scientific journals in which Australian continence research from the last twenty years has appeared follows Table 6.

<table>
<thead>
<tr>
<th>No. of Studies Identified</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Published</td>
<td>170</td>
<td>64</td>
</tr>
<tr>
<td>Where published: (multiple responses possible)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newsletter</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Meeting proceedings</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>Non peer reviewed journal</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Peer reviewed journal</td>
<td>109</td>
<td></td>
</tr>
<tr>
<td>Non published (inc. work in progress)</td>
<td>61</td>
<td>23</td>
</tr>
<tr>
<td>Blank</td>
<td>15</td>
<td>12</td>
</tr>
</tbody>
</table>

**TABLE 6**

Publication of Findings
Investigators reported publications in the following scientific journals:

- Australian Continence Journal
- Acta Obstetric Gynaecolgy Scandinavia
- Age and Ageing
- Australian Clinical Review
- Aust Coll Midwives
- Aust J of Ageing
- Aust J Physio
- Aust & NZ J Obstet Gynecol
- Aust NZ J Surg
- Aust Soc Work
- Br J Obstet Gynaec;
- Br J of Urol
- Clin Anat
- Colorectal Dis
- Dis Colon Rectum
- Health Promotion J of Aust
- Int Urogynaecol J
- J Obstet Gynaec.
- J of Wound Healing and Continence Nursing
- J Pelvic Surg.
- J Psychosomat Res
- J Urol
- Med J Aust
- National Women’s Health Group Journal Aust Physio Assoc
- Neurol Urodynamics
- Obstet Gynaec
- Scand J Gastroenterol
- Soc Sci Med
- Urologic Nursing
In addition to individual studies identified sixteen longitudinal health studies were noted (see Table 7).

Upon further investigation three studies were found to contain some reference to continence issues, and are highlighted by ** in Table 7.

<table>
<thead>
<tr>
<th>No.</th>
<th>Study Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Aboriginal Birth Cohort</td>
</tr>
<tr>
<td>2 **</td>
<td>Australian Longitudinal Study on Women’s Health</td>
</tr>
<tr>
<td>3</td>
<td>Brunswick Family Study</td>
</tr>
<tr>
<td>4 **</td>
<td>Busselton Health Study</td>
</tr>
<tr>
<td>5 **</td>
<td>Canberra-Queanbeyan Longitudinal Health Study of the Elderly</td>
</tr>
<tr>
<td>6</td>
<td>Future Needs for Carers and Projections of their Availability</td>
</tr>
<tr>
<td>7</td>
<td>Infant Study: from birth to 2 years</td>
</tr>
<tr>
<td>8</td>
<td>Labour Market Dynamics and Earnings Mobility in Australia</td>
</tr>
<tr>
<td>9</td>
<td>Life chances of Children Study</td>
</tr>
<tr>
<td>10</td>
<td>Life patterns and Education Outcomes in the post-1970 generation</td>
</tr>
<tr>
<td>11</td>
<td>Longitudinal Studies of Australian Youth</td>
</tr>
<tr>
<td>12</td>
<td>Mater-University Study of Pregnancy and its Outcomes</td>
</tr>
<tr>
<td>13</td>
<td>Negotiating the Lifecourse Study</td>
</tr>
<tr>
<td>14</td>
<td>PATH through Life Project</td>
</tr>
<tr>
<td>15</td>
<td>The Australian Temperament Project</td>
</tr>
<tr>
<td>16</td>
<td>Western Australian Linked Database Project</td>
</tr>
</tbody>
</table>

**TABLE 7**

Australian longitudinal Health Studies

Results from the Australian Longitudinal Study on Women’s Health relating to the prevalence and natural history of incontinence have been extensively reported by Chiarelli (N2 Appendix K). Three age cohorts of women from rural and urban locations and disparate ethnic backgrounds are being tracked for the evolution of bladder and bowel dysfunction and contributing factors identified. There has been close liaison with study co-ordinators and no further continence input to the study design is necessary.
However, to fully interpret findings, and to particularly explore causative and risk factors for moderate and severe incontinence funding specifically earmarked for this purpose is needed.

The Busselton Health Study began in 1966 and is now an accumulated database with no ongoing funding to support further data collection. There were no questions presented to the nearly 4000 participating adults that related directly to either urinary or faecal incontinence, however in an attempt to investigate diabetes some inquiry was made about urinary frequency. Specific questions are reproduced below:

16. Have you been unusually thirsty lately?
17. Have you been passing urine more often recently?  
   (from the 1969 adult survey of all adults; questionnaire was self-administered)
22(a). Do you have to get up at night to pass urine?
22(b). If yes, usually how many times?
23. Have you ever had attacks of scalding or burning when you pass urine?
24. Have you ever had to pass urine much more frequently than normal?  
   (from the 1987 survey of persons aged 65 and over; self-administered questionnaire)

8. Have you been more thirsty than is normal for you during the last month?
9. How many glasses (equal to 1 cup or 8 fl oz or 250 ml) of water do you drink between going to bed at night and getting up in the morning?
10. Have you been passing urine more often than is normal for you during the last month?
11. How many times do you have to get up between going to bed at night and getting up in the morning to pass urine?

According to study co-ordinators it would be possible to access these data if they were found to be relevant and were appropriate funding available.

The Canberra-Queanbeyan Longitudinal Health Study of the Elderly sampled 1000 people from the electoral roll who were 70 years and over and personally interviewed subjects in 1990 and again four and eight years later. No further interviews are planned although mortality is being monitored. Discussion with study co-ordinators revealed that urinary incontinence was not a primary variable examined, however as with the Busselton study, some information about urinary frequency could be made available. Interpretation of quality of life measures in subjects with urinary frequency may be possible. Since the study recruitment is closed there is no option to question subjects specifically about bladder and bowel control.
Discussion

This study has established a register of recent national research into urinary and faecal incontinence and revealed the aims of studies undertaken, specific topics of investigation, institutions involved, sources of funding, and communication of findings. There follows a discussion of each of these aspects before a critical review of the scope of identified work and future areas of essential research.

Firstly, the description of a total of 267 national studies related to continence was encouraging and a larger body of work than was expected. As has been described the majority of investigations arose from hospital-based initiatives, with private practice and university linked studies being the next most common. It should be recognized that a number of authors had joint appointments in hospitals and universities in addition to accessing patients privately. It is common practice to recruit subjects from all available sources during an investigation and this research summary showed a similar multiple recruitment pattern. Of particular interest is the low level of community-based non-hospital research. Given that many patients have a mild or moderate continence problem that is commonly amenable to local conservative management, and allowing for the wide network of community continence clinics that exists, one would expect greater numbers of studies to emerge from these facilities. Future investigation could establish the reasons for the current observation, but perhaps staff in community health facilities have a heavy patient load, limited access to mentors and academic advisors, insufficient understanding of research design and analysis, and restricted funding for investigative initiatives. It is conceivable that the culture of continence practitioners is largely one of care provision rather than investigation.

