

EXPERT OPINION CONSENSUS DOCUMENT

Management of bladder dysfunction
in people with multiple sclerosis



have not found an increase in relapse rates associated with surgery and anaesthesia (De Lott et al, 2020). When PwMS require surgery, this should be carried out in centres which regularly undertake anaesthesia and surgery on PwMS. In such centres, the staff will be familiar with all the issues associated with MS and be able to care for PwMS appropriately.

MEDICAL DEVICES

There is a wide and growing range of medical devices to help control and/or collect urine leakage and preserve patients' comfort and dignity when incontinence persists despite treatment, or decreasing mobility restricts people's ability to use a regular toilet. These include urinary sheaths and body-worn urinals for men, intravaginal tampons or pessaries and intraurethral mechanical devices for women, hand-held urinals for outdoor use for both sexes, bed urinals for both sexes, pubic pressure devices, such as certain briefs and toileting aids, such as toilet raisers and toilet frames (Lipp et al, 2014; Abrams et al, 2016). While patients and healthcare practitioners may find many of these devices useful, evidence for their value is often missing or poor (Lipp et al, 2014; Abrams et al, 2016), and NICE cautions against intravaginal and intraurethral devices for the management of urinary incontinence in women, other than for occasional use as necessary (NICE, 2019). Individual assessment by a bladder and bowel specialist team or community nurse is always important to ensure the best fit for a person's needs.

Smart devices will undoubtedly see increasing take-up over the coming decade, both for auto-injection treatment and monitoring (Marziniak et al, 2018; Mountford, 2018). Some provide patient advice and education, while others facilitate self-management, MS disease screening and remote assessment and monitoring via smartphone apps—an area with considerable scope for development (Mountford, 2018). Bladder and bowel nurse practitioners on the panel were finding the NHS 'Squeezy' app invaluable for PwMS who needed pelvic floor muscle exercise training, while one of the neurologists was piloting remote management and consultation with their PwMS patients, with promising early results.

CONCLUSION

Although there has been much progress since publication of the Fowler UK consensus document in 2009, with, for example, the emergence of treatments with a lower anticholinergic burden for an overactive bladder, there is still some way to go to address the escalating health and economic burden posed by LUT dysfunction in PwMS.

The incidence of hospital admissions for UTIs is increasing, with potentially devastating consequences for patients. There are also worrying reports of regional variations in specialist continence care offered to PwMS.

As the risk of LUT dysfunction increases with the severity and duration of MS, a multifaceted, multidisciplinary patient-focused approach is clearly needed to address this. The recommendations presented here offer strategic direction, with a call for a bladder management pathway to be integrated into the optimum MS care pathway, which should lead the way to more collaboration between MS and continence care services, with improved protocols for referrals. It is hoped this will help address unwarranted variations in care offered to PwMS with bladder problems. Central to good outcomes is the panel's recommendation that all PwMS should be offered a structured self-management plan supplemented with educational and health professional support.

The panel recommendations presented here offer a route map whereby the multidisciplinary team and PwMS can work together to address the problems highlighted throughout this document. The effectiveness of such an approach can be assessed by ongoing audit of recurrent admissions of PwMS with UTI and/or sepsis, which will help build a framework for future innovation.

It is hoped this latest UK consensus document will build on the achievements of the Fowler publication, and help mitigate the risk of LUT dysfunction and UTI among PwMS.

