

## 7. Psychosocial impact of urinary continence

It might seem self-evident that incontinence has a psychosocial impact on the individual. However, it is valuable to consider the reasons for this, because it may guide the type and quality of support which may be offered.

Sociologists have suggested that modern social norms require us to achieve mastery and control over our bodies (Brittain & Shaw, 2007). Success in achieving valued social status and roles is partly dependent on one's looks, apparent self-reliance and maturity, which helps to explain why people with disabilities find it difficult to establish themselves in valued social roles (Wolfensberger, 1998). A breakdown in the physical body is accompanied by a risk to an individual's social roles. If a body's boundaries are violated or broken, it can signal not only physical distress, but also a social and psychological loss. Incontinence violates the individual's boundaries through leakage of both fluids and of odours which may not be easily concealed, and thus immediately exposes the person's private life to the public. Extra vigilance on the part of the individual and the carer/s is required to ensure that dignity and autonomy is not compromised (Brittain & Shaw, 2007). Psychosocial impacts must be carefully assessed because urinary incontinence has a significant impact on an individual's quality of life.

### Point of Interest

**Self-rated health is a significant and reliable measure of an individual's actual health status. In a group of older community-dwelling people, the presence of urinary incontinence was linked with 'poor' self-rated health. It was found that people with more severe urinary incontinence were significantly more likely to rate their health as poor** (Johnson, Kincade, Bernard et al., 1998).

The impact of urinary incontinence on quality of life (QoL) varies significantly depending on factors related to the timing and setting of symptoms. Women are more likely to have high impact scores if they had night-time incontinence, coital incontinence, or co-morbid faecal incontinence, suggesting that the particular context in which women's incontinence occurs may be as important as the clinical severity of their symptoms in determining QoL impact. As a result, current approaches to evaluating incontinence, which emphasise identification of the clinical type of incontinence and screening for modifiable risk factors, may fail to identify those factors that determine whether incontinence is truly disruptive to women's lives (Huang, Brown, Kanaya et al., 2006).

### Good Practice Point

*Clinicians seeking to evaluate the impact of incontinence on people's lives should assess not only the clinical severity of their symptoms but also the specific context in which symptoms occur* (Huang, Brown, Kanaya et al., 2006).

People with urgency and urge incontinence frequently have symptoms of anxiety and depression, with anxiety being both a risk factor and a consequence of urge urinary incontinence. The anxiety created by the fear of incontinence may cause a physical symptom, because the individual's attention becomes focused on bodily events such as bladder fullness and overwhelming urgency. This in turn leads to behaviours such as frequent visits to the

toilet, staying near the toilet, avoidance of new places caused by uncertainty regarding toilet facilities, and limiting fluid intake. These behaviours then reinforce misbeliefs about bladder control and bladder weakness, and a belief that the individual will wet him/herself in public. The anxiety therefore increases, causing a spiral of behaviours which reinforce the anxiety. This pattern has emotional, social and treatment consequences. Emotionally, there may be increased depression and shame. Socially, the individual may become more isolated and stigmatised, with less social and/or intimate interactions with others, and may be fearful of institutionalisation if dependent on carers (Perry, McGrother, Turner et al., 2006; JF. Wyman, Harkins, & Fanti, 1990). The treatment consequences include refusal to seek help, having low expectations of services, and low motivation to follow through a treatment plan (Perry, McGrother, Turner et al., 2006).

Continence, in addition to being affected by the lower urinary tract, is also dependent on an individual's perceptions, beliefs, assumptions and expectations about his/her ability to control urination – the motivation and confidence about (re)learning new skills, the ability to face his/her fears and cope with failures, and the level of support and resources available for assistance. While behavioural models for managing continence have focused on relearning or imitating good toilet behaviour, such interventions do not take into account the fact that imitation in itself does not necessarily instil confidence and the ability to deal with different situations competently. An individual may still believe he/she has a weak bladder and will therefore limit rather than broaden participation in social activities. Thus, interventions need to acknowledge the feelings associated with incontinence as well as changing behaviours and physiology (Perry, McGrother, Turner et al., 2006).

## Point of Interest

**Individuals with incontinence often have negative automatic thoughts about their problem. These include feelings of lack of control – shame, disgust, and self-blame associated with the problem; a feeling that others blame them for their problem; resignation to its inevitability and an associated sense of loss; and a certainty that one's life is forever changed. It is therefore important that any interventions also focus on non-pathological thinking to replace pathological thinking** (Dowd & Dowd, 2006).

Understanding the factors that affect individuals' perceptions is important because these perceptions affect treatment expectations, which may predict treatment outcomes. Many people with bladder conditions attempt to "normalise" their condition, developing ways to manage and adapt to the symptoms rather than seeking medical attention. For these individuals, seeking medical help requires the often difficult admission that incontinence is not normal (Marschall-Kehrel, Roberts, & Brubaker, 2006).

### 7.1 Attitudes to incontinence: impact on help-seeking behaviour

Despite regular contact with health professionals, it has been found that few older people disclose their urinary incontinence (Horrocks, Somerset, Stoddart et al., 2004), with Keilman (2005) estimating that fewer than 50% of individuals experiencing urine leakage report the problem to their health care provider (Keilman, 2005). This may be due in part to the common myth that urinary incontinence is a normal part of ageing (Horrocks, Somerset, Stoddart et al., 2004), but other reasons may include embarrassment, fear of facing one's own mortality, fear of taking another medication, expense, the belief that there is no effective treatment, and fear of surgery (Keilman, 2005). The fear of needing surgery increases significantly with

age, with women over 65 years twice as likely to delay treatment as women less than 35 (Marschall-Kehrel, Roberts, & Brubaker, 2006).

Help seeking among elderly women is determined by symptom duration, co-morbidities, and severity of urinary incontinence, whereas help seeking in men is mostly determined by the frustration and anger experienced in daily life. Failure to initiate discussion of overactive bladder symptoms does not mean that the individual is not bothered by these symptoms (Marschall-Kehrel, Roberts, & Brubaker, 2006). Other factors which may impact on help-seeking behaviour are age, race and socioeconomic status (Huang, Brown, Kanaya et al., 2006; Marschall-Kehrel, Roberts, & Brubaker, 2006) and impact on quality of life (Huang, Brown, Kanaya et al., 2006).

A study of 2100 older women from California, USA, found the prevalence of treatment seeking for incontinence issues was low across all ethnic groups, even when the women had clinically severe symptoms and access to a health provider. The authors hypothesise that this may be because many women regard incontinence as more of a personal self-care or hygiene problem than a true medical condition, and hence manage it privately (Huang, Brown, Kanaya et al., 2006).

Persistent symptoms of incontinence, prolapse or sexual dysfunction influence psychological, economic and social aspects of everyday life. These can progressively and negatively impact on a woman's self-image, self-identity and self-control. Because denial is commonplace and embarrassment acute, many women go to extreme lengths to hide or cope with their symptoms. Over time, women may become restricted by their symptoms and increasingly isolated within this internal world, thus creating an uncertain future. Often it is a series of social or personal events through which symptom severity and intolerability 'trigger' help seeking behaviour. The trigger thus transfers the 'hidden' problem into the public domain. Inappropriate assessments, delays, multiple referrals and repetitive consultations with different practitioners can result in sub-optimal treatment(s) and may fall short of the woman's expectations and level of satisfaction (Davis & Kumar, 2003).

In the older man who has incontinence, commercial feminisation of urinary incontinence may create an added psychological dilemma. Media and health campaigns are directed primarily toward older women as the major consumers. Thus, older men who have incontinence may perceive this disease as a threat to their masculinity, family and societal roles. Men are less likely to be asked about incontinence than women. It has been reported that men cope far less efficiently with self-care and domestic practices surrounding continence management, and therefore older men with urinary incontinence are at increased risk of psychosocial difficulties (M. Wilson, 2004).

### **Good Practice Point**

*Shame and embarrassment combined with attitudes to disclosure about personal matters prevent people from seeking advice (Horrocks, Somerset, Stoddart et al., 2004). There is a need to educate older people in that they do not have to accept urinary incontinence. Something can be done about it (Dingwall & Mclafferty, 2006).*

## 7.2 Cultural beliefs

Understanding and negotiating cultural factors is important, because urinary incontinence can lead to social isolation and health care issues (Sange, Thomas, Lyons et al., 2008). Gender, religion, and family structure may influence an individual's willingness to divulge health concerns.

[Link to Section 4.10](#)



People from culturally and linguistically diverse (CALD) backgrounds may experience extreme embarrassment and shyness related to continence issues, and many will not discuss incontinence issues with a member of the opposite sex. Some cultures demand that women should not expose certain bodily parts to any men except their husbands (Rizk & El-Safty, 2006). Indeed, even drawings and pictures of the human genital area, particularly of the opposite gender, may be offensive to people of different cultural backgrounds (Abdelsalam, el-Mekawi, & Mustafa, 2009).

Poor access to continence services may be partly due to cultural and language barriers and/or a lack of awareness of the services available. Incontinence is less often discussed in CALD communities and there may not be words in their own language with which to talk about it (Rowan, 2003).

Bilingual clinicians can be difficult to find, and they may be geographically distant. Use of interpreters from the same cultural-ethnic group as the patient may be problematic as the person may be afraid that, despite confidentiality rules, information about his/her condition may pass into their community (Abdelsalam, el-Mekawi, & Mustafa, 2009). When relatives are used as interpreters, personal details which the patient may not be willing to share with family members for fear of embarrassment may inadvertently be disclosed. Husbands may be included as people to whom the woman would not disclose the condition for fear of their reaction. This can lead potentially to clinical mismanagement (Gammack, 2004; Sange, Thomas, Lyons et al., 2008).

A literature review of the psycho-cultural meanings reported by women who experience urinary incontinence has indicated similarities in the psychological meaning of urinary incontinence for women living in different cultures, ethnic groups and social conditions, and between narratives of western and eastern women, with all women experiencing their body as being uncontrolled, resulting in feelings of insecurity, despair and powerlessness (Higa, Lopes, & Turato, 2008). The process of leakage and cleansing can negatively impact on the individual's psychological health, as it brings with it associations of guilt, shame, punishment (Sange, Thomas, Lyons et al., 2008), and a feeling of being unattractive to one's partner (Abdelsalam, el-Mekawi, & Mustafa, 2009).

Cultural perceptions and language barriers have a great impact on the health care system with the ageing immigrant population. The roles of elders, men and women in various cultures can impact on the approach to urinary incontinence, and overcoming the frequent perception that incontinence is a normal part of ageing or is shameful can be even more challenging when accounting for cultural beliefs (Gammack, 2004). In many cultures, urinary incontinence is viewed as evidence of social incompetence, so the onset of urinary incontinence in such cultures may adversely affect self-esteem in the older adult. Among men in patriarchal cultures who traditionally occupy a central and dominant family role, this perception of incompetence may be magnified, with urinary incontinence being viewed as evidence of self-neglect, uncleanliness or poor self-discipline (M. Wilson, 2004). In other cultures, being incontinent is akin to being unclean. This may interfere with religious practices (Rizk & El-Safty, 2006; Sange, Thomas, Lyons et al., 2008).



## Good Practice Point

When discussing incontinence with individuals from CALD backgrounds, consider the following:

- Enable the individual to speak with a health worker of the same gender about continence issues
- Take time to build rapport with the individual
- Learn about cultural differences
- Be open and willing to learn from the individual about his/her beliefs and values
- Respect cultural differences, even if they clash with your own personal beliefs and values
- Treat people as individuals
- Beware of stereotyping.

(Rowan, 2003)

### **7.2.1 Indigenous Australians and incontinence**

Indigenous health is one of the key Australian National Health Priority areas, and individuals with incontinence symptoms require focused health care to address the contributing factors and associated problems.

No specific research has been published on Australian Indigenous people with bladder and bowel incontinence. However, incontinence is common among Indigenous Australian people due to the complexity and high incidence of chronic disease conditions such as diabetes, obesity, heart disease, respiratory disease, renal disease, alcohol and substance abuse, mental health conditions and many other diseases. The link to incontinence as a symptom of many chronic diseases is neither well known nor understood by the Indigenous community. Key factors for improving continence for Indigenous people are to raise awareness of the condition and to promote individual help seeking behaviour, by using focused education and primary prevention initiatives.

In the Indigenous community, there is a tendency for people to suffer in silence without family support, because incontinence is not talked about. Shyness, shame and embarrassment are experienced by many Indigenous Australians who have incontinence issues, creating a barrier to seeking help (Quintal, 2003). The gender of the health worker is important, as incontinence is regarded as ‘women’s business’ and ‘men’s business’, meaning that women only talk to women and men only talk to men about their problem (Australian Government Department of Health and Ageing, 2004).

It is important to provide culturally appropriate care to Indigenous Australians and acknowledge the diversity of cultural needs within this group in all aspects of continence care. The key is to ensure confidentiality and work in collaboration with the individual, their family, health care workers, local elders and Indigenous community organisations. Indigenous people often have difficulties accessing treatment and services for continence problems due to personal spiritual beliefs, lifestyle and geographic factors. Clinicians can use Indigenous health workers, other professionals and Indigenous elders, and talk through a third person to assist with “sideways” talking when working with Indigenous people. This may assist with sensitivity and cultural needs, thus improving access to continence service use and care. However, a strong family hierarchy can make accessing assistance difficult. Speaking on behalf of others is generally not part of the Indigenous culture. Shame can be experienced as a result of advocating on behalf of another individual, and this may impact on Indigenous health workers, who may be separated from their community if they violate

the hierarchical structure. The high tolerance for negative experiences and low expectations of services also impacts on help seeking behaviour for the individual and for others (Kendall & Marshall, 2004).

When assessing and talking to an Indigenous person, there are specific factors to consider that may be of assistance for the best achievable outcome. This includes seeking permission to discuss incontinence, and building a relationship with the individual while proceeding slowly. The clinician needs to watch for signs of negative body language such as the down casting of eyes and turning away which may indicate the person is feeling uncomfortable. Try asking simple questions to open up discussion and obtain answers, and don't assume anything.

The use of simple common local language, terms and discussing the condition using appropriate pictures and printed materials is recommended. Invasive procedures require thorough explanation using drawings and pictures to simplify the task. This will assist in ensuring the information provided is better understood. It is important to consider that Indigenous people often say yes to be polite, but may not actually understand what is meant. If the person is living in a communal house with many others, consider personal privacy, space, and the family situation when discussing bladder and bowel health issues.

Aim for small achievable goals and changes in lifestyle habits to obtain the best outcome. As with all people, clinicians must treat the individual as an individual, and gear teaching to suit the individual's needs. It is recommended that information and advice is as precise and factual as possible, while offering practical solutions for care whenever possible. Use of an untrained interpreter may result in filtering of information and consequent misinformation due to embarrassment on the part of the interpreter. (Sutherland, 2009).



### Good Practice Points

*Specific resources addressing incontinence for Indigenous people have been developed, using information that is simplified and in culturally appropriate language. These resources need to be promoted and made widely available. Individuals are encouraged to source these resources through the National Continence Helpline on 1800 33 00 66, the Continence Foundation of Australia ([www.continence.org.au](http://www.continence.org.au)), the Australian Government Department of Health and Ageing ([www.bladderbowel.gov.au](http://www.bladderbowel.gov.au)), and the HACC/MASS Continence Project [www.health.qld.gov.au/mass/docs/resources/continence/haccmasscontresources.doc](http://www.health.qld.gov.au/mass/docs/resources/continence/haccmasscontresources.doc). Clinicians should use a trained interpreter whenever possible to ensure that accurate information is being given and received.*

### 7.2.2 Non-Indigenous Australian culture and incontinence

Of course, cultural difference is not only relevant for immigrant populations in Australia. There are ideas around incontinence held more generally by the community which need to be challenged. These ideas may also be held by carers and health professionals. For example a study in 1995 identified that 50% of nurses still believe that urinary incontinence is an unavoidable part of ageing (M. Wilson, 2004). One cultural study of attitudes towards incontinence identified that some people regard those with urinary incontinence as being dirty, soiled, impure, unclean and old, and that incontinent people lack authority, and should defer to experts. This last idea fails to recognise that people may have found common-sense solutions to their problems (Bradway & Barg, 2006).

The idea of deferring to experts is contrary to the concepts championed by experts in the area of chronic disease self management, where the responsibility for health management is placed in the hands of the individual, with support from health professionals.



### Good Practice Point

*As incontinence is frequently associated with chronic diseases such as diabetes, chronic obstructive airway disease, cardiovascular and renal diseases, it is important that individuals receive the best assessment and management strategies for them to feel in control of managing their own incontinence.*

## 7.3 Family

Clinicians are encouraged to consider the impact of incontinence on the close family members of an individual with urinary incontinence. One study using focus groups found that overactive bladder symptoms cause concern, frustration and embarrassment among family members. Spouses and significant others had sleep loss because of their partner's nocturia and reported that the symptoms affected their sexual relationships. Family members also reported activity limitations and, consequently, less time spent together. Overall, family members of these individuals were most bothered by urinary frequency and nocturia. Incontinent individuals underestimated the impact their symptoms had on family members, which in turn had an impact on the family (Cassells & Watt, 2003; Marschall-Kehrel, Roberts, & Brubaker, 2006).

## 7.4 Sexuality

Sexual dysfunction has many causes, and disorders of the female pelvic floor, such as urinary incontinence and pelvic floor prolapse, can influence sexual function and satisfaction. However, there are conflicting reports on the impact of urinary incontinence on sexual satisfaction in women. Some studies report that incontinence may cause sexual difficulties (Avery, Gill, MacLennan et al., 2004; Kirby, 2006), while others have found no significant effect of pelvic floor dysfunction on sexual function in most women (Barber, Visco, Wyman et al., 2002).

Older women report a decreased desire to be sexually intimate because of urinary incontinence (Keilman, 2005), with fear of embarrassment or personal smell contributing to problems in this area (Avery, Gill, MacLennan et al., 2004).

Current approaches to evaluating incontinence, which emphasise identification of the clinical type of incontinence and screening for modifiable risk factors, may fail to identify those factors that determine whether incontinence is truly disruptive to women's lives. Women are more likely to experience a high negative impact on their quality of life if they have night-time incontinence, coital incontinence or co-morbid faecal incontinence (Huang, Brown, Kanaya et al., 2006).



## Good Practice Point

*Clinicians need to be aware that incontinence may affect an individual's perception of him/herself as a sexual being. Individuals may no longer see themselves as being sexually desirable. A clinician undertaking a continence assessment should be prepared to sensitively explore this aspect of an individual's life, to ascertain if urinary incontinence is impacting on sexual participation and satisfaction. Marital status should not lead to an assumption about sexual activity.*

## 7.5 Quality of Life (QoL)

Incontinence may not be life threatening but it is quality-of-life threatening (Avery, Gill, MacLennan et al., 2004; Ragins, Shan, Thom et al., 2008). A literature review identified feelings of worthlessness and helplessness, avoidance of social interaction, an impact on overall health through avoidance of exercise, and a loss of independent living skills as consequences of incontinence (Farage, Miller, Berardesca et al., 2008). In addition, management of incontinence has significant financial costs. It has been estimated, for example, that American women pay up to one percent of their annual gross income on continence management costs including the purchase of absorbent pads (LL. Subak, Brubaker, Chai et al., 2008).

[Link to Section 6.4](#)



A survey of almost 142,000 people found that those with urinary incontinence were twice as likely to feel depressed as people without urinary incontinence (Ko, Lin, Salmon et al., 2005). At least one study into psychological distress has found that personal ability to cope with the interference in one's daily activities is a more important factor in maintaining quality of life than the actual severity of the incontinence (Harkins, Elliott, & Wan, 2006). People respond to stressful events such as urinary incontinence with different coping behaviours. These are explored below. A psychological assessment is not part of the routine assessment of incontinent patients but may be indicated if the person demonstrates other factors associated with depression (Yip & Cardozo, 2007).

Women with urinary incontinence report more symptom distress and functional impairments, low self-esteem, depression, feelings of helplessness and social isolation than women without urinary incontinence (Avery, Gill, MacLennan et al., 2004; Heidrich & Wells, 2004).

With incontinence, routine tasks can become potentially stressful and create anxiety (Kirby, 2006). Active older adults who develop urinary incontinence or experience worsening urinary incontinence symptoms often give up community activities, exercise, hobbies, lifelong interests and travelling. This withdrawal may eventually lead to social isolation, low self-esteem, spiritual distress, hopelessness, depression, functional decline, falls and fractures (Keilman, 2005), and markedly reduce the overall quality of life (Kirby, 2006).

Urinary incontinence can make it difficult to carry out day-to-day duties such as employment, housework or other physical work including exercise. Activities that require bending down increase pressure on the bowel and bladder, while going for a walk increases the distance from toilet facilities. Incontinence is associated with a more sedentary lifestyle, and fewer hours working and walking (Fultz, Fisher, & Rahrig Jenkins, 2004). Dealing with others at work may be adversely affected if constantly excusing oneself mid-conversation to go to the toilet. There may also be a general loss of productivity. Rushing to the toilet may also be particularly difficult for older people and increases their risk of falls. The need to be close to toilets may discourage venturing out into unfamiliar territory, creating social isolation (Avery, Gill, MacLennan et al., 2004). An American epidemiological survey discovered that 62% of respondents routinely searched for toilet facilities when on an excursion, and 75% of respondents were dissatisfied with the cleanliness and privacy of these facilities (Muller, 2005).



## Point of Interest

Kenton (2006) found major discrepancies between recall of incontinence and diary records in women who experience greater bother from incontinence. Those whose daily activities were significantly impacted by urinary incontinence were more likely to overestimate or under record urinary incontinence episodes. Kenton hypothesises that the impact on a woman's QoL may be more related to her recollections about her continence status than the number of incontinence episodes recorded in a diary (Kenton, Fitzgerald, & Brubaker, 2006).

Kenton (2006) suggests that global measures of disease impact on QoL may be more meaningful than simple voiding diaries, as urinary incontinence affects women differently and with varying impact on their daily lives. Some women may find a single episode of leakage per week quite bothersome, while others may experience daily leakage with minimal life impact.