The low level of research directly resulting from commercially conducted studies is misleading, as a number of studies conducted within hospitals were in fact funded by corporate bodies with an interest in the product under investigation. It would seem appropriate for the centers with expertise, guaranteed patient population and assumed lack of bias to conduct such studies.

There was a similar lack of continence research emerging from non-government organisations (NGO). Given the fiscal limitations prevalent amongst such services, available funding may be largely responsible for lack of research. Many such organisations however, exist to serve the interests of a particular patient population and to provide
information, education and practical assistance rather than a clinical service. The charter of such organisations does not necessarily prioritise academic investigation. It should be noted that the organisations directly related to incontinence (such as state resource centres of The continence Foundation Limited) are well placed to identify needs of consumers and to comment upon gaps in knowledge, local service provision and continence management for different groups within the community. To this end the current project was extended to involve consultation with staff from relevant NGOs and their observations were incorporated into recommendations for future continence research.

Of great interest is the finding that 92% of all national continence studies were conducted over the last ten years and of those the vast majority were initiated from 1994 onward. This gradual increase in reported research is likely to be associated with the initial formation of The Continence Foundation of Australian Limited and the forums which were subsequently provided for health professionals working with urinary and faecal incontinence. Specific to the rise in relevant research was the change from a biannual scientific meeting to an annual interchange of information. Two other factors probably played an important role in the observed increase in continence research. Firstly, continence issues had historically been the domain of urologists and geriatricians however over the last two decades gynaecologists, nurses and physiotherapists have all developed subspecialties in aspects of continence management so that the pool of involved health workers has grown. Along with this shift has come an increase in the number of public and private health units dedicated to continence assessment and care. Secondly, in 1995 Australia hosted the annual scientific meeting of the International Continence Society and many practitioners who had not been in a position to attend previous international meetings were able to participate. Undoubtedly this event acted as a trigger for the exponential growth in investigative work that followed over the ensuing five years. Commensurate with this theory is the observation that after 1995 continence studies began to originate from services outside hospitals.

Throughout the last two decades research related to incontinence has been overwhelmingly oriented toward the evaluation of current and new treatment initiatives. Data from this current project identified 45% of reported studies as aiming to investigate the efficacy of treatment. In recent years there has also been international emphasis on
the quantification and measure of aspects of incontinence with the aim of identifying objective means to determine intervention outcome. Australian continence studies in this database show a similar orientation with 22.4% of reported investigations considering the assessment / reassessment process. Inspection of the raw data reveals that 44/60 studies with the stated aim of continence assessment have been conducted within the last four years. Identification and measurement of the population groups affected with incontinence has also increased incrementally, most noticeably over the last four years when 37 of the 44 reported prevalence studies have been conducted. This current report also shows investigation of psychosocial factors linked with incontinence, such as the associated cost, quality of life, attitudes related to the symptoms, and access to help and services to have become a greater focus of research over the last four years.

Thus it appears that nationally continence professionals are positioning themselves to understand both the size and impact of the problem being confronted and the efficacy of common and new modes of assessment and management of incontinent patients. From the stated research aims alone it is obvious that very little effort appears to have been extended in the study of prevention of incontinence or the mapping and or initiation of new help services.

The finding that 31% of authors reported that continence research had been associated with concurrent post-graduate studies is a positive indication of the quality of health professionals working in the continence arena. Equally as encouraging is the corollary that the remaining and majority of investigations were volitional, presumably in response to the identification of unclear clinical or other issues. As stated earlier the greater access to dedicated scientific meetings in recent years is likely to have proved an inspiration and example for continence professionals to pose questions and formulate methods by which to investigate such questions.

Major studies always require funding in order to produce high quality data from sufficient subjects over a reasonable period of time. Results of this current questionnaire shows that whilst nearly a third of all work was not formally funded the remaining investigations were equally likely to have been supported by the institution conducting the study as by an outside body. Where investigators reported studies to be unfunded it
is likely that to some extent the effort was supported by the workplace and the author used salaried and possibly personal time to conduct the investigation. It is not possible from this questionnaire to discriminate between instances when this was an integral and expected part of an individual's performance and when it was an addition to usual duties.

As has been noted in the results section of this report, half of the studies funded by outside bodies were investigating current or new treatment. An inspection of the data shows this to be largely associated with the trial of pharmacological products or management devices (such as the bladder neck support prosthesis). In contrast only a third of institutionally funded research related to evaluation of treatment for incontinence. The lowest levels of external funding were seen in work that investigated service provision, basic science and continence assessment.

Australian continence research was reportedly presented regularly at both national and international scientific meetings and published in 64% of cases. Overall there is no ground to suppose that large bodies of continence investigations have bypassed the attention of interested professionals. Approximately two thirds of the unpublished work relates to investigations that are still in progress. It is not clear from this current study why the remaining continence research was unpublished. Since it was beyond the scope of this project to critically evaluate studies reported it is not known as to whether some unpublished studies failed to detect an outcome, were inappropriate in design, suffered from insufficient number of subjects or were inadequately supported by mentor and statistical input.

Scope of identified work and recommendations for future areas of research

The second part of this discussion section reports analysis of the identified studies by various continence experts across disciplines and clinical areas of interest. The feedback from these individuals in relation to gaps and omissions in identified research is presented in Appendix L and forms the basis of the major recommendations for the focus and emphasis of future research initiatives.
It can be clearly seen that the 'wish list' for funding of on-going research initiatives is extensive and reflects the key interests of invited experts from the represented disciplines. Given that individuals have specific sub-areas of interest the resultant recommendations are potentially skewed and may not represent the priorities of the whole discipline. However, consideration of raw data generated by the questionnaire does not show conflict and thus the consultative feedback is worthy of consideration.

There was a general consensus that sufficient international epidemiological continence data exists and that Australian data to date is homogenous with respect to these findings. For these reasons it was not considered a priority to focus on further national prevalence studies of urinary incontinence. However, there was strong opinion that the area of bowel dysfunction is poorly quantified especially in the community dwelling elderly. The list of studies identified in this project as relating to bowel dysfunction and faecal incontinence appears to primarily address women, notably sphincter damage following childbirth. There is a need for further information about the sub categories of bowel dysfunction, namely constipation, soiling, faecal incontinence, obstructed defecation, Irritable Bowel Syndrome and other transit disorders that impact bowel continence. Investigation should include the prevalence, diagnosis and management options in community dwelling individuals of both genders and across age groups and levels of wellness.

