THE MANAGEMENT OF URINARY INCONTINENCE WITHIN A STROKE UNIT POPULATION

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Definition

Urinary Incontinence is AN INABILITY TO HOLD URINE until getting to the toilet. It is a symptom, not a disease, and the treatment method depends on the severity of the problem.

Tamavo (2003)
Continence FACTS

- 40-60% will initially be incontinent of urine post stroke
- 1 in 5 are still experiencing problems on discharge from hospital
- 15% are still incontinent a year later

(Stroke Association)
Continence FACTS

Urinary incontinence following a stroke is associated with:

1. poor prognosis
2. interference with rehabilitation
3. decision to discharge to long-term care
Evidence

- Little good quality research investigating incontinence after stroke

- Some evidence for interventions in non stroke populations with consensus on best practice
Guidelines

Patients with stroke who have continued loss of bladder control 2 weeks after diagnosis should:

- have any identified causes of incontinence treated
- have an active plan of management documented
- be offered simple treatments such as:
  1. Bladder retraining
  2. Pelvic floor exercises

National Clinical Guidelines for Stroke (RCP 2012)
What causes bladder problems after stroke?
Detrusor Overactivity (Urge Incontinence)

- Bladder retraining (Frequency volume chart)
- Reduce caffeine/citrus fruit
- Medication

Nerve pathways controlling bladder contraction can be damaged.

The brain perceives the urge to urinate although the bladder contains only a small amount of urine.

Even if the external sphincter can prevent leakage temporarily the bladder continues to contract and the urge to urinate persists.

Frequency/urgency may occur.
Incomplete Bladder Emptying (Urinary Retention)

- Damage to nerves that innervate the bladder
- Bladder always has a residual volume of urine left after micturition
- Can become a source of recurrent UTI’s
- Overflow incontinence occurs

- Intermittent Catheterisation
- Indwelling catheter with valve
Physical disabilities can make it difficult to reach the toilet unaided

Pain may make sitting /standing a problem

Cognitive impairment may lead to non- recognition of a toilet as the appropriate place to pass urine

- Hand held urinal with absorbent gel
- Nurse call bell within reach
- Communication Aid
- Body worn pads and pants
- Easy to remove clothing
- Frequency volume chart
Stress Incontinence

Not directly caused by stroke

Weakened pelvic floor muscles cause leakage on movement, coughing, sneezing, or laughing by increasing pressure on bladder, causing bladder neck to open.

Bladder neck not able to stay closed and external sphincter cannot compensate, so leakage occurs.

- During the acute period treat as urge incontinence
- Pelvic floor exercises
Assessment

- May have more than one type of incontinence

- Assessment is essential to establish the type of bladder problem so that the correct treatment(s) can be initiated
CONTINENCE ASSESSMENT
To be completed within 72 hrs of admission

Patient name ___________________ Hospital No ______________
Date of assessment ______________ Name of assessor ___________________
Date of onset of urinary incontinence ________________________

Review the patient’s drug chart for drugs that may be implicated in urinary incontinence (diuretics, sedatives etc).

Urine test result
Leucocytes positive o negative o
Nitrates positive o negative o
If positive send MSU to lab for culture and sensitivity

Does the patient have any pain/discomfort related to passing urine?
Yes o No o
If yes document in notes, inform medical staff and consider analgesia

Does the patient have any of the following indications in the per-rectal/gential/grain area?
Soreness Yes o No o
Itch Yes o No o
Candida Yes o No o
If yes document in notes and inform medical staff

Can the patient hold the urine in the bladder once the desire to pass urine is felt?
Yes o No o
If no treat as URGE INCONTINENCE

Is the urinary incontinence initiated or aggravated by coughing, sneezing or standing?
Yes o No o
If yes treat as STRESS INCONTINENCE

Is the patient independently mobile?
Yes o No o
Can the patient use a hand held urinal unaided?
Yes o No o
Can the patient communicate their need to pass urine?
Yes o No o
If no to one or more of the last three questions treat as FUNCTIONAL INCONTINENCE

