

MOH NURSING CLINICAL PRACTICE GUIDELINES 1/2003

Nursing Management of Patients with Urinary Incontinence

**Singapore
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STATEMENT OF INTENT

This set of guidelines serves as a guide for practitioners who are involved in caring for patients with urinary incontinence.

The recommendations are based on the available research findings and existing evidence-based guidelines. However, there are some aspects in which there is insufficient published research and, therefore, consensus of experts in the field has been utilised to provide guidelines specific to conventional practice.

Every practitioner must exercise clinical judgement in the nursing management of patients with urinary incontinence. It is recommended that practitioners use the guidelines while considering the individual patient's condition, overall treatment goal, institutional policies and the availability of resources and treatment options.

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FOREWORD

According to the National Institute of Aging in the United States, urinary incontinence affects at least 1 out of 10 people aged 65 years or older. Studies in Singapore indicate that about 1 in 7 people aged 60 years and above have urinary incontinence. Many older people mistakenly believe that it is a normal part of aging. Urinary incontinence can affect people from any age group and from every socio economic level. It is more common in women.

Urinary incontinence can be an embarrassing and uncomfortable condition that can directly affect not only a person's health but also the quality of everyday life. Some people who have urinary incontinence become socially isolated because of the fear of wetting themselves or creating an unpleasant odour from the leakage of urine. Many suffer in silence and hide the problem from family and friends.

Nurses can play an important role in helping patients to understand and manage urinary incontinence and improve their quality of life. In connection with this, we are pleased to present the guidelines on 'Nursing Management of Patients with Urinary Incontinence'. These guidelines describe the role of the nurse within the context of a multidisciplinary team approach to manage urinary incontinence. I hope that nurses will find these guidelines useful and incorporate them into their practice.

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1 SUMMARY OF RECOMMENDATIONS

History-taking

Take a history from the person identified to have Urinary Incontinence (UI).

(D/4)

Physical examination

Conduct systematic physical examination to identify abnormalities that have a bearing on the incontinence.

(D/4)

Assess skin condition around the genital-perineal region and check for excoriation.

(D/4)

Assess functional state. Examine and determine patient's mobility, cognition and manual dexterity.

(D/4)

Direct observation of leakage

Instruct patient to cough forcefully when the bladder is full and observe for urine leakage.

(D/4)

Urinalysis

Send a sample of urine for urinalysis and culture.

(D/4)

Measurement of residual volume

Measure Post Voided Residual (PVR) volume by in-out catheterisation or bladder scanning within a few minutes after voiding.

(D/4)

Bladder chart/ Intake-and-output chart

Record frequency, timing and amount of fluid intake and voiding for a few days.

(D/4)

Timed voiding/ scheduled toileting

Timed voiding/scheduled toileting is recommended throughout the whole day for patient who needs assistance in toileting.

(D/4)

Habit training

Habit training is recommended for patient in whom a natural voiding pattern can be determined.

(D/4)

Prompted voiding

Prompted voiding is recommended for patients who can learn to recognise some degree of bladder fullness or the need to void, or who can ask for assistance or respond when prompted to void. Patient is asked at regular intervals regardless whether voiding is required and is assisted to the toilet if the response is positive.

(A/1⁺)

When toileting is successful, reward with praise and words of encouragement.

(D/4)

Bladder training/ bladder re-education

Bladder training is strongly recommended for management of urge UI.

(A/1⁺)

Bladder training is recommended for management of stress UI.

(D/4)

Pelvic floor muscle exercise

Pelvic floor muscle exercise is beneficial to women with stress incontinence. It also enhances the benefits of other therapy.

(A⁺⁺/1)

Sustain a contraction of the perivaginal muscles or anal sphincter for at least 10 seconds followed by equal periods of relaxation. Perform this 30 to 80 times a day for at least 8 weeks or until desired muscle tone is achieved.

(D/4)

Intermittent urinary catheterisation

Intermittent catheterisation is recommended as a supportive measure for patients with spinal cord injury, persistent UI, chronic urinary retention due to under-active or partially obstructed bladder.

(D/4)

Indwelling urinary catheterisation

Indwelling catheter is recommended for patient with obstructive cause where other interventions are not feasible. It is also useful for the terminally ill; or patient with pressure ulcers, or for severely impaired individual in whom alternative interventions are not suitable. It may also be used when a caregiver is not available to provide other supportive measures.

(D/4)

The patient is assessed periodically for voiding trials or bladder training.

(D/4)

External collection systems

Uro-sheaths are recommended for incontinent men who have adequate bladder emptying and intact genital skin, and in whom other therapies have failed or are not appropriate.