Service provision was seen as an area needing of research input, on both a clinical skills level and in relation to optimal model of delivery. A number of experts expressed concern about the status of continence education being a post graduate professional learning experience rather than a core subject within undergraduate training. Continence clinicians were seen as separately skilled and thus the body of work associated with service provision was born by a small number of practitioners. There was some support for the idea that skilling all clinicians in basic continence care would enable greater services to be provided. This issue of educational input requires on-going consultation between tertiary institutions and professional bodies and warrants a formal evaluation and summary of benefits and options.

Education of different professionals was variously seen as progressing (i.e. physiotherapy specialist continence courses) or cost prohibitive (i.e. formal post graduate nursing studies) or lacking (i.e. general medicine). Further deficits in knowledge were identified in sub specialty and specialty professional groups that may have primary care of certain
disease groups which manifest incontinence as one of a spectrum of symptoms. A number of experts expressed the desire to initiate cross-discipline educational initiatives in order to address these concerns. The review of research indicated this had been successfully attempted in the arena of general medical practitioners and this model could be applied more widely, for example to general hospital staff and specialist professionals.

Pursuant to the issue of service provision there were several suggestions that continence intervention may be amenable to different modes of delivery. Currently most patients attend individual sessions at a hospital or specialist clinic, whilst others are visited in their homes by community-based services. Research that considered the efficacy of community-based treatment versus hospital / clinic management is warranted as is an investigation of single consultation versus group education and intervention. Outcome would be assessed in the light of continence gains but also cost effectiveness, patient preference and time to resolution of symptoms.

A number of different groups were identified as being under-represented in the current continence research initiatives. These included: incontinent males, various migrant groups, individuals with intellectual and or physical disabilities, patients attending routine self catheterisation, sufferers of faecal incontinence, the frail elderly and persons with neurological diseases secondarily impacting bladder or bowel function. In each of these groups the precise incidence and impact of symptoms was considered to have been poorly identified. In addition, since some of these groups may be disadvantaged by language or isolation, knowledge and understanding about incontinence is unclear. Research is needed to clarify as to whether certain population groups have knowledge of treatment availability, believe that intervention may be of help and consider the mode of intervention / service model accessible.

With respect to continence education in the wider community, almost all clinicians consulted expressed a desire to measure the impact of continence promotional activities. The current review of research revealed only one effort to quantify the effect of a continence education initiative, yet in each state there are services dedicated to orchestrating such activities. A priority of future research must be to evaluate common continence promotion enterprises and identify those with highest efficacy. Follow-on
work would include the formulation of promotional options likely to change knowledge about incontinence and encourage help-seeking behaviour. Such research would guide cost-effective community education initiatives. Give the scant objective data with respect to continence promotion, investigation may need to begin at the needs analysis and conceptualisation stage when considering each of the under-represented groups identified above.

Continence promotion is a separate issue to incontinence prevention, and the latter area has not been considered in Australian research to date. Obviously prevention is pivotal to continence care and priority needs to be given to initiatives that study different efforts to prevent the development of both immediate and later bladder and bowel control problems. Studies that address symptoms present in childhood and follow these into adolescence and adulthood warrant support, as do efficacy studies of intervention for incontinence in childhood.

In regard to research relating to treatment options for incontinence in Australia, the general opinion was that international data and practices interchange adequately with national management strategies. Questions that face professionals in Australian are not markedly different to those being posed and answered elsewhere in the world. Key areas of investigation that require immediate study relate to objective measurement of intervention and reliable basic assessment tools. As per continence services worldwide, national professionals are endeavouring to quantify the outcome of continence management in order to identify practices that prove most helpful, are cost effective and can be developed on a larger scale.

Within the specific areas of clinical intervention identified as warranting research focus, questions relating to the elderly were predominant. Initially there is a need to ascertain whether it is acceptable to extrapolate general incontinence research findings to the elderly. Following this there is a further need to identify new treatments that will not be limited by co-existing pathology or intolerance of intervention side effects. A longitudinal study is warranted to establish whether early diagnosis and intervention minimise progression of symptoms and concurrently maintain quality of life. The issue of funding allocation in support of continence assessment and management in the elderly dictates that research be conducted to identify the relative cost benefit in treating older sufferers.
vigorously. This would be compared to meeting the known associated costs of institutionalisation and rehabilitation following incontinence related falls, ill health and lack of suitable carers.

A further area noted to be poorly researched is the impact of incontinence, urogenital prolapse and surgery on sexuality and sexual function. Whilst this may appear to be largely related to female sufferers, consultants identified a paucity of knowledge in relation to male patients. Studies are needed to identify the impact of symptoms on sexuality and to investigate such issues as the link between vaginal surgery and sexual function and coital incontinence and bladder/pelvic floor function. Self esteem is known to be both closely linked to sexuality and jeopardised by the presence of incontinence and prolapse, thus research clarifying optimal intervention would be warranted.

A final recommendation from the consultative process was the establishment of a co-ordinating body for continence research. This would take the form of a service to professionals needing assistance with research design or implementation and also act as a repository of information about studies in progress. It is envisaged that such a body could prevent duplication of efforts and promote progression of previous findings. It would also seem logical that funding bodies and benevolent groups may liaise with this service when making support available for the furtherance of continence knowledge and scientific endeavour.

Alternatively, a research summary or directory of continence research could be generated from the studies identified in this Continence Needs Analysis. Such a directory could be similar to the Australian Ageing Research Directory in which studies are sectioned by subject and described under the headings of title, principal researcher, organisation, status, funding, outline and keywords. Each entry is approximately half a page. In the current electronic climate an hard copy would be unnecessary, instead a web reproduction and address would allow for regular updating and ready access by most health professionals.
Dear CFA Member

You may have heard that CFA National successfully tendered for parts of a National Continence Needs Analysis funded by The Department of Health and Aged Care. The outcome of the project will be recommendations to government about the direction of future research funds.

One sector of this initiative addresses the identification of Australian research related to continence. We need to locate all relevant work that has been conducted in the last 20 years regardless of whether or not the results were ever published. Data may have been collected as part of a health or organisational initiative, educational requirement or commercial investigation.

Obviously the thorough identification of such work is a substantial task and we are seeking the assistance of all members. If you are, or were, involved in any study of incontinence, or know of a relevant study, please would you complete and return the checklist below.

