Impact of incontinence after stroke

Joanne Booth, PhD RN
Professor of Rehabilitation Nursing
Institute for Applied Health Research
Urinary incontinence after stroke

• Affects 40-60% of people following a stroke: 60,000 – 90,000 people in UK each year

• 44% report UI at 3 months, 38% at 12 months

• Physical, psychological and social impact

• Associated with complications: depression 3X more likely, UTI, dehydration, skin breakdown, increased risk of death in first year, increased institutionalisation and decreased discharge home

Faecal incontinence after stroke

- 31-40% stroke admissions have FI
- 18% FI at discharge
- 7-9% FI at 6 months
- 15% at one year
- 5% ongoing FI
- 4.3% FI and UI (4X higher than non-stroke population)

Evidence

- Little good quality research investigating incontinence after stroke
- Very limited understanding of pathophysiology, natural history, types of bladder and bowel dysfunction
- Minimal evidence of effective intervention: focus is on containment more than supporting recovery
- Some evidence for interventions in non stroke populations – Cochrane Incontinence Group (160 reviews – 159 non-stroke)
  - [www.ics.org](http://www.ics.org)
  - [www.nice.org.uk](http://www.nice.org.uk)
  - [http://www.uroweb.org/guidelines/](http://www.uroweb.org/guidelines/)
Impact of post-stroke urinary incontinence

- More significant for stroke survivors than for those without stroke. More severe stroke increases risk of UI
- Increased mortality and disability
- Increased institutionalisation, in first year
- Decreased discharge home
- Depression – 4X more likely following stroke
- UTI
- Dehydration
- Skin breakdown
- Sleep disturbance
- Pain/physical discomfort
- Poorer quality of Life
- Reduced participation, impoverished social life and relationships

Human costs of UI and FI

• Isolation
• Dependence
• Embarrassment
• Discomfort
• Fear
• Frustration

Effects on stroke survivor and carers
TReAT-UI findings

- People described embarrassment and worry due to urinary symptoms, particularly leakage and worry of wetting themselves or smelling of urine.
- Response was to limit time outside the house or the length of any journeys made.
- Toilet mapping universal.

"I wouldn't have liked wetting myself. I would have been embarrassed.... Would have knocked my confidence back quite a lot." (002)

"I was very depressed I couldn't go out. I used to go to the pictures with my nephew... I'd be wondering could I watch a film or would I be in a situation...'need to get me to a disabled toilet.' (005)

"... (around 2 miles) that is... the furthest distance I can travel." (010)

"really disrupting my sleep. And when you have already got a health problem you really need to rest because stroke can be quite a debilitating eh.... difficulty and if you don’t get a good sleep well it makes me worse.“ (021)
Rehabilitation and care mismatch

• Management of bladder and bowel dysfunction are priorities for patients and their carers

• Not seen as a priority by health care professionals:
  – poor assessment and case finding
  – poor treatment and care planning
  – poor implementation of treatment and care plans
  – poor bladder and bowel rehabilitation in evidence

Bladder and bowel dysfunction are true cinderella areas following stroke

Causes of stroke-related bladder dysfunction

- Bladder and urinary tract pathology
- Higher centre damage
- Environmental challenges

‘The optimal and coordinated activity of the lower urinary tract is subject to complex neural control which involves all levels of the nervous system, from cortex to peripheral innervation’

Panicker J et al Neurogenic lower urinary tract dysfunction and its management *Clinical Rehabilitation* 2010; 24; 579-589
Essential elements in use of toilet

- Sensing & acknowledging call to urinate/stool
- Locating & moving to and from toilet facilities
- Negotiating access to toilet
- Management of clothing (& aids)
- Transfer on to and off toilet
- Control of elimination from bladder and bowel
- Perineal cleaning
- Washing and drying hands
Types of stroke-related bladder dysfunction

Important for effective rehabilitation to know type of UI

- Hyper-acute phase – incomplete emptying, urinary retention
- Acute stroke - Overactive bladder and urgency incontinence
- Rehabilitation - Mixed incontinence – OAB, UUI and stress incontinence
  functional incontinence
- After discharge - Functional incontinence, mixed incontinence
- Stress incontinence – not directly associated with stroke
Overactive bladder & Urge UI

• Nerve pathways controlling bladder contraction/ sphincter relaxation can be damaged by stroke

• May be changes to bladder sensation

• Bladder contracts with little or no warning and with small quantities eg 50-80 ml