(D/4)

Absorbent products

Absorbent products are recommended during evaluation, as an adjunct to

other therapies, and for long term care of patients with chronic, intractable UI.
(D/4)

Skin care

Inspect genital-perineal area daily. Identify signs of contact dermatitis and skin excoriation.
(D/4)

Cleanse skin immediately after urine leakage.
(D/4)

Use appropriate skin cleansers and barrier creams.
(D/4)

Dietary and fluid management

Encourage adequate fluid and fibre intake. Reduce caffeine intake (e.g. coffee, tea, colas).
(D/4)

Patient and caregiver education

The public should be informed that UI is not inevitable or shameful. UI is treatable, if not, it is manageable. Patient education should be individualised, involving caregivers and others.
(D/4)

Nursing education

Education and continuing education programmes on UI evaluation and management should be given to nurses.
(D/4)

Physical and environmental alterations

Assess the environment in which the patient is in. Perform simple alterations, such as providing toileting or ambulation devices.
(D/4)

2 INTRODUCTION

2.1 Background

Urinary incontinence (UI) is defined as the “involuntary loss of urine so severe as to have social and/or hygiene consequences” (NIH, 1988). UI or unintentional loss of urine is a health problem causing inconvenience and distress to many individuals. Although it is perceived to be common among the elderly people, bladder problems are not natural consequence of aging and they are not exclusively a problem of the elderly. It is difficult to accurately determine the number of people with continence problem due to the lack of research and the failure of the patients to request for treatment or information.

Studies on the prevalence of UI have yielded different results, as each study examined different populations and adopted different definitions of UI (Barry and Weiss, 1998). In Singapore, Chan et al (1999) found that 25% of the elderly in one home for the aged and 78% in the chronic sick unit have urinary incontinence. Another local community-based study reported a prevalence rate of 4.6% among the elderly above 65 years old living in a housing estate. In this study, urinary incontinence was defined as leakage of urine on at least two occasions in the previous one month (Lee et al, 1991a).

In the United States, UI is known to affect more than 13 million adults (Bradway, Hernly and NICHE, 1998). The impact of incontinence is broad and encompasses medical, psychosocial and economic implications. According to Barry and Weiss (1998), it is estimated that the cost of managing UI and its complications exceeds US\$1.5 billion per year.

Consequences of UI are urinary tract infection (Richardson and Hricz, 1995) and pressure ulcers (Spector, 1994). The social implications include loss of self-esteem, restriction of social and sexual activities, depression and dependence on caregivers (Barry and Weiss, 1998). In addition, caregivers of dementia sufferers with UI in the community setting reported that UI management is burdensome (Flaherty et al, 1992) and cited it as an important reason for relinquishing care (Ouslander et al, 1990).

However, UI is frequently not identified because most affected individuals believe that it is a result of normal ageing (Barry and Weiss, 1998). Hence, nurses have an important role to play in improving the quality of life for patients suffering from continence problems, especially since such difficulties are always treatable and often manageable (Hocking, 1999).

2.2 Types of UI

- 1) Stress Incontinence – is an involuntary loss of urine due to an increased intra-abdominal pressure during coughing, sneezing, laughing or other physical activities that increase intra-abdominal pressure.
- 2) Urge Incontinence – is the involuntary loss of urine associated with a strong desire or need to urinate. It is usually, associated with premature detrusor muscle contractions, referred to as detrusor instability. Although detrusor instability can be associated with neurologic disorders, it also occurs in individuals who appear to be neurologically normal. Urge incontinence is a result of a sudden, involuntary bladder contraction caused by inflammation or irritation within the bladder. This inflammation or irritation may be due to calculi, malignancy, infection or atrophic vaginitis-urethritis. These uncontrollable contractions can also occur when the brain centre that inhibits bladder contractions is impaired by neurologic conditions such as stroke, Parkinson's disease or dementia. Urge incontinence is the most common type of incontinence in older people (Thomas, 2001).
- 3) Mixed Incontinence – is a combination of both stress and urge incontinence. It is most common in older women.
- 4) Overflow Incontinence – is the involuntary loss of urine resulting from an over-distended bladder. It may have a variety of presentations, including frequent or constant dribbling, or urge or stress incontinence symptoms. Overflow may be caused by an inactive or acontractile detrusor, or bladder outlet or urethral obstruction. The bladder may be underactive or acontractile secondary to drugs, neurologic conditions such as diabetic neuropathy, low spinal cord injury, or radical pelvic surgery that

interrupts the motor innervation of the detrusor muscle. The detrusor may also be underactive from idiopathic causes. In men, it is often related to enlarged prostate and impacted faeces.

- 5) Transient Incontinence – is a result of a reversible medical condition. The patients may be suffering from delirium, urinary tract infection, atrophic vaginitis, psychological problem (such as depression), endocrine disorder, impaired immobility and/or stool impaction. It may be due to drugs such as diuretics and sedatives.

(Fantl et al, 1996; Barry and Weiss, 1998)

- 6) Functional Incontinence – is the involuntary urine loss caused by factors outside the lower urinary tract such as impairment of physical or cognitive functioning, or both. It is important to note that immobile and cognitively impaired individuals may also have other types and causes of UI.

(Fantl et al, 1996)

2.3 Scope of the guidelines

These clinical guidelines are primarily tools to assist nurses to manage adult patients suffering from UI in the hospital. The guidelines are not applicable to children, and adults who have undergone urological or gynaecological surgeries.