## Good Practice Point

*When making clinical recommendations, it is important to do so based on the individual's personal goals for treatment, which are typically much broader than reducing the number of incontinence episodes by some arbitrary number (Kenton, Fitzgerald, & Brubaker, 2006).*

Clinicians may misinterpret the extent to which urinary symptoms affect patient health related QoL. Discrepancies between patient and physician assessment of QoL impact may lead to a mismatch between the desire for treatment on the part of the patient and the perceived need for treatment by the physician. Thus, an accurate assessment of the impact of incontinence is necessary for effective management (Marschall-Kehrel, Roberts, & Brubaker, 2006).

## Good Practice Point

*As part of assessment and initial management of urinary incontinence in primary care, acknowledge its effect on quality of life and, where possible, to base treatment on the client's goals (P. Norton & Brubaker, 2006).*

### 7.5.1 Quality of life assessment tools

Numerous health related quality of life assessment tools exist, that have been specifically developed for use with people who have urinary incontinence, such as the Incontinence Severity Index, the Incontinence Impact Questionnaire Short Form (IIQ-SF7), and the Urogenital Distress Inventory Short Form (UDI-SF6). Data on the reliability, validity and sensitivity to change of these measures demonstrate that they are psychometrically strong. Further, they have been developed for simple, self-administration (Shumaker, Wyman, Uebersax et al., 1994; Thomas, Nay, Moore et al., 2006). Two of these tools are included in Sections 7.5.1.1 and 7.5.1.2. The UDI-SF6 can be found in the 'Second Steps Clinical Practice Guideline' (Queensland Health, 2008).

### 7.5.1.1 Incontinence Severity Index

This very short index, comprising only two questions, provides a short form diagnostic severity measure for urinary incontinence (Thomas, Nay, Moore et al., 2006).

#### How often do you experience urine leakage?

Never = 0; Less than once a month = 1; 1 to several times a month = 2

Every day and/or night = 4

#### How much urine do you lose?

A few drops = 1; A little = 1; More = 2

Severity index = (points for frequency) x (points for amount)

The minimum score is 0 and the maximum score, indicating more severe incontinence, is 8.

### 7.5.1.2 Incontinence Impact Questionnaire – Short Form IIQ-SF7

Some people find that accidental urine loss may affect their activities, relationships and feelings. The questions below refer to areas in your life that may have been influenced or changed by your problem. For each question, circle the response that best describes how much your activities, relationships and feelings are being affected by urine leakage.

<i>Has urine leakage affected your...</i>	<i>Not at all</i>	<i>Slightly</i>	<i>Moderately</i>	<i>Greatly</i>
Ability to do household chores (cooking, housecleaning, laundry)?	0	1	2	3
Physical recreation such as walking, swimming, or other exercise?	0	1	2	3
Entertainment activities (movies, concerts, etc.)?	0	1	2	3
Ability to travel by car or bus more than 30 minutes from home?	0	1	2	3
Participation in social activities outside your home?	0	1	2	3
Emotional health (nervousness, depression, etc.)?	0	1	2	3
Frustration level?	0	1	2	3

Items 1 and 2 = physical activity  
Item 5 = social/relationships

Items 3 and 4 = travel  
Items 6 and 7 = emotional health

**Scoring:** Score items as per numbers circled. The average score of items responded to is calculated. The average, which ranges from 0 to 3, is multiplied by 331/3 to put scores on a scale of 0 to 100 (Uebersax, Wyman, Shumaker et al., 1995).

### **7.5.2 Coping behaviour**

A qualitative study into incontinence coping behaviour by Teunissen et al. (2006) theorised that coping may take two forms:

- active coping strategies including changing pads and clothing, locating and staying near a toilet, reorganising daily activities and taking clean clothes and protective pads when leaving the house
- passive coping such as avoiding situations, and feeling angry and frustrated.

The study of 56 men and 314 women discovered that men feel more out of control with incontinence and experience more emotional impact compared with women. This may be because women associate urinary incontinence with pregnancy and childbirth, and consider urinary incontinence a normal part of being female. Moreover, women have acquired skills whilst managing menstruation that also might explain their more frequent and less inhibited use of pads (Teunissen, Van Den Bosch, Van Weel et al., 2006).

A literature review in 2006 discovered that less than 38% of women with urinary incontinence sought help for their condition and in one study 74% of women who did seek help waited for more than a year to do so. Reasons advanced for this delay included personal attitudes towards urinary incontinence and its management which may vary with individuals (Koch, 2006). A study as to why women do not seek help elicited the following reasons:

- urine leakage was experienced as a normal and expected complaint.
- other illnesses may be more important and have greater impact
- there may be difficulties in finding a doctor with whom a trusting relationship can be developed (Andersson, Johansson, Nilsson et al., 2008).



### **Good Practice Point**

When determining the most appropriate management, physicians should consider the experience of being incontinent as unique to each individual, and be careful not to make assumptions about each person's coping ability (Papanicolaou, Hunskaar, Lose et al., 2005).

## **7.6 Motivation and adherence to treatment programs**

A great deal of research has been undertaken in the area of adherence to treatment programs. This research covers numerous topics, and includes a significant body of evidence addressing continence management, including pelvic floor muscle exercises. The reader is referred to Section 12 of the 'Second Steps' clinical practice guideline (2008), which is the companion guideline to this publication, for further information on psychosocial models to promote adherence and predictors for adherence to management programs (Queensland Health (MASS), 2008).

## 8. Health care professionals and urinary incontinence: The challenges

### 8.1 Knowledge and awareness of urinary incontinence

Numerous authors suggest that a lack of knowledge about continence and awareness of local services are factors in the under-reporting and less than ideal management of urinary incontinence in community dwelling people (Haslam, 2005; Lekan-Rutledge, 2004; O'Connell, Day, Wellman et al., 2005). Dingwall (2006) found that nursing staff continue to use strategies to contain incontinence rather than promoting continence, despite staff recognizing at a personal level the impact of untreated urinary incontinence on their patients (Dingwall & McLafferty, 2006).

Some literature questions whether general medical practitioners are the most appropriate people to consult regarding continence issues. It has been suggested that health care professionals should provide more public education on the availability and use of appropriate continence specialist services (O'Connell, Day, Wellman et al., 2005). One paper describes factors such as general practitioner's therapeutic nihilism ( a disbelief in the efficacy or value of a drug, method of treatment or therapy) and sub-standard knowledge as interfering with good management of urinary incontinence in the elderly (Teunissen, Van Den Bosch, Van Weel et al., 2006). One Queensland study reported that many individuals find that urinary incontinence is treated as a secondary issue or a nuisance by generalist health professionals, causing them to believe that many health professionals lack knowledge and/or interest in urinary incontinence (St John, James, & McKenzie, 2002).

If health professionals were to increase continence awareness at every opportunity, women may feel more able to discuss their problems freely and be able to resolve or at least manage their own urinary incontinence (Haslam, 2005).



#### Good Practice Point

*Health care professionals need to feel comfortable in asking individuals about urinary problems, and must educate older people about simple strategies to promote bladder health (Heidrich & Wells, 2004; Lekan-Rutledge, 2004; Palmer & Newman, 2006).*

Research has repeatedly found that the attitudes of health care staff towards incontinence have a major impact on management of incontinence (Dingwall & McLafferty, 2006). Older adults appear to be willing to talk about bladder control issues when the listener is receptive (Palmer & Newman, 2006). Indeed, it has been found that older men and women are receptive to different forms of education and are interested in learning more about bladder control (Palmer & Newman, 2006). Generalist health practitioners need education about continence care and the skills and services provided by continence specialists (St John, James, & McKenzie, 2002).

Individuals value empathetic, interested practitioners who have good networks, assist in practical ways, and will provide and discuss information (St John, James, & McKenzie, 2002). They may detect discomfort or lack of interest on the health care provider's part and not attempt to engage in dialogue about continence issues. Public health educational programs that help individuals better understand normal bodily functions and age-related changes may help in altering the sense of inevitability many have related to incontinence (Palmer & Newman, 2006).

The challenge to healthcare professionals is to identify at-risk individuals before they experience a large number of symptoms, so that early problems can be remedied before they affect lifestyle (O'Connell, Day, Wellman et al., 2005). Once identified, management of urinary incontinence is approached best from a sensitive, holistic perspective. Interventions must be multidimensional, comprising medical, psychological, behavioural and environmental interventions as required. People should be educated and counselled regarding the legitimacy of urinary incontinence as a medical condition, and that it is not an inevitable complication of advanced ageing (M. Wilson, 2004).

Improved communication early in the doctor-patient relationship may benefit the individual through increased understanding of treatment strategies, negotiation of expectations and eventual satisfaction with treatment. Negotiation of treatment goals is part of the recent evolution toward patient-centred care. It requires a reconciliation between an individual's aims to return to specific activities or to experience less discomfort, with traditional medical outcomes, such as reduction in urinary frequency (Marschall-Kehrel, Roberts, & Brubaker, 2006).

## 8.2 Talking about urinary incontinence

### 8.2.1 Language issues

Clinicians need to ensure that the language they use when asking about incontinence is clear and appropriate to the education level and cultural background of the individual. Most people equate incontinence with total loss of control and therefore deny suffering from it. Use of terms such as bladder weakness, damp pants, leaky bladder, bladder problem may be more suitable than urinary incontinence (Hammond, 2006). Enquiring about bladder health rather than incontinence may engage more people (Roe, Watson, Palmer et al., 2004). People with low literacy or from non-English speaking backgrounds may talk about wee and poo, or other generic terms rather than urine and faeces.

 [Link to Section 11.2](#)

### Good Practice Point

*Use of appropriate resources, such as those that are designed for people with low literacy, will help to reinforce messages about bladder and bowel health. Resources such as the healthy body: healthy bladder and bowel book developed by the HACC/MASS continence project, and the Healthy bladder and bowel habits resource from the Continence Foundation of Australia (CFA) are examples of such resources.*

### 8.2.2 Individual and clinician comfort

Many clinicians and individuals feel uncomfortable raising the issue of urinary incontinence. This discomfort may unfortunately result in neither party addressing the issue, which in turn reinforces the feelings of shame and embarrassment in the older person. Older people tend not to disclose their incontinence problems, possibly because of the fear of loss of control of bodily functions and institutionalisation, or that, in comparison with the rest of their problems, the incontinence is not bothersome (Horrocks, Somerset, Stoddart et al., 2004). Clinicians should therefore inquire about the voiding habits of their older clients as a matter of routine (Stern, 2006), especially those who have mobility problems and are housebound, as it has been suggested that older people would be more likely to seek help if asked specifically and directly about urinary leakage by primary level clinicians (Horrocks, Somerset, Stoddart et al., 2004).



## Good Practice point

*Clinicians may obtain a better idea of continence difficulties if they normalise incontinence first, phrasing questions in such a way that the individual does not feel ashamed or embarrassed. Clinicians can make a general statement before asking specific questions (Rohr, Stovring, Christensen et al., 2005). For example, “many women have problems with involuntary loss of urine. Some may become incontinent when doing physical activity and some because they can’t get to the toilet in time. During the past month have you accidentally wet yourself when coughing, lifting, sneezing or laughing?” Or “Quite often men develop trouble with their bladders as they get older, and don’t have such a good stream of urine as they used to. Do you find that your urine stream is not as strong as it used to be?”*

### 8.2.3 BATHE technique

One technique which may assist clinicians to confidently ask about incontinence is the BATHE technique, which helps clinicians to quickly establish rapport with an individual, which in turn promotes trust and empowerment during the initial stages of an interview or discussion (Lieberman & Stuart, 1999; Marschall-Kehrel, Roberts, & Brubaker, 2006).

The BATHE technique (shown in Table 16) is a brief psychotherapeutic method that addresses the individual’s background issues, affect and most troubling problem. The clinician then moves on to inquire as to how the person is handling the problem, followed by a demonstration of empathy by the clinician (McCulloch, Ramesar, & Peterson, 1998). This technique enables the clinician to find out what part of the problem concerns the individual, what he/she was hoping the clinician would do and why he/she is coming for help at this time (Lieberman & Stuart, 1999).

**Table 16: The BATHE technique**

<b>BATHE technique</b>	<b>Sample questions and statements</b>
<b>B</b> ackground	Tell me what’s happening? How are things with your bladder and bowel function? Do you have any problems with your waterworks? What’s going on with your bladder?
<b>A</b> ffect	How do you feel about that? How do you feel about what is going on? How is that affecting you?
<b>T</b> rouble	What troubles you most about this? What worries you most about this situation? Of all these problems, which one is the most troublesome for you?
<b>H</b> andle	How are you handling the situation? How are you managing this?
<b>E</b> mpathy	I can understand how that would make you feel. That must be difficult for you.

(Marschall-Kehrel, Roberts, & Brubaker, 2006; McCulloch, Ramesar, & Peterson, 1998)

After carefully listening to the background information, move forward and clarify the individual's emotional state. The question "How do you feel about that?" often yields an unexpected answer. "What troubles you most about this?" helps the individual to focus and provides understanding and insight for both clinician and individual. The 'handling' question implies that the clinician believes the individual has been able to cope and respects the individual's method of dealing with the problem. From this point, the individual and clinician can work together to develop new management strategies. The non-judgemental neutrality and unconditional positive regard implicit in the BATHE technique create a good working relationship, while the empathic response conveys understanding and support (McCulloch, Ramesar, & Peterson, 1998).

## Point of interest

**While the BATHE technique may appear basic, it contains many essential elements of successful psychotherapy, including establishment of a therapeutic alliance, empathy, identification of the central conflict, development of insight and awareness, and discouragement of dependency. The technique encourages adaptation and the establishment of realistic coping strategies. The responsibility for handling the problem remains with the individual, but the clinician may validate the individual's existing coping strategies, or work with the individual to devise new methods of dealing with the problem (McCulloch, Ramesar, & Peterson, 1998).**

It has been found that the BATHE technique helps to connect individuals' physical symptoms and emotional responses to the circumstances of their lives, and empowers them to handle many aspects of their lives in a more constructive way (Lieberman & Stuart, 1999). Marschall-Kehrel (2006) suggests that the BATHE ask-tell-ask technique may prevent surprises such as unexpected pain of treatment, adverse events of medication and prolonged recovery time. Modifications may need to be made for individuals with developmental or physical disabilities, or who are from different cultural backgrounds if language is a barrier (Lieberman & Stuart, 1999).

### **8.2.4 The PLISSIT model**

Another model that may be used to guide clinicians in their initial questioning of a client with suspected urinary incontinence is one which was originally developed for clinicians working in the area of sexual counselling. The PLISSIT model is a four step counselling approach that was originally developed by an American psychologist, Jack Annon, in 1976. It provides the clinician with an opportunity to give permission to the client to talk about their problem/s. This can be achieved by using statements and questions such as "Many people with your diagnosis (insert appropriate words here such as diabetes, arthritis, Parkinson's disease etc) find they have trouble (insert appropriate phrase here such as getting to the toilet in time, going to the toilet too often, sleeping because they have to get up through the night to go to the toilet). Is this something that you experience?" Such phrasing normalises the particular symptom/s for the client, and provides permission to disclose personal, sensitive information to a health professional who is perceived as having valuable understanding of incontinence as a symptom, not as something to be ashamed about.

***Table 17: The PLISSIT model***

<b><i>PLISSIT model</i></b>	<b><i>Sample questions and statements</i></b>
<b>P</b> ermission	Because of past pregnancy and labour, many post-menopausal women who have had children have some urine leakage when they sneeze or lift heavy items. Does that happen to you at times?
<b>L</b> imited <b>I</b> nformation	There are many things that can make the problem worse, including your diet and fluid intake. I'd like to talk with you about completing a bladder diary.
<b>S</b> pecific <b>S</b> trategies	Your bladder diary shows that you drink a lot of coffee each day. If you decrease your caffeine intake, it might reduce your urine leakage. Let's look at how that can be done. I'll also give you this brochure from the CFA about pelvic floor exercises for you to take home
<b>I</b> ntensive <b>T</b> herapy	I see that you are still having some urine leakage. I'd like to refer you to a pelvic floor physiotherapist who can find out what is happening to your pelvic floor muscles, and make sure you're doing the exercises the best way possible.



## 9. Significant and causative factors related to urinary incontinence in older people

### 9.1 Significant factors and urinary incontinence: Red Flags

The International Continence Society recommends that if older people with urinary incontinence have certain factors present, they should be referred by general medical practitioners for specialist investigation (Abrams, Cardozo, Khoury et al., 2002). Older people with these factors may have serious underlying organic diseases, which are referred to as 'Red Flags' throughout the guideline. These 'Red Flags' are listed in this Section (9.1). Red Flags may be associated with urinary incontinence, but may also be present with no obvious signs of, or association with, urinary incontinence.



#### Good Practice Point

It is strongly recommended that registered nurses, allied health professionals and Indigenous health workers working in the community promptly refer urinary incontinent individuals with 'Red Flags' to a general medical practitioner.

#### 9.1.1 Pain

Pain associated with urinary incontinence may be due to a serious underlying disorder (Merck, 2000), and requires prompt investigation to determine the cause and management strategy.

#### 9.1.2 Recent unexplained weight loss

Unintentional recent unexplained weight loss can be a feature of many serious diseases that require thorough investigation.

#### 9.1.3 Recent sudden change in bowel habit

Recent or sudden changes in bowel habits such as a change to looser stools and/or increased stool frequency persisting 6 weeks or more may indicate diseases of the colon or rectum. These may impact on continence, and require prompt and thorough medical assessment ([http://cks.library.nhs.uk/constipation/management/detailed\\_answers/view\\_all\\_detailed\\_answers](http://cks.library.nhs.uk/constipation/management/detailed_answers/view_all_detailed_answers)).

#### 9.1.4 Pelvic mass

A pelvic mass may indicate a pelvic or lower abdominal, benign or malignant growth, so requires thorough investigation prior to implementation of a continence management program. A right abdominal mass consistent with involvement of the large bowel or a palpable rectal mass outside the bowel warrants an urgent referral to a urologist or gynaecologist ([http://cks.library.nhs.uk/constipation/management/detailed\\_answers/view\\_all\\_detailed\\_answers](http://cks.library.nhs.uk/constipation/management/detailed_answers/view_all_detailed_answers)).

### **9.1.5 Rectal bleeding**

Rectal bleeding may be due to a variety of causes, some of which include haemorrhoids, diverticular disease, rectal prolapse, polyps of the colon or rectum or colorectal cancer (Merck, 2000), and should be investigated before any changes to bowel habits are suggested. Rectal bleeding with a change in bowel habits as described above for people aged 40 – 60 years, and rectal bleeding without a change in bowel habits for people aged 60 years and older may indicate colorectal or anal cancer ([http://cks.library.nhs.uk/constipation/management/detailed\\_answers/view\\_all\\_detailed\\_answers](http://cks.library.nhs.uk/constipation/management/detailed_answers/view_all_detailed_answers)).

### **9.1.6 Persistent diarrhoea**

Persistent or chronic diarrhoea requires medical investigation. Diarrhoea may be due to a serious underlying disorder including, among others, inflammatory bowel disease, small bowel mucosal disease (such as coeliac disease), tumours or carcinoma of the colon (Merck, 2000).

### **9.1.7 Haematuria**

Haematuria refers to blood in the urine. It can be classified into macroscopic and microscopic haematuria. Macroscopic haematuria denotes gross haematuria (blood in the urine that is visible to the naked eye). This is in contrast to microscopic haematuria, which is detected only by dipstick or pathology testing.

Macroscopic haematuria is the presenting symptom in up to 85% of patients with bladder cancer and 40% of patients with renal cell carcinoma (Yun, Meng, & Carroll, 2004). It is the most common symptom in newly diagnosed bladder cancer (Malmstrom, 2003).

Microscopic haematuria has a prevalence of approximately 13% among adult men and postmenopausal women (Tomson & Porter, 2002). Microscopic haematuria can be due to bleeding within the renal glomerulus or anywhere along the upper or lower urinary tract and hence has a wide range of causes. It can be a sign, albeit uncommon, of malignancy and it is estimated that 5% of cases of microscopic haematuria are due to urological cancers (Cohen & Brown, 2003).

[Link to Section 9.2.2](#)



### **9.1.8 Recurrent symptomatic urinary tract infection**

Recurrent urinary tract infection (UTI) is defined as two or more UTIs in the last six months or three or more in the last 12 months. The prevalence of recurrent UTI in postmenopausal women is low. A study of postmenopausal females reported a prevalence of two or more UTIs in the last 12 months as 4% (Albert, Huertas, Pereiro et al., 2005).

Postmenopausal risk factors for recurrent UTI include bladder prolapse, incontinence and significant post-void residual (Albert, Huertas, Pereiro et al., 2005; Brown, Vittinghoff, Kanaya et al., 2001; Perrotta & Albert, 2005).

Recurrent UTI that is symptomatic requires medical review. However, treatment for asymptomatic UTI is not usually recommended.

### **9.1.9 History of pelvic surgery or irradiation**

Genitourinary fistula is a rare adverse event following pelvic surgery or irradiation in women living in industrialised nations (Goh, 2004), but is more common in women from third-world countries. Vesico-vaginal fistula is a form of genito-urinary fistula involving an abnormal communication between the vagina and urinary tract. In the rare situation where a vesico-vaginal fistula exists in an older woman the following factors will be present:

- A history of pelvic surgery and/or irradiation and
- One or both of the following:
  - obvious leakage of urine from the vagina
  - continuous leakage of urine both day and night (G. Smith & Williams, 1999).

### **9.1.10 Major pelvic organ prolapse**

 [Link to Section 4.12.1](#)

Symptoms of prolapse include the feeling of a 'lump', 'something coming down', 'heaviness' and/or 'dragging'. Other symptoms include low backache, difficulty emptying the bladder or bowel and the need for digital replacement of the prolapse in order to pass urine or a bowel motion (Abrams, Cardozo, Khoury et al., 2002). However, it is thought that symptoms alone are not a good indicator of the severity of a prolapse (Lutters & Vogt, 2002). Pelvic organ prolapse has been found to occur in 50% of women who have had children (Adams, Thomson, Maher et al., 2004), and often co-exists with symptoms of bladder or bowel dysfunction. Sixty-three percent of women with stress urinary incontinence have been found to have vaginal prolapse (Bai, Jeon, Kim et al., 2002).