RECOMMENDATIONS

RECOMMENDATIONS	ACTIONS	OWNERS	TIMESCALE
<p>Self-management</p> <p>Offer PwMS a bladder self-management programme</p>	<p>Present a bladder self-management programme comprising a written personalised action plan, supported with education</p> <p>Provide access to online bladder management apps or other accessible educational materials; these can support self-management, as well as help people understand problems that may arise and seek timely help</p> <p>Ensure PwMS have information and contact details so they can access services in a timely manner. Include advice on how to contact their HCP if problems develop or deteriorate (patient-initiated follow-up)</p> <p>Provide PwMS with a home urinalysis and MSU test kit with instructions for use to support prompt UTI management</p>	<p>Local MS and bladder and bowel services</p> <p>Commercial providers; MS services; National Bladder and Bowel Health Project</p> <p>Integrated care systems; primary care networks</p> <p>Integrated care systems; primary care networks</p>	<p>Within 6 months of publication of this consensus document</p>
<p>MS continence care bundle</p> <p>Develop a continence care bundle to standardise practice</p> <p>A care bundle is a collection of 3–5 key evidence-based process measures or interventions that are known to improve care if consistently performed (Box 3, page S19). A continence care bundle can also include provision of lifestyle information and literature on bladder management awareness.</p> <p>Care bundles have been demonstrated to contribute to improvements in care quality and safety</p>	<p>Each MS and continence service should implement the continence care bundle</p> <p>Undertake a structured clinical assessment of the bladder if bladder symptoms are reported by the patient or identified at the annual MS review, or the patient develops LUT dysfunction.</p> <p>The clinical history should include:</p> <ul style="list-style-type: none"> ■ Urinary tract symptoms ■ Bowel symptoms ■ Sexual dysfunction ■ Comorbidities ■ Use of prescription/other medications and therapies. <p>Also, check for:</p> <ul style="list-style-type: none"> ■ Red flags: haematuria, recurrent infections, loin pain and biochemical evidence of deteriorating renal function ■ Infection: dipstick and MSU, if indicated <p>Measure the PVR:*</p> <ul style="list-style-type: none"> ■ 100 ml: recommend CISC management (gold standard) ■ <100 ml: treat with antimuscarinics (anticholinergic burden caution) ■ Offer support post-CISC to maintain adherence *(see Figure 4 on page S18) <p>Referral criteria for specialist urology review should be available to the MS nurse specialist</p> <p>PwMS with LUT symptoms should be under the care of an HCP with the competency to assess or refer to the specialist bladder and bowel team (CCSG, 2014)</p> <p>Systems should be in place to improve CISC uptake</p> <p>Undertake an annual review of CISC technique, including frequency of application and suitability of the catheter. Promote use of no-touch technique. Refer to a urologist if there has been a history of UTIs that have not responded to treatment</p>	<p>Bladder and bowel services or MS clinical nurse specialist</p> <p>National agreement through the NAAG</p> <p>International Continence Society</p> <p>Promotion through patient organisations, charities and non-profit organisations, such as the MS Society, MS Trust, Neurological Alliance and MS Academy</p>	<p>Within 12 months</p>

<p>Promote NNAG MS optimum pathway</p> <p>Implement local bladder management pathways</p> <p>Pathways can improve outcomes in PwMS, optimise the skills of neurologists and MS nurse specialists in the management of MS and avoid service duplication (Fuller, 2021)</p> <p>Local pathways should take into account access to specialist bladder and bowel advisers and other services</p>	<p>MS services should implement a bladder management pathway</p> <p>Implementation of the pathway could identify the need for additional workforce capacity</p> <p>Pathway audit can highlight a range of opportunities for improving bladder and bowel management services and thus patient outcomes (Metcalf and Owen, 2021)</p>	<p>MS optimum pathway: NNAG</p> <p>Local MS and bladder and bowel pathways: promote examples of good practice in pathway implementation via the MS Trust, MS Society, MS Academy and Shift.ms</p>	<p>Within 12 months</p>
<p>IT solutions for care</p> <p>Use of technology should be integral to the delivery of continence care.</p> <p>Technology should help facilitate self-care, connect patients and caregivers, and enable providers to monitor progress and troubleshoot problems</p>	<p>Deploy new technologies to enhance MS (Fuller, 2021) and continence services. Ensure these are available to PwMS</p> <p>Where clinically appropriate, offer virtual consultations in line with the NHS Long Term Plan (NHS, 2019) and the ambitions of the Outpatient Transformation Programme. To ensure equity of access to care, face-to-face appointments should be offered when clinically indicated or requested</p> <p>Consider using an online questionnaire to take a patient's history prior to a consultation. An alternative approach will be needed for those with no internet access or limited literacy</p> <p>Provide patients with access to telephone helplines, which can improve efficiency and capacity, and digital apps and evidence-based information on approved websites, which can support self-management. Apps and approved websites can also provide comprehensive resources and education</p> <p>When developing local/regional solutions, consider the role of private providers in improving support, efficiencies and maintain quality should</p>	<p>NHSE/1</p> <p>MS/continence services</p> <p>Bladder and bowel providers</p>	<p>Within 12 months</p>
<p>Education</p> <p>Ensure bladder dysfunction is part of ongoing education and ensure all health and care professionals who are likely to provide care to PwMS are aware of MS bladder dysfunction and its management strategies</p>	<p>Ongoing education on the bladder should be available to HCPs managing PwMS</p> <p>Assessment and management of LUT dysfunction in PwMS should be in line with the cascading ownership of LUT dysfunction described in the Excellence in Continence Care guidelines (NHS England, 2018)</p> <p>Ensure there is continence/urology workforce engagement in local MS networks. This could facilitate virtual discussions and educational opportunities</p> <p>For PwMS practising CISC, provide ongoing support and education, including on no-touch technique, to reduce the risk of UTI</p>	<p>Education providers</p> <p>Health Education England; MS Trust; MS Society; MS Academy; Royal Colleges; BAUN; RCN Continence Care Forum; Association for Continence Advice</p>	<p>9 months</p>

