Learning Outcomes

After viewing the course participants should be able to:

- Discuss types and causes of urinary incontinence in older people
- Describe continence assessment
- Implement effective management strategies

Causes of Urinary Incontinence in Older People

i. Understanding the bladder mechanism

The bladder mechanism consists of the voluntary filling and voiding, (the passing of urine) from the urinary bladder which is controlled by a combined action of, the detrusor, (which is the muscle surrounding the bladder walls), the urethral sphincters, (which are muscles on the urethra that act as valves for the bladder to be emptied) and the pelvic floor muscles, (that support the bladder). During bladder filling, the detrusor, a smooth muscle, needs to be relaxed while the sphincters and urethra need to be contracted. During filling, the detrusor pressure remains nearly constant. During voiding, the opposite effect occurs. The detrusor contracts (pressure increases inside the bladder). Bladder function responds to messages sent by the nervous system to the brain

ii. Definition of urinary incontinence

Urinary incontinence refers to the uncontrolled leakage of urine. It affects up to 13% of Australian men and up to 37% of Australian women. It is estimated that between three and six million people in the UK have some degree of urinary incontinence and that 2.5 million people over the age of 60 suffer from urinary incontinence

i. Bladder Problems and types of urinary incontinence

The most common bladder problem in both men and women that also has the highest impact on quality of life in older people is nocturia. Besides this bladder problem older people may suffer from the following types of urinary incontinence over active bladder (OAB), overflow incontinence, mixed urinary incontinence, functional incontinence, and total (reflex) urinary incontinence.

a. Nocturia

Nocturia is being woken from sleep one or more times to void during the night with each void being preceded and followed by sleep. It creates an adverse effect on QOL including increased risk of depression and poor self-care thought to be due to its

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impact on sleep. In association with balance deficits in the elderly, nocturia is related to falls.

**Causes are multifactorial and include:**
- OAB (Over active bladder / detrusor over activity)
- Bladder outlet obstruction in men
- Nocturnal polyuria and primary sleep disorders .
- Some evidence to suggest late afternoon administration of diuretic medication in people with lower leg swelling or CCF.

**b. Stress urinary incontinence (SUI)**

Stress urinary incontinence occurs when there is a sudden increase in intra-abdominal pressure on effort, physical exertion, sneezing or coughing causing the person to pass urine involuntarily. Leakage is usually in small amounts and may not occur on a daily basis. Generally the greater the amount of exertion the more leakage will occur. It is the most common type of urinary incontinence in early postmenopausal women and younger elderly women. It can occur also occur in men.

**Causes of stress incontinence can include:**
- Relaxed pelvic floor muscles in women who have had multiple children although it can happen after one child birth.
- When there is urethral atrophy caused by a decrease of oestrogen levels in the female body, and, in men following prostate surgery for benign prostatic hypertrophy or prostate cancer

**c. Overactive Bladder (OAB)**

Overactive Bladder (OAB) is a syndrome characterized by symptoms of urinary urgency with (OAB Dry) or without (OAB Wet) incontinence, usually with increased daytime frequency and increased night time urination (Nocturia)

**Contributing factors of OAB can include:**
- Weakened pelvic floor muscles in a women as a result of multiple childbirth, although it can happen after one childbirth.
- A decrease in the bladder capacity of the person. This can be due to aged related changes in the bladder such as the bladder losing elasticity so affecting the bladder’s ability to stretch and hold increased volumes of urine. As the bladder storage capacity reduces the person needs to empty the bladder more often. In men an enlarged prostate can also obstruct the urethra leading to a strong and sudden urge to pass urine which may also lead to symptoms of overflow incontinence. (See diagram showing how enlarged prostate affects the size and therefore capacity of the bladder.)
- Overstimulation of the bladder stretch receptor nerves (muscarinic receptors). The person experiences the urge to urinate when the bladder is not full and the

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bladder starts contracting at the wrong time. A cause could be a urinary tract infection that causes irritation to the bladder wall, concentrated urine as a result of a poor oral fluid intake or noxious urine from drinking stimulant drinks containing caffeine and/or alcohol.