In appreciation of your contribution

Wendy F Bower
Janet W Chase
Fiona Dunham

☐ I have participated in a study of incontinence
☐ I would be willing to provide details of our findings
☐ I know of an Australian study of incontinence

The study I recall was
☐ Presented at a local/regional/state/national meeting
☐ Presented to colleagues in my profession/outside my profession (e.g. tutorial / in service)
☐ Published in a newsletter
☐ Other: __________________________________________

Related to: (topic / title): __________________________________________

A contact person might be: __________________________________________

Name: __________________________________________
e-mail: __________________________________________
Telephone number: ____________________________ Best time to call: ____________________________
Appendix B

Identification Of Continence Researchers Within The National Public And Private Health Service

Contact was established with relevant personnel within the national body of the following services and inquiry made with respect to any relevant continence investigations known to have been funded over the last two decades.

Federal and State Departments;

- Women
- Health
  - Chief Health officer
  - Services Policy Officer
  - Manager of Health Outcomes
  - Manager of Home and Community Care Services
  - Urology Research Centres
  - Program of appliances for Disabled People
  - Personell familiar with longitudinal health studies

N.B. Hospital and associated community services contacted via related universities

- Veteran Affairs
- Ageing and Disability
  - IDEAS: Information on Disability, Equipment, Access and Services
  - Independent Living Center
  - National Ethnic Disability Alliance
  - Continence Aids Assistance Scheme
- Human Services
Appendix C

Identification Of Continence Researchers Within The National Education System

**Process**

1) Identification of all Australian universities via web site:
   www.avcc.edu.au/avcc/uniwebs.htm

2) Elimination of institutions unrelated to health or allied science, creation of a profile of institutions that may be possible sources of continence research. Resultant summary:

- Australian Catholic University: Schools of Nursing Campuses Sydney, Queensland and Victoria
- Australian National University: National Center of Epidemiology and Population Health
- Avondale College: School of Nursing
- Ballarat University: Faculty of Health Science and health Promotion
- Bond University: Institute for health Sciences
- University of Canberra: School of Nursing
- University of Central Queensland: Faculty of Nursing and Health Science
- Charles Sturt University: School of Nursing
- Curtin University: Schools of Nursing, Physiotherapy, Occupational Therapy, Pharmacy and Psychology
- Deakin University: Schools of Health Sciences and Nursing
- Edith Cowan University: Schools of Nursing and Medicine
- Flinders University of South Australia: Research Education Unit; Center for Research on Ageing; School of Nursing
- Griffith University: Faculty of Nursing and Health Sciences
- James Cook University: School of Nursing and Medicine
- La Trobe University: Schools of Nursing, Physiotherapy, Occupational Therapy
- Macquarie University: School of Chiropractic
- University of Melbourne:
- Monash University:
- Murdoch University:
- University of New England: Faculty of Nursing, Health and Professional Studies
- University of New South Wales: Faculty of Medicine
- University of Newcastle: Faculty of Medicine and Health Sciences; Faculty of Nursing School of Population Sciences School of Medical Practice
- University of Queensland: Schools of Medicine, Occupational Therapy and Physiotherapy
- Queensland University of Technology: Center Nursing Research; School of Nursing
3) Exploration of web sites and staff interest and portfolio profiles within each identified institution.

4) Email introduction to each potential researcher, as per the letter below.

Dear ________________

The Continence Foundation of Australia recently successfully tendered for parts of a National Continence Needs Analysis funded by The Department of Health and Aged Care (Tender 112). The outcome of the project will allow the Foundation to make recommendations to government about the direction of future continence research funding.

One sector of this current initiative addresses the identification of Australian research related to continence. The aim throughout is to identify gaps in our national continence profile and knowledge and thus establish a platform from which to recommend keys areas to target future government funding. By preventing duplication of research and directing funds to extend knowledge we ensure maximum benefit to incontinence sufferers. To this end, the Foundation needs to locate all relevant investigative work with respect to incontinence, that has been conducted in the last 20 years, regardless of whether or not the results were ever published. Obviously the thorough identification of such work is a substantial task and we are seeking the assistance of all clinicians and academic staff. If you are, or were, involved in any study of incontinence, or know of a relevant study, please would you complete and return the e-mail checklist below.

In appreciation of your contribution

Dr Wendy F Bower - Chief Investigator (wendy.bower@gogo.net.au)
Ms Janet W Chase - Investigator
Ms Fiona Dunham - Investigator
☐ I have never been associated with any research related to incontinence
☐ I have participated in / been associated with a study of incontinence
☐ I would be willing to provide details of our findings
☐ I know of an Australian study of incontinence

The study was
☐ Presented at a local / regional / state / national meeting
☐ Presented to colleagues in my profession / outside my profession (e.g. tutorial / in service)
☐ Part of post-graduate study requirements
☐ Published ☐ Not published

Topic / title: _____________________________________________

I would be happy to complete a questionnaire about this work; my contact details are

Name: ___________________________ Institution: ___________________________
Telephone: _______________________ Fax: _________________________________
e-mail: __________________________

PLEASE RETURN BY FAX TO: 039 8516652
OR MAIL TO: PO BOX 1036 HUNTERS HILL NSW 2110

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5) Follow-up of all email contacts and distribution of project questionnaire

6) Follow-up of all questionnaires sent
Appendix D

National and Regional Research Ethics Committees

- National Health and Medical Research Council (Department of Health and Aged Care)
- Research Database was searched for continence studies and authors of same identified

Appendix E

Research Funding Bodies

- Australian Kidney Foundation
- Physiotherapy Research Foundation
- Philanthropy Australia
- Philanthropic bodies
- Ramaciotti Foundation
- Brockhoff Foundation
- Helen Schutt Foundation
- Myer Foundation
- The Potter Foundation
- Para Quad Association
- Chronic Illness Alliance

Appendix F

Associated Trade / Commercial Bodies Involved With the Manufacture or Distribution of Incontinence Products

- State departments of health

The corporate sponsorship list (i) was obtained from The Continence Foundation Of Australia and an introductory letter (ii) sent to the following commercial bodies with an interest in continence products. All communication was follow-up and a project questionnaire sent to companies indicating previous research initiatives and a willingness to be involved in the current analysis.