Is the patient able to pass urine spontaneously (bladder scan >500mls)?
Yes o No o
If no treat as ACUTE RETENTION
If yes Post induction bladder scan result _________ ml
More than 100mls o Less than 100mls o
If more than 100mls treat as INCOMPLETE BLadder EMPTYING

NB Patients may be suffering with more than one type of incontinence. A 48 hour frequency/volume chart will help with diagnosis.
How can nurses’ help the patient to overcome some of these problems?

- Treatment options will be discussed and agreed with the patient and/or relevant other person.

- A plan of care for the treatment and management of urinary incontinence will be documented in the patients’ notes (care plan) within 72 hours of admission.

- If incontinence problem persists on discharge, after having discussed with patient and/or relevant other, refer patient to District Nurse or other appropriate agency with a copy of hospital continence assessment.
Research project - ‘**Do enuresis alarms help facilitate a bladder assessment?**’

- R&D and ethics approval
- Small grant secured
- Patient consent/carer assent
- Looked at continence assessment at 3 time points
Enuresis alarm

- Developed in 1902
- Evidence to support the use of alarms in the treatment of bedwetting (children)
- Works by waking the child as soon as micturition starts, so that the child can go to the toilet to empty the bladder
- Little evidence of use in adults, none in stroke patients
- Many different types of alarms
Sensor

- Single patient use, but can be reused for the same patient
- Cost £23 each
- Wash with soap and water between use
- Wrap with soft wipe before placing in pad
Transmitter

- Battery powered
- Telemetry
- Safety pin
- Must disconnect the sensor to reset
- Clean with alcohol
Receiver

- Monitors up to 7 patients at one time
- Transmitters can be set up to link with specific receivers
- LED green light shows that battery is working
- On/off switch at side
- Volume control at side
- Clean with alcohol
Why use alarms?

Not to tell you every time a patient is wet so that they can be changed!!!
Why use alarms?

- To facilitate an accurate post micturition bladder scan to see if the bladder is emptying completely
- To maintain an accurate bladder diary to aid diagnosis/ provide times for toileting schedule
- To monitor the effectiveness of medication to treat bladder problems
- For use with patients who are unable to tell you that they need the toilet/have passed urine
Is the bladder emptying completely?

- A post micturition bladder scan should be part of every bladder assessment

- Incomplete bladder emptying causes frequency, discomfort and increases risk of UTI

- Difficult to achieve with dysphasic pts, cognitively impaired, reduced conscious level or those who are unaware when they pass urine

- The alarm can notify staff exactly when urine is being passed so that an accurate post micturition scan can be done
1st group

- 20 patients admitted to stroke unit (consecutively) with urinary incontinence
- Staff unaware of data collection
- To ascertain initial standard of assessment
2nd and 3rd group

- 20 patients with UI had access to alarm system for their continence assessment
- 20 patients had usual care
- Separate arms of the ward
- Two groups were recruited at the same time
Outcome measures

- Continence Assessment
- If there was a diagnosis
- If a care plan in notes
- If care plan was followed
## Findings

<table>
<thead>
<tr>
<th></th>
<th>Pre study</th>
<th>Standard care</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean age</strong></td>
<td>83</td>
<td>82</td>
<td>80</td>
</tr>
<tr>
<td><strong>Mean Barthel on admission</strong></td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td><strong>Mean Barthel on discharge</strong></td>
<td>5</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td><strong>Cognitive impairment</strong></td>
<td>16 (80%)</td>
<td>18 (90%)</td>
<td>17 (85%)</td>
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<td><strong>Communication difficulties</strong></td>
<td>12 (60%)</td>
<td>6 (30%)</td>
<td>10 (50%)</td>
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<td><strong>Reduced consciousness</strong></td>
<td>6 (30%)</td>
<td>3 (15%)</td>
<td>6 (30%)</td>
</tr>
<tr>
<td><strong>Assessment completed</strong></td>
<td>8 (40%)</td>
<td>8 (40%)</td>
<td>18 (90%)</td>
</tr>
<tr>
<td><strong>Diagnosis made</strong></td>
<td>8 (40%)</td>
<td>8 (40%)</td>
<td>20 (100%)</td>
</tr>
<tr>
<td><strong>Care plan written</strong></td>
<td>8 (40%)</td>
<td>8 (40%)</td>
<td>20 (100%)</td>
</tr>
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Findings continued...