- Polyuria which is the frequent passing of large volumes of urine. It can be caused by an increase in the amount of fluids taken in by the person particularly if during the evening/night or if those fluids contain alcohol or caffeine. Alcohol is a diuretic and it is thought that caffeine is also a diuretic so leading to an increase in production of urine leading to polyuria. Uncontrolled diabetes and diuretic medicines being taken by the person for congestive heart failure can also cause polyuria.
- Diabetes can also contribute to detrusor over activity and so urge incontinence.

d. Functional incontinence

Functional incontinence is a term used to describe incontinence that is unpredictable and involuntary and is related to chronic cognitive issues, environmental factors, mobility impairments and/or sensory issues that interfere with the person’s ability and skills to be able to toilet themselves independently. The person’s urinary tract system is intact.\(^\text{13}\)

**Causes of functional incontinences include:**\(^\text{14}\)

- Mobility issues such as a person living with arthritis or who has experienced a stroke.
- Environmental issues that make it hard for the person to find their way around such as poor lighting.
- Dementia which may make it difficult for the person to find the toilet.
- Hearing or sight problems. Diabetes leading to peripheral neuropathy of the lower limbs. The loss of feeling impacts on the person being able to get to the toilet.

e. Overflow Incontinence

Overflow incontinence, also known as chronic urinary retention, is often caused by a blockage or obstruction to the bladder. The bladder may fill up as usual, but the ‘obstruction’ prevents it emptying completely. Pressure from the urine that is still in the bladder builds up behind the obstruction, causing frequent leaks.

The bladder can become obstructed by:

- An enlarged prostate gland, in men
- Bladder stones
- Constipation

Overflow incontinence may also be caused by the detrusor muscles not fully contracting and/or the sphincter muscles not relaxing during micturition, which means that the bladder does not completely empty, as a result, the bladder becomes over-distended. This may occur if:

\(^\text{13}\) Crisp, J. et al. Potters and Perry’s fundamentals of nursing. 3e. 2010. Mosby Elsevier.p1185
\(^\text{14}\) Crisp, J. et al. Potters and Perry’s fundamentals of nursing. 3e. 2010. Mosby Elsevier.p1185
• The individual has a neurogenic disorder that affects the peripheral nerves involved in the maintenance of bladder filling, storage and emptying.
• There is damage to the nerves, for example as a result of abdominal surgery or a spinal cord injury
• Taking certain medications

f. Post micturition dribble

Post micturition dribble occurs in males when a small volume of urine collects in the bulbar urethra leading to a small leakage of urine after voiding. It is common in older males with enlarged prostates or weakened pelvic floor muscles.

Continence Assessment

Assessing and managing incontinence of the older person in care homes involves:

• Screening the older person for continence problems
• Assessing their continence level
• Planning their continence care
• Implementing the care plan
• Reviewing their continence status

Whether an older person is continent or not can be established through a simple continence assessment for both faecal and urinary continence. The practice in many care homes is to select an appropriate continence pad when an older person is incontinent. However this process should be followed by establishing what kind of urinary incontinence a person has and whether the incontinence can be treated or reduced. It may not be necessary to undertake all the assessments for every person, for example in multiple sclerosis, bladder incontinence is one of the major symptoms that a person faces. In such cases urinary incontinence is best managed in consultation with the older person’s specialist. The assessment done for a specific type of urinary incontinence will therefore vary from older person to older person

i. Screening

There are common aspects of a continence screening. Staff must follow their organisation’s policies and procedures relating to assessments particularly who can undertake the assessments. Screening should include:

a. Frequency Volume Chart

A frequency volume chart or bladder diary completed for three days. Recorded by staff (or the older person if they are able) it should document the time the person gets up and goes to bed, their fluid intake, types of drinks, the volume of urine passed each time they go to the toilet, and, whether any incontinence aid is used. Recorded also can be the number of urgency episodes the person experiences in a day. This chart is useful in assessing nocturnal polyuria versus nocturia, (excessive urine production during the night versus an excessive number of times the person needs to void during the night).

b. The 3 Incontinence Questions (3IQ)\(^{16}\)

This screen test is used to distinguish between urge (OAB), stress incontinence. It takes no more than a couple of minutes to complete. The 3IQ can also help in identifying mixed incontinence.

c. Symptom Profile\(^{17}\)

A symptom profile can be used to distinguish between urge (OAB), stress and overflow incontinence. It takes no more than a couple of minutes to complete. The symptom profile can also help in identifying mixed incontinence.

A medicine review to identify any medicines the person is taking that could impact on their continence status. \(^{18}^{\text{19}}\)

A risk assessment to identify if the person is at risk of falling due to their problems with continence. (An older person may fall because they are rushing to the toilet. This should be checked if they suffer nocturia).

