HOW NICE ARE WE?
Urological Service Provision at the MCSI

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The Robert Jones and Agnes Hunt Orthopaedic Hospital NHS Foundation Trust

Background

- People with spinal cord injury often have bladder dysfunction which may lead to complications that increase morbidity and mortality significantly.
- The Midland Centre for Spinal Injuries (MCSI) is a designated national spinal injury centre and has got an established urological service providing assessment, monitoring and treatment for people with urological complications following spinal cord injuries.
- National Institute for Health and Care Excellence (NICE) provided guidance on management of urinary incontinence in neurological disease (CG 148) which is relevant to our service.
- The existing service was audited with the NICE benchmark in 2014 looking at the quality of care in comprehensive clinical assessment, investigation, referral and treatment with antimuscarinics and botulinum toxin injection of bladder wall.
- The recommendations were made for the quality improvement and maintenance.

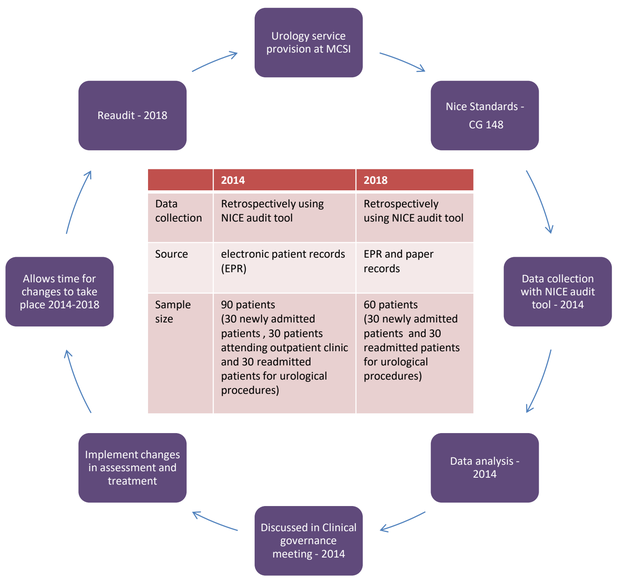
Objectives

- The second study was done in 2018 to observe the current state of service provision and the improvements being implemented.

Standards

- National Institute for Health and Care Excellence (NICE) guidance on management of urinary incontinence in neurological disease (CG 148) was used as benchmark.

Methods



	2014	2018
Data collection	Retrospectively using NICE audit tool	Retrospectively using NICE audit tool
Source	electronic patient records (EPR)	EPR and paper records
Sample size	90 patients (30 newly admitted patients , 30 patients attending outpatient clinic and 30 readmitted patients for urological procedures)	60 patients (30 newly admitted patients and 30 readmitted patients for urological procedures)

Results

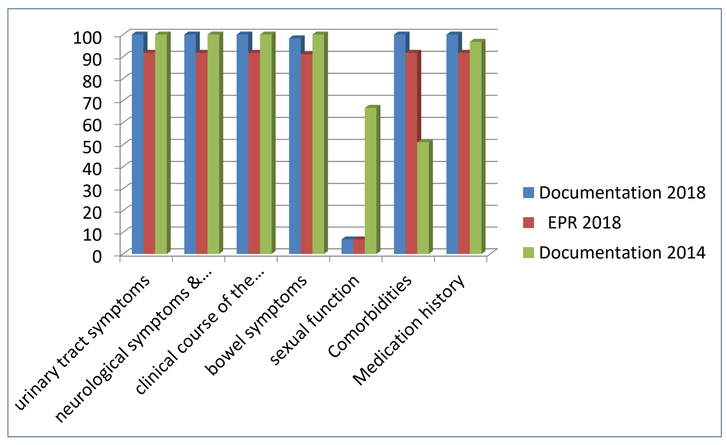
Demography

		2014	2018
Age	Mean	54 years	54.6 years
	Range	8 years – 90 years	19 years – 89 years
Gender	Male	76.7%	53.3%
	Female	23.3%	46.7%
Level of injury	Tetraplegics (C2 – T1)	48%	55%
	Paraplegics (T2 – L3)	52%	43.3%
	Cauda equina.	0%	1.6%
Severity of injury		'Motor complete' i.e., Frankel A or B - 49%, Frankel C – 26%, Frankel D – 25%	AIS A – 38.3%, AIS B – 16.7% , AIS C – 30%, AIS D -15%
Mean duration since injury		17.7 years	10 years