3 DEVELOPMENT OF GUIDELINES

3.1 Strategy and literature review

The workgroup reviewed a set of highly-regarded evidence-based guidelines by the Agency for Health Care Policy and Research. (AHCPR) Clinical Practice Guideline on ***Urinary Incontinence in Adults: Acute and Chronic Management*** (Fantl et al, 1996).

The workgroup felt that a review of the literature identified from key specific topics found in the electronic databases (MEDLINE, CINAHL and Cochrane library) and through hand-searching of relevant journals (Geriatric Nursing, Journal of Advanced Nursing, Journal of Gerontological Nursing) from February 1996 to July 2002 would be sufficient.

3.2 Evaluation of evidence and grading of recommendations

The workgroup adopted the revised Scottish Intercollegiate Guidelines Network (SIGN) system which gives clear guidance on how to evaluate the design of individual studies and grade each study's level of evidence and how to assign a grade to the recommendation after taking into account external validity, result consistency, local constraints and expert opinion. The extensive reliance on the AHRQ guidelines is acknowledged and treated as a very special case of published expert opinion. For areas where available evidence is inconsistent or inconclusive, recommendations were made based on the clinical experience and judgement of the workgroup or expert committee reports.

3.2.1 Individual study validity rating

All primary studies and reviews addressing a particular topic were appraised using a SIGN checklist appropriate to the study's design. These were individually rated for internal validity using the system below:

Rating	Description
++	All or most of the criteria have been fulfilled. Where they have not been fulfilled the conclusions of the study or review are thought very unlikely to alter.
+	Some of the criteria have been fulfilled. Those criteria that have not been fulfilled or not adequately described are thought unlikely to alter the conclusions.
-	Few or no criteria fulfilled. The conclusions of the study are thought likely or very likely to alter.

3.2.2 Levels of evidence

The study design is designated by a numerical prefix

- “1” for systematic reviews or meta-analyses or randomised controlled trials (RCTs)
- “2” for cohort and case-control studies
- “3” for case reports/series
- “4” for expert opinion/logical arguments/ “common” sense

Each study is assigned a level of evidence by combining the design designation and its validity rating using the system below:

Level	Type of Evidence
1⁺⁺	High quality meta-analyses, systematic reviews of RCTs, or RCTs with a very low risk of bias.
1⁺	Well conducted meta-analyses, systematic reviews, or RCTs with a low risk of bias.
1⁻	Meta-analyses, systematic reviews, or RCTs with a high risk of bias.
2⁺⁺	High quality systematic reviews of case-control or cohort studies. High quality case-control or cohort studies with a very low risk of confounding or bias and a high probability that the relationship is causal.
2⁺	Well-conducted case-control or cohort studies with a low risk of confounding or bias and a moderate probability that the relationship is causal.
2⁻	Case-control or cohort studies with a high risk of confounding or bias and a significant risk that the relationship is not causal.
3	Non-analytic studies e.g. case reports, case series.
4	Expert opinion.

3.2.3 Grade of recommendation

The detailed results of each study and mitigating local circumstances were considered in the formulation of each recommendation which was then graded using the system below:

Grade	Recommendation
A	At least one meta-analysis, systematic review, or RCT rated as 1 ⁺⁺ , and directly applicable to the target population; or A body of evidence, consisting principally of studies rated as 1 ⁺ , directly applicable to the target population, and demonstrating overall consistency of results.
B	A body of evidence, including studies rated as 2 ⁺⁺ , directly applicable to the target population, and demonstrating overall consistency of results; or Extrapolated evidence from studies rated as 1 ⁺⁺ or 1 ⁺ .
C	A body of evidence including studies rated as 2 ⁺ , directly applicable to the target population and demonstrating overall consistency or results; or Extrapolated evidence from studies rated as 2 ⁺⁺ .
D	Evidence level 3 or 4 ; or Extrapolated evidence from studies rated as 2 ⁺ .

3.2.4 Interpretation of the D/4 grading

The grading system emphasises the quality of the experimental support underpinning each recommendation. The grading D/4 was assigned in cases where

- it would be unreasonable to conduct a RCT because the correct practice is logically obvious;
- recommendations were derived from existing high quality evidence-based guidelines. We alert the user to this special status by appending the initials of their source e.g. (D/4 – Fantl et al 1996)

3.3 Guideline review and revision

Drafts of the guidelines were circulated to healthcare institutions for peer review on validity, reliability and practicality of the recommendations.