(i)
- Advantage Health Care Pty Ltd
- Ames Medical Equipment
- AMS - American Medical Systems
- Ausmed Publications
- Aust Pacific Paper Products
- Australian Home Health Care
- Australian Home Nursing Supplies
- Aventis Pharmar
- Bard Australia Pty Ltd
- Cardio Design
- Cello Paper Pty Ltd
- Coloplast Pty Ltd
- Comfy Garments
- Confident Care Products
- CONVATEC
- Endovasive Pty Ltd
- Hartmann - SA
- Hollister
- Kimberly-Clark Australia
- Maersk Indoplas Pty Ltd
- Masters Medical
- McNeil's Surgical Pty Ltd
- Medical Industries Australia
- Medtronic Australasia Pty Ltd
- Minappi Night'n'Day
- Norgine Pty Ltd
- Ocean Spray International Inc
- Pharmacia & Upjohn
- Precise Medical Supplies P/L
- Rhone-Poulenc Rorer Australia Pty Ltd
- Sancella Pty Ltd
- Sanicare Pty Ltd
- Sayco Pty Ltd
- Smith & Nephew
- Sonoray P/L
- Sydlore PTY LTD
- Techmed Australasia Pty Ltd
- Trewint
- Tyco Healthcare
- Vernon Carus Australia Pty Ltd
- William Pearce & Co Pty Ltd
Dear CFA Corporate / Trade Member

You may have heard that the fact that The Continence Foundation of Australia recently successfully tendered for parts of a National Continence Needs Analysis funded by The Department of Health and Aged Care. The outcome of the project will allow the Foundation to make recommendations to government about the direction of future research funding.

One sector of this current initiative addresses the identification of Australian research related to continence. The aim throughout is to identify gaps in our national continence profile and knowledge and thus establish a platform from which to recommend keys areas to target future government funding. By preventing duplication of research and directing funds to extend knowledge we ensure maximum benefit to incontinence sufferers. To this end, the Foundation needs to locate all relevant investigative work with respect to continence, that has been conducted in the last 20 years, regardless of whether or not the results were ever published. Data may have been collected as part of an health or organisational initiative, educational requirement or commercial investigation.

Obviously the thorough identification of such work is a substantial task and we are seeking the assistance of all Foundation members. It is appreciated that in the corporate world some such information may be sensitive and used to direct marketing initiatives. However, if your company has been involved in any study of incontinence over the last 20 years we would greatly appreciate the opportunity to speak with you. All discussions would be confidential.

We welcome your contribution to this project and ask that you consider the brief questionnaire below. Our thanks in anticipation of your input.

On behalf of The Continence Foundation of Australia

Dr Wendy F Bower – Principal investigator
Ms Janet W Chase
Ms Fiona Dunham

Company Name: ________________________ Contact person: ________________________
Contact details: Tel ____________________ E-mail ________________________

Our company has collected data about incontinence; specifically (please tick all relevant options)

☐ prevalence statistics ☐ public opinion
☐ cost of management ☐ clinical studies
☐ cost comparisons ☐ other

We are prepared to assist the Continence Foundation of Australia – please send an email survey. We will be pleased to speak with / meet an investigator from the project team.

The most appropriate person to contact in our organisation is: ________________________

PLEASE RETURN BY FAX TO: 039 851 6652
Associated Trade / Commercial Bodies Involved With Aged Care or Disability

- National industry organisations:
  - Aged and Community Services Australia
  - Australian Nursing Homes and Extended Care Association (ANHECA) Ltd
  - National Industry Association for Disability Services

- State industry organisations:
  - Aged Care Services Association of NSW and ACT
  - Victorian Association of Health and Extended Care
  - Aged Care Queensland
  - Aged Care Tasmania
  - Aged-Care Organisations Association (SA and NT) Inc
  - Aged Care Western Australia
  - ANHECA QLD
  - ANHECA NSW
  - ANHECA VIC
  - ANHECA TAS
  - ANHECA SA
  - ANHECA WA
Appendix G

Non-Government Organizations And Service Providers

The following organizations were approached at a state and national level with a request for information about any research inclusive of continence issues. All feedback was followed up with a project questionnaire to identified researchers.

- Alzheimers’ Support Group
- Multiple Sclerosis Society
- Parkinsons Disease Association
- Allergy Association
- Allergies and Intolerant Reactions Association Inc
- Alzheimers Association
- Arthritis Foundation
- Association of Genetic Support
- Australian Brain Foundation
- Australian Cerebral Palsy Association
- Australian Quadriplegic Association
- Autistic Association
- Brain Injury Association
- Centacare Support Program
- Cerebral Palsy Association
- Charcot Marie Tooth Association
- Chronic Fatigue Syndrome Society
- Coeliac Society Inc.
- Colostomy Association of NSW Inc
- Diabetes Australia
- Epilepsy Association
- Freidreich's Ataxia Association
- Guillain Barre Syndrome Association
- Head Injury Council of Australia Inc
- Huntington’s Disease Association
- Ileostomy Association Inc
- Irritable Bowel Society
- Lupus Association Inc
- Motor Neurone Disease Association
- Multiple Sclerosis Society
- Muscular Dystrophy Association
- National Council on Intellectual Disability
- National Ethnic Disability Alliance
- National Stroke Foundation
- NSW Association for Mental Health Inc
- NSW Lymphoedema Network
- Nursing Mother's Association
- Osteoporosis Australia
- Parent to Parent Association
- Scleroderma Association Inc
- Spastic Centre
- Spina Bifida Association
- Spinecare Foundation
- Stroke Recovery Association
- Sydney Crohn's and Colitis Support Group
- Women with Disabilities Australia
Appendix H

Professional or Special Interest Bodies

An introduction to the current investigation was made to the following organisations and all feedback with respect to known continence research was followed up with a project questionnaire.

- Australian Medical Association
- Australian Nursing Federation
- Australian Nurses For Continence
- Association of Occupational Therapy
- Australian Psychological Society
- Australian Society of Geriatric Medicine and Australian Association of Gerontology
- Australian Urodynamics Society
- Blue Care Nursing Service
- Continence and Women’s Health Group of the Australian Physiotherapy Association
- Jean Hailles Foundation
- Key Centre for Women’s Health
- Psychology Registration Board
- Royal Australian College of Obstetrics and Gynaecology: Urogynaecology members
- Royal District Nursing Service
- Urology Nurses Association
- Urological Society of Australasia
Appendix I

Journals And Abstract Collections Reviewed For Australian Contributions

The following publications were reviewed for Australian content and identified authors informed of the current project and asked to complete a data collection questionnaire.

