

## RATIONALE/NEED

Medical students are provided with limited opportunity to practice performing patient education during the pre-clinical years of their education.<sup>1</sup> They have many opportunities to practice patient interviews and physical examinations with standardized patients,<sup>2,3</sup> but there is limited focus on allowing the students to practice educating their patients in language that said patients can understand. The studies focusing on improving medical student's communication with patients have mainly involved the patient interview and generally use standardized patients.<sup>2,3,4,5</sup> The goal of this study is to focus specifically on patient education with the assistance of persons from a specific patient population as opposed to standardized patients.

## RESEARCH QUESTIONS

- ❖ Can a second year medical student explain autonomic dysreflexia to a person with a spinal cord injury?
- ❖ Do students with this training have an improved comfort level with patient interaction and patient education as a result?

## STUDY POPULATION

- ❖ Second year medical students at the Brody School of Medicine.
- ❖ Individuals in the local community who have been diagnosed with a spinal cord injury. Community volunteers will be chosen from individuals who have previously participated in the Spinal Cord Injury Rehabilitation program at Vidant Medical Centers' Regional Rehabilitation Center.

## METHODOLOGY/RESULTS

- ❖ Students will be provided with a short power point presentation on autonomic dysreflexia prior to initiating this exercise.
- ❖ Students will perform patient education on autonomic dysreflexia with an individual from the community with SCI and receive feedback from this person. Community volunteers will be instructed to provide feedback to the students based on their own experiences, no formal training will be given.
- ❖ Students will complete a short survey on the experience using a 7 point Likert scale to determine if this experience was helpful to them and if it improved their comfort level with patient interaction and education.
- ❖ There will be a follow up survey to all second year medical students upon completion of their core clinical rotations to assess students' level of comfort with patient interaction and education.
- ❖ The study is still in progress. Results from the first phase of the study were completed in January of 2018. All participants either agreed or were in strong agreement that the exercise was helpful to them as a medical student and that they would like to see this kind of activity implemented into the medical curriculum. During the debriefing sessions following the exercise, 87% of the participants stated that their interactions with the community volunteers were much more informative than their experiences with standardized patients. The follow up survey to the class of 2020 is currently in process.

## IMPACT/LESSONS LEARNED

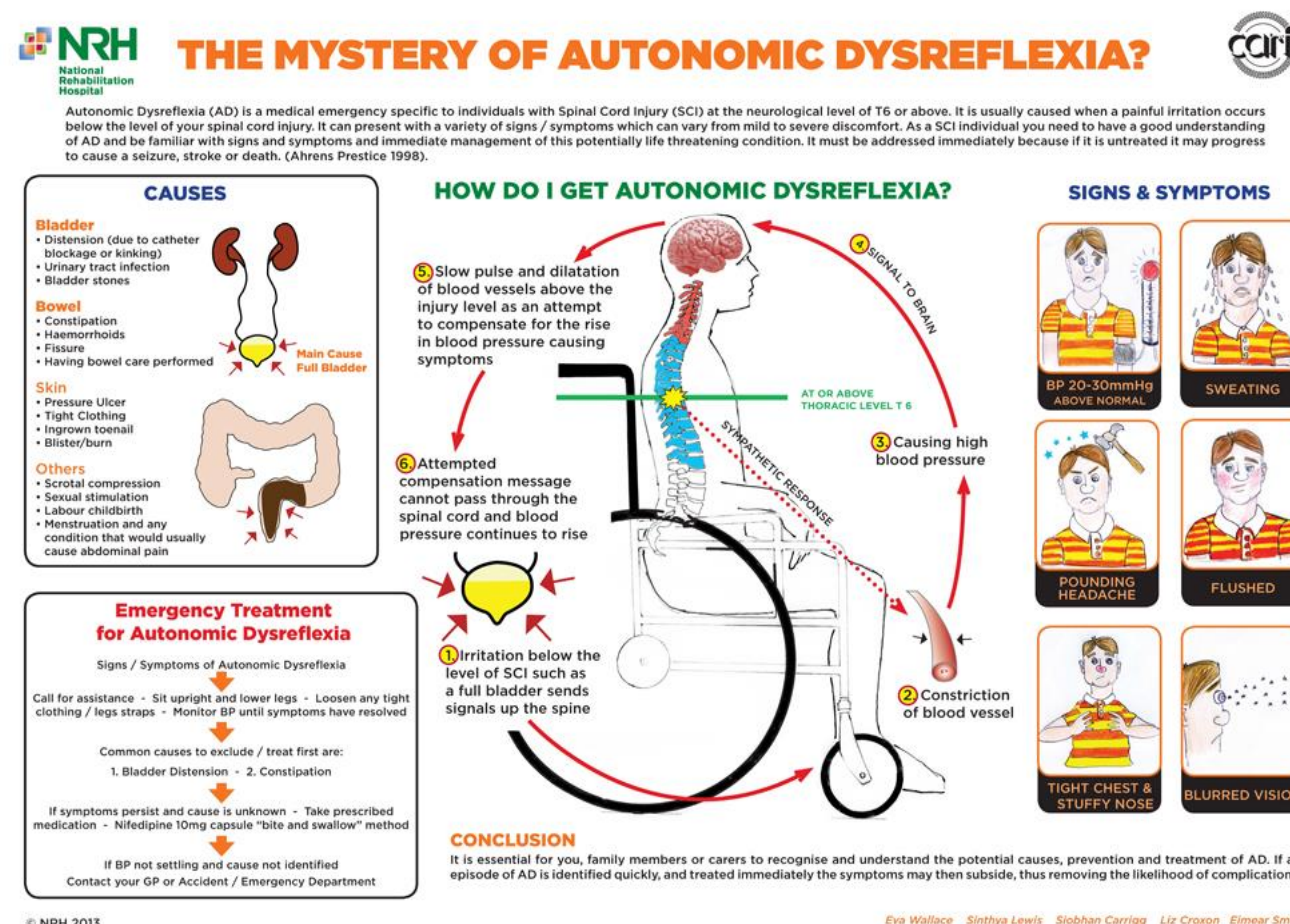
It is the hope of the authors that this exercise will illustrate the need for increased exposure to and practice of performing patient education during the pre-clinical years of medical school. The authors believe that to implement such activities into the medical school curriculum will result in improved medical student performance and interaction with patients during the clinical years, and will set a precedent for continued quality patient education as these students become physicians.