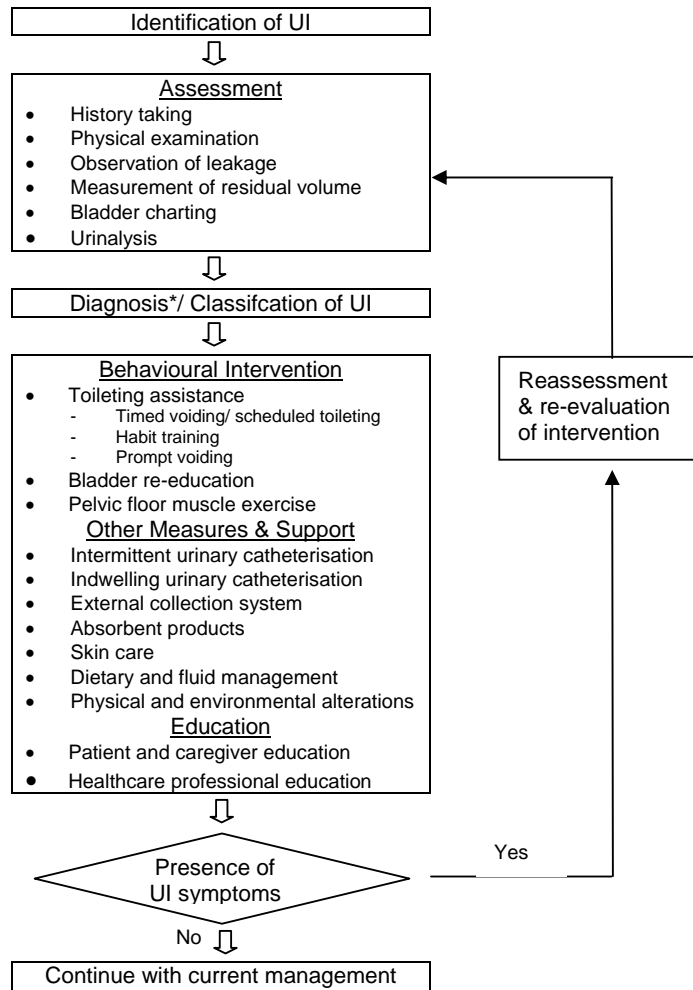
These guidelines will be reviewed and revised periodically to incorporate the latest relevant evidence and expert clinical opinion.

3.4 Limitations

These guidelines offer recommendations that are based on current scientific evidence and professional judgement. They are not intended as a legal standard of care.

Users of these guidelines should determine the appropriate and safe patient care practices, based on assessment of the circumstances of the particular patient, their own clinical experiences and knowledge of the most recent research findings.

4 ALGORITHM FOR THE NURSING MANAGEMENT OF PATIENTS WITH URINARY INCONTINENCE



*Diagnosis by doctor

5 ASSESSMENT

Assessment is the first step in managing UI and is the basis for determining potential management modalities. Nurses play a key role in assessing and managing UI.

5.1 History-taking

Take a history from the person identified to have UI, history-taking should include:

- past medical/ surgical/ obstetric and gynaecological history
- medications
- duration of UI
- circumstances of leak e.g. coughing, straining, sense of urgency
- bladder storage symptoms e.g. frequency, urgency, nocturia
- any voiding symptoms e.g. intermittency, poor stream, post-void dribble, straining
- psychological and social history

(D/4 – Fantl et al, 1996)

Rationale:

- History-taking is vital in determining whether the UI is related to an underlying cause e.g. diabetes, constipation, stroke, Parkinson's disease, abdomino-perineal resection, parity, difficult delivery or prolonged labour.
(Fantl et al, 1996; Chin, 2001)
- Sexual functions and lower urinary tract infection may have identical innervations and therefore sexual function should be discussed. Leakage during sexual contact can be a problem of both sexes, though it is more common in females.
(Chin, 2001)

5.2 Physical examination

Conduct systematic physical examination to identify abnormalities that have a direct bearing on the incontinence.

(D/4 - Fantl et al, 1996)

Check for fluid retention.

(D/4 - Fantl et al, 1996)

Assess skin condition around the genitoperineal region and check for skin excoriation.

(D/4 - Fantl et al, 1996)

Assess functional state. Examine and determine patient's mobility, cognition and manual dexterity.

(D/4 - Fantl et al, 1996)

Rationale:

- Pelvic floor defects, e.g. cystocele and uterine prolapse, can contribute to incontinence.
(Ouslander et al, 1986)
- Diseases that lead to fluid retention, e.g. congestive cardiac failure, renal failure, may contribute to nocturia and nocturnal UI.
(Williams & Gaylords, 1990)
- Assessment for mobility, cognition and manual dexterity are related to toileting skills among frail and functionally impaired patients. Limited mobility may prevent a patient from reaching the toilet on time. Manual dexterity is also required for undressing.

(Williams & Gaylords, 1990)

5.3 Direct observation of leakage

Instruct the patient to cough forcefully when the bladder is full and observe for urine leakage.

(D/4 - Fantl et al, 1996)

Rationale:

- Stress incontinence is likely if instantaneous urine leakage occurs with cough.

(Kadar, 1988)

Note:

- Cough test - Urine leakage can be observed in a supine or standing position.

5.4 Urinalysis

Send a sample of urine for urinalysis and culture as ordered by Doctor.

