Title: **AUTONOMIC DYSREFLEXIA, PREVENTION OR MANAGEMENT OF SPINAL INJURY PATIENTS WITH Spinal injury at T6 and above**

Ref: 0901 Version 3
Classification: Guideline

Directorate: Organisation Wide

Due for Review: 20/04/21

Responsible for review: Clinical Skills Facilitator Torbay and South Devon NHS Foundation Trust (TSDFT)
Community Nurse Manager, Community Nursing Team
Clinical Lead Bladder & Bowel Care, Northern Devon Healthcare NHS Trust.
Head of Midwifery

Document Control

Ratified by: Care and Clinical Policies Group
Clinical Director of Pharmacy
Chief Nurse
Medical Director

Applicability: Related to persons who have sustained a spinal cord injury at or above the 6th thoracic vertebrae

These guidelines have been developed to assist the healthcare professionals involved with a clear and structured approach and one that hopes to minimise the likelihood of Autonomic Dysreflexia occurring.

Introduction
These guidelines have been written to assist the health care professionals with a clear plan of action to be followed to prevent an event of Autonomic Dysreflexia in those patients who are at risk of its occurrence. If it is not recognised early or if it is left untreated it can be fatal. By being aware of the signs and symptoms of this condition and treatment options available, the event can be managed in a safe and effective manner. Further episodes of Autonomic Dysreflexia can be avoided by educating patients on how they can implement prevention strategies.

When assessing spinal injury patients on admission; a healthcare professional should ask the patient if they are aware of or have previously suffered from Autonomic Dysreflexia. It is important to record information from the patient if they had any previous episodes of Autonomic Dysreflexia in their medical notes under the Alert system.

Information
Autonomic Dysreflexia is an exaggerated response to pain stimuli, below the level of spinal cord damage. The autonomic nervous system is stimulated creating a hypertensive response. Peripheral vasodilatation, which would normally have relieved the hypertension, does not occur because the stimuli cannot pass distally through the injured cord (Harrison, 2000).

Persons who have sustained spinal cord injury at or above the 6th thoracic vertebrae may potentially experience Autonomic Dysreflexia. This is due to the outflow of sympathetic nerves from this level of the spinal cord.

Community Settings
Within a community setting the community nurses need to complete a care plan detailing both the risks of Autonomic Dysreflexia and the actions necessary should an Autonomic Dysreflexia event occur. This should incorporate the flow chart illustrated in appendix 1.

Lignocaine gel MUST be prescribed within the community setting and all staff administering this must be up to date with their anaphylaxis training.

It is important to acknowledge that not all individuals will experience Autonomic Dysreflexia whilst some patients will be predisposed to it.

Common Causes

* Bladder	-	Blocked catheter, distended bladder.
* Bowels	-	Constipation, diarrhoea, haemorrhoids, impacted bowel, anal fissure.
* Skin	-	Infected pressure sores, burn/scald/sunburn, ingrown toenail.
* Bones	-	Fracture below level of lesion.
* Reproduction	-	Pregnancy/delivery, sexual intercourse.
* Pain	-	Visceral pain/trauma.
* Embolism	-	Deep vein/pulmonary.
* Psychological	-	Severe anxiety/emotional distress.

Symptoms
All symptoms occur suddenly and above the level of the spinal cord injury.
Individuals may experience one or more of these symptoms; however, the pounding headache is one that the majority of patients experience with hypertension.

HYPERTENSION

- Severe pounding headache
- Patient will become distressed due to pain and concern
- Flushing/blotching of the face, neck, chest and arms
- Profuse sweating
- Nasal congestion
- Dilated pupils
- Bradycardia
- Increase in spasm

In some instances and if left untreated:

- Cerebral vascular accident
- Epileptic fit
- Death

The individual patient, relative or carer may be able to tell you this is a dysreflexic episode.

Immediate Treatment

- Sit patient up and drop feet.
- Perform a quick assessment for the possible causes so that the stimuli may be removed.
- Treat cause. See appendix 1
- **Seek prompt medical advice if cause cannot be identified or the hypertension cannot be controlled.**

Blocked Catheter:

- Change the catheter promptly. Use a lignocaine based lubricating gel when inserting the catheter to reduce pain stimuli.

