

## INTRODUCTION

- A health care navigator is an individual who assists, educates and empowers patients with selected medical conditions to achieve better health by improving self-management.
- The purpose of this project is to measure knowledge change regarding pressure ulcers (PU) and skin care during acute inpatient rehabilitation, at discharge and 3 month post-discharge in patients with SCI who were enrolled in either supported discharge group or SCI navigator.

## METHODS

- Program participants received inpatient rehabilitation at NRH, and all subjects with a new traumatic spinal cord injury were introduced to the program.
- Thirty individuals with varying severity of injury were randomized to either a control group (n=11) or SCI navigator group (n=19) (See Table 1).
- Both groups received usual rehabilitation care and education including nursing education and general SCI materials. The SCI navigator group received additional interaction with the SCI navigator either in person or over the phone and PU education using the Paralyzed Veterans Affairs (PVA) (2002) pressure ulcer guidelines and SCI model systems knowledge translation center skin fact sheets as primary education tools.
- PU knowledge was assessed with the Pressure Ulcer Knowledge Scale (PRESS) (reliability Chronbach's  $\alpha$  0.71), a 10 item multiple choice scale with the summative score ranging from 0 to 26 assessing knowledge in preventing PUs (see Fig 1). The scale is administered at study enrollment, discharge from rehabilitation, three months post-discharge, and one year post enrollment

## RESULTS

- The navigator group showed significant improvement in PU knowledge from initial assessment to discharge (PRESS score change from 18.3 to 20.6,  $p=0.002$ ), while the increase on PRESS score in the control group was not significant (PRESS score change from 17.9 to 20.1,  $p=0.093$ ) based on a paired comparison t-test.
- The PU knowledge change from discharge to 3 months post-discharge was not significant for either group.
- Both groups significantly improved their PU knowledge from the initial assessment to 3 month post discharge (PRESS score change from 18.3 to 19.9,  $p=0.023$  for the Navigator group, and PRESS score change from 17.9 to 20.6,  $p=0.035$  for the control group) (See Graph 1).

TABLE 1: Demographic information

	Navigator group n= 19	Control group n=11
<b>Gender</b>		
Female	4 (21.1%)	1 (9.1%)
Male	15 (78.9%)	10 (90.9%)
<b>Age</b>		
Mean	32.32	52.19
Range	18-54	27-77
<b>Etiology</b>		
MVA	7 (36.84%)	4 (36.4%)
Motorcycle	1 (5.26%)	
Gunshot Wound	4 (21.05%)	
Fall	5 (26.32%)	4 (36.4%)
Surgery	1 (5.26%)	1 (9.1%)
Other	2 (10.53%)	2 (18.2%)
<b>Level of Education</b>		
Mean	13.3	14.3
Range (yrs)	12-18	9-18
<b>Level of Injury</b>		
Tetraplegia	11 (57.9%)	7 (63.6%)
Paraplegia	8 (42.1%)	4 (36.4%)
<b>ASIA classification</b>		
A	4 (21.1%)	3 (27.3%)
B	6 (31.6%)	1 (9.1%)
C	4 (21.1%)	2 (18.2%)
D	5 (26.3%)	5 (45.5%)