(D/4 - Fantl et al, 1996)

Rationale:

- Urinalysis detects any contributory factors e.g. haematuria, glucosuria, pyuria, bacteriuria and proteinuria. Urine culture is done to exclude urinary tract infection.

(Fantl et al, 1996)

5.5 Measurement of residual volume

Measure Post Voided Residual (PVR) volume by in-out catheterisation or bladder scanning within a few minutes after voiding.

(D/4 - Fantl et al, 1996)

Rationale:

- Less than 50 mls is considered adequate bladder emptying.
- Repeated PVR volumes in excess of 100 mls are considered inadequate emptying.

(Fantl et al, 1996)

Note: Bladder scan can be done by a trained nurse, depending on institutional practice.

5.6 Bladder chart/Intake-and-output chart

Record frequency, timing and amount of voiding preferably for three days using a bladder chart.

(D/4 - Fantl et al, 1996)

Rationale:

- The bladder chart is probably the single most useful nursing tool in assessing the individual's level of UI. It provides baseline information, helps to monitor progress and effectiveness of therapy.

(Fantl et al, 1996; Lee et al, 1991b)

Note:

- Bladder chart is a useful assessment tool to describe a patient's voiding patterns. This baseline information provides the patient with enhanced self-awareness of his/her fluid intake and elimination situation.
- The patient can keep this recording in his/her own environment.

6 BEHAVIOURAL INTERVENTION

6.1 Toileting assistance

6.1.1 Timed voiding/ scheduled toileting

Timed voiding/scheduled toileting is recommended throughout the whole day for patients who need assistance for toileting.

(D/4 - Fantl et al, 1996)

Rationale:

- Systematic effort is required to motivate the patient to delay voiding and resist urge. The goal is to achieve continence by pre-empting involuntary bladder emptying. There must be regular opportunities for micturation.

(Godec, 1994)

Note:

- Timed voiding is usually at 2 hourly intervals.

6.1.2 Habit training

Habit training is recommended for patients with whom a natural voiding pattern can be determined.

(D/4 - Fantl et al, 1996)

Rationale:

- Habit training involves matching toileting schedule to patient's voiding habits.
- Frequency, volume, patterns of continence and incontinence are adjusted. The voiding schedule fits the patient's established pattern.

(Fantl et al, 1996)

6.1.3 Prompted voiding

Prompted voiding (usually at 2 hourly intervals) is recommended for patients who can learn to recognise some degree of bladder fullness or the need to void, or who can ask for assistance or respond when prompted to void. The patient is asked at regular intervals whether voiding is required and is assisted to the toilet if the response is positive.

(A/1⁺)

When voiding is successful, reward with praise and words of encouragement.

(D/4 - Fantl et al, 1996)

Rationale:

- Prompted voiding can improve dryness in patients with mild to moderate UI.

(Fantl et al, 1996)

6.2 Bladder training/ bladder re-education

Bladder training is strongly recommended for management of urge UI.

(A/1⁺)

Bladder training is recommended for management of stress and mixed UI.

(D/4 - Fantl et al, 1996)

Rationale:

- Bladder training helps the patient to postpone voiding according to a schedule, to provide for larger voiding volume, and longer intervals between voiding.

(Fantl et al, 1996)

- Bladder training appears to be effective in reducing the frequency of stress and urge UI. Studies have indicated cure rates of 10 to 15% and improvement in the majority of patients.

(Roe et al, 2002; Chin, 2001; NIH, 1988)

Note:

- Candidates for bladder training should be physically and cognitively able and motivated (Hadley, 1986, Kennedy, 1992). Bladder training generally comprises three components: patient education, scheduled voiding, and positive reinforcement (Fantl et al, 1996).
- Bladder training requires the patient to resist or inhibit the sensation of urgency, to postpone voiding.
- The voiding schedule progressively increases the interval between mandatory voids with concomitant distraction or relaxation techniques. Initially, the interval goal is usually set between 2 to 3 hours or is determined by the patient's baseline interval. This bladder training is not enforced during sleeping hours.
- Continence can take some months to achieve.

6.3 Pelvic floor muscle exercise

Pelvic floor muscle exercise is beneficial to women with stress incontinence.

(A⁺⁺/1)

Sustain a contraction of the peri-vaginal muscles or anal sphincter for at least 10 seconds followed by equal periods of relaxation. Perform 30 to 80 times a day for at least 8 weeks. This may need to be continued indefinitely.

(D/4 - Fantl et al, 1996)

Rationale:

- Pelvic floor muscle exercise strengthens the voluntary periurethral and pelvic floor muscles, the contraction of which exerts a closing force on the urethra. This technique has been emphasised for women with stress UI but appears to be useful in men as well. Benefit has been reported in 30 to 90% of women, but criteria differ among studies. Patients with mild symptoms may improve most. Continued exercise is required for continued benefit.

(NIH, 1988)

- Pelvic floor muscle exercise enhances other therapies including insertion of vaginal cones, electrical stimulation and behavioural training.