A thorough history including the person’s functional ability and health status. \(^{20}\)-Do they have problems voiding? Do they dribble? Do they experience post micturition problems such as the feeling of incomplete emptying of the bladder? Do they have any findings that are suspicious such as pain on passing urine which could suggest a bladder tumour or urinary tract infection? Does the person have concomitant bowel problems such as constipation or faecal incontinence? The presence of a co-existing bowel problem should lead to a bowel assessment

d. A dip stick urinalysis looking for leucocytes, blood or nitrates that will indicate if the person has a urinary infection or problem. If present the General Practitioner should order a MSU, (midstream specimen of urine).

e. A physical examination of the abdominal and pelvis areas looking for signs of distension, and/or genital excoriation that can indicate exposure to urine. Are there any atrophic changes, (a decrease in the size of body tissue in the genital area), or signs of a prolapse, (uterine, vaginal), in the older female? Is there any urinary leakage observed during the cough stress test?

f. A formal neurological screening on a person with any signs of a cognitive impairment.

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As pointed out where a specific type of urinary incontinence is suspected, clinicians should assess to establish that. The following assessment refers to specific types of urinary incontinence.

ii. **Continence assessment for stress urinary incontinence**

The assessment should include:

a. A complete medical history and pelvic examination. A positive cough stress test undertaken during a pelvic examination is a definitive diagnostic test when loss of urine is visually seen through the urethra when the person is asked to cough.

b. A urinalysis to exclude any infection which can cause a transient stress urinary incontinence.

iii. **Continence assessment for (Overactive Bladder Syndrome)**

The assessment should include:

a. In a male a PSA test, (Prostate Specific Antigen), can identify cancer of the prostate. (Ordered by GP) If the individual has a diagnosed neurological medical condition a post-void bladder scan, ordered by the General Practitioner/Specialist Nurse should be performed to assess bladder emptying. A post-void bladder scan may also be appropriate if a male patient has a known history of prostatic hypertrophy.

b. A per rectum, (PR), examination can feel an enlarged prostate in a male and identify rectal loading if the transverse or descending colon can be felt. (Undertaken by the GP)

iv. **Continence assessment for Overflow incontinence**

a. In a male a PSA test, (Prostate Specific Antigen), can identify cancer of the prostate. (Ordered by GP)

b. A post-void bladder scan, ordered by the General Practitioner/Specialist Nurse should be performed to assess bladder emptying.

c. A per rectum, (PR), examination can feel an enlarged prostate in a male and identify rectal loading if the transverse or descending colon can be felt. (Undertaken by the GP)

v. **Continence assessment for functional incontinence**

The reason for the incontinence needs to be identified. The following questions can be answered using the older person’s medical history, by talking to the older person, and/or their family, consulting other clinicians and care staff.

a. Does the person have any related urinary tract pathology such as a urinary tract infection?

b. How does the person’s mental and/or physical limitations impact on their ability to remain continent?

c. Do they suffer from Dementia or have they had a stroke or have Arthritis?

d. Can they undo their bottom clothing such as pants?

e. Can they manage to clean themselves afterwards?

f. What impact is their medicine regime playing, if any, on their lack of continence? (E.g. Are they on furosemide – diuretic that leads to increased voiding)

g. Is the environment playing a part? (E.g. is the toilet too far?)

h. Is the pathway to the toilet cluttered or are the signs identifying the toilets in the care home unclear?

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Managing Urinary Incontinence

i. General management strategies

Lifestyle modification:

Giving up smoking as nicotine can also irritate the bladder lining, weight reduction if the person is obese, maintaining a good bowel regimen and reducing the intake of bladder irritants such as caffeine are all a part of lifestyle modification.

a. Scheduling voiding regimens which includes:

- Timed voiding which means toileting on a fixed schedule usually every 2-3 hours during waking hours.
- Habit retraining. This is scheduled toileting with the adjustment of voiding intervals, (either longer or shorter), depending on the person’s voiding pattern.
- Prompted voiding which is scheduled toileting that requires the staff to prompt the person to void, (usually every 2-3 hours). Used in people with cognitive impairment.
- Bladder retraining and urge suppression strategies. This is scheduled toileting with a gradual increase in the time between the passing of urine by the person. It is used in conjunction with strategies such as pelvic floor exercises, relaxation and distraction therapy.

b. Pelvic floor muscle rehabilitation such as pelvic floor muscle exercises. (As with all procedures clinicians should make sure they have the skill to train the older person and where the older person has been trained the older person’s care plan should include the times and staff responsible for prompting and reminding the older person. E.g. "Care staff to remind resident to do pelvic floor muscle exercise every time the person voids (this way they get multiple reminders – once a day during bathing is not sufficient) before bathing. Pelvic floor muscle exercises may not be easy or appropriate to do with an older person, particularly if they have hip damage or dementia.

