

# Management of urinary incontinence in residential care

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## Background

Urinary incontinence is prevalent in residential care and rates are expected to increase with the ageing population in Australia. It contributes to poor quality of life (QoL), functional impairments in activities of daily living, and deterioration of mental and sexual health. Management depends on the type of incontinence, its aetiology, the severity of symptoms, the effects on QoL, and patient factors. Treatment options include active treatment and passive containment. However, not all active treatment options are feasible in residential care. There is little evidence to advise on standard best practice.

## Objective

The aims of this article are to review treatment options for urinary incontinence in residential care, feasibility of service delivery and challenges associated with this.

## Discussion

A greater understanding of the issues surrounding the management of urinary incontinence in residential care is required to deliver satisfactory patient-centred care on a consistent basis.

The International Continence Society defines urinary incontinence as 'the complaint of any involuntary leakage of urine', which stands alongside an older definition of 'involuntary loss of urine that is a social or hygienic problem'.<sup>1</sup> There are three subtypes of urinary incontinence – urge, stress and mixed – and other less common subtypes of overflow and functional incontinence (Table 1).<sup>2</sup> Urinary incontinence is not a physiological part of ageing, although age-related changes in the urinary tract and other factors related to ageing leave older adults more susceptible.<sup>3</sup> Being incontinent directly and indirectly increases the risk of falls and related fractures, thus increasing morbidity and mortality.<sup>3</sup> It is associated with poorer quality of life (QoL), functional impairments in activities of daily living, deterioration of mental and sexual health, and sleep disruptions, and has an impact on residential outcomes.<sup>3,4</sup> According to 87% of aged care assessment team respondents, incontinence is a significant deciding factor for transition to living in residential care.<sup>5</sup>

## Burden of disease

Residential aged care facilities (RACFs) provide 'respite or permanent care for frail or disabled people who can no longer live in their own homes, combining residential, personal and nursing care for 9% of Australians'.<sup>6</sup> The estimated occupancy rate is 92% and is forecasted to remain high given the ageing Australian population.<sup>6</sup>

Current epidemiology data and total cost of incontinence in RACFs are likely to be under-estimated because incontinence is under-reported, under-screened and under-treated. Exact numbers are scant because there is a lack of research, particularly relating to faecal incontinence alone. Urinary incontinence incidence rates are estimated to be 27% after being in RACFs for two months.<sup>5</sup>

The prevalence of incontinence in RACFs is significantly higher than in the general population because of the aged demographic with deteriorating cognition and function, impaired mobility and accumulated comorbidities, all of which are proven risk factors for incontinence.<sup>7</sup> In 2009, three out of four people living in cared accommodation in Australia had severe incontinence and needed assistance with managing their bladder or bowel control.<sup>5</sup>

The cost of incontinence in Australia was estimated to be \$1.6 billion in the 2008–09 financial year, with residential care expenditure contributing \$1.3 billion.<sup>5</sup> This formed about 30% of the total residential aged care government subsidy. In that same period, the federal government provided \$31.6 million for the Continence Aids Assistance Scheme (CAAS), which represented an average increase of 34.6% per year from 2006–07.<sup>5</sup> A national burden of disease analysis, which takes into account prevalence estimates, severity data and disability weights, concluded that residents in care lost 39,200 healthy life years as a result of incontinence.<sup>5</sup>