(Hay-Smith et al, 2002)

Note:

- Pelvic floor muscle exercise involves "drawing in" or "lifting up" peri-vaginal muscles or anal sphincter as if to control voiding or defaecation with minimal contraction of abdominal, buttock or inner thigh muscles.

(Fantl et al, 1996)

7 OTHER MEASURES AND SUPPORTIVE CARE

7.1 Intermittent urinary catheterisation

Intermittent catheterisation is recommended as a supportive measure for patients with spinal cord injury, persistent UI, chronic urinary retention due to underactive or partially obstructed bladder.

(D/4 - Fantl et al, 1996)

Rationale:

- Intermittent catheterisation prevents the bladder from becoming overly distended. It helps to reduce infection and minimise UI.
- Overly distended bladder may have high intra-vesical pressure which can cause damage to the upper urinary tract as a result of reflux to the kidneys.

(Fantl et al, 1996)

Note:

- Intermittent catheterisation can be performed by patient or caregiver. It involves passing a catheter into the bladder every 3 to 6 hours.

(Fantl et al, 1996)

7.2 Indwelling urinary catheterisation

An indwelling catheter is recommended for a patient with an obstructive cause where other interventions are not feasible. It is also useful for the terminally ill; or patients with pressure ulcers, or for severely impaired individuals for whom alternative interventions are not an option. It may also be used when a caregiver is not available for other supportive measures.

(D/4 - Fantl et al, 1996)

The patient is assessed periodically for voiding trials or bladder training.

(D/4 - Fantl et al, 1996)

Rationale:

- An indwelling catheter aids in monitoring fluid balance. It also prevents wetting of clothes and bed linen, thus reducing the frequency for change of clothes and linen. An indwelling catheter minimises pain from intermittent catheterisation, disruption to the patient and lessens skin irritation and the risk of developing pressure ulcers.

(Fantl et al, 1996)

7.3 External collection systems

The uro-sheath is recommended for an incontinent man, who can adequately empty his bladder and has intact penile skin, and in whom other therapies have failed or are not appropriate.

(D/4 - Fantl et al, 1996)

Rationale:

- The uro-sheath drains the urine and keeps the skin dry. However, improper or prolonged use of uro-sheaths can cause contact dermatitis, maceration of the penis, ischemia and penile constriction.

(Fantl et al 1996, Ouslander et al 1987, Jayachandran et al 1985)

7.4 Absorbent products

Absorbent products are recommended during evaluation, as an adjunct to other therapies, and for long term care of patients with chronic, intractable UI.

(D/4 - Fantl et al, 1996)

Rationale:

- Absorbent products are helpful during assessment and treatment of UI. However, early dependence of absorbent products may be a deterrent to continence and removes the wearer's motivation to seek professional help. Improper use of absorbent products may contribute to skin breakdown and UTI.

(Starer & Libow, 1985; Fantl et al, 1996)

7.5 Skin care

Inspect genito-perineal area daily. Identify signs of contact dermatitis and skin excoriation.

(D/4 - Fantl et al, 1996)

Cleanse skin immediately after urine leakage.

(D/4 – Fantl et al, 1996)

Use appropriate skin cleansers and barrier creams.

(D/4 – Fantl et al, 1996)

Rationale:

Good skin care promotes skin integrity and prevents skin breakdown.
(Fantl et al, 1996)

7.6 Dietary and fluid management

Encourage adequate fluid and fibre intake. Discourage consumption of caffeinated products such as coffee, tea, colas and chocolate.

(D/4; Fantl et al, 1996)

Rationale:

Inadequate fluid intake contributes to constipation. Elimination of bowel impaction and consequent pressure on the bladder and urethra are often necessary first steps in the treatment of chronic UI.
(Fantl et al, 1996)

Eliminating dietary caffeine such as coffee, tea, colas, and chocolate is particularly important for persons with urge UI and frequency of urination.

(Creighton and Stanton, 1990).

Note:

Caffeine has a diuretic effect.

7.7 Physical and environmental alterations

Assess the environment in which the patient is in. Perform simple alterations, such as providing toileting or ambulation devices.

(D/4; Fantl et al, 1996)

Rationale:

These can often eliminate or reduce episodes of involuntary urine loss. Strategies that maintain or improve mobility are likely to prevent or reduce incontinent episodes.

(Fantl et al, 1996)

8 EDUCATION

8.1 Patient and caregiver education

The public should be informed that UI is not inevitable or shameful. UI is treatable, and if not, it is manageable. Patient education should be individualised, involving caregivers and others.

(D/4 - Fantl et al, 1996)

Rationale:

- Education promotes early and more effective management.
- Education may reduce physical, psychological and social limitations, thus improving quality of life.

(Patricia et al, 1996; Rigby, 2001)

8.2 Nursing education

Education and continuing education programmes on UI evaluation and management should be given to nurses.

(D/4 – Fantl et al, 1996)

Rationale:

- Informed decisions improve the success of incontinence management.