It is recommended that women with major pelvic organ prolapse, that is, a prolapse that is visible at the vaginal introitus, should be referred for specialist review (Abrams, Andersson, Brubaker et al., 2005).

## **9.2 Potentially reversible/treatable causes of urinary incontinence: DIAPPERS**

 [Link to Section 11.2](#)

A number of conditions have been identified as causing or contributing to urinary incontinence (Fonda, 2002; Resnick, 1995). The 'DIAPPERS' mnemonic (see Table 18) assists with recall of these conditions (Resnick, 1995). Fonda et al (2005) state that these eight transient causes of urinary incontinence should be aggressively searched for in all older incontinent individuals, before embarking on complex assessment and management. Their prevalence is high and the payoff is great, not only in terms of improving or curing incontinence but also in terms of improving an individual's overall function and quality of life (Fonda, 2005). Some clinicians use the 'E' in DIAPPERS as a prompt for 'Endocrine disorders', such as diabetes, in addition to 'Excess urine output'.

**Table 18: DIAPPERS mnemonic**

D – Delirium  
I – Infection (urinary tract)  
A – Atrophic urethritis/vaginitis  
P – Pharmaceuticals  
P – Psychological  
E – Excess urine output/Endocrine disorders  
R – Reduced mobility  
S – Stool impaction

(Resnick, 1995)

### **9.2.1 Delirium**

Delirium is a syndrome of transient or fluctuating cognitive disturbance of acute onset, which can result from any condition that disrupts normal cerebral metabolism. Older people are particularly susceptible to developing delirium because of age-related impaired homeostatic responses to physiological stressors, and the effects of co-existent diseases. Common causes of delirium in older people include adverse drug reactions, electrolyte derangement, deficiency states, infections, stroke or myocardial infarction. People with pre-existing cognitive impairment (e.g. stroke or dementia) are particularly prone to developing delirium because of limited cerebral reserve. The cause of delirium is often multifactorial in older people.

Delirium is exceedingly variable in its manifestations. It is characterised by impairment of attention and disorganised thinking, and may be associated with either increased motor activity (agitated delirium) or decreased motor activity (apathetic delirium). Disturbance of the sleep-wake cycle is a frequent early sign of delirium. People with delirium are unable to sustain or direct attention and may display erratic shifts of attention in relation to environmental events. Incoherent speech and rapid shifting from one topic to another are typical. Hallucinations occur frequently and, unlike in established psychotic disorders, are often of a visual or tactile nature. Misinterpretation of sensory stimuli (illusions) may occur and patients may attempt to escape from perceived dangers in their surroundings. Delusions and disturbances of mood are common. New onset of incontinence or gait disturbance may be early signs of delirium.

Delirium should be regarded as a medical emergency as it is indicative of a significant physiological stress and is associated with a significant mortality. The underlying cause of the delirium may progress if not attended to promptly. Management of delirium should include a thorough search for, and treatment of, the underlying cause and supportive care in a safe environment, with particular attention to maintenance of adequate hydration and nutrition.

[Link to Section 9.1.8](#)



### **9.2.2 Infection (urinary tract)**

Urinary tract infections (UTI) are the most frequent bacterial infections recorded in older people (Lutters & Vogt, 2002; MA. Smith & Duke, 1994). Infections are approximately 50 times more common in women than men (Jepson, Mihaljevic, & Craig, 2008). UTIs can be classified into two categories, namely asymptomatic and symptomatic, with symptoms including dysuria, frequency, gross haematuria in individuals over 50 years of age, fever, vaginitis, lower abdominal pain, nausea and vomiting (Bent & Saint, 2002).

Older people are at increased risk for both symptomatic and asymptomatic UTI due to various factors such as diminished immune function, hormonal changes and changes in urinary and vaginal pH (Resnick, 1995; MA. Smith & Duke, 1994). Infection may also result from a failure of the bladder to empty properly, bladder neck obstruction, or to problems with neurological control resulting in uncoordinated bladder contractions (Swaffield, 2001). Postmenopausal risk factors for UTI include significant post-void residual volume, bladder or uterine prolapse, and oestrogen deficiency leading to imbalance of vaginal flora (Stapleton & Stamm, 1997). Table 19 lists the risk factors associated with complicated UTI in women.

Urinary incontinence is a risk factor for UTI in older people (Hu, Boyko, Scholes et al., 2004; Lutters & Vogt, 2002; MA. Smith & Duke, 1994) and as such, screening for UTI in older people presenting with incontinence is therefore important. A two year study of the bladder diaries of 1017 postmenopausal women indicated that the basal rate of urine loss was higher among women who experience UTIs compared to those who did not. An increase in urine loss was also found in the three day period following a urinary tract infection, when compared with infection free periods (E. Moore, Jackson, Boyko et al., 2008).

Asymptomatic bacteriuria (bacteriuria without stinging or burning) is common in older people, present in at least 20% of women and 10% of men over 65 years of age (Lutters & Vogt, 2002; MA. Smith & Duke, 1994). Incontinence and other bladder symptoms (such as frequency and urgency) may co-exist with asymptomatic bacteriuria. Bacteriuria may resolve spontaneously and treatment of asymptomatic bacteriuria is not recommended (Boscia, Kobasa, Abrutyn et al., 1986).

Urinary tract infections can be detected by urinalysis, with this generally being the only laboratory test required to establish the diagnosis of acute uncomplicated cystitis in a symptomatic individual. However, individuals who present with risk factors for complicated infection (see Table 19) require proper evaluation which usually includes additional diagnostic tests (Bent & Saint, 2002).

 [Link to Section 11.3.4](#)

### Point of interest

When a clean catch urine specimen cannot be obtained, a urine dipstick-pad method can be used. This requires cleansing of the perianal area, securing a continence pad in place, and monitoring it hourly until it is wet with urine but with no faeces present. To obtain a specimen for analysis, press a urine dipstick into the wettest part of the pad for ten seconds. A study by Midthun et al., (2003) comparing this method with the traditional method amongst asymptomatic nursing home residents found it to be just as reliable as the traditional method (Dowling-Castronovo & Specht, 2009).

### Good Practice Point

Many females are unaware of the correct way to wipe themselves after toileting, and may need teaching and verbal prompts to encourage wiping from the front to the back, to avoid contamination from the anal area being transferred into the urethral meatus and urethra.

**Table 19: Risk factors for complicated UTI in women**

Fever greater than 38 degrees Celsius  
Immunosuppression  
Diabetes mellitus  
Chronic renal or urological abnormalities (e.g. polycystic kidney disease, neurogenic bladder, renal failure)  
Recurrent or persistent urinary stones  
Urinary catheterisation or other urological procedure within the last two weeks  
Discharge from hospital or nursing home within the last two weeks  
Treatment for UTI within the last two weeks  
Recurrent symptomatic UTI.

(Bent & Saint, 2002)

### **9.2.3 Atrophic urethritis/vaginitis**

Atrophic vaginitis is an inflammation of the vagina with thinning of the epithelial lining, which occurs following menopause and is due to a deficiency of oestrogen. The vaginal tissues become inflamed, thinner, drier and less elastic (Suckling, Lethaby, & Kennedy, 2003). Additionally, the drop in oestrogen leads to a drop in glycogen in epithelial cells. This inhibits lactobacilli and lactic acid production and leads to an increase in vaginal pH, allowing infection with various micro-organisms (Pandit & Ouslander, 1997). The similar atrophic changes that occur in the urethral epithelium are called atrophic urethritis.

Symptoms related to vaginal atrophy may occur in 50% of women over 60 years (Iosif & Bekassy, 1984), and include vaginal dryness, itchiness and irritation, difficult or painful sexual intercourse, stress urinary incontinence, urgency, frequency and difficult or painful urination (Pandit & Ouslander, 1997; Suckling, Lethaby, & Kennedy, 2003). Recurrent urinary tract infections (Pandit & Ouslander, 1997) and vaginal infections (Suckling, Lethaby, & Kennedy, 2003) may also occur. Other signs of atrophy detected on vaginal examination include a pale, smooth, shiny or dry vaginal epithelium, while signs of vaginitis include skin inflammation, small spots of haemorrhage on the skin or mucosa, increased vascularity, friability and bleeding, and discharge (Pandit & Ouslander, 1997).

Link to Section  
6.3 and 4.19

### **9.2.4 Psychological**

Depression is characterized by a lowering of mood and a loss of pleasure in activities that are normally enjoyable (anhedonia). The term depression is used to describe both clinically significant sadness and demoralisation, and the psychiatric syndrome of major depression (Varghese, 2005).

Clinically significant depression (sufficiently significant so the clinician believes intervention is warranted) affects up to 15% of older Australians. The prevalence of major depression in the community is around 1% – 3% but is much higher in residential care and physically ill people. Up to 25% of older people with co-morbid ischaemic heart disease, stroke, cancer, chronic lung disease, arthritis, pain and neuro-degenerative conditions such as Parkinson's disease have major depression. Depression is also common in people with urinary incontinence, especially those with urge incontinence, cerebrovascular disease, diabetes and Alzheimer's disease. Major depression is often overlooked, but is treatable. Hence, screening for depression symptoms is a standard component of geriatric assessment (Varghese, 2005).

Major depression is distinguished by its severity in terms of loss of function, persistence (duration greater than two weeks), pervasiveness (that is, it is there most of the time) and the presence of characteristic symptoms such as reduced energy, sleep and appetite, and psychomotor disturbance. The latter includes thinking which can be slowed or rushed, and movements which are slowed or agitated. Depressive thoughts are characterised by worthlessness, hopelessness, helplessness and sometimes suicidal content. In severe cases there are psychotic features such as delusions of persecution or implausible poverty (Varghese, 2005).

Older people often deny depression. If depressed mood is denied but suspected, anhedonia should also be present for the diagnosis. It is normal to have depressed mood when grieving but bereaved people rarely think themselves worthless or have suicidal thoughts (Varghese, 2005).

The presence of depression can both precipitate and exacerbate urinary incontinence. Both depression and urinary incontinence contribute to social isolation. The cognitive effects of major depression and side effects of antidepressants may affect voluntary control and awareness of continence or interfere with education or non-pharmacological interventions such as pelvic floor training (Varghese, 2005).

### **9.2.5 Pharmacological**

Older people are more susceptible than their younger counterparts to the adverse effects of medication. It is necessary to assess and check for medications that may be contributing to urinary incontinence. It should be remembered that 'medication' refers to prescription, over-the-counter and complementary medications.

 [Link to Section 4.13](#)

### **Good Practice Point**

~~~~~  
*A medication review is an integral part of a continence assessment and requires referral to a general medical practitioner.*  
~~~~~

The Home Medicines Review Program is a Commonwealth funded service which enables a specially trained pharmacist to visit an individual, following the individual's and general practitioner's consent. The review enables pharmacists to use their skills and knowledge to support and assist other health professionals, and contribute to the care of patients by ensuring quality use of medicines. The Home Medicines Review referral template is shown in Table 20.

**Table 20: Request for home medicines review**

**To General Practitioner:**

Name:	
Address:	
Phone:	
Facsimile:	
e-mail:	

**From Nurse / Pharmacist / Carer / Other**

Name:	
Address:	
Phone:	
Facsimile:	
e-mail:	

**Concerning Patient**

Name:	
Address:	
Phone:	

**Reason for Referral:**

- .. Currently taking 5 or more regular medications
- .. Taking more than 12 doses of medication daily
- .. Significant changes made to medication regimen in previous 3 months
- .. Medication with narrow therapeutic index or requiring therapeutic monitoring
- .. Symptoms suggestive of an adverse drug reaction
- .. Sub-therapeutic response to treatment
- .. Suspected non-compliance or inability to manage drug delivery devices
- .. Difficulty managing medication because of literacy or language difficulties
- .. Dexterity of vision problems; confusion or other cognitive difficulties
- .. Attending a number of different GPs or specialists
- .. Discharged from a facility/hospital within the previous 4 weeks
- .. Other .....

Please consider whether the individual identified above would benefit from a Home Medicines Review.

Signature: ..... Date: .....



## **9.2.6 Excessive urine output: polyuria, nocturnal polyuria and nocturia**

### **9.2.6.1 Polyuria**

Polyuria refers to excessive urine output (Abrams, Cardozo, Khoury et al., 2002). It has been variously defined as a 24-hour urine volume of greater than 40 mL per kilogram of body weight (Van Kerrebroeck, 2002; Weatherall & Arnold, 2006) or as a urine output of over 2500 mL in 24 hours (Oliver, 2006). One of the main causes is an habitual excess fluid intake (Van Kerrebroeck, 2002), which is best identified using a bladder diary. Other causes of polyuria are shown in Table 21.

### **9.2.6.2 Nocturia**

Polyuria and nocturnal polyuria may be flagged initially by the presence of nocturia. Nocturia is the complaint of waking one or more times at night to void. Nocturia may arise for similar reasons to daytime frequency, but may also occur with congestive heart failure due to increased venous return on lying flat, or to the reversal of the normal circadian rhythm in anti-diuretic hormone secretion (Staskin, Hilton, Emmanuel et al., 2005). However, it must be remembered that, for some people, voiding once or twice during the night may be normal.

The specific symptom of nocturia has been found to be present in 29% – 31% of surveyed older people (Coyne, Zhou, Bhattacharyya et al., 2003; Wein, Lose, & Fonda, 2002). In a cohort of females over 55 years of age with urinary incontinence, 68% were found to have symptoms of nocturia, and this increased to 78% in those who were over 75 years of age (Massolt, Wooning, Stijnen et al., 2005).

Studies demonstrate that a common underlying cause of nocturia is nocturnal polyuria. Nocturnal polyuria was found in 51% of women with urinary incontinence and nocturia. A small bladder capacity has also been found to be an underlying factor, being demonstrated in 15% of females with nocturia (Massolt, Wooning, Stijnen et al., 2005).

Shiri et al. undertook a mailed questionnaire survey, which was completed by 1580 Finnish men aged from 50 – 70 years. They found that a range of health conditions may cause nocturia, including obesity, heart disease and hypertension, but the links of nocturia to other lifestyle factors such as smoking, alcohol and coffee consumption are weak. Interestingly, they also found that widowed, divorced or single men are at higher risk for nocturia than married men or those living with a partner, possibly because married men are less likely to engage in negative health behaviours and more likely to engage in positive health behaviours than single men (Shiri, Hakama, Hakkinen et al., 2008). Obviously, frequently disturbed sleep can cause tiredness and exhaustion (Heit, 2007), and the impact of this on quality of life and safety must be considered.

### **Point of Interest**

**A study of thirty men with an average age of 71 years investigated the effects of walking rapidly for a minimum of thirty minutes in the evening or night for eight weeks. The authors found that nocturia was significantly decreased after walking exercise, possibly because the subject's sleep became deeper, which increased the arousal threshold bladder volume. The authors warn, however, that the subject's overall state of health be assessed before recommending a walking program, in case other issues are exacerbated** (Sugaya, Nishijima, Owan et al., 2007).

**Table 21: Causes of nocturia, nocturnal polyuria, reduced nocturnal voided volumes and 24 hour polyuria**

<b>Urinary problem</b>	<b>Causes</b>
<b>Nocturnal polyuria</b>	<ul style="list-style-type: none"> <li>Congestive cardiac failure</li> <li>Obstructive sleep apnoea</li> <li>Peripheral oedema</li> <li>Venous stasis</li> <li>Nephrotic syndrome</li> <li>Hepatic failure</li> <li>Hypoalbuminaemia</li> <li>Circadian defect in secretion or action of antidiuretic hormone</li> <li>Primary (idiopathic)</li> <li>Secondary (caffeine, alcohol, excessive evening fluid intake)</li> <li>Renal insufficiency</li> <li>Oestrogen deficiency</li> <li>Diuretic therapy</li> </ul>
<b>Reduced night time voided volumes</b>	<ul style="list-style-type: none"> <li>Bladder outlet obstruction (BOO)</li> <li>Detrusor overactivity (neurogenic or non-neurogenic)</li> <li>Neurogenic bladder</li> <li>Cancer of bladder, prostate or urethra</li> <li>Learned voiding dysfunction</li> <li>Anxiety disorders</li> <li>Pharmacological agents</li> <li>Bladder calculi</li> <li>Ureteral calculi</li> <li>Significant post-void residual urine volume</li> <li>Bladder hypersensitivity</li> <li>Urogenital ageing</li> </ul>
<b>24 Hour polyuria</b>	<ul style="list-style-type: none"> <li>Diabetes mellitus</li> <li>Diabetes insipidus</li> <li>Primary polydipsia</li> <li>Hypercalcaemia</li> <li>Excessive fluid intake</li> </ul>

(Stember, Weiss, Lee et al., 2007; Van Kerrebroeck, 2002; Wein, Lose, & Fonda, 2002)

## Point of Interest

As little as one void a night is not only bothersome, but it increases the risk of falls, and affects health related quality of life and sleep. These adverse effects increase with increasing frequency of night-time voids (Coyne, Zhou, Bhattacharyya et al., 2003). Voiding twice or more a night impairs health related quality of life as much as type 2 diabetes and to a greater extent than hypertension.

Urinalysis should be performed to exclude relevant pathology in patients presenting with nocturia (Van Kerrebroeck, 2002). Once this is ruled out, causes can be divided into three categories: polyuria/nocturnal polyuria, reduced voided volume (that is, bladder storage problems) or sleep disorder. Causes of reduced voided volume and sleep disorder can be seen in Tables 21 and 22 respectively.

## Good Practice Point

*When asking an individual about his/her nocturia, it is important to ascertain the cause of the waking. Does the urge to void wake him/her or does he/she wake for other reasons and then decide to go to the toilet?*

**Table 22: Causes of sleep disorder**

Insomnia
Obstructive and central apnoea syndrome
Periodic legs syndrome/periodic limb movement disorder (occurs in a wide variety of sleep disorders including narcolepsy, sleep apnoea, REM sleep behaviour disorder, and various forms of insomnia)
Restless legs syndrome (a sleep disorder characterised by leg discomfort during sleep, which is only relieved by frequent movements of the legs)
Parasomnias (disorders that frequently interfere with sleep, such as nightmares, night terrors, sleep walking)
Sleep disorders due to medical conditions such as chronic obstructive pulmonary disease and cardiovascular disease
Sleep disorders due to neurological disorders such as Parkinson's disease, Alzheimer's disease and nocturnal epileptic seizures

(Van Kerrebroeck, 2002)

### 9.2.6.3 Nocturnal polyuria

Nocturnal polyuria in the older person is present when the following two criteria exist (Rembratt, Norgaard, & Andersson, 1992):

- The total 24-hour volume is normal (i.e. there is no 24-hour polyuria)
- The total volume of all night voids and the first void of the morning upon rising is greater than 33% of the 24-hour total.

The International Continence Society's definition of nocturnal polyuria suggests that the nocturnal volume should be approximately 22% of the total 24 hour output in young adults, and it should be less than 33% of the total 24 hour output in older people.

## Point of Interest

There is no widespread agreement as to the definition of nocturnal polyuria, with some authors defining it as a night-time output of more than 0.9 mL per minute, and others including an adjustment for weight, calculating it to be greater than 10 mL of urine per kilogram of body weight. Another means of assessing nocturnal polyuria is to use relative criteria, by dividing the 24 hour period into three, with anything above one third of urine being produced in the eight hours at night time being regarded as nocturnal polyuria. This relative definition is only appropriate if the 24 hour volume is within normal limits (Weatherall & Arnold, 2006).

Individuals with diabetes insipidus and those whose sleeping patterns vary greatly from an eight hour night-time sleep pattern are exceptions to the above guide (Van Kerrebroeck, 2002). A decrease in nocturnal production of arginine vasopressin (anti-diuretic hormone (ADH) may be partially responsible. Additionally, a decrease in the ability of the kidneys to concentrate urine may occur with age. A decline in the ability of the kidneys to retain sodium may contribute by causing an osmotic diuresis, especially when the individual is recumbent, as with sleep. Impairment of ADH secretion or action is probably the most common cause of nocturnal polyuria in the elderly (M. Miller, 2000). The causes of nocturnal polyuria are outlined in Table 21.

### 9.2.7 Restricted mobility

## Good Practice Point

*It is important to view the best practice in continence management within the context of the individual's environment and capabilities. This entails shifting the focus away from simply controlling micturition and bowel function, towards viewing the individual's physical and cognitive abilities in addition to their environment both at home and wherever else they choose to go (Christiansen & Baum, 1997).*

Occupational therapists are trained to assess the interaction of the individual, his/her occupation and the environment; in terms of this document, the occupation is managing urinary continence. The greater the 'fit' between these three areas, the better is the occupational performance, namely, how well an individual manages the task (Christiansen & Baum, 1997).

Impaired mobility may interfere with the ability of the individual to access the toilet and undress in a timely manner and may therefore promote incontinence, particularly in the frail older individual, due to the increased prevalence of stroke, arthritis, hip fractures, Parkinson's disease, peripheral vascular disease and amputation (Ouslander, 1997). Mobility is also influenced by vision, medication and cognitive status. Reduced manual dexterity can impact on self-care and hygiene (Vickerman, 2002). Improving an individual's mobility will help to reduce the probability of incontinence, by decreasing the time taken to reach the toilet and adjust clothing.

[Link to Section 11.7.1.1](#) 

A number of environmental factors need to be considered for people with incontinence who have mobility restrictions (Vickerman, 2002). These are covered in detail in Section 11.7.1.1.