Pelvic floor exercises for women

a. It is important to ensure that when pelvic floor exercises are being undertaken the person is reminded to keep breathing freely and not to hold their breath, only squeeze and lift, not to tighten their buttocks and to keep their thighs relaxed.

b. It takes effort on the part of the person to identify their pelvic floor muscles and learn how to contract and relax them. Below is a technique to follow:

- To identify the pelvic floor muscles either:

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27 Continence Foundation of Australia. Pelvic floor muscle training for women. http://www.continence.org.au/resources.php/01fA000000b1e41AA/06-pelvic-floor-muscle-training-for-women (Brochure is in the program folder)
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- Ask the older person to stop urination midstream. If they succeed in doing this they have identified the right muscles.

- Note: The person should not use the exercises to start and stop their urine stream as doing the exercises while emptying their bladder can weaken the muscles and also lead to incomplete emptying of the bladder and an increased risk of a urinary tract infection.

- Once the person has identified their pelvic floor muscles, ask them to empty their bladder OR

- ask the older person to sit or lie down with the muscles of their thighs, buttocks and stomach relaxed. Then ask them to squeeze the ring of muscle around their back passage as if they were trying to stop passing wind. They should then relax the muscle. They should squeeze and let go a couple of times until they are sure they have found the right muscles. Whilst doing this they should try to not squeeze their buttocks.

- If the person is unable to feel a distinct “squeeze and lift” of their pelvic floor muscles or are unable to slow their urine stream during voiding the doctor should be notified or the physiotherapist or continence nurse.

- In the meantime, the nurse/carer can still encourage the individual to try and locate their pelvic floor as extra practice may aid the individual to get the hang of it.

c. Pelvic floor exercise technique:

- Ask the person to sit or lie down.

- Ask them to then squeeze and draw in the muscles around their back passage and their vagina at the same time, to lift them up inside. Every time they squeeze their pelvic floor muscles they should have a feeling of a “lift” inside. Try to hold the muscles as tight as they can for as long as they can up to 10 seconds then let go and relax which should bring about the feeling of “letting go.” Repeat this squeeze and hold technique (sometimes called slow contractions) as many times as the person is able to up to maximum of 10 times resting for a few seconds between each contraction.

- Now try some ‘fast contractions’: Repeat the “squeeze and lift” as tightly as possible then let go immediately without holding the contraction. Do up to 10 fast contractions in a row resting for 1 or 2 seconds in between each one.

- The person should repeat this technique: three sets of up to 10 slow and fast contractions several times (6) per day.

Pelvic floor muscle exercises for men.  

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a. The first step in performing pelvic floor muscle exercises is to identify the correct muscles. There are several ways to do this.

- **Method 1 - Stopping the flow**
  
  - Ask the older man to try to stop or slow the flow of urine midway through emptying his bladder. If he is able to do this then he is squeezing the correct muscles. This is only a way of identifying the correct muscles and not part of the exercise.

- **Method 2 – Visualisation**
  
  - Make sure the older man feels relaxed and that their dignity is maintained at all times as this method requires the older person to stand in front of the mirror with at least the lower half of their clothing off. A continence physiotherapist, continence nurse advisor or urology nurse can help if the person is having trouble identifying their pelvic floor muscles.
  
  - Ask the person to tighten their pelvic floor muscles. If they are tightening the right muscles they should see the base of the penis draw in and the scrotum lift up. They will also feel their back passage tighten.
  
  - Ask the person to relax their muscles and they feel a sensation of "letting go".

- **Pelvic floor exercise technique**
  
  - When the person is able to contract their pelvic floor muscles they should be asked to try holding the inward squeeze for longer (up to 10 seconds) before relaxing the muscles.
  
  - If the feel comfortable they can repeat this up to 10 times and it can be done 3 times a day.
  