- Annual meeting proceedings of The International Continence Society 1990 - 2000
- Meeting proceedings of The International Urogynaecological Association 1990 - 2000
- Proceedings of Societe D’Urologie
- Proceedings of the scientific meetings of The Continence Foundation of Australia 1996 - 2000
- Journal of The Continence and Women’s Health Group of the Australian Physiotherapy Association
- Australian Ageing Research Directory 2000
Appendix J

Project Questionnaire

CONTINENCE NEEDS ANALYSIS Research Questionnaire

1) Which of the following best describes your service or institution:
   - TAFE / University
   - Hospital
   - Government community-based health service
   - Non-government organisation
   - Private Practice
   - Professional body
   - Commercial body

2) Have you or your staff / students ever been involved in any research into the problem of urinary or faecal incontinence in Australia?
   - Yes (please complete a separate copy of the following questions for each study identified)
   - No (Thank you for returning this questionnaire to the fax number or address indicated below)

3) What year was the research concluded / when do you expect to complete it? __________

4) What was the aim of the study? Please tick all relevant descriptions.
   - To identify prevalence of the disorder
   - To understand the psychosocial impact of incontinence
   - To investigate assessment of incontinence
   - To investigate current treatment
   - To trial / evaluate a new treatment
   - To identify service provision
   - To justify funding for a new service / staff increase
   - Other

5) What was the project investigating? ________________________________
   ________________________________
   ________________________________
   ________________________________
6) Was the study for educational purposes? i.e. assignment requirement / part of post-graduate study criteria

☐ Yes ☐ No

7) How was the project funded? ☐ Project was unfunded?
☐ Funded by your institution
☐ an outside body

8) Were the findings presented outside your institution?

☐ No
☐ Yes: local / regional seminar
☐ Yes: state meeting
☐ Yes: national meeting
☐ Yes: international meeting

Please give details of meeting at which research was presented: _____________________________

9) Were the findings published? ☐ YES ☐ NO

If yes, please indicate type of publication:
☐ newsletter
☐ meeting proceedings
☐ non peer reviewed journal
☐ peer reviewed journal

10) Reference of publication arising from research: _____________________________

12) Would you be willing to provide The Continence foundation with a hard copy of your study findings?

☐ YES ☐ NO
11) Please provide contact details of chief investigators:

Name (s): _______________________________________________________
E-mail (s): _____________________________________________________
Telephone number (s): ___________________________________________

We thank you for your contribution to this data bank of Australian Continence research.

PLEASE RETURN TO FAX NUMBER: 039 851 6652 /
PO BOX 1036 HUNTERS HILL NSW 2110

Note: The initial questionnaire was 2 pages but different formatting of report does not show this
### Appendix K

Key to data presented in table below:

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2 Hospital  
3 Government community-based health service  
4 Non-government organisation  
5 Private practice  
6 Professional body  
7 Commercial body |
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| AIM | 1 To identify prevalence  
2 To understand psychosocial impact of incontinence  
3 To investigate assessment of incontinence  
4 To investigate current treatment  
5 To trial / evaluate new treatment  
6 To identify service provision  
7 To justify funding / staff increase  
8 Other  
9 Basic science |
| CLINICAL AREA | 1 Prevalence  
2 Psychosocial impact  
3 Pregnancy, peri and post partum  
4 Bowel dysfunction and faecal incontinence  
5 Menopause  
6 Aged care  
7 Cost of incontinence  
8 Assessment of incontinence  
9 Conservative management  
10 Catheterisation  
11 Pharmacology  
12 Surgical management  
13 Basic science  
14 Voiding dysfunction  
15Interstitial cystitis  
16 Sexual dysfunction  
17 Education  
18 Other |
### APPENDICES

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INVESTIGATOR DETAILS
PA Moran, PL Dwyer, S Ziccone 03 94162469 pdwyer@hotkey.net.au

V11d 2 1998 8 Morphological basis to impaired detrusor contractility in women 2 2 1 4 Neurourol & Urodynamics 1998;17:308-309
M Carey 03 92215099

V11c 2 1997 8 Bladder microvasculature in women with Interstitial Cystitis 2 2 1 4 Neurourol & Urodynamics 1997;16;438-439
A Rosamilia 03 94162469

V11b 2 1997 8 Role of human detrusor muscle intercellular junctions 2 2 1 4 Neurourol & Urodynamics 1997;16;425-426
M Carey 03 92215099

V11a 2 1997 3 The sign of stress incontinence 2 2 1 4 AustNZ Obstet Gynaecol 1997;8:5;263-264
M Carey 03 92215099

V10k 2 1997 3 Non-absorbable sutures, a cause of morbidity following surgery for GSI 2 2 1 4 Int Urogynecol 1997;8,50
P Dwyer 03 94162469 pdwyer@hotkey.net.au

V10l 2 1997 3 Pain of Interstitial Cystitis 2 2 1 4 Iontophoretic lignocaine and hydrocortisone for
A Rosamilia 03 94162469

V10j 2 1997 3 Urinary kinin excretion in women with Interstitial Cystitis 2 2 1 4 Neurourol & Urodynamics 1997;16;337-378
A Rosamilia 03 94162469

V10i 2 1996 8 Electron microscopy of detrusor instability and controls 2 2 1 4 Neurourol & Urodynamics 1996;15:431-432
P Dwyer 03 94162469 pdwyer@hotkey.net.au

V10h 2 1994 3,4 Clinical and UD followup of women with incont after radical hysterectomy 2 2 1 4 AustNZ J Obstst Gyn 1994;34:557-561
P Dwyer 03 94162469 pdwyer@hotkey.net.au

V10g 2 1994 3 Impaired bladder emptying in women 2 2 1 4 AustNZ J Obstet Gyn 1994;34:73-78
P Dwyer 03 94162469 pdwyer@hotkey.net.au

V10e 2 1993 1,3 Urinary incontinence following radical hysterectomy 2 2 1 4 Neurourol and Urodyn 1993;12:429-430
P Dwyer 03 94162469 pdwyer@hotkey.net.au

P Dwyer 03 94162469 pdwyer@hotkey.net.au

M Carey 03 92215099

P Dwyer 03 94162469 pdwyer@hotkey.net.au

V8b 1 1999 4 Review of timed voiding and habit retraining 1 3 1 work in progress
J Ostaszkiewicz

V8a 1 1999 2 Quality of life for people with long term catheters in situ 2 3 4 CFA Meeting 1999 1 1 Aust Cont J 5,4:102
J Ostaszkiewicz 0414 975 440 j.ostaszkiewicz@pgrad.unimelb.edu.au

J Urol 1999:162: A Rosamilia 03 94162494

V5 2 0 1 Prev of urinary incont post radical retropubic prostatectomy 2 1 1 0 0 0 0 1 M Frydenberg 03 95091199 frydenberg@hcn.net.au

V4c 2 2000 4 Effect of endoanal stimulation on anorectal function and faecal incont 2 2,3 4 CFA Nat 2000 2 0 0 1 M Fynes 03 93452000