### **9.2.8 Stool impaction**

A consequence of severe unresolved constipation is stool (faecal) impaction. Consensus is lacking on the definition of faecal impaction, and includes: 'hard masses of faeces filling the rectum', 'a large mass of compacted faeces in the rectum that cannot be passed', 'the formation of hardened masses of faeces' and 'faecal loading of the rectum and/or colon with hard stool' (Creason & Sparks, 2000). Stool impaction has been found to be present in 30% of older people living in residential care (Chassagne, Jego, Gloc et al., 2000). The prevalence of faecal impaction in the older community-dwelling population is unknown, although it is thought to be quite high (Abyad & Mourad, 1996; Joanna Briggs Institute, 2008).

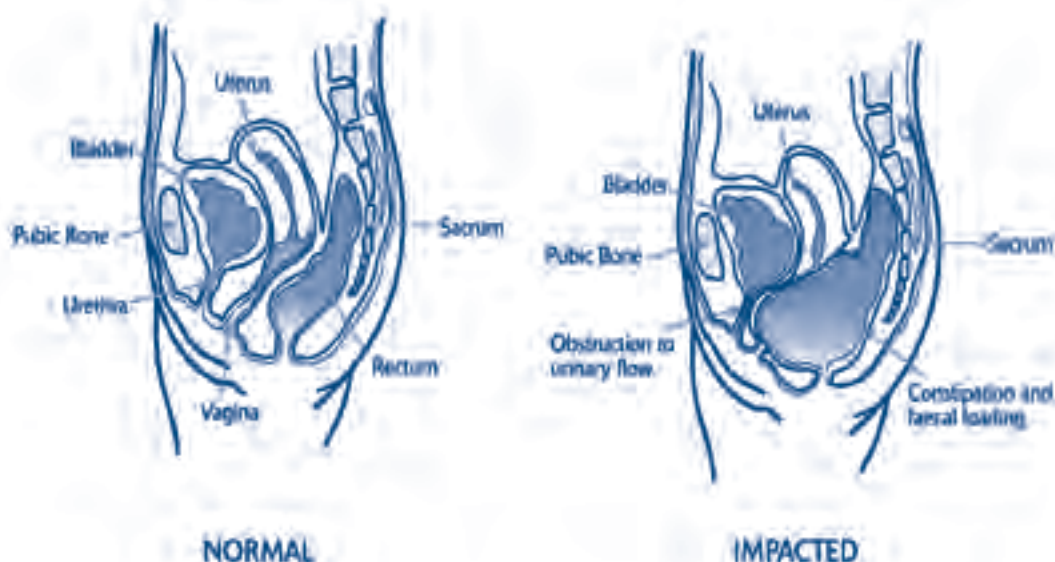
Stool impaction results from prolonged exposure of stool to the absorptive processes of the colon and rectum (Abyad & Mourad, 1996). In older people it often causes faecal incontinence (C. Norton, 1997). Over-distension of the rectum, due to an accumulation of hard stool, results in inhibition and consequent relaxation of the internal and external anal sphincter muscles. The presence of hard impacted stools in the bowel promotes mucus production and bacterial activity, causing an accumulation of a foul-smelling fluid stool. In the absence of normal sphincter tone (which assists in maintaining faecal continence) there is free passage of this material, causing liquid faecal soiling and incontinence.



#### **Good Practice Point**

*Individuals with faecal incontinence caused by stool impaction are not able to control the leakage of fluid stool from the bowel and often do not sense that it is occurring (Irvine, 2001). It is imperative that stool impaction is ruled out as a cause of faecal incontinence in older people. Incorrect treatment of faecal incontinence with a constipating agent (when stool impaction is the underlying cause) will make the stool impaction and faecal incontinence worse (Irvine, 2001).*

*The impacted faecal mass in the rectum may be large enough to physically obstruct the urethra (Fonda, 2002; Wells, 2001), as illustrated in Figure 4. This results in incomplete bladder emptying, causing urinary retention. As the bladder continues to fill with urine (during the storage phase) it becomes over-distended, and accidental leakage characterised by constant or frequent dribbling of urine occurs (Fonda, 2002).*



**Figure 4: Impact of stool impaction on the lower urinary tract**

Urinary incontinence caused by stool impaction should be suspected when:

- fluid intake is less than 1500 mL/day or 30 mL/kg of body weight per 24 hours
- dietary fibre intake is less than 10g per day
- medications such as laxatives are used excessively
- levels of exercise are extremely low (non-ambulant) (Joanna Briggs Institute, 2008).

A bowel diary can help confirm a diagnosis of constipation. Objective data that further confirms the diagnosis includes an abdominal assessment to identify abnormal bowel sounds, tenderness, and masses and a rectal examination for faecal consistency and impaction.

### Point of Interest

**Individuals with stool impaction and associated urethral obstruction may present with a number of urinary symptoms such as urgency, frequency, urge incontinence, stress incontinence, continuous incontinence and symptoms of abnormal voiding.**

An older person with stool impaction may also have symptoms of abdominal pain, abdominal distension, nausea and vomiting. Excessive straining at stool may lead to shunting of blood away from the cerebral, coronary, and peripheral vascular circulation, leading to temporary insufficiency in affected organs. This may manifest as dizziness, fainting and falls (de Lillo & Rose, 2000).

Faecal impaction can also cause anorectal disorders (such as anal fissures, haemorrhoids, rectal prolapse and rectal bleeding), mental disturbances (including apathy, anxiety, agitation and confusion) and social isolation (de Lillo & Rose, 2000; Folden, 2002; Irvine, 2001).

Link to Section 5.7 and 5.8

▶ A full bowel assessment should be undertaken (Edwards, Dolman, & Horton, 2003). Management of stool impaction is discussed in Section 5.7.

## Good Practice Point

*Many individuals with impaction have hard faeces in the rectum that can be detected by a digital rectal examination. However, a digital rectal examination can only identify low impaction. Faecal loading of the large bowel may be present without loading of the rectum and can only be identified using an abdominal X-ray (R. Smith & Lewis, 1990).*

### 9.3 Potentially reversible/treatable causes of urinary incontinence: TOILETED

Another version of the DIAPPERS mnemonic is TOILETED. It has been suggested that the DIAPPERS mnemonic, from which the TOILETED mnemonic has been developed, implies an emphasis on containing urinary incontinence through the use of continence pads rather than on appropriate assessment and management. The use of DIAPPERS may be seen as offensive, and may perpetuate negative attitudes about urinary incontinence amongst health care professionals (Dowling-Castronovo & Specht, 2009). While the TOILETED mnemonic has not been psychometrically tested, its inclusion in this guideline offers clinicians a choice in memory aids to assist with assessment of transient causes of incontinence.

**Table 23: TOILETED mnemonic**

<b>T</b>	Thin and dry vaginal and urethral epithelium
<b>O</b>	Obstruction (of bowels)
<b>I</b>	Infection (urinary tract)
<b>L</b>	Limited mobility
<b>E</b>	Emotional or psychological factors
<b>T</b>	Therapeutic medications
<b>E</b>	Endocrine disorders
<b>D</b>	Delirium

(Dowling-Castronovo & Specht, 2009)

## 10. Recommendations for referral pathways

This section makes recommendations for referral pathways to be used when managing older people with urinary incontinence in community health care settings.

### 10.1 Models of continence care

The following clinical algorithm (Figure 5) which has been developed using the concept of three levels of continence care (Canadian Continence Foundation, 2001), has been recommended for use in Queensland (Cadden, 2002). The primary level is the first point of contact for older people with urinary incontinence. Registered nurses and allied health professionals at this level have generalist backgrounds and are able to perform initial continence assessments and interventions, that is, the 'first steps'.

At the secondary level, registered nurses and allied health professionals such as continence nurses and continence physiotherapists, who have specialist training in continence care, provide the more complex assessment and treatment strategies for people who have not responded to the 'first steps'.

The tertiary, medical specialist level is found mostly in a hospital setting or the private rooms of a gynaecologist, urologist or geriatrician. This tertiary level provides highly specialised assessment and medical and surgical interventions (Milne & Moore, 2003).

Link to Figure 5,  
Section 11



### 10.2 Clinical algorithm

The clinical algorithm is recommended for use in clinical environments where there are primary level registered nurses and allied health professionals, with support from continence nurses and continence physiotherapists in the secondary level. In circumstances where primary level registered nurses and allied health professionals are not confident in continence care and do not have access to those in the secondary level, direct referral to the general medical practitioner is recommended. Non-registered health care workers should also refer individuals directly to the general medical practitioner.

The identification (Step 1) of urinary incontinence in older people should trigger the need for continence assessment (Steps 2 and 3) followed by the development of a management plan (Step 4) and implementation of the plan (Step 5) by primary level registered nurses and allied health professionals. Individuals presenting with 'Red Flags' should be referred immediately to their general medical practitioner. If there is no indication of 'Red Flags', primary level registered nurses and allied health professionals should undertake a multi-reagent strip urinalysis (if this test is available to them) and also encourage the individual to complete a bladder diary. If abnormalities are noted, the individual should then be referred to the general medical practitioner with this supporting information. Primary level registered nurses and allied health professionals should then implement their treatment plan (Step 5) and refer to other allied health professionals as appropriate.



### 10.3 Indications for referral

A multidisciplinary approach will assist in the team management of continence. It is recognised that access to a multidisciplinary team of health professionals is variable across Queensland and that there are variations in referral criteria. Where possible, however, collaboration and consultation regarding the individual's problems will result in a more comprehensive approach. If there is no immediate access to a multidisciplinary team in the local area, telephone contact with these health professionals in a larger hospital may be required to achieve the optimum outcome for the individual.

Following consultation with the individual and gaining his/her consent, the following referrals may be appropriate.

- Referral to a dentist is recommended if:
  - dental and/or gum problems interfere with the ability to achieve good nutrition
  - dentures are ill fitting, missing or broken.
- Referral to a dietitian should occur when:
  - compliance with initial dietary advice does not begin to resolve constipation within a two to four week period
  - the individual has any condition requiring specialist dietitian management, such as diabetes, cardiovascular disease, coeliac disease, food intolerance, advanced renal disease, malnutrition or cancer
  - an individual is significantly overweight or obese.
- Referral to an Indigenous health worker should occur:
  - when the individual is of Aboriginal or Torres Strait Islander background
  - for ongoing monitoring and support.
- Referral to an occupational therapist should occur when the individual has functional or environmental limitations which impact on the ability to:
  - get to the toilet safely and in a timely manner
  - adjust clothing as required
  - use the toilet appropriately
  - wash hands after toileting.
- Referral to a pharmacist via a Home Medicines Review (which requires a referral from the general practitioner) may occur when pharmacological issues are thought to be adversely affecting continence. Referral examples include:
  - if medicines are not used properly, or if the wrong ones are used together (including vitamins and complementary medicines)
  - taking five or more medicines
  - if the individual appears to be confused or worried about his/her medications
  - if there are concerns the medications are not being taken appropriately or are being forgotten
  - if suspected medication adverse reaction occurs
  - recent discharge from hospital with medication changes.

 [Link to Section 11.1.1](#)

 [Link to Table 19. Section 9.2.5](#)

- Referral to a physiotherapist who treats mobility disorders should occur if the individual has:
  - mobility safety concerns or requires a review of mobility aids
  - difficulty implementing changes in exercise patterns
  - any condition that makes exercise difficult or requires a tailored exercise program
  - difficulty achieving desired results from a pre-existing pelvic floor muscle exercise program.
- Referral to a psychologist should occur if:
  - the individual is having difficulty coping emotionally with his/her incontinence
  - depression is suspected
  - incontinence is affecting the sex life of the individual and/or his/her partner.
- Referral to a social worker is recommended if:
  - reasonable measures to address continence have failed to lessen significant social issues
  - abuse or neglect is suspected
  - the burden of care on the individual's carer is of ongoing concern.
- Referral to a speech pathologist should occur when:
  - there are concerns about swallowing of thin fluids or aspirating food or fluids
  - the ability to chew is compromised
  - an inability to effectively communicate limits access to food and drink or prevents gaining assistance to access the toilet.

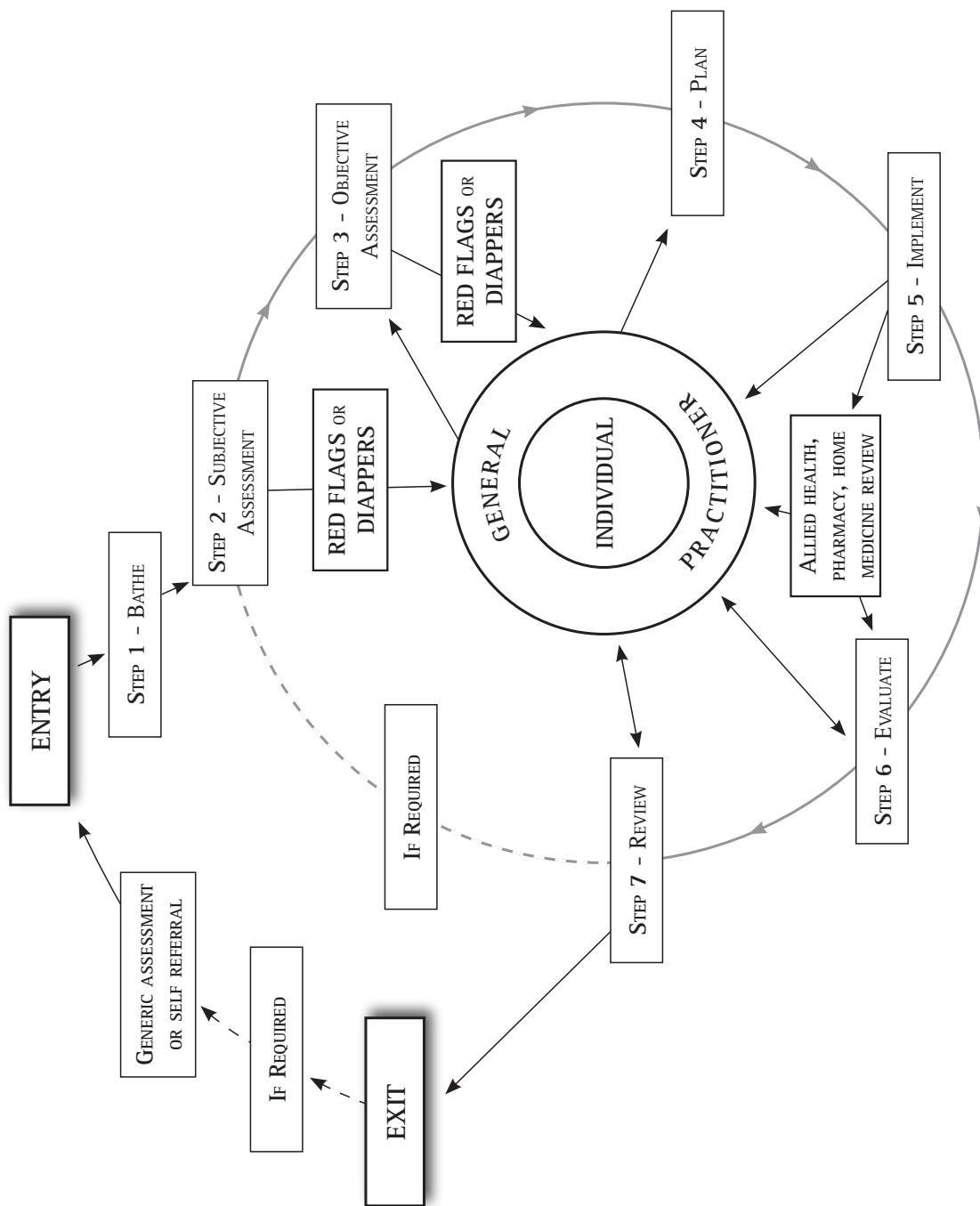
#### 10.4 Further management

Referral to a secondary level clinician (continence nurse and/or a continence physiotherapist) should occur if there is no improvement in the individual's urinary incontinence following the implementation of Steps 1 – 5. If constipation is suspected to be due to outlet obstruction caused by pelvic floor muscle dysfunction, referral to a continence physiotherapist should also occur.

Link to Figure 5 and Section 11

In some parts of Queensland, public health access to continence specialists may not be possible, resulting in individuals needing to pay as a private patient. These costs may be reduced by the Enhanced Primary Care Program, which provides preventive care for older Australians, and improves coordination of care for people with chronic conditions and complex care needs, through Medicare rebates for certain allied health and dental care services on referral from their GP.

To maintain a client-centred approach, communication between registered nurses and allied health professionals in the primary and secondary levels of care, and the general medical practitioner, should take place as required throughout the episode of care. The episode of care also requires the clinician to evaluate the outcomes of all the relevant interventions, including those undertaken by other team members (Step 6), and to review the individual's presenting and associated problems (Step 7). Again, feedback and discussion with the general practitioner and the individual are central to this process. After the review, the individual either exits the service or, if management of the problem is ongoing or if a new continence issue has arisen, the clinician returns to Step 2 of the algorithm (Figure 5). In this model of care which has been developed by the expert panel for this clinical practice guideline, the individual and general practitioner are viewed together as the central hub.

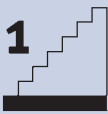








**Figure 5: Proposed clinical algorithm for the care of community-dwelling older people with urinary incontinence**

## 11. First steps in the management of urinary incontinence

This section outlines the ‘first steps’ in the management of urinary incontinence in community-dwelling older people, by describing in greater detail the seven steps of the continence care algorithm (figure 5). The steps are summarised in Table 24, and expanded upon in the rest of this section.

**Table 24: Explanation of the seven steps of the clinical algorithm**

Steps	Explanation of steps
<b>Entry</b>	Urinary incontinence is identified in a generic assessment, or the individual is referred or self-refers to the service
<b>Step One</b> 	Establish an appropriate clinical environment and therapeutic relationship with individual. The BATHE or PLISSIT mnemonic may assist in this
<b>Step Two</b> 	Undertake a subjective assessment. If RED FLAGS or DIAPPERS/TOILETED are identified or suspected, refer to general medical practitioner, and obtain these results. Commence management of these factors
<b>Step Three</b> 	Undertake an objective assessment. If RED FLAGS or DIAPPERS/TOILETED are identified or suspected, refer to general medical practitioner, and obtain these results. Commence management of these factors
<b>Step Four</b> 	Plan the required interventions in consultation with the individual and/or carer
<b>Step Five</b> 	Implement treatment/management plan. This may include referral to other health professionals, the general medical practitioner and/or other agencies assisting the individual in the community. Obtain feedback from these people
<b>Step Six</b> 	Evaluate the outcomes of your plan. Discuss the outcomes with the individual and other relevant people, and provide general medical practitioner with a brief report
<b>Step Seven</b> 	Review the outcomes to determine if the individual exits your service in relation to continence issues, or whether you need to return to step two again, with another assessment. If exiting the service, inform the individual of appropriate procedure to re-access the service if required

Link to Section 8.2.3 and 8.2.4

## 1 11.1 Step 1: Establish an appropriate clinical environment

In all areas of health care it is important that health professionals treat individuals with dignity and respect. This is particularly the case with individuals who have urinary incontinence, as many will feel embarrassed and ashamed about their condition and also in having to speak about sensitive and private issues with a health professional.

Health professionals should be aware of the psychological impact that urinary incontinence may have on an older individual's life. By establishing an appropriate clinical environment, the clinician can help to preserve the individual's respect and dignity, assist with establishing rapport and therefore make assessment and treatment easier for the individual. Privacy should be ensured when discussing urinary incontinence. It is preferable to use a private room, but if this is not possible, withdraw yourself and the individual from others to avoid being overheard. Visual privacy is important when showing diagrams, models, continence products and when demonstrating toileting and exercise positions.

Some people may wish to have the support of friends, relatives or caregivers when discussing their continence condition with a health professional. Others may wish to speak about these issues in private. If an individual is able to make his/her own decisions, the health professional should obtain consent before discussing continence issues with, or in front of, others.

## 2 11.2 Step 2: Subjective assessment/history

### R Recommendation

*Individuals who have been identified as having urinary incontinence should undergo subjective assessment covering the following areas: onset of urinary incontinence, presenting symptoms, mobility status, surgical history, medical history, medications, the impact of urinary incontinence on everyday life, motivation and cooperation (Abrams, Andersson, Brubaker et al., 2005).*

*Level of evidence: 4*

*Grade of recommendation: D*

Individuals should be specifically questioned about whether or not they have urinary incontinence. Different methods of questioning can be used to identify urinary incontinence in older people depending on the clinical circumstances. In some cases a direct question approach may be effective. Examples of questions that could be asked are covered in the remainder of this section (Section 11.2).

Table 25 identifies questions pertaining to Red Flags, DIAPPERS/TOILETED, and daily living habits, to assist clinicians in their subjective assessment. While Table 25 provides referral suggestions for certain symptoms or personal difficulties, individuals with urinary incontinence and clinicians may be able to offer practical solutions to non-urgent difficulties prior to referring on to other members of the health care team.