  - Remind the person to continue to breathe normally while they squeeze the muscles in.

c. **Anti-incontinence devices.** This can include intravaginal support devices such as pessaries and bladder neck support prostheses. Surgery is not required for the placement of these supports. The organisations policies and procedures must be adhered to at all times and a continence specialist may need to be consulted or a specialist physiotherapist. (Normally prescribed in the UK by a GP)

d. **Continence devices.** Before using continence aids as the permanent management of urinary incontinence any treatable causes must be identified and corrected with the person being educated on the ways of controlling or managing their continence problems. Continence products include; absorbent pads and pants, absorbent bed sheets and chair covers, and penile sheaths, male and female urinals, commodes and male urinary pouch devices.
The strategies used will depend on the older person’s continence issue their continence care plan should outline specific strategies that will be required. Some problems may require a combination of strategies while others may require a simple strategy such scheduled toileting.

ii. Condition Specific Management Strategies

a. Management of stress urinary incontinence 29 30

Many older people and their GP’s continue to look at stress urinary incontinence as an inevitable consequence of ageing. This is not the case as there are effective interventions that are either non-invasive or minimally invasive procedures or surgical interventions can mean the person can be treated successfully or have their symptoms reduced.

- The first management strategy especially in mild cases of urinary stress incontinence consists of pelvic floor exercises that are designed to strengthen these muscles.
- Pelvic floor exercises for women. 31 32 and men are discussed in detail above.
- Pelvic floor exercises can be used in conjunction with physiotherapy techniques including the use of electrical stimulation, vaginal cones and biofeedback.
- Reducing the weight of an obese person will reduce extra abdominal pressure on the urinary system.
- Topical oestrogen can be helpful for the older woman with urethral atrophy.

b. Overactive Bladder (OAB) (detrusor over activity) 33

The aim of managing OAB is to improve the control the person has over their bladder. This is done by reducing the degree of urgency and accidental leakage of urine by gradually increasing the storage capacity or size of the bladder and increasing the time between visits to the bathroom/toilet.

- A bladder retraining program should be commenced which aims to increase the amount of urine the bladder can hold. It starts with a bladder diary 34 or continence record being completed.
- Pelvic floor exercises are used as a non-invasive treatment for urge incontinence.
- Ensure the person is not constipated. The Bristol stool chart 35 is a useful tool in classifying the type of faeces the person is passing. 36 They should eat enough fibre, (fruit and vegetables, high fibre cereals), and drink enough fluids. The fluid intake needs to be increased if the person is eating more fibre. They should also have an exercise program as this can help moving the food through the large intestine.


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c. Management of functional incontinence

- It is important for staff to ensure that there is easy access to the toilet for the person and that signage is clear and the lighting is good.
- Clothing needs to be easy to remove to improve the ability of the person to toilet themselves. Their toilet routine needs to be monitored to ensure enough assistance is given to the person when needed. Their bowel movements need to be monitored to ensure the person is not constipated or impacted. They also need aids close by and staff to assist when necessary. It’s important they are not left when calling for help.

d. Management of post micturition dribble in men

It is treated with a combination of pelvic floor exercises and educating the older person in the technique “urethral milking” or “bulbar urethral massage” after voiding to ensure any remaining urine can drain freely.

- The older man needs to stand sidewise to a mirror without their lower underclothes on. It is important the person teaching the technique is able to maintain the dignity and comfort of the person. The spouse of the person can be taught the technique if it is appropriate. (in the UK this is done by the continence nurse) The procedure includes:
  - Teaching the older male to attain a big pelvic floor contraction at the end of urinating which can lift up the S bend shape in the urethra and allow the urine to run out. This is a good technique to use if the person is in a public bathroom. Ask the person to practice this in front of the mirror. If the person is able to correctly contract their pelvic floor muscles in a big squeeze they will see their scrotum lift up.
  - In the privacy of their bathroom/toilet the older person can attend this manually by placing their hand under their scrotum and lifting the penis up and forward. This straightens the urethra and allows the urine to flow.

e. Management of overflow incontinence

- Establish cause of obstructed voiding if possible.
- If constipation identified then carry out a bowel assessment and initiate appropriate treatment to relieve constipation. Reassess continence status following treatment of constipation to see if the continence problem has improved/resolved.
- If cause of overflow symptoms is unclear or symptoms remain after treatment for constipation refer to GP for further assessment.
- If the individuals bladder is not emptying fully, catheterisation (intermittent or indwelling) may be necessary to facilitate complete bladder emptying whilst
the patient is awaiting further specialist assessment – be guided by the GP/Specialist and local policies in the first instance.

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