Distended Bladder:

- Do not try to manually express the bladder this will increase pain stimuli.

- Using an intermittent or indwelling catheter, pass per urethra to empty the bladder (use lignocaine gel as directed above).

Constipated stool: Full Rectum

- If possible pass lubricated suppositories into rectum. Use Lignocaine gel.
- Daily bowel care until constipation resolved.
- Increase aperients or faecal softeners.

Diarrhoea:

Treat diarrhoea in order to prevent further irritation of colon and rectum:

- Stop taking aperients and stool softeners.
- Advice low fibre/residue foods.
- Imodium may be used if necessary, but it is essential to exclude “constipation with overflow” first and to seek medical advice if concerned

Anal Fissure:

- Keep the area clean and dry.
- When performing bowel care use a lignocaine based gel to reduce pain stimuli.
- Attempt to keep stool formed but soft so as not to overstretch anus on passing stool.
- Sitting may increase pain stimuli: bed rest may be necessary until healed.

Haemorrhoids:

- Treat and prevent constipation.

Fracture:

- If a fractured limb is suspected this will need to be immobilised.
- Continue to keep patient sitting upright to reduce hypertension.
- Seek medical advice.

Reproduction:

- For some men ejaculation may cause a dysreflexia episode. This may cause an acute experience. For some, a very mild episode can become a pleasurable experience. Individuals will learn their tolerance level and manage accordingly.
- Females when planning pregnancy should consult their General Practitioner.
- Pregnant women should be referred to antenatal clinic for consultant lead care as opposed to midwife care.

Following removal of pain stimuli patients will experience immediate relief from the symptoms they have. Continue to use lignocaine based gel when performing any intimate care.
Note: Lignocaine gel not suitable for long term use. (BNF 2017)

Move and position patients carefully, particularly in the acute stage.

Recording of Blood Pressure

Taking a blood pressure reading in the acute stage can take valuable time when the important issue is to find and remove the cause of the problem. However, a blood pressure must be taken to check that the correct cause of the hypertension has been found and the problem eliminated and should be compared with the base line observations done on admission or during the inpatient stay. If

medical staff are asked to see the patient urgently they will need to know the patients blood pressure in order that they can prescribe the necessary medication.

It should be noted that these patients would normally have a low blood pressure due to “peripheral pooling”. Their pressures recorded during dysreflexia attacks may not be exceptionally high compared to the normal population.

Raised blood pressure can occur during bowel management, without symptoms; in this instance no treatment would be required. (Spinal Injuries Association 2012)

Management of Elevated Blood Pressure:
If the elevated blood pressure is at or above 150 mm Hg systolic, consider pharmacologic management to reduce the systolic blood pressure without causing hypotension. Use an antihypertensive agent with rapid onset and short duration while the causes are being investigated for example one of the following drugs: Nifedipine 5-10mg sublingually, or Glyceryl Trinitrate 300 micrograms sublingually or Phentolamine 5-10mg intravenously. Monitor the individual for symptomatic hypotension or continued raised blood pressure

Document the episode in the Medical notes, including;

- Presenting signs and symptoms.
- Treatment instituted.
- Recordings of blood pressure and pulse.
- Response to treatment

Evaluate effectiveness of the treatment according to the level of outcome criteria reached:

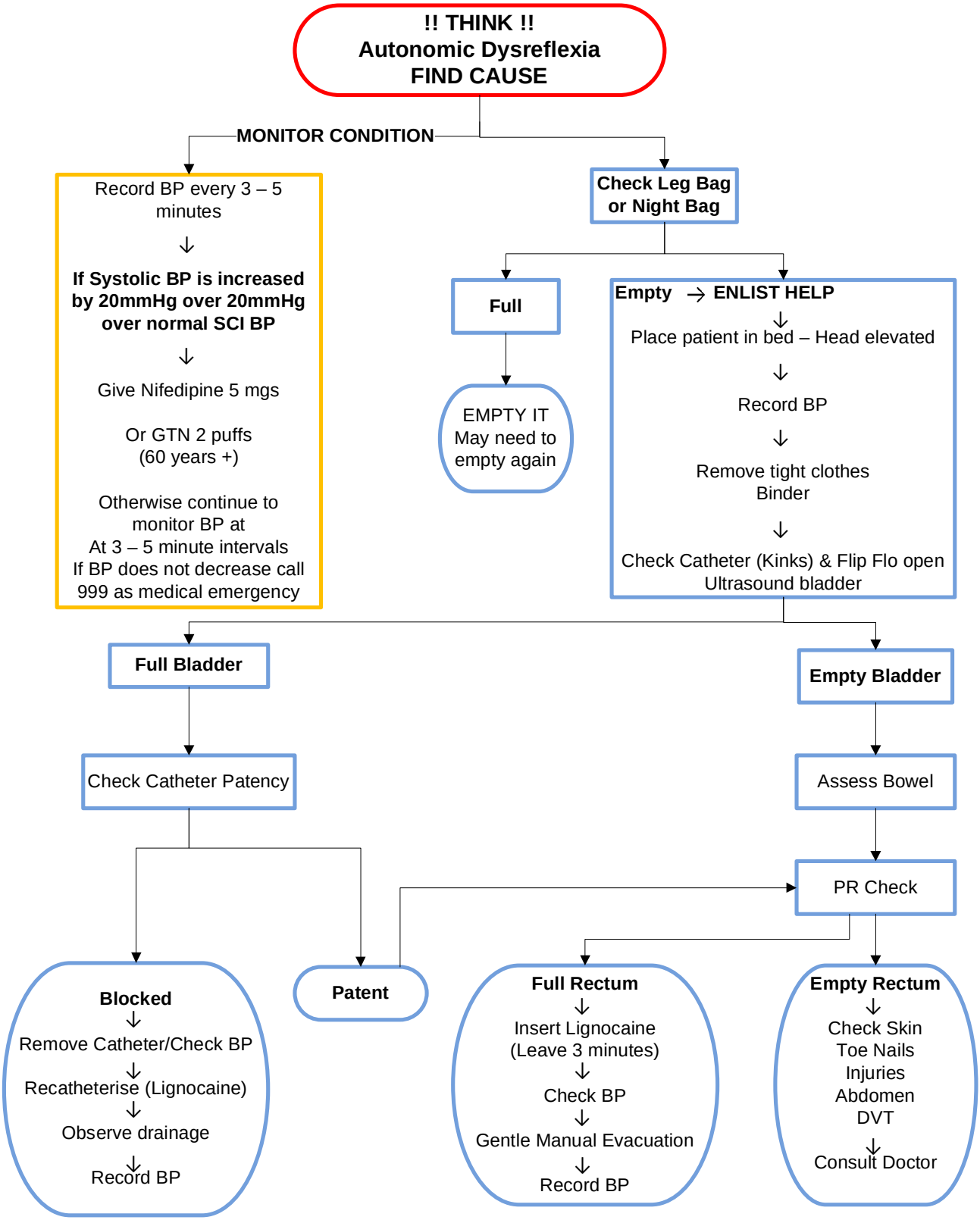
- The cause of Autonomic Dysreflexia episode has been identified.
- The blood pressure has been restored to normal limits for the individual (usually 90 to 110 systolic mm Hg for a tetraplegic person in a sitting position).
- The pulse rate has been restored to the patients normal limits.
- The individual is comfortable, with no signs or symptoms of Autonomic Dysreflexia.
- An education plan has been completed and included preventative and management guidance

Appendix 1 – Flowchart Management of Autonomic Dysreflexia

Appendix 1

MANAGEMENT OF AUTONOMIC DYSREFLEXIA

HEADACHE, FLUSHED, SWEATING, GENERALLY UNWELL?



Protocols & Guidelines – Document Control

This is a controlled document. It should not be altered in any way without the express permission of the author or their representative. On receipt of a new version, please destroy all previous versions.

Ref: 0901	Title: Spinal injury patients with Autonomic Dysreflexia.