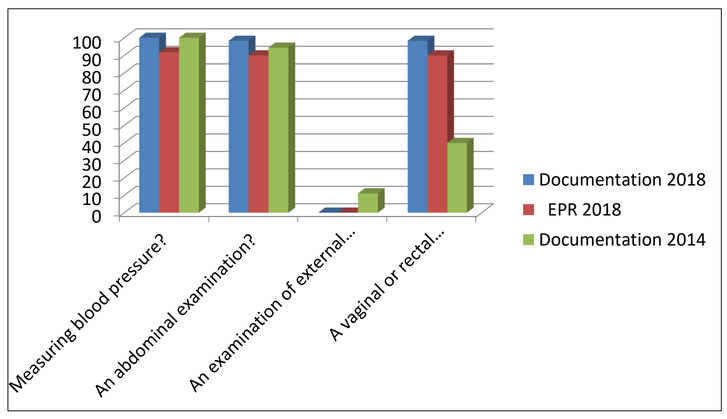
Results

Assessment

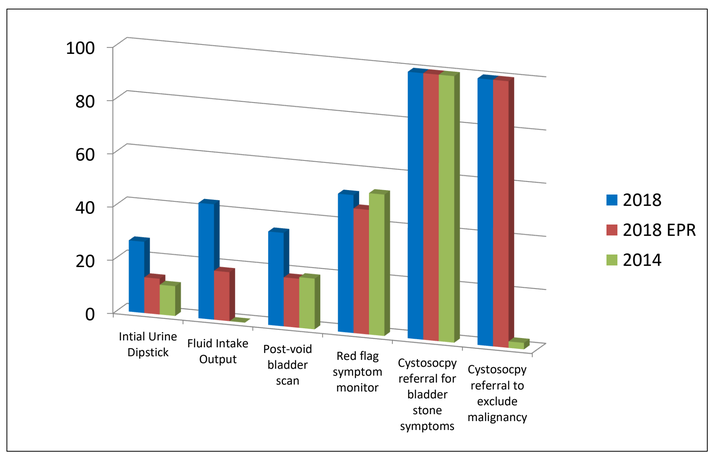
- History*



- Examination*



- Investigation*



Treatment

Treatment to improve bladder storage: antimuscarinics and botulinum toxin type A	Documented 2018	EPR 2018	Documentated 2014
Does the person have symptoms of an overactive bladder?	16/60	16/60	31/90
Offered antimuscarinic drugs?	15/16 (one had a plan to be offered after the current UTI)	15/16	32/32
Did they start antimuscarinic drug treatment?	14/15 (One opted not to take)	14/15	31/32
Did this prove effective and was the drug tolerated?	13/14 (One did not tolerate side effects)	13/14	25/32
Was residual urine volume monitored in the person taking antimuscarinic drug?	13/13	13/13	3/32

Treatment to improve bladder storage: antimuscarinics and botulinum toxin type A	Documented 2018	EPR 2018	Documentated 2014
Did urodynamic investigation show impaired bladder storage?	16	16	51
Was bladder wall injection with botulinum toxin type A offered?	2	2	8
Before offering the injection, Explained that a catheterisation regimen is needed in most people?	2/2	2/2	8/8
Before offering the injection, Ensured that they are able and willing to manage such a regimen should urinary retention develop?	2/2	2/2	8/8
Did the person having bladder wall injection with botulinum toxin type A have residual urine volume monitored?	NA	NA	0/8
Was the person judged to be at risk of renal complications?	2	0	8
If 'yes' was the upper urinary tract monitored?	2	0	8

Results

Compliance

NICE Standards for treatment	Standard	2014	2018
1: Antimuscarinic drugs are offered to all people with: • Spinal cord disease • Symptoms of an overactive bladder such as increased frequency, urgency and incontinence	100%	97%	93%
2: Residual urine volume is monitored in all people who are not using intermittent or indwelling catheterisation after starting antimuscarinic treatment	100%	97%	100%
3: Bladder wall injection with botulinum toxin type A is offered to all adults: • With spinal cord disease • With symptoms of an overactive bladder and • In whom antimuscarinic drugs have proved to be ineffective or poorly tolerated	100%	67%	100%
4: Bladder wall injection with botulinum toxin type A is offered to all adults: • With spinal cord disease and • With urodynamic investigations showing impaired bladder storage and • In whom antimuscarinic drugs have proved to be ineffective or poorly tolerated.	100%	67%	100%
5: Before bladder wall injection with botulinum toxin type A is offered healthcare professionals: • Explain to all people and/or family members and carers that a catheterisation regimen is needed in most people with neurogenic lower urinary tract dysfunction after treatment, and • Ensure people are able and willing to manage such a regimen should urinary retention develop after the treatment.	100%	100%	100%
6: Residual urine volume is monitored in all people who are not using a catheterisation regimen during treatment with botulinum toxin type A.	100%	0% Lack of documentation	NA All are using catheters
7: In people who are judged to be at risk of renal complications the upper urinary tract is monitored during treatment with botulinum toxin type A	100%	100%	100%

Discussion

- The 2014 findings revealed that many of the criteria were practiced at the desired level of compliance but not all of that were documented on EPR.
- It identified area in need of improvements - assessment of comorbidities and sexual function, recording of fluid intake and output and residual volumes, examination of external genitalia and rectal examination, and offer of botulinum toxin to bladder wall where antimuscarinics failed.
- The findings were discussed in the clinical governance meeting.
- The recommendations were advocated and implemented by disseminating the findings within the service and encouraging team members.
- After allowing time for the implementation to take effect, the second study was done in 2018 to determine the impact, compare again with the standard and figure out improvement in practice.
- The second study suggested the current state of clinical history taking, examination and investigation was generally acceptable.
- There were significant improvements with getting history of comorbidities, rectal and vaginal examination, urgent cystoscopy referral for red flags and appropriate referral for the botulinum toxin injection of the bladder wall.
- However, obtaining sexual history and examination of external genitalia got worse.
- It was still required to document fluid intake and output and residual volumes consistently.
- Though more information was available on EPR, it was not complete.

Action Plan

- The findings were discussed in the clinical governance meeting to reinforce awareness of the recommendations and standards.
- Clinicians and nursing staff are encouraged to maintain good work and implement the changes.
- Changes in Trust's Electronic record system have been proposed to resolve some of the issues with documentation.
- The state of service provision is to be reaudited in 2021.

* Comparison is based on the percentage of compliance as the two studies have different numbers of participants