## SOURCES

- 1: Barr, J., Bull, Rooney, K (2015) Developing a patient focused professional identity: an exploratory investigation of medical students' encounters with patient partnership in learning. *Adv in Health Sci Educ*, 20:325-338
- 2: Deveugele, M., Anselme, D., Maesschalk, S., Wilems, S., Van Dreil, M. Teaching communication skills to medical students, a challenge in the curriculum? (2005) *Patient Education and Counseling* 58(3), 265-270
- 3: Taveira-Gomes, I., Mota-Cardoso, R., Figueriedo-Braga, M. (2016) Communication Skills in Medical Students- An exploratory study before and after clerkships. *Porto Biomedical Journal* 1(5), 173-180
- 4: Smith, S., Hanson, J., Tewksbury, L. (2016) Teaching Patient Communication Skills to Medical Students A Review of Randomized Controlled Trials *Evaluation and the Health Professions* 30(1) 3-21
- 5: Aspergren, K. BEME Guide No.2: Teaching and learning communication skills in medicine- a review with quality grading of articles. (1999) *Medical Teacher* 21, 6
- 6: [www.scinurse.org](http://www.scinurse.org)

## ACKNOWLEDGEMENTS

The authors would like to thank Dr. J. Virag, Dr. K. Campbell, and all of the research participants for their time and enthusiasm.



**THE MYSTERY OF AUTONOMIC DYSREFLEXIA?**

Autonomic Dysreflexia (AD) is a medical emergency specific to individuals with Spinal Cord Injury (SCI) at the neurological level of T6 or above. It is usually caused when a painful irritation occurs below the level of your spinal cord injury. It can present with a variety of signs / symptoms which can vary from mild to severe discomfort. As a SCI individual you need to have a good understanding of AD and be familiar with signs and symptoms and immediate management of this potentially life threatening condition. It must be addressed immediately because if it is untreated it may progress to cause a seizure, stroke or death. (Ahrens Prentice 1998).

**CAUSES**

- Bladder**
  - Distension (due to catheter blockage or kinking)
  - Urinary tract infection
  - Bladder stones
- Bowel**
  - Constipation
  - Haemorrhoids
  - Fissure
  - Having bowel care performed
- Skin**
  - Pressure Ulcer
  - Tight Clothing
  - Ingrown toenail
  - Blister/burn
- Others**
  - Scrotal compression
  - Sexual stimulation
  - Labour childbirth
  - Menstruation and any condition that would usually cause abdominal pain

**HOW DO I GET AUTONOMIC DYSREFLEXIA?**

1. Irritation below the level of SCI such as a full bladder sends signals up the spine
2. Constriction of blood vessel
3. Causing high blood pressure
4. Sympathetic response
5. Slow pulse and dilatation of blood vessels above the injury level as an attempt to compensate for the rise in blood pressure causing symptoms
6. Attempted compensation message cannot pass through the spinal cord and blood pressure continues to rise

**SIGNAL TO BRAIN**

**AT OR ABOVE THORACIC LEVEL T 6**

**SIGNS & SYMPTOMS**

- BP 20-30mmHg ABOVE NORMAL
- SWEATING
- POUNGING HEADACHE
- FLUSHED
- TIGHT CHEST & STUFFY NOSE
- BLURRED VISION

**Emergency Treatment for Autonomic Dysreflexia**

Signs / Symptoms of Autonomic Dysreflexia

Call for assistance - Sit upright and lower legs - Loosen any tight clothing / legs straps - Monitor BP until symptoms have resolved

Common causes to exclude / treat first are:

1. Bladder Distension - 2. Constipation

If symptoms persist and cause is unknown - Take prescribed medication - Nifedipine 10mg capsule "bite and swallow" method

If BP not setting and cause not identified Contact your GP or Accident / Emergency Department

**CONCLUSION**

It is essential for you, family members or carers to recognise and understand the potential causes, prevention and treatment of AD. If an episode of AD is identified quickly, and treated immediately the symptoms may then subside, thus removing the likelihood of complications.

© NRH 2013

Eva Wallace, Sinthya Lewis, Siobhan Carrigg, Liz Croxon, Eimear Smith