(Patricia et al, 1996; Rigby, 2001; Wight, 2001)

9 QUALITY ASSURANCE

Health care administrators should consider these guidelines in their in-house quality assurance programmes. Nurses should critically review the implications of these guidelines for their routine care delivery, trainee teaching and patient education needs.

9.1 Parameters for Evaluation

In the nursing management of UI, the quality of care may be determined by assessing the changes in the following rates/ number:

Incidence of UI symptoms that developed during hospitalisation

Use of behavioural intervention

Proportion of patients with symptoms of UI given behavioural intervention (toileting assistance/ bladder re-education/ pelvic floor muscle exercise)

Teaching of pelvic floor muscle exercise

Proportion of women with stress UI who were given health teaching on pelvic floor muscle exercise

Continuing education on UI for nurses

- Number of continuing education programmes on UI evaluation and management for nurses
- Proportion of nurses who had attended continuing education programmes on UI evaluation and management

It is suggested that the above parameters be monitored on a regular basis.

9.2 Management Role

Health care administrators together with quality assurance teams should ensure that the targets for these indicators are met. They may benchmark against hospitals or institutions that perform well.

10 IMPLEMENTATION OF GUIDELINES

It is expected that these guidelines would be adopted after discussion involving clinical and management staff of the health care institution. They may review how these guidelines would complement or be incorporated into their existing protocols.

Feedback may be directed to the Ministry of Health for consideration in future reviews.

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GLOSSARY

Absorbent products:

Examples of absorbent products include shields, guards, undergarments, pads cum pants, adult diapers and bed pads.

Behavioural techniques:

Specific interventions designed to alter the relationship between the patient's symptoms and his/her behaviour and/or environment for the treatment of maladaptive urinary voiding patterns. This may be achieved by modification of the behaviour and/or environment of the patient (e.g. bladder training, electrical stimulation, habit training, pelvic floor muscle exercises, prompted voiding).

Bladder chart:

Also called an "incontinence chart", "voiding or bladder diary (record)". A record maintained by the patient or caregiver that is used to record the frequency, timing, amount of voiding, and/or other factors associated with the patient's UI.

Bladder training/ bladder re-education:

A behavioural technique that requires the patient to resist or inhibit the sensation of urgency (the strong desire to urinate), to postpone voiding, and to urinate according to a timetable rather than to the urge to void.

Catheterisation:

A technique for managing UI that involves the use of a slender tube inserted through the urethra or through the anterior abdominal wall into the bladder, urinary reservoir, or urinary conduit to allow urine drainage (see indwelling catheters, intermittent catheterisation).

Detrusor:

General term for any part of the body that pushes down. In the urinary system, the detrusor muscle is the smooth muscle in the wall of the urinary bladder that contracts the bladder and expels the urine.

Detrusor instability (unstable bladder):

Involuntary detrusor contraction in the absence of associated neurologic disorders (see urge incontinence).

Electrical stimulation:

The application of electric current to stimulate or inhibit the pelvic viscera or their nerve supply in order to induce a direct therapeutic response.

External collection system:

Devices for externally draining the bladder made from latex rubber, polyvinyl, or silicone that are secured on the shaft of the penis by some form of adhesive and are connected to urine collecting bags by a tube.

Habit training:

A behavioural technique that calls for scheduled toileting at regular intervals on a planned basis. Unlike bladder training, there is no systematic effort to motivate the patient to delay voiding and resist urge.

Indwelling catheter:

A tube inserted into the bladder, urinary reservoir, or urinary conduit for a period of time longer than one emptying.

Intermittent catheterisation:

The insertion of a catheter through the urethra into the bladder every 3 - 6 hours for drainage of urine in persons with urinary retention.

Involuntary detrusor contraction:

A cause of UI resulting from uncontrolled contractions of the detrusor.

Mixed urinary incontinence:

The combination, in a patient, of urge UI and stress UI.

Overflow incontinence:

The involuntary loss of urine associated with over-distension of the bladder. Overflow incontinence results from urinary retention that causes the capacity of the bladder to be overwhelmed. Continuous or intermittent leakage of a small amount of urine results.

Pelvic floor muscle exercises:

A behavioural technique that requires repetitive active exercise of the pubococcygeus muscle to improve urethral resistance and urinary control by strengthening the periurethral and pelvic floor muscles. Also called Kegel exercises.

Post voided residual (PVR) volume:

The amount of fluid remaining in the bladder immediately following the completion of urination. Estimation of PVR volume can be made by abdominal palpation and percussion or bimanual examination. Specific measurement of PVR volume can be accomplished by catheterisation, pelvic ultrasound, radiography, or radioisotope studies.

Prompted voiding:

A behavioural technique for use primarily with dependent or cognitively impaired persons. Prompted voiding attempts to teach the incontinent person awareness of his/her incontinence status and to request toileting assistance, either independently or after being prompted by a caregiver.

Residual urine:

The amount of urine that remains in the bladder after urination.