**Table 25: Clinicians guide to questioning**

	<b>Questions to ask</b>	<b>Y/N/ Comment</b>	<b>Factors/Conditions contributing to urinary incontinence</b>	<b>Action</b>
<b>1</b>	When did your urine leakage first start? Has your urine leakage become worse lately?		Onset of urinary incontinence	Focussed assessment
<b>2</b>	Clinician to consider: Are there any signs and symptoms of delirium?		Reversible treatable condition	Medical emergency
<b>3</b>	Are there any signs and symptoms of dementia?			Involve care-giver in assessment process
<b>Red Flags</b>				
<b>4</b>	Do you have any pain? Where is the pain? How is it affecting you? How do you manage it?		Pain	Refer immediately to general medical practitioner (GP)
<b>5</b>	Have you recently lost weight without trying?		Recent unexplained weight loss	
<b>6</b>	Have you had a recent change in your bowel habit?		Recent change in bowel habit	
<b>7</b>	Do you have bleeding from the back passage?		Rectal bleeding	
<b>8</b>	Do you have diarrhoea that won't go away?		Persistent diarrhoea	
<b>9</b>	Do you have blood in your urine?		Hematuria	
<b>10</b>	Have you had: – 1 or more bladder infections in the past 6 months? – 3 or more in the past year?		Recurrent UTI is present if the patient has had two or more in the last 6 months or three or more in the last 12 months	

<b>Questions to ask</b>		<b>Y/N/ Comment</b>	<b>Factors/Conditions contributing to urinary incontinence</b>	<b>Action</b>
11	Have you had surgery or radiation treatment to your abdomen or pelvis in the past?		History of pelvic surgery or irradiation. Increased risk of fistulae	Refer immediately to GP
12	Do you have a feeling of heaviness, dragging, a lump, or something hanging out of your vagina/private parts?		Major pelvic organ prolapse	
13	Do you have to push something back up inside before you can empty your bladder or bowel?		Major pelvic organ prolapse	
14	Clinician to consider: Is there any factor in the individual's presentation that would make you suspect a pelvic mass?		Pelvic mass	
<b>DIAPPERS – Reversible and Treatable Causes</b>				
15	<b>Delirium</b> (as for Q2)		Reversible treatable condition	Medical emergency
16	<b>Infection</b> Do you go to the toilet to pass urine more often than you think you should/ more often than seven times a day? Do you get an urgent / sudden overwhelming need to pass urine? Do you have stinging burning when you pass urine?		Frequency Urgency Dysuria	The presence of these symptoms may indicate a urinary tract infection  A routine urinalysis using reagent stick or via referral to the GP is required
17	<b>Atrophic Urethritis / Vaginitis</b> Females: Do you have any itching, irritation or dryness around the vaginal area?		Atrophic vaginitis	If present, refer to GP
18	<b>Psychological</b> Ask questions from validated screening tool.		Depression	If suspected, refer to GP  Use Geriatric Depression Scale or other tool. This can be downloaded from <a href="http://www.stanford.edu/~yesavage/GDS.html">http://www.stanford.edu/~yesavage/GDS.html</a>

	<b>Questions to ask</b>	<b>Y/N/ Comment</b>	<b>Factors/Conditions contributing to urinary incontinence</b>	<b>Action</b>
19	<p><b>Pharmacological</b></p> <p>What prescription medications are you taking?</p> <p>What over-the-counter preparations are you taking?</p> <p>What herbal medications do you take?</p>		Pharmaceutical	<p>Medication review</p> <p>Refer to GP</p> <p>Refer to pharmacist: Home Medicines Review program, via the GP</p>
20	<p><b>Excessive Urinary Output</b></p> <p>Do you have to get up at night to go to the toilet?</p> <p>Does the urge to empty your bladder wake you or is it some other reason?</p> <p><b>Endocrine Disease (Diabetes)</b></p> <p>Do you or your family have any signs or symptoms of diabetes?</p>		<p>Nocturia is present if the individual wakes one or more times to void at night</p> <p>Nocturnal polyuria is a common cause of nocturia</p>	<p>Undertake bladder diary with all individuals</p> <p>If present, refer to GP or diabetes educator</p>
21	<p><b>Restricted Mobility</b></p> <p>Do you have difficulty getting to and using the toilet?</p>		Functional incontinence: mobility issues	Refer to occupational therapist/physiotherapist
22	<p>Are you able to manage zips, buttons, underclothes and the like when going to the toilet?</p> <p>Do you have difficulty managing personal hygiene after toileting?</p>		Functional incontinence: upper limb issues	Refer to occupational therapist
23	<p><b>Stool Impaction</b></p> <p>How many times do your bowels open per week?</p> <p>Do you have soiling/leakage from the back passage?</p>		Stool impaction	If present, refer to GP
24	<p>How often do you have hard lumpy stools?</p> <p>How often do you have to strain excessively to empty your bowel?</p> <p>How often do you feel that you haven't emptied your bowel completely?</p> <p>How often do you have to use your finger or hand to help empty your bowel?</p> <p>What products, if any, do you currently use to manage constipation?</p>		Constipation	<p>Use Rome II criteria and Bristol Stool Form Scale</p> <p>Refer immediately to GP if individual reports a recent change in bowel habits</p> <p>Undertake bowel diary with individuals with constipation</p> <p>Use Stepping Out of Constipation algorithm</p>



<b>Questions to ask</b>		<b>Y/N/ Comment</b>	<b>Factors/Conditions contributing to urinary incontinence</b>	<b>Action</b>
<b>Daily Living habits which affect urinary continence</b>				
25	How much caffeinated fluid and alcohol do you drink each day? (Includes cola, high energy drinks)			Refer to bladder diary analysis sheet Reduce caffeine & alcohol
26	How much water do you drink on a daily basis?			Refer to bladder diary analysis sheet Recommend adequate water and “ideal” fluid intake
27	How many minutes of exercise (walking) do you do each day?			Encourage 30 minutes per day to assist continence management
28	Have you been taught how to do pelvic floor muscle exercises? Do you regularly do these exercises?			See Continence Foundation of Australia brochures Refer to continence advisor or continence physiotherapist
29	Can you (and do you) have your feet flat on the floor while using your bladder and bowels? Show me what position you use to empty your bowels.			Adjust toilet position if required
30	Do you have sufficient privacy for you to toilet without embarrassment?			Consider improving privacy

In certain clinical circumstances, direct questioning may not be appropriate. Also, some individuals respond better to a more indirect approach. Examples of indirect questions are listed below:

Do you have trouble holding onto your urine/wee before reaching the toilet?	Urgency
Do you sometimes find your underwear gets wet when you cough or sneeze?	Stress
Do you find that you know where every toilet is in your local shopping centre?	Urgency, Frequency
Do you control your bladder, or does your bladder control you?	Impact

Additional questions that may be useful to ask women:

In the past month, have you leaked urine when you:	
• Coughed, laughed or sneezed?	Stress
• Were on your way to the toilet/had to wait to use the toilet?	Urgency
• Did not go to the toilet immediately when you first felt the urge?	Urgency

Additional questions that may be useful to ask men:

Link to Section 7.5.1



<b>Questions to be answered</b>	<b>International Prostate Symptom Score (IPSS)</b>					
	<i>(circle one number on each line)</i>					
<b>Over the past month have you...</b>	<b>Not at all</b>	<b>Less than 1 time in 5</b>	<b>Less than half the time</b>	<b>About half the time</b>	<b>More than half the time</b>	<b>Almost always</b>
had the sensation of not emptying your bladder completely after you finished urinating?	0	1	2	3	4	5
had to urinate again less than 2 hours after you finished urinating?	0	1	2	3	4	5
found you stopped and started again several times when urinating?	0	1	2	3	4	5
found it difficult to postpone urination?	0	1	2	3	4	5
had a weak urinary stream?	0	1	2	3	4	5
had to push or strain to begin urination?	0	1	2	3	4	5
most typically, got up at night to urinate (bedtime – morning)?	0	1	2	3	4	5
Sum of 7 circled numbers (IPSS score): _____						
0 – 7 indicates mild incontinence						
8 – 19 indicates moderate incontinence						
20 – 35 indicates severe incontinence						
If you were to spend the rest of your life with your urinary condition the way it is now, how would you feel about that?						
Happy   Satisfied   Mixed satisfaction/dissatisfaction   Mostly dissatisfied   Unhappy						

A group of primary level health professionals, chaired by the HACC/MASS Continence Project staff, developed a generic continence assessment tool in 2008. Contact [contpro@health.qld.gov.au](mailto:contpro@health.qld.gov.au) for further information.



### Point of Interest

**The IPSS has been found to predict urinary incontinence in women, as confirmed by the 48 hour pad test. It is a useful outcome tool when used to compare the score at baseline to that at the end of an intervention.**

In 2006, the Medical Aids Subsidy Scheme (MASS, Queensland Health) developed comprehensive information concerning the key core components of an episode of care. Clinicians wishing to find out more about an episode of care are encouraged to refer to the MASS Statewide Prescriber Procedures Manual, continence section, which can be found on the MASS website: <http://www.health.qld.gov.au/mass/docs/procedures/masscontprocsep08.pdf>.

### **11.2.1 Medications**

**R**

#### **Recommendation**

*Consideration for a medication review should be made for individuals with symptoms of urinary incontinence. It is important to investigate the potential for a medication's impact on continence. Medications should include prescription, over-the-counter and complementary medicines. A medication review can be conducted following referral to the general medical practitioner who may then request that a Home Medicines Review be conducted by an accredited pharmacist.*

*Level of evidence: 4*

*Grade of recommendation: D*

*(Golding, 2009)*

 [Link to Table 20](#)

### **11.2.2 Impact on every day life**

It is recommended that clinicians assess the level of bother and the desire for treatment/management, based on information given by the individual and/or their carer (Staskin, Hilton, Emmanuel et al., 2005), as it is well recognised that there are frequently marked differences between the individual's and the clinician's perceptions of bothersomeness. Questions to illicit this information include:

- Does your problem with leakage/urinary incontinence stop you from doing things?
- How much does your leakage/urinary incontinence bother you?

### **11.2.3 Motivation and cooperation**

It is important to establish the individual's degree of motivation in regard to improvement in urinary incontinence. To optimise outcomes, adherence (compliance) to programs to treat incontinence such as pelvic floor muscle exercise program is important. Several studies have demonstrated a relationship between adherence to continence programs and improved outcome (Bo & Talseth, 1996; Chen, Chang, Lin et al., 1999; Lagro-Jansenn, Debruyne, Smits et al., 1991; Siu, Chang, Yip et al., 2003).

Pelvic floor muscle exercises are regarded as an important behavioural strategy for managing urinary incontinence (Balmforth, Mantle, Bidmead et al., 2006; Hatzimouratidis, Konstantinidou, & Hatzichristou, 2006; Milne & Moore, 2006). A qualitative case study of 33 men and women indicated that success with pelvic floor muscle exercises may be associated with the motivation for people to experience a normal lifestyle and success in being able to visualise and track their own progress (Milne & Moore, 2006). In addition, a study of 359 women engaged in pelvic floor muscle training suggested that adherence to exercise was improved when the approach was routine rather than ad hoc (Hines, Seng, Messer et al., 2007). For a more extensive review of models and literature around the factors which promote adherence to exercise regimes refer to Section 12 of "Second Steps in the Management of



Urinary Incontinence in Community-Dwelling Older People” (Queensland Health (MASS), 2008).

A case study of 20 women selected from a randomised trial examined women’s attitudes and ideas which influenced their capacity to continue and complete programs for the management of urinary incontinence. It found that beliefs about one’s own abilities to succeed in such a program are influenced by four main sources of information:

- one’s own assessment of capability through performance experiences
- observing other people’s behaviour and the consequences
- verbal persuasion from significant others about one’s capabilities
- one’s own physical and mental reactions (E. Hay-Smith, Ryan, & Dean, 2007).

Some of the women blamed themselves for their incontinence, (e.g. for having failed to do the exercises given to them after pregnancy), and they therefore needed to develop confidence in themselves in order to succeed in their programs (E. Hay-Smith, Ryan, & Dean, 2007).

A further qualitative study of the experience of 38 men and women in self-care strategies, concluded that “seeing enhanced believing” (experiencing the results of their self-care strategies, particularly if positive) was motivating. However, this needs to be accompanied by good quality guidance so that people are clear on what they have to do (Milne & Moore, 2006).

Questions which may assess the level of motivation of the person to manage their incontinence are:

- Would you like some help with improving your urinary incontinence?
- Doing some simple things may improve your urinary incontinence/leakage.  
Would you like to try these?



### 11.3 Step 3: Objective assessment

#### Recommendation

*Individuals who have been identified as having urinary incontinence should undergo an objective assessment in the following areas: psychological/behavioural/cognitive status, physical examination, bladder diary and urinalysis (Staskin, Hilton, Emmanuel et al., 2005).*

*Level of evidence: 4*

*Grade of recommendation: D*

#### 11.3.1 Psychological/behavioural/cognitive status

Older people who present with impaired psychological, behavioural or cognitive status need to be assessed by a general medical practitioner. If an older individual presents with symptoms of delirium, it is a medical emergency and urgent medical attention should be sought. Some forms of assessment and treatment are not appropriate in older individuals with impaired cognitive ability. Formal testing of cognitive function may be necessary (Staskin, Hilton, Emmanuel et al., 2005). The Geriatric Depression Scale can be found at <http://www.stanford.edu/~yesavage/GDS.html>.

### **11.3.2 Physical examination**

Physical examination related to urinary incontinence involves perineal, vaginal and/or rectal examinations. Older people should be referred to a general medical practitioner, continence nurse or continence physiotherapist for these investigations. Observation of the perineal and/or perianal areas may be undertaken by registered nurses, continence advisors and some allied health professionals as part of their normal routine of care for individuals. During observation of these areas, the integrity of the skin and a check for significant pelvic organ prolapse may be undertaken (Hirst, 2006).

### **11.3.3 Bladder diary**

A sample bladder diary is included in this section (Table 26).

#### **11.3.3.1 Reasons for use of a bladder diary**

Reasons for using a bladder diary include:

- To help develop a treatment/management plan for a patient with lower urinary tract symptoms
- To help measure the effectiveness of a treatment/management intervention.

#### **11.3.3.2 Information recorded in a bladder diary**

Information gathered from a bladder diary includes:

- Date
- Times of individual voids
- Volumes of individual voids
- Incontinence episodes
- Fluid intake
- Comments regarding urgency, degree of leakage and factors associated with leakage.

#### **11.3.3.3 Limitations of the bladder diary**

Maintaining a bladder diary requires significant effort on the part of the individual. Some studies have explored the length of time for data collection and the quality of results, while another (Kenton et al., 2006) focussed on quality of life issues, and noted that the number of incontinence episodes by themselves is not an adequate measure of the “bothersomeness” which people feel around incontinence. Kenton’s study of 61 participants found that women with urge incontinence may either overestimate or under record incontinence episode frequency in a bladder diary, and that this effect is more pronounced in women who are more bothered by incontinence (Kenton, Fitzgerald, & Brubaker, 2006).

 [Link to Section 7.5](#)

#### 11.3.3.4 Time period required

The minimum length of time needed to get important information from the chart is 24 hours.

#### Point of Interest

**A seven day bladder diary has been found to be a reliable measure of the frequency of incontinence episodes in community-dwelling women aged 40 – 90 years** (Locher, Goode, Roth et al., 2001). **Another study confirmed that there were no statistically significant differences between a four day diary and a seven day diary in women** (Schick, Jolivet-Tremblay, Dupont et al., 2003). **A study compared patient compliance and burden experienced by patients when completing a 2 day versus a 3 day versus a 7 day diary** (Ku, Jeong, Lim et al., 2004). **Compliance to the diary, measured by frequency of missing data, was not significantly different in the three different diary lengths. However, reported burden was significantly higher in those performing a 7 day diary. This finding has been reinforced by another study of 288 people which found that the 7-day diary included less complete data than the 3-day diary and suggests that “diary fatigue” may be responsible. The study recommended that a 3 day diary is superior in terms of data quality** (Tincello, Williams, Joshi et al., 2007).

#### Good Practice Point

*The longer a bladder diary is completed, the more accurately it is able to reflect the clinical picture, but clinicians need to be aware of the impracticality and bothersomeness associated with completion of a bladder diary. It is far better to complete a diary accurately for less time than to fill it out sporadically for longer. Therefore, for practical purposes and accuracy, a 48 hour to three day (72 hour) diary is recommended.*

*If even one void in the 24-hour period is left out, the diary can be misinterpreted. Therefore, if it is impractical for the individual to measure all volumes for greater than 24 hours, he/she can be encouraged to complete the diary for 24 hours only, but to also record the number of voids and leakage episodes for several days after that. This will increase the accuracy of the information in the bladder diary regarding number of voids, nocturia and leakage episodes.*

Some individuals may find it too much bother to measure the volume of each drink they consume during the period of recording on the bladder diary. If this is the case, the clinician may suggest that the individual works out the capacity of their favourite cup, mug or glass, and record this information separately and attach to the diary. The diary can then be completed simply by describing the drinking vessel, rather than measuring the volume for each entry.

If the individual is unable to measure any volumes, a modified chart can be used. A pictorial chart can also be useful for individuals with lower literacy levels. One such chart is available to download from the following website: <http://www.kidney.niddk.nih.gov/kudiseases/pubs/diary/index.htm>. Alternately, a tick and the time of void can be recorded in the bladder diary to indicate when a void has occurred.



### **11.3.3.5 Instructions for completing a bladder diary**

A bladder diary helps us to understand how you have trouble with your bladder. It is very important that you complete it accurately, so that we can try to improve your symptoms.

1. When you get out of bed in the morning, show this on the diary by writing “got out of bed”.
2. During the day, enter the time, type and volume of all drinks you have during the day, e.g. 8:00am – two cups of coffee (total 400 mL).
3. The time you pass your urine, e.g. 7.30am. Do this every time you pass urine throughout the day and night.
4. Every time you pass urine, collect the urine in a measuring jug and record the amount (in mL) next to the time you passed the urine. To do this easily, place a large plastic container in the toilet bowl to catch the urine. When finished, the urine can then be poured into a measuring jug and the amount measured. This will allow you to sit or stand comfortably and naturally to void, and will alleviate the need to hold a container while urinating, which can adversely affect the urine flow.
5. Each time you pass your urine, please write down how urgent was the need to pass urine:
  - 0 = not urgent.
  - + = I had to go within 10 minutes.
  - ++ = I had to stop what I was doing and go to the toilet.
6. Write “W” at the time you leak urine (W = Wet).
7. Write “P” if you have to change a pad (P = Pad).
8. Write “WP” if you leak urine and have to change your pad.
9. Write “C” if you have to change your underclothes or even outer clothes (C = Clothes).
10. Write “WPC” at the time you leak and need to change a pad and underclothes and/or outer clothes.
11. If you have a leak, please write in the column called “comments” whether you leaked a small amount or a large amount and what you were doing when you leaked, e.g. “leaked small amount when I sneezed three times”.
12. Record bowel movements in the “comments” column.
13. When you go to bed at the end of the day show it on the diary – write “went to bed”.
14. When you are ready to go to sleep, write “ready for sleep”.

These instructions should be included on the bladder diary form, usually on the reverse side. The instructions should also be given verbally to the patient during the consultation (Abrams, Andersson, Brubaker et al., 2005). Table 27 shows a completed sample diary.





## Good Practice Points

*Suggest the individual keeps the bladder diary near the toilet.*

*If medications affecting the bladder diary (e.g. diuretics) are taken, note the time they are taken on the diary.*

*Ensure adequate night lighting is available for measuring and documentation, and advise the individual to stow away measuring equipment safely each time to avoid them being a safety hazard.*

*Place an empty ice-cream container into the toilet to pass urine, then empty the urine into the measuring receptacle. If the individual does not wish to use a measuring jug to measure urine, mark another container (such as an ice-cream container) in millilitres with a permanent marking pen using the measuring jug.*

*Ask the individual to record the number and time of bowel motions on the chart, or complete a separate bowel diary.*

*Use or adapt a pictorial diary if the individual has poor vision, cognitive impairment, or is from a non-English speaking background.*

**Table 27: Completed bladder diary example**

Time urine passed am/pm	Amount of urine passed	Urgency?	Leakage?	Comments?	Drinks		
					Time/amount/type		
7:15am	200 mL	0	–	Got up	7:15	800 mL	Coffee
7:30am	100 mL	+	–				
11:30am	275 mL	++	W	Wet pants	11:00	375 mL	Cola
12:30pm	75 mL	+	–		12:30	250 mL	Water
3:00pm	220 mL	0	–		3:30	200 mL	Tea
3:45pm	–	–	W	Sneezed x 3			
5:30pm	175 mL	0	–		6:30	250 mL	Water
7:45pm	120 mL	–	–		8:00	100 mL	Wine
9:15pm	175 mL	–	–				
10:00pm	100 mL	–	–	Went to bed	10:00	250 mL	Cocoa
12:50am	200 mL	–	W	Woke up			
2:00am	250 mL	+	W	Urge woke			
4:05am	200 mL	+	–	Urge woke			
7:00am	220 mL	+	W	Got up	7:15	250 mL	Coffee

(Abrams, Andersson, Brubaker et al, 2005, p1628-9)

### 11.3.3.6 Information gained from a bladder diary

Using the bladder diary shown in Table 27, clinicians can calculate the following:

#### 1. Daytime Frequency

- Count the number of voids from the first after 'waking up' to the last before 'going to bed'
- Eight or more is commonly thought to indicate increased daytime frequency.

*Example bladder diary:* Daytime frequency = 9

#### 2. Nocturia

- Count the number of times the individual woke to void during the night
- One or more voids at night indicate the presence of nocturia, although once or twice may be normal for some people
- Do not include any voids that occurred after 'going to bed' but before falling asleep
- Do not include the first void after 'waking up'.

*Example bladder diary:* Nocturia = 3

[Link to Section 11.5.2.1](#)

#### 3. Total 24-hour input

- Add up all fluids consumed within a 24-hour period
- The recommended fluid intake is approximately 1500-2000 mL of alcohol-free fluid in 24 hours
- It has also been recommended that enough fluid be consumed to produce a urine output of 1500-2500 mL in 24 hours (Scottish Intercollegiate Guidelines Network, 2004).

*Example bladder diary:* Total 24-hr input = 2475 mL (1625 mL caffeinated, 750 mL non-caffeinated and 100 mL alcoholic)

#### 4. Maximum and minimum voided volumes and intervals

- Normal voided volumes range from approximately 300-500 mL every 3-4 hours (Homma, Batista, Bauer et al., 2002)
- Note – volumes below 250 mL may be normal at times eg when voiding before bed, or before or after sexual intercourse.

*Example bladder diary:* Maximum volume = 275 mL, Minimum volume = 75 mL

#### 5. Total 24-hour output (diurnal/24-hour polyuria)

- Add up all volumes in a 24-hour period
- Output should be 1500-2500 mL (Scottish Intercollegiate Guidelines Network, 2004)
- A urine output of greater than 2500 mL in 24 hours may reflect diurnal or 24-hour polyuria
- Note – The International Continence Society definition of diurnal/24-hour polyuria is a urine output volume greater than 40 mL per kilogram of body weight (van Kerrebroeck et al., 2002).