**Table 1. Types of urinary incontinence**<sup>1,2,3,23,24</sup>

Type	Symptoms	Pathophysiology	Common aetiologies
Urge	<ul style="list-style-type: none"> <li>Involuntary leakage accompanied by strong desire to void ± frequency and nocturia</li> <li>Patient typically loses urine on the way to toilet and certain activities (running water, cold weather, etc) can trigger urine loss</li> <li>Volume of urine loss is variable</li> </ul>	Detrusor overactivity or instability	<ul style="list-style-type: none"> <li>Urinary tract infection</li> <li>Atrophic vaginitis, stroke</li> <li>Spinal cord injury</li> <li>Parkinson's disease</li> </ul>
Stress	<ul style="list-style-type: none"> <li>Involuntary leakage due to increases in intra-abdominal pressure on effort or exertion (eg on laughing, sneezing, coughing and lifting)</li> <li>Patient can usually predict which activities will cause leakage</li> <li>In severe cases, it occurs with minimal activity (eg walking, standing from sitting) and limited awareness of leakage</li> </ul>	Pelvic floor/bladder neck weakening or internal sphincter dysfunction from increased urethral mobility	<ul style="list-style-type: none"> <li>Childbirth</li> <li>Obesity</li> <li>Post-prostatectomy</li> </ul>
Mixed	<ul style="list-style-type: none"> <li>Involuntary leakage associated with features of urgency and stress incontinence</li> </ul>	Combination of the above	<ul style="list-style-type: none"> <li>Combination of the above</li> </ul>
Overflow (urinary retention)	<ul style="list-style-type: none"> <li>Involuntary leakage with loss of fullness sensation from an overdistended bladder</li> <li>Associated with obstructive symptoms such as dribbling, hesitancy and poor stream</li> <li>Patient often feels that there is incomplete bladder emptying</li> <li>Tends to occur with post-void residual volumes of &gt;300 mL</li> </ul>	Overdistention of the bladder from impaired detrusor contractility or bladder outlet obstruction	<ul style="list-style-type: none"> <li>Anticholinergic agents</li> <li>Benign prostatic hyperplasia</li> <li>Pelvic organ prolapse</li> <li>Diabetes mellitus</li> <li>Multiple sclerosis</li> <li>Spinal cord injuries</li> <li>Faecal impaction</li> <li>Prostatomegaly or pelvic mass</li> </ul>

**Table 2. Assessment of urinary incontinence**<sup>1</sup>

Stages of assessment	Summary of key points
History	<ul style="list-style-type: none"> <li>Genitourinary system</li> <li>Sexual function</li> <li>Other relevant medical history</li> <li>Medication history</li> <li>Obstetric and menstrual history</li> <li>Social history</li> <li>Functional status</li> <li>Impact of incontinence on quality of life</li> </ul>
Physical examination	<ul style="list-style-type: none"> <li>General status</li> <li>Abdominal examination</li> <li>Pelvic examination</li> <li>Relevant neurological examination</li> </ul>
Initial tests	<ul style="list-style-type: none"> <li>Urinalysis</li> <li>Bladder diary</li> <li>Renal function</li> <li>Bladder scan estimating post-void residual urine</li> <li>Cough stress test</li> </ul>
Follow-up tests	<ul style="list-style-type: none"> <li>Imaging of pelvic and urinary tract with plain films, ultrasound, computed tomography or magnetic resonance imaging</li> <li>Endoscopy</li> <li>Urodynamic testing</li> </ul>

## Management of urinary incontinence

Management depends on the type of incontinence, its aetiology, the severity of symptoms, the effects on QoL and patient factors (eg cognition, functional status, medical history). As with other geriatric syndromes, the cause of urinary incontinence is often multifactorial and requires a comprehensive approach. A valuable online resource for general practitioners (GPs) that provides clinical guidelines for the assessment and management of urinary incontinence (*Medical care of older persons in residential aged care facilities* [the Silver book]) can be found on The Royal Australian College of General Practitioners (RACGP) website.<sup>8</sup> A summarised assessment of urinary incontinence is shown in Table 2.