Date of Issue:	20 April 2018	Next Review Date:	20 April 2021
Version:	3		
Author:	Clinical Skills Facilitator TSDFT Community Nurse Manager, Community Nursing Team Clinical Lead Bladder & Bowel Care, Northern Devon Healthcare NHS Trust		
Index:	Organisation Wide		
Classification:	Guideline		
Applicability:	Related to persons who have sustained a spinal cord injury at or above the 6th thoracic vertebrae		
Equality Impact:	The guidance contained in this document is intended to be inclusive for all patients within the clinical group specified, regardless of age, disability, gender, gender identity, sexual orientation, race and ethnicity & religion or belief.		
Evidence based:	Yes		
References:	1. Ash. D (2005) Sustaining safe and acceptable bowel care in spinal cord injured patients. Nursing Standard 20(8) p55-64. 2. Harrison P (200) HDU/ICU Managing Spinal Injury: Critical Care. London, Spinal Injuries Association. 3. Dougherty and Lister. Royal Marsden (2015) Manual of Clinical nursing Procedures. 9th Edition. Wiley Blackwell p244 – 245. I have added this reference. 4. Joint Formulary Committee (2015). *British National Formulary. 69th edition.* London: British Medical Association and Royal Pharmaceutical Society of Great Britain. added reference 5. Bowel Management Guidelines (Sept 2012) www.spinal.co.uk Spinal Injuries Association. p 17 added reference 6. Appendix one taken from Salisbury spinal unit		
Produced following audit:	No		
Audited:	No		
Approval Route:	See ratification	Date Approved:	16 April 2018
Approved By:	Chief Nurse Medical Director Care and Clinical Policies Group Clinical Director of Pharmacy		
Links or overlaps with other policies:			
All TSDFT Trust strategies, policies and procedure documents.			

PUBLICATION HISTORY:

Issue	Date	Status	Authorised
1	30 March 2006	New	Medical Director, Director of Nursing and Quality
1	24 April 2008	Date Change	Medical Director, Director of Nursing and Quality
2	17 November 2011	Revised	Medical Director, Director of Nursing and Governance Clinical Director of Pharmacy

3	20 April 2018	Revised	Care and Clinical Policies Group Chief Nurse Medical Director Clinical Director of Pharmacy

The Mental Capacity Act 2005

The Mental Capacity Act provides a statutory framework for people who lack capacity to make decisions for themselves, or who have capacity and want to make preparations for a time when they lack capacity in the future. It sets out who can take decisions, in which situations, and how they should go about this. It covers a wide range of decision making from health and welfare decisions to finance and property decisions

Enshrined in the Mental Capacity Act is the principle that people must be assumed to have capacity unless it is established that they do not. This is an important aspect of law that all health and social care practitioners must implement when proposing to undertake any act in connection with care and treatment that requires consent. In circumstances where there is an element of doubt about a person's ability to make a decision due to 'an impairment of or disturbance in the functioning of the mind or brain' the practitioner must implement the Mental Capacity Act.

The legal framework provided by the Mental Capacity Act 2005 is supported by a Code of Practice, which provides guidance and information about how the Act works in practice. The Code of Practice has statutory force which means that health and social care practitioners have a legal duty to have regard to it when working with or caring for adults who may lack capacity to make decisions for themselves.

"The Act is intended to assist and support people who may lack capacity and to discourage anyone who is involved in caring for someone who lacks capacity from being overly restrictive or controlling. It aims to balance an individual's right to make decisions for themselves with their right to be protected from harm if they lack the capacity to make decisions to protect themselves". (3)

All Trust workers can access the Code of Practice, Mental Capacity Act 2005 Policy, Mental Capacity Act 2005 Practice Guidance, information booklets and all assessment, checklists and Independent Mental Capacity Advocate referral forms on iCare

http://icare/Operations/mental_capacity_act/Pages/default.aspx

Infection Control

All staff will have access to Infection Control Policies and comply with the standards within them in the work place. All staff will attend Infection Control Training annually as part of their mandatory training programme.