*Example bladder diary:* Total 24-hour urine output = 2310 mL (no 24-hour polyuria present)

## 6. Nocturnal polyuria

Nocturnal polyuria is present if the following two criteria are present:

- The 24-hour urine output volume is normal (ie there is no 24-hour polyuria)
- The total volume of all voids after going to sleep plus the first void after waking up is greater than one-third (33%) of the 24-hour total.

**Example bladder diary:** Total volume after going to sleep including first void after waking = 200 + 250 + 200 + 220 = 870;  $870/2310 = 37.7\%$  (therefore nocturnal polyuria is present)

## 7. Leakage episodes

- Add up the number of leakage episodes noted on the diary.

**Example bladder diary:** 5 episodes of leakage

(Homma, Batista, Bauer et al., 2002)

### 11.3.4 Urinalysis

R

#### Recommendation

*A urinalysis should be performed on urine of all individuals presenting with urinary incontinence. (Rigby & Gray, 2005).*

*Level of evidence: 4*

*Grade of recommendation: D*

Urinalysis can be undertaken using two methods. A specimen of urine is obtained and either sent to a laboratory for microscopy, culture and sensitivity or the reagent strip testing method can be used. Commonly used reagent strips test for a number of abnormalities, including glucose, ketones, bilirubin, blood, protein, nitrites, leukocytes and specific gravity (Rigby & Gray, 2005).

#### Point of Interest

Authors of a meta-analysis examining the accuracy of the dipstick (reagent strip) test in screening for urinary tract infections (UTI) concluded that dipstick screening for UTI in the older individual has a high sensitivity when used in a primary care setting. The specificity of the test for UTI was also found to be acceptably high (Deville, Yzermans, van Duijn et al., 2004). These two indicators suggest that dipstick urinalysis testing is a valid diagnostic test for UTI. Macroscopic or dipstick urinalysis tests for the presence of nitrites and leukocyte esterase. Nitrite is produced when bacteria convert dietary nitrates to nitrites, and hence indicates bacteriuria (presence of bacteria in the urine). Leukocytes (white blood cells or pus cells) produce an enzyme called esterase. Presence of leukocyte esterase suggests bladder or renal infection (Bayer Australia Ltd). Negative nitrite and leukocyte esterase effectively rule out UTI, whereas a finding of positive nitrites effectively indicate a UTI.

As detailed in Section 9.2.2, asymptomatic bacteriuria is common in older people (Lutters & Vogt, 2002; MA. Smith & Duke, 1994), and treatment of asymptomatic bacteriuria is not recommended (Boscia, Kobasa, Abrutyn et al., 1986).



### Good Practice Point

Dipstick kits have a limited shelflife after opening, especially in warmer climates such as Queensland. The dipstick kit should be kept in an airtight container and stored in a cool, dry, dark place. Check the expiry date prior to use.



## 11.4 Step 4: Plan the required interventions

After assessment information has been gathered from all relevant sources, including the general medical practitioner, family members, and other health professionals as appropriate, the next logical step is to plan management and treatment interventions.



## 11.5 Step 5: Implementation of treatment/management interventions

It is important to view continence management and treatment in an holistic manner, as appropriate management of many of the contributing factors discussed in Section 4 can have positive outcomes on urinary incontinence. Implementation may include referral to specialist continence services, the general medical practitioner for further specialist assessment and intervention, members of the allied health team, the dentist, and carer support agencies.

There are, however, specific interventions which are appropriate for consideration and application by generalist clinicians, and these are outlined in this section.

### 11.5.1 Management of stool impaction



#### Recommendation

Once impaction is identified, the loaded rectum and bowel must be cleared (disimpacted) prior to any other intervention (Irvine, 2001).

Level of evidence: 4

Grade of recommendation: D



### Good Practice Points

- The use of stimulant laxatives to clear faecal impaction (including bisacodyl and senna) is contra-indicated (Bochner, 2003).
- Rectal preparations are indicated to clear faecal impaction (Bochner, 2003). See Steps 6 and 7 of the Stepping out of Constipation algorithm (see Section 5.7.2). Rectal preparations such as enemas, suppositories and water lavage induce evacuation in response to colonic distension. The commonest reason for their failure is inadequate administration.
- After disimpaction by use of rectal preparations, the following steps should be undertaken:
  - The use of oral bowel medication may be appropriate on an ongoing basis. This is done in consultation with the general medical practitioner.
  - Review of bowel habit and pattern using a bowel diary (see Section 5.6.2.1).
  - A constipation management plan should be implemented (Harari, 2004; Woodward, 2002).

Chronic straining in women may be a risk factor for the development of urinary incontinence. Women who report straining at stool have been found to be 1.9 times more likely to have stress incontinence, and 1.7 times more prone to urgency. This is possibly due to a link between straining and pudendal nerve function. However, further research is needed to better understand the pathogenesis of straining and urinary incontinence (P. Wilson, Berghmans, Hagen et al., 2005).

## **11.5.2 Fluids, caffeine, alcohol and carbonated drinks**

### **11.5.2.1 Fluids**

A search of the literature has found that it is not possible to provide a single recommended fluid intake for adult healthy bladder and bowel function, as there are a number of different measures used for determining adequate daily fluid intake, including:

- volume per day
- volume per kg of body weight
- volume of urine output.

These differences appear to be related to the authors' professional backgrounds, with those from a dietetic and nutritional perspective advocating slightly higher intakes than those with a urological viewpoint.

#### ***Volume per day***

For both healthy bladder and healthy bowel function, the recommended fluid intake for adults is 1500-2000 mL of caffeine-free and non-alcoholic fluid in a 24-hour period unless otherwise indicated (British Dietetic Association, 2006). Caffeinated beverages do not have to be excluded as a source of fluid but should not be relied upon as the sole source of fluid or be consumed in excess (P. Smith, Smith, Miners et al., 2000).

Some foods, such as soups, stews, custards, ice cream, yoghurt, etc., contain a large percentage of fluid, and can therefore be included in fluid intake calculations (see Table 28). In order to prevent urinary incontinence brought on by excessive fluid consumption, the total daily fluid volume probably should not exceed 3000 mL/day from a combination of foods and fluids. However, this general recommendation does not take into consideration individual needs, raised ambient temperatures and high activity levels (Hashim & Abrams, 2008; Swithinbank, Hashim, & Abrams, 2005).

 [Link to Table 28](#)

#### ***Volume per kg of body weight***

Adequate adult hydration is typically achieved with an intake of 24 mL fluid/kg of body weight (Rantell & Vosloo, 2008; Cardoza, 2006) or 30 mL fluid/kg of body weight (Joanna Briggs Institute, 2001; Wound Ostomy and Continence Nurses Society, 2003) every 24 hours. Again, these recommendations do not take into consideration individual needs, raised ambient temperatures and high activity levels.



## Point of Interest

### Fluid Calculation examples:

The formula, 24 mL x body weight in kg = optimal fluid intake, allows for a fluid intake of 1,500 – 2,000 mL for those who are of average weight, as shown:

50 kg x 24 mL = 1200 mL      60 kg x 24 mL = 1440mL      70 kg x 24 mL = 1680 mL

80 kg x 24 mL = 1920mL      90 kg x 24 mL = 2160mL      100 kg x 24mL = 2400 mL

People who weigh less than 60 kg may need less fluids, while those who weigh over 90 kg may need more, depending on health conditions, climatic conditions, exercise levels and fluid derived from dietary intake.

The formula, 30 mL x body weight in kg = optimal fluid intake, allows for a fluid intake of 1,800 – 2,600 mL for those who are of average weight, as shown:

50 kg x 30 mL = 1500 mL      60 kg x 30 mL = 1800mL      70 kg x 30 mL = 2100 mL

80 kg x 30 mL = 2400mL      90 kg x 30 mL = 2700mL      100 kg x 30 mL = 3000 mL

### Volume of urine output

Fluid intake for adults should be sufficient to produce a urine output of 1500-2500 mL in 24 hours (SIGN, 2004).

### Rate of fluid intake

For adequate hydration, the rate of fluid intake should not exceed the bladder's maximum filling rate and holding capacity (300-500 mL). It may be useful to limit fluid intake to less than 300-500 mL in any 15 minute period, as this is the minimum volume to initiate diuresis (Shafiee, Charest, Cheema-Dhadli et al., 2005). Elderly and disabled people may also tolerate smaller, more frequent amounts of fluid.

**Table 28: Fluid Content of various Foods**

170 mL clear soup	170 mL
170 mL thicker soups (6oz = 170 mL)	150 mL
30 mL gravy/sauce, e.g. White sauce	25 mL
1 ice cream slice 100 mL = 46 g	30 mL
Jelly, average serve (½ cup)	125 mL
Jelly served with custard (¼ cup Jelly)	50 mL
Custard, average serve	100 mL
Custard served with cake etc, ¼ cup custard	50 mL
Jelly & Custard together	100 mL
100 g tub yoghurt	80 mL
1 serve cooked porridge	160 mL
½ cup watermelon/other melons (100 g)	80 mL
1 medium apple/pear/orange	120 mL
1 medium tomato (160 g)	90 mL
Paw paw (1/2 cup) = 75 g	66 mL
20 grapes (60 g)	50 mL
5 prunes (70 g)	50 mL
1 kiwi fruit (80 g)	65 mL
Vegetable and beef lasagne	90 mL

Mater Adults Hospital, Brisbane, 2007

### 11.5.2.2 Caffeine

R

#### Recommendation

*The effect of caffeine reduction on an individual's symptoms should be evaluated. It may be necessary to restrict caffeine to < 100 mg in any one hour and no more than 250 mg in a 24-hour period. For clients with quite sensitive bladders such as an overactive bladder, complete avoidance of caffeine may be necessary or at least a daily limit set to 100 mg per day (Ayra, Myers, & Jackson, 2000; Bryant, Dowell, & Fairbrother, 2002; Creighton & Stanton, 1990).*

#### Supporting evidence

A study of community-dwelling women aged 55 years and older with urinary incontinence involved a 'behavioural management for continence' intervention by visiting nurses. One component of the intervention was advice to reduce caffeine intake. Thirty-four women were encouraged to reduce their caffeine intake, and 29 out of the 34 (85.3%) did so. Twenty-six out of these 29 women demonstrated a reduction in the volume and number of daytime incontinence episodes (Tomlinson, Dougherty, Pendergast et al., 1999).

A randomised control trial of 74 adults examined the effect of a reduction in caffeine consumption on bladder function. The experimental group received bladder training and an educational intervention to reduce their caffeine intake to less than 100mg a day, while the control group also received bladder training, but continued their usual daily caffeine intake of over 100mg every 24 hours during the 24 hour study period. Frequency, urgency and leakage were measured, based on bladder diary results. Significant improvements in the occasions of urgency per day and number of voids per day were found, along with a non-significant reduction in the number of daily leakage episodes. The report concludes that reducing caffeine intake can have a beneficial effect on bladder function (Bryant, Dowell, & Fairbrother, 2002).

However, the data on caffeine intake and incontinence are conflicting. While large cross sectional surveys indicate no association, small clinical trials suggest that decreasing caffeine intake improves continence in women. (Creighton & Stanton, 1990; Milne, 2008; P. Wilson, Berghmans, Hagen et al., 2005).

There are reports of increased anxiety levels in adults at levels greater than 210 mg of caffeine (3 mg/kg body weight) per day (P. Smith, Smith, Miners et al., 2000). It may be prudent to advise a limit of daily caffeine consumption of less than 250 mg/day (i.e. less than 2-3 cups coffee or 4 cups strong tea).

Caffeine reaches peak blood levels in 30 to 50 minutes following ingestion (Creighton and Stanton, 1990). Therefore, those susceptible to urinary incontinence, and especially those with an overactive bladder, might find it best to reduce caffeine to less than 100 mg in any one hour (Ayra, Myers, & Jackson, 2000; Bryant, Dowell, & Fairbrother, 2002; Creighton & Stanton, 1990). This would represent a maximum of one cup of coffee or strong tea, in any one hour. Certainly, the effect of caffeine reduction on an individual's symptoms should be tested and appropriate modifications made based on the results.

**Table 29: Caffeine content in beverages and food**

<b>Beverage/Food</b>	<b>Serving Size</b>	<b>Caffeine (mg)</b>
Coffee, generic brewed	240 mL	133 (range: 102-200)
Tea, brewed	240 mL	53 (range: 40-120)
Green Tea	200 mL	18
Cola drink	375 mL (1 can)	35 – 38
Lemonade	375 mL (1 can)	0
Energy drink	250 mL	80
Hot Chocolate	240 mL	9 (range: 3-13)
Chocolate bar	45 g	31
Over the counter medications used for mental fatigue (maximum strength)	1 tablet	100

Adapted from <http://www.cspinet.org/new/cafchart.htm>

### **11.5.2.3 Alcohol**

Consumption of alcohol has both immediate and cumulative effects, which arise not only from the quantity of alcohol consumed but also from a complex interaction between the age and experience of drinkers, their social environment, genetics and general health. Gender, body size and individual metabolism also affect the biological responses to alcohol. Because of these factors, no specific amount of alcohol can be said to be safe for everyone (NHMRC, 2009).

Guidelines recommend no more than two standard drinks on average each day for healthy women and men, and, because the risk of alcohol related injury increases with the amount consumed, it is recommended that healthy women and men should consume no more than four standard drinks on a single occasion. Drinking less frequently over a lifetime (e.g. drinking weekly rather than daily) and drinking less on each drinking occasion reduces the lifetime risk of alcohol related harm (NHMRC, 2009).

Light to moderate alcohol consumption for some older adults may lower the risk of several chronic conditions, such as reduced bone loss and reduced risk of cardiovascular conditions such as heart failure, stroke and atherosclerosis, and may protect against cognitive impairment and dementia in older adults. However, because of its cumulative effects, harm from alcohol related disease is more evident among older people. As people age, their tolerance for alcohol decreases and the risk of falls and adverse interactions with medications increases. Alcohol can affect the pituitary gland, suppressing the production of anti-diuretic hormone, which causes the kidneys to fail to reabsorb an adequate amount of water, causing dehydration. The NHMRC guidelines state that alcohol consumption has been associated with a range of diseases, including cardiovascular disease, cancers, diabetes, nutrition-related conditions, overweight and obesity, liver disease, and long term cognitive impairment (pp 20–23, NHMRC guideline). It may increase the risk of falls and injuries, as well as some chronic conditions (p 89, NHMRC guideline). Older people are therefore advised to consult their general medical practitioner about the most appropriate level of alcohol consumption for their health (NHMRC, 2009).



## Point of Interest

A population-based study of adults aged over 75 years by Aira et al. (2005) found that, among those using alcohol at any level, 87% also regularly used medications that had potentially adverse interactions with alcohol ((NHMRC, 2009), p89).

Alcohol is generally thought to aggravate urinary incontinence in susceptible people, especially those with the overactive bladder syndrome. However, Roe and Doll (1999) (cited in Rantell & Vosloo, 2008) found no association between urinary incontinence and alcohol consumption, while Dallosso et al. (2003) (cited in Rantell & Vosloo, 2008), found that consumption of wine, beer or spirits does not increase the risk of either stress urinary incontinence (SUI) or overactive bladder symptoms (Rantell & Vosloo, 2008).

## Good Practice Point

*Health professionals should encourage individuals to consume alcohol safely, in accordance with the Australian guidelines to reduce health risks from drinking alcohol. If an individual has ongoing urinary difficulties such as polyuria, frequency and/or urgency, sensible alcohol limitations are suggested.*

### 11.5.2.4 Carbonated drinks

A search of Medline and CINAHL for 'carbonated beverages' and 'incontinence' or 'bladder' revealed only two papers. Dallosso et al. (2003) investigated the role of diet and other lifestyle factors in the incidence of overactive bladder (OAB) and stress incontinence in over 6000 community dwelling women aged 40 years or over. A postal survey and food-frequency questionnaire was initially sent, with a follow up posted survey one year later. The authors found significant increased risks for overactive bladder associated with obesity, smoking and consumption of carbonated drinks, while obesity and carbonated drinks daily or more often were also significant risk factors for the onset of stress incontinence (Dallosso, McGrother, Matthews et al., 2003). About half of the carbonated drinks consumed were 'colas' which contain significant amounts of caffeine. However, there is insufficient evidence to support caffeine having a causal role in altered bladder function. Many carbonated drinks are rich sources of sugar, and others have high levels of artificial sweeteners, while chemicals used in the manufacture of carbonated drinks include colorants and preservatives, commonly citric acid. It may be these factors that affect bladder function (Dallosso, McGrother, Matthews et al., 2003).

Milne (2008) states that initial evidence suggests that obesity, smoking, and consumption of carbonated drinks are risk factors for OAB but there is less support for the contributory role of caffeine or the impact of caffeine reduction. She believes that further prospective trials are warranted to examine the impact of reducing or eliminating carbonated drinks (Milne, 2008).

### **11.5.3 Nocturia**

**R**

#### **Recommendation**

*If nocturia is still present once underlying conditions have been addressed by the medical practitioner, the following advice can be considered:*

- *timing of diuretic use in consultation with the general medical practitioner*
- *reduction in caffeine and alcohol intake*
- *reduction in fluid consumption close to bedtime*
- *modifying night-time influences on sleep*
- *taking daytime rests in the recumbent position, especially in the afternoon/evening if lower limb peripheral oedema is present*
- *using elasticised (compression) stockings with medical practitioner's approval if lower limb peripheral oedema is present.*

*(Wein, Lose, & Fonda, 2002)*

*Level of evidence: 4*

*Grade of recommendation: D*

### **11.5.4 Good habits for bladder emptying**

#### **11.5.4.1 Avoid 'hovering'**

Women may report 'hovering' above the toilet to void, especially in public toilets or if there are concerns about hygiene.

**R**

#### **Recommendation**

*Females should be informed that it is best to sit on the toilet and avoid the 'hovering' position.*

*Level of evidence: 3*

*Grade of recommendation: D*

#### **Supporting evidence**

Eighty-five percent of a sample of British women attending a gynaecological outpatients clinic reported 'crouching' above a public toilet to void, 12% applied toilet paper to the seat and only 2% sat on the seat. In the 'crouching' position, there was a 21% reduction in urine flow rate, and a 149% increase in post-void residual volume (KH. Moore, Richmond, Sutherst et al., 1991).

**•**

#### **Point of Interest**

**'Hovering' above the toilet requires contraction of the lower limb musculature including the quadriceps femoris, gluteus maximus and adductor muscles, as well as the muscles of the abdominal wall. The pelvic floor muscles and striated urethral sphincter muscles have been shown to contract together with the abdominal, gluteal and adductor muscles (Bo & Stein, 1994). Hence it may be more difficult for the pelvic floor muscles and striated urethral sphincter to relax and allow effective voiding in the 'hovering' position, due to the contraction of the lower limb muscles.**

#### 11.5.4.2 Positioning for bladder emptying

R

### Recommendation

Females should be instructed to sit on the toilet and lean forward from the hips to void, as far as it is safe to do so.

Level of evidence: 3

Grade of recommendation: D

### Supporting evidence

Different sitting postures to void have been demonstrated to have different effects on the urine flow rate in women. Voiding in the upright sitting position and a leaning-forward position was compared in a cohort of women 17-70 years of age, some with lower urinary tract symptoms. There was a statistically significant improvement in urine peak and average flow rates and a decrease in residual volume in the forward leaning position (Rane & Cortisaans). Unlike the need to lean forward with a straight spine when defecating, the position of the spine is not as important for urination, and, in fact a spinal slump may actually help as it may compress the abdomen and therefore increase the urine flow (Tait, 2007).

### Point of Interest

A study of 54 women aged between 18-62 years investigated the effects of posture on micturition in the lean forward and squatting positions. No statistical difference in uroflowmetric parameters was found. However, this study did highlight that only 54 of the initial 125 volunteers were able to do a full squat, with 51 able to squat for less than 30 seconds and 19 were unable to squat at all (Rane & Cortisaans, 2008).

**Figure 6: Good sitting position for bladder emptying**



1. Sit comfortably on the toilet
2. Feet flat on the floor
3. Lean forward resting elbows on your knees
4. Men may stand or sit according to preference.

**R****Recommendation**

*Males should be advised to void in either the standing or the sitting position according to preference.*

*Level of evidence: II+*

*Grade of recommendation: C*

**Supporting evidence**

A case-control study was conducted in middle-aged and older men with lower urinary tract symptoms due to benign prostatic hypertrophy (BPH) to determine the effects of different voiding positions on urine flow and post-void residual urine volume (Unsal & Cimentepe, 2004). No differences were found between the standing and the sitting position.

**11.5.5 Exercise**

High-impact athletic activities are linked to stress urinary incontinence in younger women, particularly elite athletes (Nygaard, Girts, Fultz et al., 2005), and strenuous exercise is likely to unmask the symptoms of female stress incontinence during provocation. There is scant level 2 and 3 evidence that suggests that active women may be more likely to report incontinence than sedentary women, and that heavy occupational work may be associated with pelvic organ prolapse and urinary incontinence. However, there is no evidence to suggest that strenuous exercise causes incontinence, and no trials that assess the role that altered activity level plays in treating urinary incontinence (P. Wilson, Berghmans, Hagen et al., 2005).

**11.5.5.1 General****R****Recommendation**

*An exercise program should be designed so it ensures the maintenance of appropriate levels of exercise while not exacerbating existing symptoms. The National Physical Activity Guidelines for Australians recommend that 30 minutes of moderate intensity activity (such as walking) should be undertaken most days of the week and that this can be broken up into more frequent, shorter periods of activity. Individuals unable to undertake such exercise are encouraged to exercise within their limitations (National Physical Activity Guidelines for Australians 1999).*

*Level of evidence: 2+*

*Grade of recommendation: C*

**Supporting evidence**

Regular exercise in older people may help to decrease urinary incontinence. A prospective study was undertaken investigating the effects of general exercise on urinary incontinence involving nursing home residents with cognitive impairment. Subjects were between 70 and 97 years of age and demonstrated functional impairment. A daily exercise program was instituted involving approximately half an hour a day of assisted walking interrupted by rests. After four weeks of assisted walking five days a week, individuals demonstrated a decreased frequency of daytime urinary incontinence episodes (Jirovec, 1991).