A few practical points are worth reiterating – managing fluid and caffeine intake, treating constipation (given the

complex interplay between bladder and bowel function) and minimising certain medications that can induce incontinence (eg diuretics, calcium channel blockers, alpha-adrenoceptor antagonists, antipsychotics, benzodiazepines, antidepressants and hormone replacement therapy).<sup>9</sup>

Urinary tract infections (UTIs) may lead to or worsen existing urinary incontinence, and thus should be treated appropriately with antimicrobials.<sup>10</sup> The challenge is often with diagnosis rather than treatment, given the low sensitivity and specificity rates of current diagnostic criteria for nursing home residents.<sup>1</sup> Asymptomatic bacteriuria (ASB) is a common occurrence in RACFs and antimicrobial therapy does not result in improved outcomes.<sup>11</sup> On the contrary, there is potential for harm from side effects of antimicrobials and the development of resistant organisms, thus treatment of ASB (unlike true UTIs) is not recommended.<sup>11</sup>

### Considerations in residential care

Incontinence may be under-reported in RACFs because of deteriorating cognition or poor communication abilities. A large proportion of older people in Australia were born overseas, thus creating a cultural and language barrier. There is often an element of shame, fear and stigma associated with asking for assistance, particularly from unfamiliar carers.<sup>7</sup> Continence care is a recognised activity that provokes anxiety among cognitively impaired residents.<sup>12</sup>

Care in Australian RACFs is provided by a total workforce of 133,000 employees; these are nurses (registered or endorsed) and personal care assistants,<sup>12</sup> many of whom are overseas-trained and bring along their own set of cultural-ethnic and professional diversities. There is often minimal formal education about incontinence and its management, which leads to varying levels of skill and experience. High turnover rates from difficulties in retaining skilled staff lead to carers being unfamiliar with their working

environment and also to vulnerable residents having to adapt to frequent personnel changes. In the past decade, the number of full-time care staff in RACFs has increased by 25%, but registered nurse employment has decreased by an alarming 14%.<sup>13</sup>

As part of a government initiative, specialised assessment tools, which are readily available online, have been developed; these consist of a continence screening form, management flow chart, bladder and bowel charts, assessment and care plan, and continence review form.<sup>12</sup> These tools are evidence-based, comply with professional and accreditation standards, and have recently been

evaluated to be well received by residential care staff.<sup>12</sup>

The various treatment options for incontinence (Table 3, Box 1) may not apply to all residents in the residential care setting. Very few studies have looked at the efficacy of active treatment options in the residential care setting, but it seems that toileting assistance programs have the most promise in reducing incontinence.<sup>14</sup> However, this can be a labour-intensive approach – a compliance rate of 61% was reported in one trial<sup>15</sup> with rates likely to be poorer outside the trial period. Implementing a toileting program and maintaining accurate voiding records remain the biggest

**Table 3. Overview of treatment options for urinary incontinence<sup>1,2,14,16</sup>**

Treatment options*		
Active treatment	Lifestyle interventions	Weight loss, smoking cessation, fluid reduction, constipation management
	Physical therapies	Pelvic floor muscle training and vaginal cones
	Behavioural therapies	Bladder training, prompted or scheduled voiding
	Mechanical devices	Continence pessaries, urethral plugs
	Medications	Anticholinergic agents, alpha or beta adrenoceptor agonists, serotonin–norepinephrine reuptake inhibitors, botulinum toxin A For women: intravaginal topical oestrogen For men: alpha adrenoceptors antagonists, 5-alpha reductase inhibitors
	Electrical or magnetic stimulation	Targeting posterior tibial nerve or sacral nerve
	Minimally invasive procedures	Radiofrequency denaturation of the urethra, injection of periurethral bulking agents
Passive containment	Surgery	For women: sling procedures, colposuspension, urethropexy For men: prostatectomy, artificial urinary sphincter, male sling
	Pads – disposable or reusable	Urinals
	Catheters – urethral or suprapubic	Bedpans
	Condom drainage	Commodes
	Bed protection products	