V4b 2 2000 5 Effect of percutaneous post tibial n stim'n for urinary urge I/c 1 2,3 4 CFA Nat 2000 2 0 0 1 M Fynes 03 93452000

V4a 2 2000 4 Prognostic factors for continence following TVT 1 2 4 CFA Meeting 1999 1 1 Aust Cont J 5,4:102
J Ostaszkiewicz 0414 975 440 j.ostaszkiewicz@pgrad.unimelb.edu.au

V3b 1,2, 1999 3 Development of checklist to asess bowel symptoms following childbirth 1 2 4 CFA Nat Conf 1999 in press 0 1 K Selleck 39479597 3 K.Selleck@latrobe.edu.au

V3a 2 1998 1,2,3 Bowel dysfunction (incl faecal incont) following vaginal obstetric delivery 1 3 4,5 Am Soc of Col & Rect Surg 99 2 0 0 1 J Keck 394193377 KECKJO@SVHM.ORG.AU

V2a 1 1998 1,2 Association b/w menopause and urinary incontinence 1 1 4,5 APA Congress 1998 2 0 0 1 M Sherburn 03-8344 8096 m.sherburn@physio.unimelb.edu.au

V1 1998 3 Asymm pudendal nerve damage in pelvic floor disorders 1 3 1 1 4 Int J Colorectal Dis 1988, 3:158-160
D Lubowski

D Lubowski

V2a 1986 3 Pudendal nerve motor latency with defecation and straining 1 3 1 1 4 Br J Surg 1988, 75:1086-1088
D Lubowski

V1a 1986 3 Urinary incontinence in women with prolapse and incontinent 1 3 1 1 4 Int J Colorectal Dis 1986;1:24-28
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<td>National Women's Health Group Journal APA, Nov 1989</td>
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<td><a href="mailto:meind@fl.net.au">meind@fl.net.au</a></td>
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Appendix L

Feedback from the consultative process with invited experienced continence clinicians from the professions of Geriatric Medicine, Gynaecology, Nursing, Physiotherapy, and Urology.

The following summary records the areas of research priority identified by invited clinicians after individual consideration of the findings from this project.

**GeriatriC Medicine**

1) Epidemiology of bowel problems
2) Poor awareness of incontinence among medical specialists e.g. neurologists -> concern for bladder function in patients with Multiple Sclerosis, Spinal Cord Injury, Parkinson’s Disease etc
3) A need for increased service provision and awareness in general hospitals
4) Ethnic issues (attitudes and needs) and appropriate service provision
5) Clinic-based intervention versus home management of elderly patients
6) Does early diagnosis and intervention minimise progression of symptoms, maintain quality of life and decrease eventual cost of continence management?
7) Alternative treatments in the elderly since drug therapy is known to be limited by intolerance at therapeutic levels
8) Interrelationship between urodynamic findings and symptoms in the elderly
9) Clarification of significance of bacteriuria in the elderly and its relevance to incontinence.
10) Optimal management and efficacy of treatment of urinary tract infection
11) Can general incontinence research be extrapolated to the elderly?
12) Is it valid to decrease effort of intervention with increasing age?
13) Optimal intervention for the frail elderly
14) Is treatment in the elderly likely to have greater benefits than treatment in younger people since the risks and costs of institutionalisation and falls are significantly greater in the older age individuals?
15) Debate of research investment versus service provision investment. Where it is known that patients respond to treatment, should money be directed towards more staff, greater skilling of staff and evaluation of the efficacy of different interventions rather than basic science?
16) Identify ways to maximise compliance and motivation in older patients
GYNAECOLOGY

1) High priority: continue investigation into connective tissue risks for prolapse and incontinence
2) Voiding dysfunction in long-term diabetics and the evaluation of a screening program in early disease
3) Post-partum urinary retention: evaluation of aetiology, screening and management
4) The effect of prolapse on voiding dysfunction
5) Nocturia: evaluation of the contribution from increased nocturnal output, instability and immobility in the elderly. Effective treatment of all contributing variables.
6) Address migrant information and service provision by investigating the difference in needs between elderly migrants and first generation / younger individuals
7) Evaluate sexual dysfunction post delivery and the efficacy of pelvic floor exercises in changing same
8) Little is known about the co-existing incidence of both faecal and urinary incontinence post partum not the long term effect of early onset of these symptoms
9) Investigate the relative gains of receptor-specific oestrogens on urogenital physiology and function
10) A randomised controlled trial of ECG and cardiovascular changes during Tolterodene use is urgently needed
11) Evaluate the relative gains in pelvic floor training in older / elderly women versus younger women
12) A randomised controlled trial of the efficacy of bladder re-training in patients with sensory urgency versus detrusor instability
13) Evaluate the role and clinical application of MRI and ultrasound in the assessment of urinary incontinence in i) the elderly and ii) early post partum women

NURSING

1) Increase nurse participation in research by addressing the limiting factors of i) cost of post graduate education and ii) resolution of historical medical / nursing issues
2) Need for more studies of the efficacy of preventative strategies
3) Evaluation of the impact of continence promotion initiatives
4) Prevalence of incontinence in men in the general population is unknown
5) Prevalence of incontinence in different migrant groups is largely unknown
6) Prevalence of faecal incontinence in the general population is unclear
7) Evaluation of intervention for male incontinence
8) Psychosocial impact of enuresis on families and affected children
9) Incontinence around the menopause and the effect of hormone replacement therapy
10) Basic incontinence assessment tools for use by any and all health professionals
11) Intermittent self catheterisation issues
12) Focus on identification of funding sources for clinicians

**PHYSIOTHERAPY**

1) Comparison of the efficacy of different regimes of pelvic floor exercises, as per known physiological principles.
2) Currently there is poor continuity of research or development of findings therefore investigate the establishment of a continence research co-ordinating body to encourage new researchers and to prevent duplication of endeavours
3) Minimal research exists into incontinence in specific diseases
4) Neglect of the impact of symptoms or intervention on female and male sexuality
5) Poor coverage of service provision
6) Limited studies of management of paediatric incontinence, the neurogenic bladder incontinence incontinence in the presence of disability - physical and intellectual
7) Evaluation of the impact of fatigue and low physical fitness on the efficacy of pelvic floor exercises
8) Evaluation of the efficacy of education and proprioception training in women with symptomatic urogenital descent
9) The effect of menopause on continence mechanisms
10) Need to promote scientific design and research among clinical physiotherapists
11) Evaluation of the efficacy of different pelvic floor regimes for varying conditions and in different age groups of patients
12) Evaluation of team management of complicated patients versus single clinician management