Daily exercise programs designed to improve walking and upper body strength have been shown to be effective in reducing daytime urinary incontinence in cognitively impaired

older people living in residential care (Skelly & Flint, 1995; Tannenbaum & DuBeau, 2004). In addition, analysis of data from the Nurses Health Study supported the finding that moderate intensity physical activity, including walking, was associated with an approximate 20–25% reduced risk of developing urinary incontinence in older women (Danforth, Shah, Townsend et al., 2007).

#### 11.5.5.2 Verbal instruction of pelvic floor muscle exercises

R

### Recommendation

*If vaginal or rectal examination is not able to be performed because the health professional does not have the required training, or consent is not received from the individual, specific verbal instruction should be given to individuals who are cognitively able.*

*Level of evidence: 4*

*Grade of recommendation: D*

### Supporting evidence

During the development of this guideline, no studies were identified that showed that verbal instruction only of pelvic floor muscle exercises is effective in reducing urinary incontinence. Therefore, the level of evidence for verbal instruction only has been rated as 4.

A correct pelvic floor contraction has been found to increase pressure inside the urethra without a concurrent increase in pressure inside the bladder and abdomen, and to cause forward and upward movement (elevation) of the pelvic floor muscles, bladder and urethra (Bo, Lilleas, Talseth et al., 2001; Christensen, Djurhuus, & Constantinou, 1995). Conversely, it has been shown that a straining action produces a downward movement or depression of the pelvic floor muscles and the bladder (Bo, Lilleas, Talseth et al., 2001).

Forty-seven women aged 23 to 83 years of age, with pelvic organ prolapse and/or urinary incontinence were asked to “...contract the muscles you would use if you were trying to keep from losing your urine...” Only 49% of the women performed a correct pelvic floor muscle contraction, and 26% used a technique that could promote incontinence, in that they increased the pressure inside the bladder, which is associated with straining (Bump, Hurt, Fantl et al., 1991).

The movement of the muscles during a pelvic floor muscle contraction following verbal instruction was observed using transabdominal ultrasound in 104 women with stress incontinence, urgency or prolapse. Only 38% of subjects were able to perform a correct pelvic floor muscle contraction; that is, one where elevation of the pelvic floor muscles occurred. Depression of the pelvic floor muscles was observed in 43% of the subjects who attempted to perform a pelvic floor muscle contraction (J. Thompson & O’Sullivan, 2003).

Following verbal instruction, the position of the lower part of the bladder (the bladder neck) during a pelvic floor muscle contraction was observed using transperineal ultrasound in 120 continent and incontinent women. In 22.5% of the subjects, depression of the bladder neck occurred during attempted pelvic floor muscle contraction. This occurred in both continent and incontinent subjects (J. Thompson, O’Sullivan, Briffa et al., 2004).



## Point of Interest

Link to Section 11.2.3  
of 2nd steps CPG



**Exercising the pelvic floor muscles activates the muscles of the abdominal cylinder. If exercises are done incorrectly they may in fact increase pressure on the pelvic floor, worsening incontinence. Care should be taken that exercises are properly understood and practised. For further information about the pelvic floor and its role as part of the abdominal capsule, refer to Section 11.2.3 Functional integration with abdominal capsule in ‘Second Steps in the Management of Urinary Incontinence in Community Dwelling Older people: A clinical practice guideline’ (Queensland Health (MASS), 2008).**

While misunderstanding verbal instructions may be one reason for incorrect pelvic floor muscle actions occurring, it is also thought that some people may have impaired motor control strategies related to pelvic floor muscle function (J. Thompson, O’Sullivan, Briffa et al., 2004b). This has clinical implications when considering the approach that needs to be taken when providing pelvic floor muscle rehabilitation programs for older people with urinary incontinence.

Strength training of the pelvic floor follows the same principles as those for general strength training. It can take at least five months to strengthen weak muscles. The following are suggestions on the frequency and duration of pelvic floor muscle exercises:

- Make sure the individual is able to perform a correct contraction
- Contract as strongly as possible. Start with gentle contractions if muscles are weak, and progressively challenge the muscles to work harder
- Hold each contraction for 3 – 10 seconds
- Practice 8 – 12 repetitions (1 set)
- Perform three sets per day
- Rest for 1 – 2 minutes between sets (Bo & Aschehoug, 2007; Kenway, 2009).

Clinicians should be aware of individual differences, and refer to a pelvic floor physiotherapist if verbal instruction does not achieve the desired results.

Randomised controlled trials (those with the highest level of evidence rating) have demonstrated that pelvic floor muscle exercises are an effective treatment for some older people with urinary incontinence (Dorey, Speakman, Feneley et al., 2004; E. Hay-Smith, Bo, Berghmans et al., 2001; Hunter, Moore, Cody et al., 2004). These trials have been limited to subjects who:

- had the possibility of urinary incontinence related to poor bladder emptying excluded
- were cognitively able to understand and carry out the requirements of a pelvic floor exercise program
- were able to perform a correct pelvic floor muscle contraction as determined by digital palpation of the muscles via vaginal or rectal examination.

Pelvic floor muscle instruction should be provided to individuals who are cognitively able. Ideally, pelvic floor muscle exercise instruction should be based on individualised assessment of the pelvic floor muscles and instruction of a correct contraction via vaginal examination in women and rectal examination in men. A trained health professional should undertake vaginal and rectal examinations. Vaginal and rectal examinations require informed consent from the individual.



## Good Practice Point

The following instructions are useful to encourage the individual to sit the correct way for pelvic floor muscle exercises:

- sit unsupported, away from the back of the chair
- have your legs comfortably apart with your feet firmly on the ground
- keep your lower back straight, not slumped
- make sure that your shoulders are relaxed
- maintain normal relaxed breathing
- feel your perineum (the area between the tops of your legs) on the seat.

The following words and phrases may be useful for verbal cueing of correct pelvic floor muscle contraction:

- females – gently and slowly lift and draw in and tighten around the bladder opening and vagina
- males – gently and slowly tighten your muscles as if trying to stop the flow of urine – feel the testicles rise and the base of the penis move closer to the abdomen (Dorey, Speakman, Feneley et al., 2004)
- both – tighten your muscles as if trying to stop the flow of urine – hold the contraction for as long as you can while continuing to breathe normally.

Actions that may indicate that the contraction is being performed incorrectly include:

- taking a breath in while performing the contraction
- holding the breath
- lifting the shoulders
- any movement in the trunk
- tensing the buttocks
- pulling the knees or legs together
- pushing or bearing down or straining
- movement of the spine or pelvis.

Individualised assessment and recommendations regarding frequency, duration, positioning and number of pelvic floor muscle exercises to complete per 'set' are the ideal. Therefore, a referral to a continence physiotherapist is recommended, particularly if verbal instruction does not achieve the desired results.



## Recommendation

Individuals reporting leakage during specific activities should be taught to contract the pelvic floor muscles before and during these activities (the 'Knack').

Level of evidence: 4

Grade of recommendation: D

## Supporting evidence

The 'Knack' refers to a learned response of contracting pelvic floor muscles before and during activities that increase intra-abdominal pressure, such as coughing or sneezing. It is a momentary, volitional "holding on", as distinguished from pelvic floor muscle exercises (J. Miller, Sampelle, Ashton-Miller et al., 2008).

The 'Knack' has been shown to be effective in reducing leakage in older women with mild stress urinary incontinence without significant prolapse who are capable of a correct pelvic floor muscle contraction (J. Miller, Ashton-Miller, & DeLancey, 1998). However, the 'Knack' has only been shown to be effective in subjects who had undergone a vaginal examination to teach a correct contraction of the pelvic floor muscles via vaginal palpation. The 'Knack' may not show the same level of effectiveness in individuals who have not been provided with instruction on pelvic floor muscle contraction using vaginal palpation.

### **11.5.6 Further management**

A number of recommendations regarding the initial management of urinary incontinence in older people have been made (Abrams, Andersson, Brubaker et al., 2005). As outlined previously, the full complement of recommended initial management strategies are not addressed in this guideline. Those not covered in detail in this guideline are outlined briefly below. The reader is referred to the 'Second Steps' guideline published as a companion to this 'First Steps' guideline, for more detailed information (Queensland Health (MASS), 2008).

Link to 2nd steps CPG, 2008



#### **11.5.6.1 Measurement of the post-void residual volume (PVR)**

In some circumstances, it is useful to measure the volume of urine left in the bladder immediately after an individual has finished emptying his/her bladder. This is done by using a portable bladder scanner or 'in-out' catheterisation. Measurement of post-void residual volume (PVR) has been highly recommended as an initial assessment strategy because it can influence the choice of treatment for the individual (Abrams, Andersson, Brubaker et al., 2005). While it is often impractical to obtain a PVR measurement (Fonda, 2005), it should be undertaken in all older people who have failed to improve following the implementation of first step management strategies.

#### **11.5.6.2 Conservative and behavioural therapies**

These include bladder retraining and pelvic floor muscle exercises for the cognitively able and prompted voiding for cognitively impaired patients (Fonda, 2005). Randomised controlled trials have shown that these techniques are effective in reducing urinary incontinence in older people living at home (Burgio, Locher, Goode et al., 1998; Colling, Owen, McCreedy et al., 2003; Dougherty, Dwyer, Pendergast et al., 2002; Engberg, Sereika, McDowell et al., 2002; Fantl, Wyman, McClish et al., 1991; Goode, Burgio, Locher et al., 2003; McDowell, Engberg, Sereika et al., 1999; J. Miller, Ashton-Miller, & DeLancey, 1998; J. Wyman, Fantl, McClish et al., 1998). Recommendations to use these interventions in clinical practice carry with them the highest grading levels.

#### **11.5.6.3 Conservative use of continence aids**

While conservative lifestyle changes and behavioural therapies are the optimal way to manage incontinence, use of continence pads and other products have their place. It has been demonstrated that, because incontinence can have a devastating effect on a woman's emotional and social well-being, pad usage can improve the quality of life when conservative therapies are not adequately successful (Uchil, Thakar, Sultan et al., 2006).



#### 11.5.6.4 Medications

Cautious use of some medications is recommended in some older people with urinary incontinence. Anti-muscarinic drugs may be used in conjunction with conservative treatments, such as bladder retraining, for urinary urge incontinence. Alpha-blockers may assist bladder emptying in older men with high PVR volumes (Fonda, 2005), but caution should be taken if used in older people because of the risks of postural hypotension (Fonda, 2007).

The risk of cognitive impairment during anticholinergic (antimuscarinic) therapy for over active bladder (OAB) is an important concern (Kay & Ebinger, 2008).

Advancing age is itself associated with decline in cognitive function and increasing permeability of the blood-brain barrier, which can increase a patient's susceptibility to the central nervous system (CNS) effects of medications with anticholinergic effects, in the absence of other contributing factors. Additionally, medications given concomitantly for a variety of unrelated comorbid conditions may have hidden anticholinergic effects, which add to the total anticholinergic burden on the patient and, consequently, impaired cognitive function. Indeed, multiple studies have reported a high prevalence of elevated anticholinergic load in elderly patients, and the cognitive consequences of this burden (Kay & Ebinger, 2008).

 [Link to appendix 14, 2nd steps CPG, 2008](#)

The main side effects of the anticholinergic medications are: dry mouth, constipation, confusion, somnolence, blurred vision, and urinary retention (Duthie, Katz, & Malone, 2007). Clinically, it appears that the extended release and transdermal formulations are better tolerated by patients (J. Hay-Smith, Herbison, Ellis et al., 2005). Presently, a transdermal preparation is available in Australia but not an extended release oral preparation of oxybutynin or tolterodine as yet.

Anticholinergic medications interfere with learning and memory, so cognitive testing should include assessments of language, reasoning, immediate and delayed memory recall, visual attention and memory, reaction time and information processing. Screening tests such as the Mini Mental State Examination (MMSE) may overlook identifiable problems (Janos, Paggi, & Tsao, 2008).

#### Point of Interest

**Drug-induced deterioration in memory and the effects on other cognitive processes are often unnoticed and unreported by the individual. It has been reported that, in spite of a significant decline in memory performance (equivalent to 16 years of cognitive ageing), participants receiving oxybutynin ER were not aware of any change in their memory (Kay & Ebinger, 2008).**

The extent to which anticholinergics can disrupt central nervous system (CNS) function depends on several factors, including the ability of the drug to enter the brain, the accumulation/retention within the brain in sufficient concentrations, and the interaction with muscarinic receptors in the brain, particularly M1 receptors (Kay & Ebinger, 2008).

Anticholinergics differ in their ability to penetrate the blood-brain barrier passively, and the extent to which they are actively carried across the blood-brain barrier by transporter proteins. Once accumulated in the brain, the unwanted blocking of M1 receptor sites is a key factor contributing to drug related cognitive dysfunction.

Different anticholinergics have different potentials to adversely affect memory and other aspects of cognitive function. The latest findings suggest that Oxybutynin has the greatest potential for negative cognitive effects among all currently available overactive bladder (OAB) drugs. Oxybutynin has consistently been shown to cause deterioration in memory. By contrast, Darifenacin has been reported to have a low CNS perfusion and a greater relative selectivity for the M3 receptor over the M1 subtype, making it less likely to cause memory impairment or other adverse cognitive changes in both younger and older adults (Kay & Ebinger, 2008).

Currently, although available in Australia, the newer more selective anti-muscarinic agents – Darifenacin and Solifenacin are not subsidised by the Pharmaceutical Benefits Scheme, as oxybutynin is, and are therefore a more expensive treatment option in comparison.

The newer anticholinergic agents (eg solifenacin, darifenacin) which are more selective for the muscarinic receptors found in the bladder have not significantly improved efficacy with respect to the treatment of overactive bladder, and patients may still experience adverse effects associated with the use of anticholinergic medications (Australian Medicines Handbook, 2008).

There are few trials directly comparing the efficacy and safety of currently available anticholinergic drugs. Longer-term evaluation and post-marketing studies are still awaited to confirm the safety profile of the relatively new treatment options for OAB (Kay & Ebinger, 2008).



### Good Practice Points

- *The adverse cognitive effect of drugs with anticholinergic actions should be considered in the older person (Merchant, Li, Yap et al., 2009).*
- *Cognitive testing should include a comprehensive analysis in order to best identify the effects of OAB agents on all aspects of cognition, rather than simply the most salient features (Janos, Paggi, & Tsao, 2008).*
- *Drug induced deterioration in memory and the effects on other cognitive processes are often unnoticed and unreported by the patient, so family members and/or carers may need to be consulted when assessing the extent of any cognitive changes.*
- *As with most other medications in the elderly population, use the smallest dose possible and monitor for side effects (Duthie, Katz, & Malone, 2007).*
- *Avoid using anticholinergics in people with dementia as such drugs impair cognition*

#### 11.5.6.5 Surgery

Age in itself is not a contraindication for continence surgery. However, before surgery the following should be addressed:

- All potentially reversible and treatable co-morbidities should be treated
- A trial of conservative therapies should be undertaken
- The individual should have undergone urodynamic testing
- Careful preoperative assessment and perioperative care should be undertaken to avoid age-related surgical complications (Fonda, 2005).

The decision to consider surgery in older individuals must be individualised, weighing up carefully the degree of bothersomeness of symptoms and the potential risks and benefits of surgical treatment (Gibbs, Johnson, & Ouslander, 2007).

# MANAGEMENT OF URINARY INCONTINENCE IN FRAIL OLDER PEOPLE

## HISTORY/SYMPOM/ASSESSMENT

## INCONTINENCE

### CLINICAL ASSESSMENT

- D I A P P E R S**
- Delirium
  - Infection
  - Atrophic vaginitis
  - Pharmaceuticals
  - Psychological
  - Excess urine output
  - Reduced mobility
  - Stool impaction and other factors

### CLINICAL DIAGNOSIS

\*These diagnoses may overlap in various combinations, e.g., MIXED UI

### INITIAL MANAGEMENT

(If Mixed UI, initially treat predominant symptoms)

### ONGOING MANAGEMENT and REASSESSMENT

- Assess, treat and reassess potentially treatable conditions, including relevant comorbidities and activities of daily living (ADLs)
- Assess QoL, desire for Rx, goals of Rx, patient and caregiver preferences
- Targeted physical exam including cognition, mobility, neurological
- Urinalysis and MSU
- Bladder diary
- Cough test and PVR (if feasible and if it will change management)

- UI associated with:
- Pain
  - Haematuria
  - Recurrent-symptomatic UTI
  - Pelvic mass
  - Pelvic irradiation
  - Pelvic/LUT surgery
  - Major prolapse (women)
  - Post-prostatectomy (men)

#### Urge UI \*

- Lifestyle interventions
- Behavioral therapies
- Consider cautious addition and trial of antimuscarinic drugs
- ± Topical oestrogens (women)

#### Significant PVR \*

- Treat constipation
- Review medications
- Double voiding
- Consider trial of alpha-blocker (men)
- If PVR>500: catheter decompression then reassess

#### Stress UI \*

- Lifestyle interventions
- Behavioral therapies
- ± Topical oestrogens (women)

Continue conservative methods ± Dependent continence ± Contained continence

If fails, consider need for specialist assessment

Figure 7: Management of urinary incontinence in frail older persons

(Abrams, Andersson, Brubaker et al., 2005)



### 11.5.6.6 Skin care

The pH of normal skin is 5.4 – 5.9. Decomposition of urinary urea by microorganisms release ammonia to form the alkali, ammonium hydroxide, which changes the pH of the skin. Chemical irritation of the skin may arise from both the rise in alkalinity and bacterial proliferation (Ersser, Getliffe, Voegeli et al., 2005).

Skin which is exposed to urine due to infrequent pad changes or pads which are not sufficiently absorbent, can produce a significant increase in the wetness of the skin. Prolonged exposure to water alone has been shown to cause hydration dermatitis, and prolonged occlusion of the skin (as with a continence product) reduces skin barrier function and significantly raises microbial counts and pH (Ersser, Getliffe, Voegeli et al., 2005). Skin hydration following occlusion is significantly higher and slower to dissipate in aged skin. Excess moisture on the skin will eventually produce mechanical change, causing the skin to be more vulnerable to breakdown due to friction forces. Twice as much energy is required to produce frictional erosions on dry skin as on skin subjected to 24 hour water exposure (Farage, Miller, Berardesca et al., 2007). Coupled with frequent washing of the incontinent individual's skin, this can disrupt the skin's barrier function by removing skin lipids, and accelerating epidermal water loss (Ersser, Getliffe, Voegeli et al., 2005).

#### Prevention of skin breakdown

- Cleanse skin gently with a pH neutral product. Avoid scrubbing
- Moisturise skin
  - some moisturisers contain humectants or emollients
  - some manufacturers include moisturisers in the cleanser product
- Routine use of a skin protectant is recommended for those at risk of incontinence associated dermatitis (IAD), including those experiencing high volume or frequent incontinence, or those with double urinary and faecal incontinence (Gray, Bliss, Doughty et al., 2007; Lekan-Rutledge, Doughty, Moore et al., 2003). Most protectants contain petrolatum, dimethicone or zinc dioxide.
- many clinicians advocate application of products that incorporate a skin protectant into a one-step cleansing solution or system, thus reducing the time required to adequately cleanse and protect the perineal and perigenital skin (Gray, Bliss, Doughty et al., 2007).



#### Good Practice Point

Active preventative care to maintain skin health is essential. This should include a thorough assessment and review, and regimes put in place for cleansing, moisturising and protecting skin (Lekan-Rutledge, Doughty, Moore et al., 2003). Cleansing agents should be pH balanced and contain surfactants to emulsify stool and lift irritants from the skin surface with minimal force (Gray, Bliss, Doughty et al., 2007; Lekan-Rutledge, Doughty, Moore et al., 2003).

## 6 11.6 Step 6: Evaluate outcomes

An episode of care requires an evaluation of all outcomes relevant to the initial presenting problem. Thus, feedback is required from all those to whom referrals were made at the beginning of and during the implementation phase. As the name implies, this step involves considering the process that has been undertaken, and any further interventions which may assist the individual to manage his/her incontinence, including provision of written resources, enrolment in self-management programs, etc. Clinicians are also encouraged to provide the general medical practitioner with a brief report, providing information on the interventions undertaken, outcomes achieved, and any plans for further follow-up at a later time.

There are numerous standardised measures for assessing continence outcomes which are suitable and appropriate for use by the primary level clinician. For further information about these assessment tools, the reader is referred to the Continence Outcome Measurement Suite (Thomas, Nay, Moore et al., 2006), an Australian publication, which provides a comprehensive assessment and details pertaining to continence outcome measures.