\*Specific treatment options may not apply to all types of urinary incontinence

**Box 1. Indications for specialist care referral**<sup>24,2</sup>**Clinical conditions**

- Haematuria
- Suspected pelvic mass or urogenital fistulae
- Symptomatic prolapse
- Palpable bladder after voiding
- Persistent pelvic pain
- Suspected neurological disease
- Voiding difficulty
- Previous continence surgery or pelvic cancer surgery
- Poor response to conservative management
- Unclear type/diagnosis of incontinence

**Patient factors to consider**

- Severity of symptoms
- Psychosocial impact of symptoms
- Likelihood of future improvement with therapy
- Goals and treatment preferences
- General fitness for invasive procedures

challenges for carers.<sup>15</sup> Poor access to ancillary continence services (eg nursing, physiotherapy) further compounds the problem. Although there is some early promise, there remains an insufficient body of evidence to suggest that bladder training should be mandatory treatment for urinary incontinence.<sup>16</sup>

For women, in general, pelvic floor muscle training (PFMT) remains first-line treatment for urinary incontinence and can improve urinary symptoms and QoL.<sup>17</sup> However, those with cognitive and functional impairment in RACFs may struggle to perform PFMT. The majority of trials for PFMT revolve around the perinatal period, and few studies have focused on geriatric patients, particularly those living in residential care settings.<sup>16</sup> There is a lack of good-quality evidence that PFMT makes a positive difference when it is added to another active treatment for all types of urinary incontinence in women.<sup>18</sup>

A systematic review investigating the management of incontinence in residential care found that non-invasive methods involving toileting and use

of pads were common management approaches; no studies aimed at maintaining continence.<sup>19</sup> This speaks about the perceived irreversibility of the condition, which unfortunately is often the case in residential care where researchers and clients both seem to have accepted this.<sup>7,12</sup> Goals of continence care needs to be discussed with the resident or a surrogate decision maker, taking into account what is practically feasible for carers to provide.

In a comparative study of residents, family members and nursing staff, residents preferred medications to diapers, keeping in line with reported wishes of 'feeling dry, being natural, not causing embarrassment, being easy and not resulting in dependence'.<sup>20</sup> In this case, the old adage of 'start low, go slow' should prevail, given the potential for side effects in this already vulnerable population. Anticholinergics can cause confusion, dry mouth and constipation, and can interfere with the positive effects of cholinesterase inhibitors used for the treatment of dementia. The 'new kid on the block' that has yet to receive government subsidy is mirabegron, a beta-3 adrenoceptor agonist that relaxes the detrusor smooth muscle, thus increasing bladder capacity. It is as effective as anticholinergics and has a more favourable side effect profile, but it should not be used in severe or uncontrolled hypertension.<sup>21</sup>

Invasive procedures for diagnostic or therapeutic purposes remain unpopular among residents in RACFs. Detailed discussions about potential benefits versus the likelihood of adverse outcomes need to be conducted prior to making such decisions.

It remains crucial that, whenever possible, a resident is able to decide on their preferred treatment. In RACFs, facility staff add a different dimension to the equation. This could involve different levels of the organisation, from executive management with particular financial and regulatory interests, clinical managers who have performance indices to comply

with, and carers who themselves are of varying levels of skill and experience. Often, a patient's preference on continence care is sidelined for practicality of care to be provided on a daily basis.

RACFs abide by a government-funding model that 'incentivises higher levels of incontinence' causing some staff to focus on 'securing funding and avoiding sanctions' rather than providing optimal care.<sup>22</sup> Over-reporting of incontinence rates during particular assessment periods for funding is prevalent.<sup>22</sup> A change from 'rewarding' higher rates of incontinence to supporting efforts made to improve continence and manage incontinence is warranted.

**Conclusion**

Urinary incontinence in RACFs is prevalent and remains a challenge to manage. The dearth of research provides much ambiguity about best standard practice and more high-quality studies are needed to support implementation of treatment options. For the medical practitioner involved, an appreciation of various factors and factions in RACFs will increase the chances of success in providing satisfactory care.

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