Stress urinary incontinence:

A form of UI characterised by the involuntary loss of urine from the urethra during physical exertion such as coughing. The stress incontinence symptom or complaint may be confirmed by observing urine loss coincident with an increase in abdominal pressure in the absence of a detrusor contraction or an over-distended bladder.

Transient urinary incontinence:

Temporary episodes of UI that are reversible once the cause or causes of the episode(s) are identified and treated.

Timed voiding

This is a rigid regime, fixed voiding scheme unchanged. It may include techniques to trigger voiding and allow complete emptying of bladder.

Underactive bladder:

A condition characterised by a bladder contraction of inadequate magnitude and/or duration to effect bladder emptying in a normal timespan. This condition can be caused by drugs, faecal impaction, and

neurologic conditions such as diabetic neuropathy or low spinal cord injury or as a result of radical pelvic surgery. It also can result from a weakening of the detrusor muscle from vitamin B12 deficiency or idiopathic causes. Bladder underactivity may cause over-distension of the bladder, resulting in overflow incontinence.

Urge incontinence:

The involuntary loss of urine associated with an abrupt and strong desire to void (urgency). Urge incontinence is usually associated with the urodynamic findings of involuntary detrusor contractions or detrusor overactivity.

Urge/urgency:

A strong desire to void.

Urinary incontinence (UI):

Involuntary loss of urine sufficient to be a problem. There are several types of UI, but all are characterised by an inability to restrain or control urinary voiding (see mixed UI, nocturnal enuresis, overflow incontinence, stress incontinence, transient UI, urge incontinence).

Urinary tract:

Passageway from the pelvis of the kidney to the urinary orifice through the ureters, bladder, and urethra.

Urinary tract infection (UTI):

An infection in the urinary tract caused by the invasion of disease-causing micro-organisms, which proceed to establish themselves, multiply, and produce various symptoms in their host. Infection of the bladder, better known as cystitis, is particularly common in women, mainly because of the much shorter urethra, which provides less of a barrier to bacteria. In men, infection is usually associated with obstruction to the flow of urine, such as prostate gland enlargement.

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ANNEX 1 TIME AND VOIDING CHART

(Bladder charting)

Guideline for using this form:

Record your drinking and voiding pattern for 2 full days.

If you wet yourself:

write (+) for a few drops of urine loss

(++) if wets pants or pad

(+++) if soaked pants or bladder emptied

Date started: _____

INTAKE			OUTPUT		INTAKE			OUTPUT	
Time	Volume (ml)	Type of fluids	Volume (ml)	Wetting	Time	Volume (ml)	Type of fluids	Volume (ml)	Wetting

Summary of bladder chart:

Frequency	Day:	Night:
Urine volume per void (ml)	Maximum:	Minimum*:
Frequency of wetting per day	Day:	Night:
Total volume voided per day (ml):		

*Don't count last void before bed

ANNEX 2 SELF ASSESSMENT

- 1 Which of the following statements on urge incontinence is incorrect?
 - a) It is the involuntary loss of urine associated with a strong desire to void.
 - b) It presents clinically as the involuntary loss of urine during physical activities that increase intra-abdominal pressure.
 - c) It is a result of a sudden, involuntary bladder contraction caused by inflammation or irritation within the bladder.
 - d) Uncontrollable contractions may be related to neurologic conditions such as stroke or dementia.

- 2 Assessment to elicit the cause of incontinence may include
 - a) symptom review.
 - b) skin condition around genital-perineum region.
 - c) functional state.
 - d) all of the above.

- 3 Which of the following is not a key component of a good bladder chart?
 - a) Amount.
 - b) Frequency.
 - c) Urinalysis.
 - d) Timing.

- 4 Which of the following statements on bladder training is true?
 - a) All patients with UI are suitable candidates for bladder training.
 - b) Patient is prompted to void every two hourly.
 - c) Bladder training is not enforced during sleeping hours.
 - d) Patient must attempt to void when time is due.

- 5 Pelvic floor muscle exercise
 - a) may benefit men.
 - b) does not benefit women with stress UI.
 - c) can strengthen the voluntary pelvic floor muscles but not the periurethral muscles.
 - d) cannot be practised in conjunction with other therapies such as behavioural training.

- 6 Indwelling catheterisation
- is the first choice intervention for patient with UI.
 - involves passing a catheter into the bladder every 3 to 6 hours.
 - will benefit patient who is terminally ill or, with pressure ulcers.
 - is the only way to monitor fluid balance.
- 7 Absorbent products
- are not recommended for long term care of patients with chronic, intractable UI
 - eliminate the time needed for cleaning soiled skin.
 - do not contribute to skin breakdown.
 - may remove the wearer's motivation to seek professional help.
- 8 Which of the following statements is incorrect?
- Adequate fluid and fibre intake reduces risk of constipation.
 - Daily inspection of penile area is necessary when external collection system such as uro-sheath is used.
 - Reduced fluid intake is an effective way to prevent urinary incontinence.
 - Skin should be cleansed immediately after each incontinent incident.

Answers

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