- None of the care plans were carried out as planned.

- Fields that were missing were mainly trigger questions, post micturition bladder scan and Urine dip results.
Care plans

- Impossible to measure the effectiveness of intervention if they are not carried out

- Toileting times need to be documented and passed on at handovers

- Use of commodes rather than bedpans

- Tilt in space commodes available
Urine dip

- Males - use urosheath to collect sample

- Females - either use intermittent catheter to collect or use sterile pad specifically made for this
Next steps...

- Feasibility study to look at the practicality of using the alarms in clinical practice
- Need information on staff and patient perceptions of device, effect on workload, development of training package
- The continence assessment form has been adapted to include a pathway for patients with cognitive/communication deficits
### Adapted Continence Assessment form

#### EPSOM AND ST HELIER STROKE SERVICE BLADDER CONTINENCE ASSESSMENT

<table>
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<tr>
<th>Patient name:</th>
<th>Hospital Number:</th>
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<table>
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<tr>
<th>Name of assessor:</th>
<th>Date of assessment:</th>
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</table>

**Can the patient pass urine?**
- Yes ☐ No ☐
  - (bladder scan >500MLS)
**If no treat as acute urinary retention**

**Pre stroke bladder problems:**

**Date of onset of urinary incontinence:**

**Review the patient’s drug chart for drugs that may be implicated in urinary incontinence (diuretics, sedatives etc)**

**List drugs:**

**Discuss with medical team**

**Urine test result**

- Leucocytes ☐ positive ☐ negative ☐
- Nitrites ☐ positive ☐ negative ☐

*If positive send MSU to lab for culture and sensitivity*

**Does the patient have any pain/discomfort related to passing urine?**
- Yes ☐ No ☐

*If yes document in notes, inform medical staff and consider analgesia*

**Does the patient have any of the following indications in the perianal/genital/groin area**

- Soreness ☐ Yes ☐ No ☐
- Rash ☐ Yes ☐ No ☐

*If yes document in notes and inform medical staff*
Adapted Continence Assessment form

The patient is aware when they are passing urine and is able to communicate their need to pass urine.

Can the patient hold the urine in the bladder once the desire to pass urine is felt (urgency)?
Yes □ No □

Is there urinary frequency (more toileting than usual)?
Yes □ No □

If no treat as overactive bladder

Is the urinary incontinence initiated or aggravated by coughing, sneezing or standing?
Yes □ No □

If yes treat as stress incontinence

Does the patient leak urine on movement?
Yes □ No □

Could be stress incontinence but treat as functional

Is the patient independently mobile?
Yes □ No □

Can they use a hand held urinal unaided?
Yes □ No □

If no to one or more of the last two questions treat as functional incontinence

Post micturition bladder scan result ........ mls

More than 100 mls □ Less than 100 mls □

If scan shows more than 100 mls treat as incomplete bladder emptying

Use Enuresis alarm to identify when patient has passed urine

Post micturition bladder scan result ........ mls

More than 100 mls □ Less than 100 mls □

If scan shows more than 100 mls treat as incomplete bladder emptying

NB Patients may be suffering with more than one type of incontinence. A 48 hour frequency/volume chart will help with diagnosis.
Identifying Continence Options after Stroke (ICONS)