Torbay and South Devon NHS
NHS Foundation Trust

NHS South Devon and Torbay Clinical Commissioning Group

Rapid (E)quality Impact Assessment (EqIA) *(for use when writing policies)*

Policy Title (and number)	Prevention or management of Autonomic dysreflexia in patients with spinal cord injury	**Version and Date**	3 March 2017
Policy Author	Clinical Skills Facilitator		

An (e)quality impact assessment is a process designed to ensure that policies do not discriminate or disadvantage people whilst advancing equality. Consider the nature and extent of the impact, not the number of people affected.

Who may be affected by this document?

Patients/ Service Users ☒	Staff ☒	Other, please state… ☐

Could the policy treat people from protected groups less favorably than the general population?
PLEASE NOTE: Any 'Yes' answers may trigger a full EIA and must be referred to the equality leads below

Age	Yes ☐ No☒	Gender Reassignment	Yes ☐ No☒	Sexual Orientation	Yes ☐ No☒
Race	Yes ☐ No☒	Disability	Yes ☐ No☒	Religion/Belief (non)	Yes ☐ No☒
Gender	Yes ☐ No☒	Pregnancy/Maternity	Yes ☐ No☒	Marriage/ Civil Partnership	Yes ☐ No☒

Is it likely that the policy could affect particular 'Inclusion Health' groups less favorably than the general population? (substance misuse; teenage mums; carers[1]; travellers[2]; homeless[3]; convictions; social isolation[4]; refugees)	Yes ☐ No☒

Please provide details for each protected group where you have indicated 'Yes'.

VISION AND VALUES: Policies must aim to remove unintentional barriers and promote inclusion

Is inclusive language[5] used throughout?	Yes ☒ No☐ NA ☐
Are the services outlined in the policy fully accessible[6]?	Yes ☒ No☐ NA ☐
Does the policy encourage individualised and person-centered care?	Yes ☒ No☐ NA ☐
Could there be an adverse impact on an individual's independence or autonomy[7]?	Yes ☐ No☒ NA ☐

EXTERNAL FACTORS

Is the policy a result of national legislation which cannot be modified in any way?	Yes ☐ No☒

What is the reason for writing this policy? (Is it a result in a change of legislation/ national research?)

Who was consulted when drafting this policy?

Patients/ Service Users ☐	Trade Unions ☐	Protected Groups (including Trust Equality Groups) ☐
Staff ☒	General Public ☐	Other, please state… ☐

What were the recommendations/suggestions?

Does this document require a service redesign or substantial amendments to an existing process? ***PLEASE NOTE: 'Yes' may trigger a full EIA, please refer to the equality leads below***	Yes ☐ No☒

ACTION PLAN: Please list all actions identified to address any impacts

Action	Person responsible	Completion date

AUTHORISATION:
By signing below, I confirm that the named person responsible above is aware of the actions assigned to them

Name of person completing the form	Clinical Skills Facilitator	**Signature**	
Validated by (line manager)		**Signature**	

Clinical and Non-Clinical Policies – New Data Protection Regulation (NDPR)

Torbay and South Devon NHS Foundation Trust (TSDFT) has a commitment to ensure that all policies and procedures developed act in accordance with all relevant data protection regulations and guidance. This policy has been designed with the EU New Data Protection Regulation (NDPR) in mind and therefore provides the reader with assurance of effective information governance practice.

NDPR intends to strengthen and unify data protection for all persons; consequently, the rights of individuals have changed. It is assured that these rights have been considered throughout the development of this policy.

Furthermore, NDPR requires that the Trust is open and transparent with its personal identifiable processing activities and this has a considerable effect on the way TSDFT holds, uses, and shares personal identifiable data. The most effective way of being open is through data mapping. Data mapping for NDPR was initially undertaken in November 2017 and must be completed on a triannual (every 3 years) basis to maintain compliance. This policy supports the data mapping requirement of the NDPR.

For more information:

- Contact the Data Access and Disclosure Office on dataprotection.tsdft@nhs.net,
- See TSDFT's Data Protection & Access Policy,
- Visit our GDPR page on ICON