• Powerful urgency
• Frequency – more than 8 voids/24 hours
• Nocturia - rise from sleep 2X nightly,
• Urgency incontinence may occur
Acute retention, incomplete emptying and underactive bladder

- Damage to nerves that innervate the bladder and urethral sphincter
- Detrusor muscle weakness
- Sphincter coordination – dyssynergia – DSS,
- Outlet obstruction
- Constipation/faecal impaction
- Prone to infection
Contributing to incontinence - constipation

Impacted faecal mass presses on the urethra and bladder, and stretches the pelvic floor.
Stress incontinence

- Weak pelvic floor muscle and urethral sphincter causes leakage on movement, coughing, sneezing, laughing etc – striated muscles under voluntary control
- Not caused by stroke but can be made worse:
  - reduced mobility and muscle deconditioning
  - increase in coughing due to swallowing difficulties, chest infection etc
  - hemiparesis of pelvic floor and sphincters

Functional incontinence

- Bladder may be fully functional
- Problems with mobility
- Cognitive impairment
- Sensation disruption
- Communication problems
Of Note

- May have more than one type of incontinence/bladder problem

- Assessment is essential to identify the type of bladder problem

- Type of bladder problem determines correct treatment
What is current situation for majority of stroke survivors?
Management of *In*continence

• Containment - for social continence, not recovery of continence

- Absorbent products
- Penile sheaths
- Indwelling urethral catheters
- Supra-pubic catheters
Containment is ‘costly’

£14 million pa on absorbent products in Scotland

£1.2 million in Glasgow (2014)

Only half of men and two-thirds of women felt satisfied with their pads  

Individual costs may be high - Many wear pads ‘just in case’

Adverts for pads – normalise (arguably glamorise) wearing an absorbent pad - 

*for life!*

‘What puzzles me about all this is the advertiser’s apparent conviction that young women today have absolutely no control over their bladders. If so this is surely a matter of grave concern. These women shouldn’t be buying grown-up nappies; they should be seeking urgent consultations with their GPs’ – Barry Norman, 2015
We need a paradigm shift

Move from

*managing INcontinence*

to

*promoting con* inence
Bladder & bowel rehabilitation

• Lifestyle changes
  • Fluid management – type, amount, timing,
  • Bowel/constipation avoidance
  • Exercise

• Behavioural therapies
  • Education & self-monitoring
  • Voiding programmes eg prompted voiding, timed voiding
  • Bladder training
  • PFME

• Pharmacological
  • Anticholinergics / antimuscarinics
  • Beta 3 adrenergic agonists

• Electrical stimulation

• Environmental management
Environment is important

It should be warm, clean, comfortable and private
Physical environment adaptation

- Adapted to individual needs
- Includes provision of equipment & structural adaptation
- Attention to dignity and safety of person
- Seating assessment important for optimal toilet use eg foot raises, arm rests especially for bowel function, improved toilet seat design needed.
<table>
<thead>
<tr>
<th>The Top 10 Research Priorities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.</strong> What are the best ways to manage and/or prevent fatigue?</td>
</tr>
<tr>
<td><strong>2.</strong> What are the best ways to improve cognition after stroke?</td>
</tr>
<tr>
<td><strong>3.</strong> What are the best ways to manage urinary and faecal incontinence?</td>
</tr>
<tr>
<td><strong>4.</strong> What are the best ways to manage altered mood and emotion after stroke?</td>
</tr>
<tr>
<td><strong>5.</strong> What are the best ways to promote self-management and self-help after stroke?</td>
</tr>
<tr>
<td><strong>6.</strong> What are the best ways of helping stroke survivors and their families come to terms with uncertainty of prognosis and the long-term consequences of stroke?</td>
</tr>
<tr>
<td><strong>7.</strong> Can a goal setting approach help recovery after stroke?</td>
</tr>
<tr>
<td><strong>8.</strong> What is the impact of thrombolysis on emotion, cognition and communication?</td>
</tr>
<tr>
<td><strong>9.</strong> Is a “young stroke environment” better than other stroke rehabilitation environments at improving recovery of young people after stroke?</td>
</tr>
<tr>
<td><strong>10.</strong> What is the optimal amount and intensity of therapy provided by nurses for patients with stroke?</td>
</tr>
</tbody>
</table>
Bladder Dysfunction after stroke

- It’s common
- It’s ignored or poorly recognised
- It’s given to the least qualified staff to manage
- It’s embarrassing
- It’s distressing

- But it’s treatable
Thank you

Brighter futures begin with GCU

Jo.booth@gcu.ac.uk