<p>UTI management</p> <p>UTIs are a frequent cause of admission in MS</p>	<p>Ensure PwMS receive educational materials on the potential problems that can arise</p> <p>Provide PwMS assessed as at risk of UTI with a self-help testing kit</p> <p>If the dipstick test result and the patient's clinical signs are indicative of infection, urine bacterial culture and antibiotic sensitivity tests should be performed before starting antibiotic treatment. Treatment need not be delayed, but may be adapted when the results are available (NICE, 2012a)</p> <p>Be aware that the urine of people who use a catheter will be colonised with bacteria, and thus urine dipstick testing and bacterial culture might be unreliable for diagnosing active infection (NICE, 2012a)</p> <p>Refer PwMS for urgent investigation if they have red flag' signs and symptoms such as, haematuria and recurrent UTI (for example, three or more infections in the past 6 months)</p> <p>Clear, easy-to-follow guidance should be available for HCPs on the UTI management of PwMS. Link with Public Health England and Royal College of Pathologists when developing guidance and empiric antibiotic management of UTI</p> <p>NHS trusts should track and highlight recurrent admissions of PwMS with UTI/sepsis, either as part of their safety thermometer for UTI or a national database of recurrent UTI or CAUTI</p>	<p>Local bladder and bowel services and MS services</p>	<p>Within 12 months</p>
<p>Data collection</p>	<p>Consider developing a data dashboard with routinely collected data. This will enable monitoring of key metrics and thus support ongoing quality improvement</p> <p>Each ICS should be aware of the number of emergency admissions of PwMS, the associated costs and, in particular, the incidence of UTI in this group</p> <p>NHS trusts should track and highlight recurrent admissions of PwMS with UTI/sepsis, either for their UTI safety thermometer or in a national database of recurrent UTI or CAUTI</p> <p>A&E attendance by or hospital admission of a PwMS should trigger a MS nurse-led clinic follow-up review (NHS England, 2018) to address the reason for attendance/ admissions and determine the management required to avoid further admission (Metcalf and Owen, 2021)</p>	<p>Local bladder and bowel services and MS services</p>	<p>Within 12 months</p>
<p>Ongoing care</p>	<p>Ensure PwMS undergo a bladder assessment as part of their annual MS review</p> <p>Audit number of patients having a bladder assessment as part of annual review</p>	<p>MS services</p>	<p>Within 12 months</p>

Continence and urology services	<p>All integrated care systems should have explicit links to bladder and bowel services and urology services, so that MS teams are aware of specialist advice and referral routes</p> <p>Joint MS, bladder and bowel clinics and urology clinics should be available, where possible</p> <p>MS networks should be available to facilitate virtual discussions and educational opportunities</p> <p>A UK map of bladder and bowel services and urology services would help streamline referral pathways</p>	Bladder and Bowel Foundation	6 months
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CAUTI – catheter-associated urinary tract infection; CISC – clean intermittent self-catheterisation; HCP – healthcare professional; ICS: integrated care systems; LUT – lower urinary tract; MS – multiple sclerosis; MSU – midstream urine culture; NNAG – National Neuroscience Advisory Group; PVR – post-residual volume; PwMS – patients with multiple sclerosis; UTI – urinary tract infection

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