**UROLOGY**

1) Addition of continence education to undergraduate training so that skills are part of core education and not considered a post graduate specialty
2) Efficacy of community treatment versus clinic with respect to cost effectiveness as well as clinical outcome
3) Efficacy of group education and intervention versus individual consultation
4) Establishment of project design support service for continence professionals
5) Male continence issues are under represented especially with respect to i) post prostatectomy, ii) incidence and relevance to nursing home admission, and iii) prevention
6) Impact of incontinence on sexual dysfunction.
7) Does continence promotion change clinical outcome?
8) Urgent need to design and test better objective measures
13) Identification of robust outcome measures and their incorporation into randomised controlled trials of intervention for incontinence
14) On-going surgical evaluation especially: i) transurethral collagen in both males and females ii) prospective evaluation of the pubovaginal sling
15) Clinical trial of anticholinergics plus and minus pelvic floor exercises
16) Evaluation of the incidence and management of intrinsic sphincter deficit after hysterectomy
17) Longitudinal and cross sectional study of the association between menopause and urinary incontinence
## Appendix M

### Category A: Education and Information

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<thead>
<tr>
<th>ORGANISATION/S</th>
<th>PROJECT</th>
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<tbody>
<tr>
<td>Lions Club of Canberra City Inc and ACT Community Care</td>
<td>‘Healthy as a Lion’ - education sessions in Lions Clubs providing information about prostate and urological health to men.</td>
</tr>
<tr>
<td>Continence Foundation of Australia - Victorian Branch Inc</td>
<td>(1) A pilot project to conduct videoconferencing linking health services in rural and remote Australia with Melbourne-based multidisciplinary continence services (2) Development of a simplified client questionnaire and health care worker continence assessment tool.</td>
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<tr>
<td>LaTrobe University School of Nursing</td>
<td>Development of a Computer Assisted Learning Package on continence issues for personal care workers in residential aged care.</td>
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<tr>
<td>Continence Clinic, Wangaratta District Base Hospital</td>
<td>‘Incontinence Prevention Roadshow’ providing information to women in rural workplaces.</td>
</tr>
<tr>
<td>Ovens Valley Physiotherapy</td>
<td>Pilot educational project on ‘Continence Through Life’s Stages’ targeting continence information to mothers of kindergarten/ pre-school children.</td>
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<tr>
<td>Pharmaceutical Society of Australia</td>
<td>‘Preventing Incontinence’ project to develop continence information cards and articles targeted to pharmacists and pharmacy staff.</td>
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### Category B: Preventative Approaches

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<tr>
<td>Royal Australian College of General Practitioners</td>
<td>A Longitudinal Prospective Study into the prevalence and determinants of stress incontinence in pregnancy and post-childbirth.</td>
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<tr>
<td>Flinders University School of Nursing</td>
<td>Investigation of Lower Urinary Tract Symptoms and Faecal Incontinence in the Prison Populations</td>
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<tr>
<td>Women’s Health Victoria Inc</td>
<td>‘Strengthen Your Inside!’ - Fernwood fitness instructors incorporating pelvic floor consciousness in fitness routines</td>
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<td>Edith Cowan University International Office for Men’s Health and Gender Studies</td>
<td>A Men’s Health Gendered Approach to Continence Education, Management and Community Promotion: Development of a Best Practice Model</td>
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<tr>
<td>Ballarat Health Services</td>
<td>Research into the optimum time to deliver pelvic floor education to new mothers</td>
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### Category C: Testing the cost-effectiveness of different treatment approaches

<table>
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<tr>
<th>Institution</th>
<th>Project Description</th>
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<tbody>
<tr>
<td>University of Queensland Department of Surgery</td>
<td>Transurethral Electrical Stimulation for the Treatment of Genuine Stress Incontinence</td>
</tr>
<tr>
<td>University of South Australia Division of Health Science, School of Nursing and Midwifery</td>
<td>Acupuncture to Treat Incontinence in Adult Australian Women: A Randomised Controlled Trial</td>
</tr>
<tr>
<td>Griffith University, Faculty of Nursing and Health</td>
<td>Making Links: Evaluation of an Integrated Multi-Disciplinary Community-Focused Model of Service Delivery for Intersectoral Transition and Community Support for People Suffering Urinary Incontinence in the Gold Coast Region</td>
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<tr>
<td>Sir Charles Gairdner Hospital (WA) University Department of Nursing Research</td>
<td>Randomised, Controlled Trial to Evaluate the Effect of an Electronic Monitoring Device in Decreasing Urinary Incontinence in Elderly Patients in an Acute Care Setting</td>
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<tr>
<td>St. George Hospital</td>
<td>Extracorporeal Magnetic Stimulation for the Treatment of Urge Incontinence</td>
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### Category D: Mechanism to support people who care for people with incontinence

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<tr>
<td>Royal District Nursing Service (St. Kilda)</td>
<td>A Care Model for Management of Faecal Incontinence for Clients Receiving Care in their Home</td>
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<tr>
<td>Royal District Nursing Service of South Australia Inc</td>
<td>Development of a Carers Continence Management and Treatment Information Package for Carer In-Home Continence Management and Treatment</td>
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<tr>
<td>LaTrobe University - Clinical School of Advanced Nursing Practices and Caulfield General Medical Centre - Caulfield Continence Service</td>
<td>Patient and Carer Self-Reported Incontinence Evaluation: Providing Guidance for Management and Interventions</td>
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<td>LaTrobe University - Clinical School of Advanced Nursing Practices and Caulfield General Medical Centre - Caulfield Continence Service</td>
<td>Continence Resource Group: Support for Hostel and Residential Care Workers</td>
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### Category E: Program targeting groups with special needs

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<td>Three Sticks Consultants</td>
<td>Continence Management in the Aboriginal and Torres Strait Islander Community</td>
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<tr>
<td>Ethnic Community Care Links Inc</td>
<td>Project to develop a best practice demonstration model that addresses identified gaps and recommends culturally appropriate continence management and prevention for ethnic communities.</td>
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<td>Council of Aboriginal Elders of South Australia Inc</td>
<td>The Development of a National Continence Training Package for Aboriginal and Torres Strait Islander Health Workers</td>
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<td>Intellectual Disability Services Council SA and Minda Inc</td>
<td>Continence education and training package for people with an intellectual disability</td>
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<tr>
<td>Spina Bifida Foundation of Victoria</td>
<td>Implementing Effective Continence Management Strategies for Young Adults with Spina Bifida/Hydrocephalus</td>
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