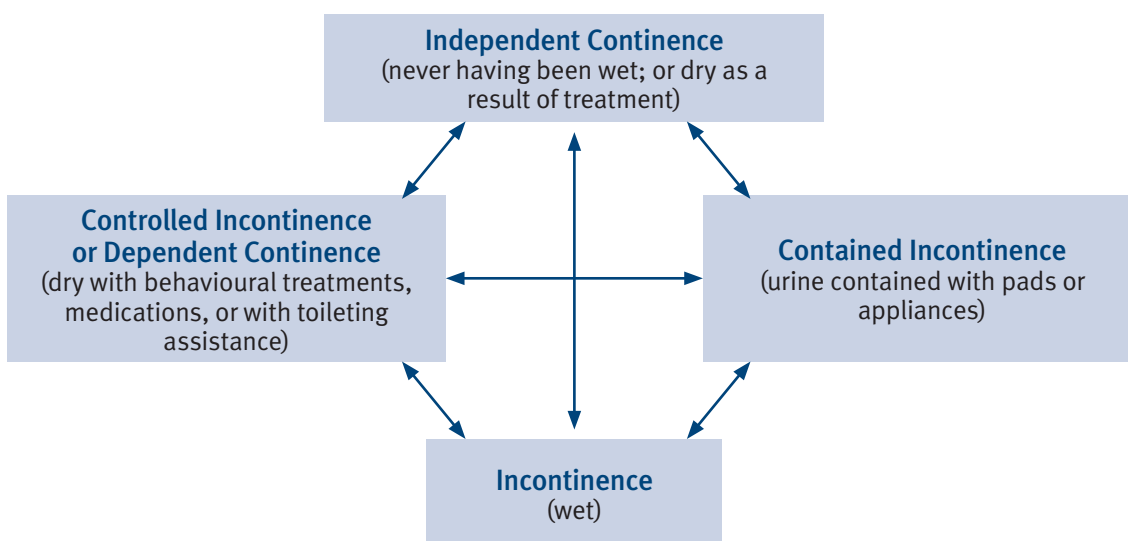
## 7 11.7 Step 7: Review outcomes

The final step of the clinical algorithm is to review the outcomes. If the presenting problem/s have been appropriately managed, then the individual exits the service after this review, with information as to how to re-enter the service should the need arise. If the presenting problem is still present in some form, it is at this stage that consideration should be given as to whether the clinician passes back to stage two and completes another subjective and objective assessment with the individual. At this point it may be decided that ongoing management in the form of 'contained continence' is the best course of symptom management.

### 11.7.1 Ongoing management

The aim of actively managing urinary incontinence in older people is to achieve 'independent continence' (that is, not dependent on ongoing treatment) or 'dependent continence' (that is, continent with assistance, behavioural treatment and/or drug therapy). If neither of these approaches is attainable then 'contained incontinence' with the appropriate use of aids and appliances can then be implemented (see figure 8) (Fonda, 2005).

**Figure 8: Types of continence management**



Reprinted with permission from D. Fonda (Fonda & Abrams, 2006)

Despite many advances in treatment of bladder and bowel problems, incontinence commonly persists and some form of containment using continence aids may be necessary. The provision of continence aids generally follows the continence assessment, intervention, evaluation and review. Regaining continence is the ultimate goal in managing incontinence, although the use of continence aids plays an important role in boosting confidence and self-esteem. While aids are not a cure for incontinence, appropriate selection and use can make the problem more manageable (H. Miller & Burgin, 2006).

The use of continence aids aims to preserve the individual's dignity and self respect by making it possible to conceal and manage incontinence. By containing urine or faeces, the product should enable the individual to achieve social continence (Pomfret, cited in P. Norton & Brubaker, 2006).

Inappropriate selection and use of aids may increase the number of incontinent episodes and be a significant cost burden. Clinician feedback has indicated that appropriate selection and use of aids requires specific knowledge and skills, while inappropriate selection and use of aids can have negative consequences for individuals, compromising their privacy and dignity.

The selection of continence aids should be carried out using a problem solving approach. Health professionals assessing continence problems should be aware of the many choices available and ensure individuals receive comprehensive advice when selecting and fitting continence aids to ensure optimal outcomes. Table 30 highlights the issues health professionals need to consider when assisting an individual to select the most appropriate continence product. Manufacturers are continually updating and developing new products and it is essential that health care professionals regularly update their knowledge base.

Continence aids to contain or manage incontinence may be classified into the following groups:

- Containment aids: absorbent continence products including disposable and re-usable pads, bed pads and chair pads
- Conduction aids: include catheters, sheaths, urine drainage bags and accessories
- Occlusive aids:
  - Catheter valves are available for men and women, and are a positive alternative to leg or chair bags. These valves are similar to the taps on leg bags and are connected directly to the end of the catheter. The valve needs to be released regularly to drain urine from the bladder. To be safe and successful, the individual must have a compliant bladder, adequate cognitive ability to remember to drain the bladder regularly, and sufficient manual dexterity to operate the catheter valve (Cottenden, Fader, Getliffe et al., 2005)
  - There are several occlusive devices available for women who have urinary incontinence. These are inserted into the vagina and prevent leakage by applying pressure on the urethra
  - Other than artificial sphincters, the only other type of occlusive device for men is the penile clamp. Penile clamps are not recommended or best practice, and are rarely used due to high risk factors (Cottenden, Fader, Getliffe et al., 2005)
  - Aids to assist with toileting: for example: commodes, bedpans, urinals (Cottenden, Fader, Getliffe et al., 2005).

**Table 30: Key elements of individual assessment for the most appropriate continence product**

<b>Element</b>	<b>Rationale</b>
<b>Independence/ assistance</b>	Involve carer in the selection of the product and establish the willingness and ability to use it, if carer is required to apply or change the product  If a carer is not available at all times, consider how the individual can manage independently when necessary
<b>Nature of incontinence</b>	Frequency, volume and flow rate of the incontinence influences product suitability. Generally smaller, more discreet products should be tried before larger, bulkier products
<b>Mental acuity</b>	Can affect ability to manage products. Individuals with dementia may better manage products that resemble usual underwear  Products which have health implications if used incorrectly (occlusive aids or catheter valves) should be avoided if mental impairment is present  Products which have a number of steps in their preparation and donning may not be suitable for those with executive function problems such as logical sequencing, problem solving and short term memory difficulties
<b>Mobility</b>	Impaired mobility may make some products impractical or require toilet or clothing modifications to allow effective use of the product  An individual who is unable to transfer to and from the toilet independently will require some other means of managing bladder and bowel function, or will require assistance whenever the need to toilet arises  Standing ability without support may be required if continence aid or clothing requires bilateral adjustment in the standing position
<b>Dexterity</b>	Problems with hand or finger movement can make it difficult to use some products (such as taps on leg bags, straps with buttons)  Some aids require bilateral hand function so are not appropriate in people with function in only one hand
<b>Eyesight</b>	Impaired eyesight limits effective application and management of some products. Consider contrasting colours or textures on tapes and adhesive strips
<b>Physical characteristics</b>	Anthropometrics (e.g. height and waist, thigh, penile circumference) will influence the comfort and effectiveness of a product, and the ease of product application and removal
<b>Leg abduction problems</b>	Can make the use of some products impractical or ineffective
<b>Lifestyle</b>	Different products may be more satisfactory for day time and going out (when discretion may be a priority) and night-time or staying home (when comfort may be a priority) or for holidays (when large quantities of disposables may be a problem)
<b>Laundry facilities</b>	Consider the weight of wet reusable continence products and bed linen, and ensure the individual doing the laundry has the strength, ability and facilities to cope  Consider availability of clean water for regular laundering
<b>Disposal facilities</b>	Consider the ability to appropriately, safely and discreetly dispose of the selected products

<b>Element</b>	<b>Rationale</b>
<b>Financial considerations</b>	Consider financial costs to the individual, access to subsidy schemes and gap payments
<b>Personal preferences</b>	Different people like different products for different reasons. Choice and trial of products should be included in the product selection process
<b>Personal priorities</b>	May be avoidance of leakage, but may equally be discretion, financial considerations, appearance and bulk

(Cottenden, Fader, Getliffe et al., 2005; Leech, 2009)



## Good Practice Point

Health professionals are encouraged to access the book published by the HACC/MASS Continence Project titled “Continence products: Personal characteristics and specific considerations when selecting continence products and toileting equipment”. This book assists clinicians to consider their client’s physical, sensory and cognitive abilities when selecting an appropriate continence product (Queensland Health (MASS), 2009).

### 11.7.1.1 Personal and environmental factors affecting continence

Table 31 summarises personal and environmental factors that need to be considered when managing incontinence. These factors are described in greater detail in the remainder of this section (Leech, 2009).

**Table 31: Personal and environmental factors affecting continence**

<b>Factors</b>	<b>Examples of considerations</b>
<b>Toilet features</b>	Height of seat, surrounding space, access to toilet paper
<b>Transfers</b>	Height of chair/toilet/bed, floor coverings
<b>Grab rails</b>	Security of fixing points, angles of rails, diameter of rails
<b>Carer requirements</b>	Manual handling, workplace health and safety issues, time commitment required for toileting program, issues with intimacy
<b>Fatigue</b>	With transfers. May be worsened by nocturia
<b>Night time</b>	Nocturia, use of continence aids, emptying of bedside commode, effectiveness of pressure reduction mattress
<b>Hand function</b>	Ability to manage toilet paper, taps, to reach anus for wiping after bowel motion
<b>Clothing and features of continence aid</b>	Ease and speed of adjustment, safety of footwear
<b>Medications</b>	May cause or contribute to incontinence, sedative effect
<b>Vision and Lighting</b>	Risk of falls
<b>Cognitive function and confusing signals</b>	Readily identifiable toilet, good signage

[Link to Section 4.19.3](#)





### **Toilet features**

It is important to consider the independence level of the individual when considering toileting. Consider:

- Can the individual sit on the toilet or commode with his/her feet well supported, or is the seat too high? A low seat may provide good stability, but it could be difficult to get down onto and up from if the individual has weakness in the hip and knee extensor muscles
- Is a footstool required? A footstool can provide foot support if an individual's feet cannot reach the floor when sitting on the toilet, but it may be a hazard when transferring to and from the toilet, particularly if the individual is unsteady or uses a walking aid. Feet can catch on a footstool, and movement and positioning of walking aids can be limited by the size and position of the footstool
- Would an over-toilet frame, or a toilet surround frame help? Both of these frames can be adjustable in height. An over-toilet frame has a seat and armrests, whereas a toilet surround frame only has armrests
- Would a toilet seat raiser be sufficiently stable for the individual?

### **Transfers**

The height of the bed and wheelchair/scooter are also of importance if an individual uses a wheeled aid indoors. Consider:

- Are the seats of the toilet and the wheelchair the same height? If not, the individual will need to do an uphill transfer in one direction. Muscle weakness and fatigue can make this tiring and difficult at times
- Are the bed and wheelchair/scooter the same height as the mobile over toilet shower chair (MOTSC)? Generally, MOTSCs have a high seat, so they can clear the toilet bowl. However, this means that they are usually significantly higher than the bed and wheelchair/scooter. A lowered MOTSC may need to be considered, and/or a height adjustable bed may be indicated to ensure independence
- Consider the floor surface where transfers will be taking place, and the footwear worn by the individual. For greater safety, the floor around the toilet may need to be treated with a non-slip product.
- Can the individual sit safely on the edge of the bed with feet adequately supported, before standing up? Would a bed pole assist in getting to the sitting position from lying, and also with sitting stability?

### **Grab rails**

Correctly positioned and secured grab rails may provide additional stability to an individual with reduced balance. They can also assist an individual to pull or push themselves up from the toilet. Rails must meet certain standards in order to be used as grab rails. Towel rails should not be used as grab rails, as they are neither manufactured nor fitted to the wall in such a way that they can support an individual's weight. Consider:

- Are there grab rails by the toilet to provide stability, when getting on and off the toilet, when using the toilet, and when adjusting the clothing?
- Is a wall-mounted rail sufficient or would a rail attached to the toilet itself be more supportive?
- The individual's needs and habits in determining the configuration required for the positioning of grab rails. He/she could be a 'pusher', using the rails to push up from the toilet, or a 'puller' using them to pull up to standing

- Is the home privately owned, rented or provided by public housing? Landlords may not be keen to consider having grab rails fitted to their walls, so other options may need to be implemented
- While transferring to and from the toilet, the individual also needs to be able to adjust their clothing, so standing balance needs to be supported with only one arm/hand.

### **Carer requirements**

Many people require the assistance of another person to manage their incontinence, so the needs of carers must be included when developing a continence management plan. Consider:

- Does the individual require another person for mobility or transfers?
- If so, does someone live with the individual or are paid carers required?
- How much assistance is required?
- Would the carer need to do any lifting or provide assistance with transfers? Many agencies won't allow paid carers to assist with transfers unless a hoist is in place. Transfers using a hoist tend to be more time consuming than standing transfers, so urgency needs to be considered in this situation. Similarly, for an individual who requires assistance with all transfers, frequency of urination can take over the life of that individual and their carer, resulting in both being housebound. An in-dwelling catheter may be one option to consider in situations where transfers to and from the toilet require the assistance of a carer and/or a hoist transfer
- What training in lifting, transferring, using continence aids etc. does the carer require?
- How much intimate personal contact is required when applying continence aids? Some men may need to be partially stimulated in order to fit and attach a penile sheath. Some carers may find this unacceptable for a variety of reasons. Clinicians need to be aware of these factors when selecting the most appropriate aid
- Some toileting programs require a huge commitment from carers, in terms of time, routines, patience and cleaning, while the program is being established. Some carers may require additional support and encouragement during this period.

### **Fatigue**

Some medical conditions can cause the individual to suffer from marked fatigue. Consider:

- Is fatigue when transferring an issue?
- Would the individual be better off with a mobile over-toilet shower chair, which can be positioned, for example, by the bed, so in the morning transfers can be minimised?
- Would use of a urinal or bed pan reduce fatigue?
- Would a urine bottle left in situ be a better option for a man? Be alert for any risk of skin redness or pressure areas.

### **Night time**

For night time, consider:

- Is nocturia an issue? A bedside commode may reduce the risk of falling when going to the toilet during the night, and can be less time consuming for carers in need of sleep
- The ability to empty the commode bowl in the morning. Can the individual manage this him/herself, or is he/she dependent on a family member or paid carer for this aspect of their continence management? Some family members have a psychological problem accepting this as part of their role, particularly if the commode has been used for bowel motions
- Sleeping without body worn pads but using an absorbent bed pad. An absorbent bed pad may help skin integrity and overcome the need for night time transfers. It is important to consider who is willing and available to change the bed pad and wash it. Alternating pressure mattresses are likely to be less effective when covered by an absorbent bed pad
- The type of bedclothes. Light weight continental quilts are easier to quickly throw off than firmly tucked in sheets and blankets.

### **Hand function**

The individual's hand function should be assessed when choosing the most appropriate aids or equipment to assist with continence management. Consider:

- Does the individual have good sensation in their hands? If sensation is altered or reduced, the individual may have to rely on their vision when doing things with their hands. This can affect the ability to wipe oneself clean after toileting. Using baby wipes or other types of moist towelettes may be useful in this circumstance.
- Is the individual able to clean his/her hands after toileting? Can he/she access the hand basin, or do other methods need to be considered?
- How useful is the individual's hand function? Does the individual have use of both hands, or just one?
- If just one, is it their dominant or non-dominant hand?
- Is in-hand manipulation adequate? Can the individual turn items around in his/her hand while holding them, or are two hands needed for this task?
- What type of grasp does the individual have? Is he/she able to hold the toilet paper, tear off the appropriate length from the roll?
- Does arthritis affect hand function?
- Can the flush button be accessed and used safely?
- Can the individual turn on and off the bathroom taps after toileting, or are different taps required?

## Clothing

Clothing that is difficult to adjust can increase the risk of incontinence episodes. Consider:

- Can the individual manage clothes fasteners such as buttons, zips, and elastic waist underwear?
- For the female patient, would it be better if she wore a gathered skirt (for privacy)? Can she gather up the material in her skirt and hold it out of the way as she sits down?
- For men, would urinary continence be more easily managed with a Velcro fly on the trousers or by extending the fly so a urinary bottle can be positioned more easily?
- Appropriate footwear. Wearing scuffs or just slipping feet into shoes or slippers rather than putting on properly may increase the risk of falls
- Ease of use of continence aid with different types of clothing. For example, a pull-on style pad may necessitate bending and reaching the feet for removal of trousers and shoes when putting on a clean pad, and then redressing the lower limbs and feet.
- The risk of falls when putting on and removing continence aids. For example, some continence products need to be put on over the feet like regular underpants, necessitating bending, reaching the feet, removal of footwear if the item has small leg holes, and removal and re-donning of trousers.

## Medications

The side effects of some medications can impact on urinary incontinence. Consider:

- Diuretics will often increase frequency of urination for a portion of the day, generally in the mornings. It is important to assist the individual to plan their day around the lifestyle constraints associated with this frequency
- Sedatives may cause an individual to sleep through the signals indicating a full bladder, resulting in bed wetting. Waterproofing the mattress, and/or using an absorbent bed pad is advised in these circumstances
- Sedatives may make an individual feel groggy and unsteady on the feet if he/she wakes to urinate during the night. This may increase the risk of falls, so consider night lights in the bedroom and hallway, or leaving the toilet light on during the night
- If the risk of falling is great due to the effect of sedatives, a bedside commode or urine bottle may be a useful item of equipment. A home medicines review may also be warranted
- Pain medications may contain opioids (e.g. codeine, morphine or oxycodone), which can cause constipation. Other medications with potential to constipate (e.g. tricyclic antidepressants, antipsychotics, verapamil, diuretics) may exacerbate this adverse effect of the opioids. Ensure the individual has sufficient non-caffeine based fluids. If necessary, regular appropriate laxatives should be administered prophylactically. Constipation can build up and create outflow obstruction of the urethra, possibly causing urinary leakage, frequency, and urgency of urination. If mobility is compromised, a bedside commode or urine bottle could be useful in this circumstance.

[Link to Section 9.2.5](#)



### ***The environment, vision and lighting***

The home environment can significantly impact on an individual's ability to be continent. The term that is sometimes used to describe incontinence caused by environmental barriers is "functional incontinence", although this term is no longer used by the International Continence Society as it doesn't accurately define the type of incontinence (e.g. stress, urge etc.). Consider:

- Is the toilet easy to access? Is it in close proximity to living area and bedroom? Are there any building features that make toilet access difficult, such as stairs or steps?
- Is there adequate space in the toilet for the individual and any mobility aids that are required?
- Are there stairs between the living area or bedroom and the toilet? Is lighting good on these stairs, and are the edges of the steps clearly distinguishable?
- Is there adequate lighting in the toilet?
- Is there a bedside lamp for night time visits to the toilet?
- Is there a two-way switch in the hallway that can be operated at either end?
- Would a night-light in the hall reduce the risk of falls on the way to the toilet?
- Is there a bedside table next to the bed so the individual can easily reach his/her glasses and/or a torch, and thus move about safely?
- Do you need to think about contrasting colours where there are small variations in floor height, as is often the case at the entry to the toilet and bathroom? Some people find that highly glossy floor coverings, such as tiles or vinyl are problematic to their vision and can make them feel unsafe.

### ***Cognitive function and confusing signals***

It can be difficult for people with some degree of cognitive dysfunction or confusion to learn or understand new ways of managing continence. It is therefore wise to look at minimising the risk of adding to possible confusion. Consider:

- Clear signage or pictures indicating the location of the toilet
- Is there adequate lighting for the individual to find his/her way to the toilet at night time?
- Remove any objects that may be misinterpreted as being toilet substitutes, such as buckets and vases
- A spill proof urinal bottle could be suitable for some confused men
- A 'target' in the toilet bowl may assist men to successfully direct their urine stream into the toilet
- A bedside commode which looks like a toilet, not an arm chair may be useful. Therefore, if using this option, use a very basic commode which cannot be confused with anything other than a toilet
- A movement and pressure sensitive floor pad which sounds an alarm may be worth considering if a patient has a tendency to wander from his/her bed while trying to find a toilet. This is particularly useful in the institutional setting, but could be of value in the home environment also
- A confused individual who tends to fall from bed while getting out to toilet may be safer with the mattress positioned on the floor.

## 12. Development of the guideline

There were no conflicts of interest from any panel members with regards to the development of this guideline.

### 12.1 Project Team 2010

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### 12.3 Clinical Expert Panel 2010

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## 12.4 External reviewers 2007

Associate Professor Dr David Fonda – Geriatrician, Cabrini Medical Centre, Melbourne, Member of the International Continence Society

Alyssa Tait – Continence Physiotherapist and Nutritionist

## 12.5 Search strategy

A search for relevant clinical practice guidelines was undertaken using Queensland Health recommendations, and recommendations from the 3rd International Consultation on Incontinence (Abrams, Andersson, Brubaker et al., 2005).

Databases searched included the Cochrane Library, Medline (1966-present), Medline (1996-current week), and CINAHL. Search terms used were:

'adherence', 'aboriginal', 'aged', 'apnoea', 'arthritis', 'assessment', 'asthma', 'Australia\$', 'back pain', 'biodegradable', 'bladder', 'BMI', 'bowel elimination', 'bowel irrit\$', 'bowel', 'inflm\$ bowel', 'caffeine', 'carbonated drinks', 'cardiac', 'carer', 'COAD', 'conservative management', 'continence', 'COPD', 'short bowel', 'childbirth', 'childhood history', 'child\$', 'community', 'constipation', 'cough', 'dehydration', 'delirium', 'dementia', 'depression', 'diabetes', 'diabet\$', 'diagnos\$', 'economic impact', 'elderly', 'epidemiology', 'exercise', 'faecal impaction', 'fistula', 'frail', 'frailty', 'functional bowel', 'gynaecological', 'heart', 'heart disease', 'heart failure', 'h?ematuria', 'hydration', 'hover\$', 'indigenous australian', 'intervention\$', 'lactobacillus', 'mental health', 'mobility', 'motivation', 'natural history', 'nocturia', 'obese', 'obesity', 'overweight', 'pelvic floor', 'pelvic floor muscle\$', 'physiology AND constipation', 'position\*', 'position AND void', 'prevalence', 'probiotic\$', 'prolapse', 'postpartum', 'pregnancy', 'psychogenic polydipsia', 'pulmonary', 'question\$', 'questionnaire', 'respiratory', 'respiratory disease', 'refuse disposal', 'schizophrenia', 'screen\$', 'sexuality', 'sleep disorder', 'smoking', 'straining AND faecal', 'statistics', 'stress', 'stroke', 'symptom\$', 'treatment', 'urinary incontinence', 'URTI', 'urinary tract infection\$', 'urination', 'UTI', 'urethritis', 'vaginitis', 'valid', 'void\$', 'walk\$', 'waste disposal'

Inclusion of studies was limited to those published in English. Literature searching was not undertaken in non-peer reviewed publications; however, some literature in this area was included.

## 12.6 Updating of the guideline

This is the third edition of the guideline, which was originally printed in 2005. In accordance with Queensland Health policy, it is envisaged that the guideline will be updated every two years.