Graph 1: PRESS scores by group

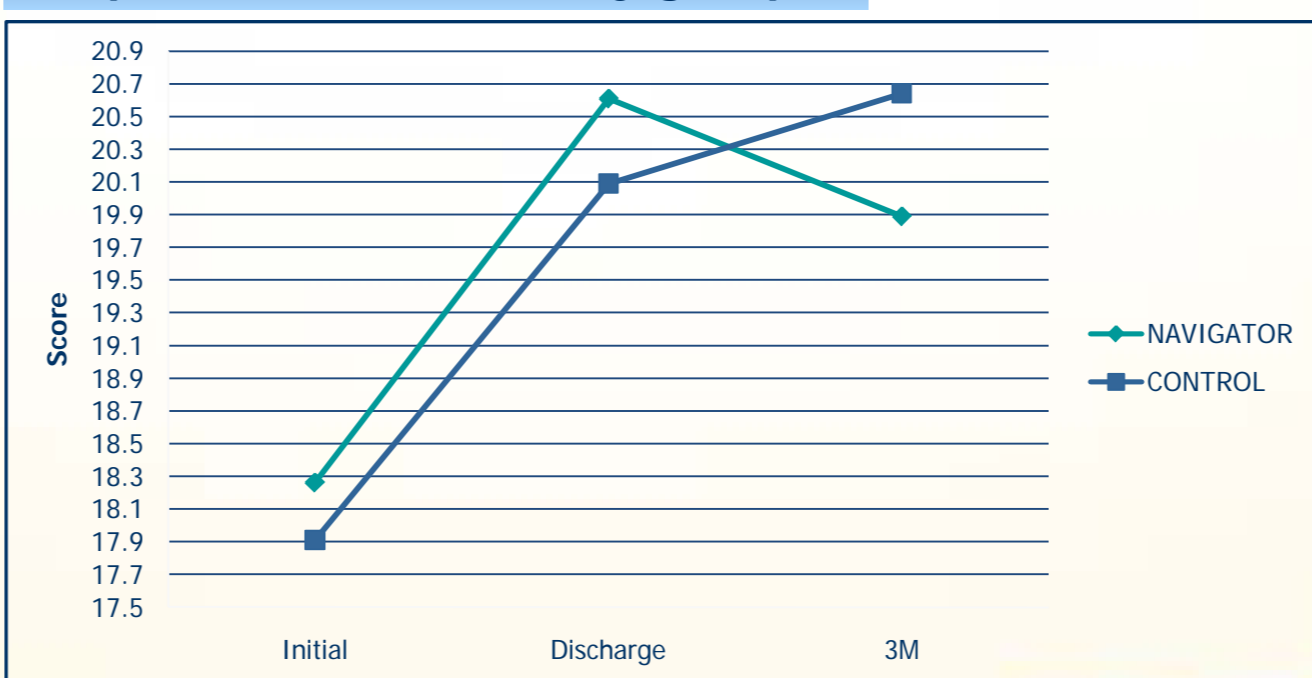


FIGURE 1: Pressure Ulcer Knowledge Scale (PRESS)

NRH Pressure Ulcer Knowledge Tool Date: _____	NRH Pressure Ulcer Knowledge Tool Date: _____
<b>CIRCLE ALL THAT APPLY</b>	<b>CIRCLE THE CORRECT ANSWER</b>
1. Which of the following can <b>DIRECTLY</b> cause a pressure ulcers (circle all that apply): a. Staying in one position for too long b. Not drinking enough water c. Too much moisture on the skin d. Shear/friction (rubbing) of skin	6. Pressure ulcers are classified the following way (circle the correct answer): a. In two (2) stages b. In four (4) stages c. In three (3) stages d. In five (5) stages
2. Which of the following can help prevent pressure ulcers (circle all that apply): a. Keeping skin clean and dry b. Changing your position regularly c. Massaging the body part that has pressure once a day d. Choosing proper fitting clothing	7. Which of the following is the first sign of a pressure ulcer (stage I): a. Broken skin b. Redness and/or discoloration c. Blood d. Blister
3. The area(s) most likely to develop pressure ulcer(s) (circle all that apply): a. Heels b. Seat bones (ischium) c. Tailbone (coccyx/sacrum) d. Back of upper leg (thigh)	8. If you do not currently have a pressure ulcer, how often should you check your skin? (circle the correct answer): a. Every hour b. Twice a day c. Once a week d. Once a month
4. The following may lead to the development of pressure ulcers (circle all that apply): a. Smoking b. Illegal drugs and alcohol c. Other health problems such as diabetes or heart disease d. Proper (good) nutrition e. Worn out equipment f. Equipment that does not fit well	9. How often should you perform a pressure relief/weight shift? a. Every 15 to 30 minute b. Once every 1 hours c. Once every 4 hours d. Once a day
5. If you notice a pressure area or a pressure ulcer on your skin, you should (circle all that apply): a. Call your healthcare provider if it does not improve in 24 hours b. Stop using your specialized cushion c. Remove all pressure from the area of immediately	10. A wheelchair cushion that is fit special for you should... a. Allow you not to do a pressure relief when you are in your chair. b. Evenly spread out the pressure on your bottom. c. Need no care for the next two years.

## DISCUSSION & CONCLUSION

- Educating patient's on the self-management SCI related medical conditions is a multi-factorial process that involves 1) acquisition of new knowledge through focused interactions with the navigator, and 2) transferring existing knowledge from the involved medical professionals to a patient through daily routine. Results suggest that a navigator presenting additional educational materials seemed to impart a greater benefit in patients' PU knowledge.
- Relationship between education amount and type of education with PU occurrence warrant further exploration. Results suggest that continued PU-specific education may be warranted post discharge from inpatient rehabilitation.
- Sensitivity and specificity of the PRESS scale needs to be explored further using a more rigorous research design with patients in the navigator group and supported discharge group being recruited from different hospital units

## SUPPORT

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