Multicentre randomised controlled pilot trial to provide evidence of the effectiveness and cost-effectiveness of a systematic voiding programme
Systematic voiding programme

- 3 day continence diary
- Full continence assessment
- Appropriate route for patient selected depending on
  1. level of bladder control
  2. Cognitive status
- Weekly review of progress and adjustment of schedule (if necessary)
ICONS Outcome measures

**Primary outcome measure (6 weeks post stroke)**

- Presence/absence of UI

**Secondary outcome measures (6 weeks, 3 & 12 months)**

- Frequency/severity of UI
- Quality of life
- Cost utility
ICONS: Identifying Continence OptionS after Stroke

Summary
The aim of this course is to improve the knowledge and skills of nurses and other health professionals (e.g., physiotherapists, occupational therapists, etc.) about the assessment and management of urinary incontinence after stroke. The course has been developed by a team of stroke researchers based at the University of Central Lancashire. The team includes two Patient, Public, and Carer Involvement Groups, one including stroke survivors with communication difficulties (aphasia) and their carers; one including other stroke survivors and their carers. The group with communication difficulties helped write the section on 'Helping people with communication problems after stroke'; members of the other group provided comments on course content and clarity.

The course includes information on: bladder control and micturition; urinary incontinence after stroke; assessing urinary incontinence after stroke; approaches to helping people with urinary incontinence and helping people with communication problems after stroke. The course is run online. It is open to staff anywhere in the UK. Staff can do the course at any time over a two-week period; it takes about two hours to complete. There is no assessment at the end of the course. Staff have the opportunity to provide feedback on the course through a mixture of open and closed questions. All staff completing the feedback section will be given a certificate of completion.

Course category
Non-registered

Who can take the course
- Nurses
- Physiotherapists
- Occupational therapists
- Speech and Language therapists

Course duration
2 hours (approximately)
Web address and password for ICONS online training programme

- http://breeze01.uclan.ac.uk/p9llwxl5z18/
- username iconsuser@uclan.ac.uk
- password “stroke”
Future

- **Transcutaneous posterior tibial nerve stimulation for bladder and bowel dysfunction**
CASE STUDY A

- Albert Mathews, 80 year old man, admitted with stroke, Right arm and leg weakness and expressive speech problems
- Regularly incontinent of urine (large amounts)
- Urine dipstick normal
- No pain on passing urine
- No soreness/rash
- Bo yesterday (normal pattern once every 1-2 days)
- Bladder scan shows 80ml post-void residual
- Unable to say if can hold onto urine once urge felt due to expressive speech problems
- Is unable to mobilise/unable to use a bottle unaided.
- Doesn’t appear to be aggravated by coughing/sneezing
CASE STUDY A – Proposed Solution

Treat as:

**FUNCTIONAL & URGE INCONTINENCE**

- Unable to say if can hold onto urine once urge felt due to expressive speech problem
- Is unable to mobilise/unable to use a bottle unaided
CASE STUDY B

- Phyllis Mearn, 78 year old lady, admitted with stroke
- On high dose co-codamol for pain (fracture following fall)
- passing only small amounts of urine, but feels bladder is not completely empty.
- Only occasionally incontinent when she doesn’t get a bed pan quick enough
- Urine dipstick normal
- No pain on passing urine
- No soreness/rash
- Bladder scan shows 400ml post-void residual
- Bowels not open since admission (5 days)
- Can hold on but nurses sometimes not quick enough to bring bedpan
- Is able to communicate needs
- Is immobile
CASE STUDY B – Proposed Solution

Treat as:

**URINARY RETENTION**

- On high dose co-codamol for pain (fracture following fall)
- Bladder scan shows 400mls post void residual
- Bowels not open since admission (5 days)
Conclusion

If we are to improve continence care following stroke we need to change our practice from managing urinary incontinence to promoting urinary continence by supporting stroke patients to recover their bladder function using proactive interventions targeted to the type of bladder dysfunction the person is experiencing.
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Any Questions