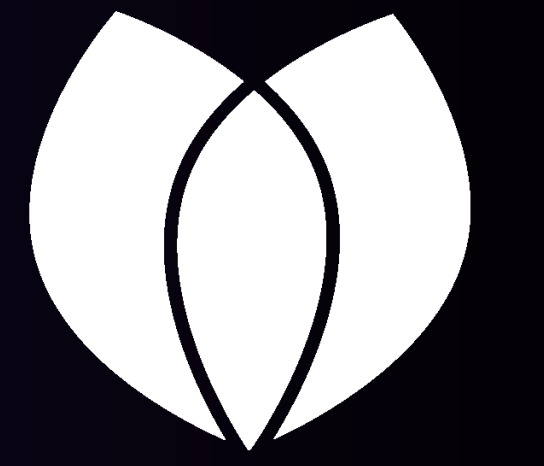




Utilization of Braden Subscores for Individualized Pressure Injury Prevention as Compared to Total Braden Score.

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BACKGROUND

The Braden Scale is a validated tool used to assess the risk of a patient developing pressure injuries. The tool consists of 5 categories each of which are given a score based on a patient's presentation. The lower the number, the higher the risk of pressure injury development. While pressure injuries can be caused by medical devices, the Braden scale focuses on prevention of positional pressure injuries. Historically, prevention interventions have been completed based on Total Braden score. However, in 2014 the NPUAP/EPUPA recommended utilizing subscores instead of total score to perform more individualized prevention interventions.

PROJECT AIM

To demonstrate how utilizing Braden Subscores resulted in a more individualized prevention plan of care and improved patient outcomes by decreasing hospital acquired pressure injuries.

METHODS

Transition to utilization of subscores:

- Initiated through the Skin Task Force March 2014

Education:

- Coordinated with Education Department
- To assist the nurses in learning Braden subscore definitions and associated interventions
- Online education modules
- Electronic Health Record
- Education of Nursing Care Partners

Initial education period: 5 months (April – August 2014)

EVALUATION

- Chart Reviews:
 - 300 patients (convenience sample) of new inpatient skin/wound consults over a 1 month period.
 - Compared the number of interventions nursing needed to complete if Total Braden Score was utilized compared to the number of interventions when using subscores.

INTERVENTIONS BASED on BRADEN TOTAL SCORES

Braden Score ≤14	Braden Score 15-18	Braden Score ≥19
Moisture Management	Low Air Loss Bed	
Heel Floating	Moisture Management	
Turns q2 hours	Heel Floating	
Nutrition Consult	Turns q2 hours	
Chair cushion and q1 hr boosts (If getting Out of Bed)	Nutrition Consult	
HOB ≤30 degrees if able	Chair cushion and q1 hr boosts (If getting Out of Bed)	
	HOB ≤30 degrees if able	

INTERVENTIONS BASED on BRADEN SUBSCORES

**IF NOT 4 DO MORE

Sensory/Perception	Float Heels off Bed Surface, Monitor under devices
Moisture	Q2 hour checks, toileting schedules. If 1 or 2 – get low air loss bed
Activity	Cushion in Chair. Limit sitting time. Q1 hour boosts
Mobility	Q2 hour turns, heel floating. If 1 or 2 – get low air loss bed
Nutrition	Nutrition consult
Friction and Shear	1 or 2 – keep HOB as low as possible, use turn sheet. Protect bony prominences

- National Database of Nursing Quality Indicators (NDNQI) Prevalence Study Data:
 - 6 months prior to the practice change (October 2013 – March 2014),
 - 6 months after the initial education role out (September 2014 – February 2015),
 - 6 month period starting 2.75 years after the initial education had been completed (June – November 2017).

RESULTS/OUTCOMES

BRADEN SCALE FOR PREDICTING PRESSURE SORE RISK			
Patient's Name	Evaluator's Name	Date of Assessment	
SENSORY PERCEPTION ability to respond meaningfully to pressure/wound discomfort	1. Completely Limited Unresponsive to pain, touch, or temperature. No response to noxious stimuli or repositioning. 2. Very Limited Responds only to painful stimuli. Cannot communicate discomfort except by moaning or repositioning. 3. Slightly Limited Responds to verbal commands, but cannot always communicate discomfort or the need to be turned. 4. No Impairment Responds to verbal commands. Has no sensory deficit which would best ability to feel or voice pain or discomfort.		
MOISTURE degree to which skin is exposed to moisture	1. Constantly Moist Skin is kept moist almost constantly by perspiration, urine, etc. Caregivers are instructed to keep skin as dry as possible. 2. Very Moist Skin is often, but not always moist. Caregivers are instructed to keep skin as dry as possible. 3. Occasionally Moist Skin is occasionally moist, requiring an extra turn change approximately once a day. 4. Rarely Moist Skin is usually dry, but only requires changing of linens infrequently.		
ACTIVITY degree of physical activity	1. Bedfast Confined to bed. 2. Chairfast Unable to walk without limited or non-existent. Cannot bear own weight and must be assisted into chair or wheelchair. 3. Walks Occasionally Walks occasionally during day, but for very short distances, with or without assistance. Spends majority of each shift in bed or chair. 4. Walks Frequently Walks frequently during day, at least once a day and in room and outside room. Spends most of each shift walking freely.		
MOBILITY ability to change and control body position	1. Completely Immobile Does not make even slight changes in body or extremity position without assistance. 2. Very Limited Makes occasional slight changes in body or extremity position but unable to make frequent or significant changes independently. 3. Slightly Limited Makes frequent though slight changes in body or extremity position independently. 4. No Impairment Makes major and frequent changes in position without assistance.		
NUTRITION usual food intake pattern	1. Very Poor Eaten only a complete meal. Usually eats more than 1/2 of any food offered. Eats 2 servings or less of protein (meat or dairy products) per day. Takes fluids poorly. Does not take a liquid dietary supplement. 2. Probably Inadequate Eaten only a complete meal and generally eats only about 1/2 of any food offered. Protein intake includes only 2 servings of meat or dairy products per day. Occasionally will take a dietary supplement. 3. Adequate Eats most of every meal. Eats a total of 2 servings of protein (meat, dairy products) per day. Usually takes a supplement when offered. 4. Excellent Eats most of every meal. Usually eats a total of 4 or more servings of meat and dairy products per day. Occasionally will take a dietary supplement. Does not require supplementation.		
FRICTION & SHEAR	1. Problem Slides head to maximum distance in rooming. Constant sliding without ability to get up against sheets or mattress. Frequent or slides over in bed or chair. Requires frequent repositioning with maximum assistance. Generally, caregivers or patients must be moved constantly. 2. Problem Slides head to maximum distance in rooming. Constant sliding without ability to get up against sheets or mattress. Frequent or slides over in bed or chair. Requires frequent repositioning with maximum assistance. Generally, caregivers or patients must be moved constantly. 3. No Apparent Problem Moves in bed and in chair. Slides head to maximum distance in rooming. Slides through 180° or completely during meal. Maintains good position in bed or chair. 4. No Apparent Problem Moves in bed and in chair. Slides head to maximum distance in rooming. Slides through 180° or completely during meal. Maintains good position in bed or chair.		
Total Score			

CHART REVIEW:

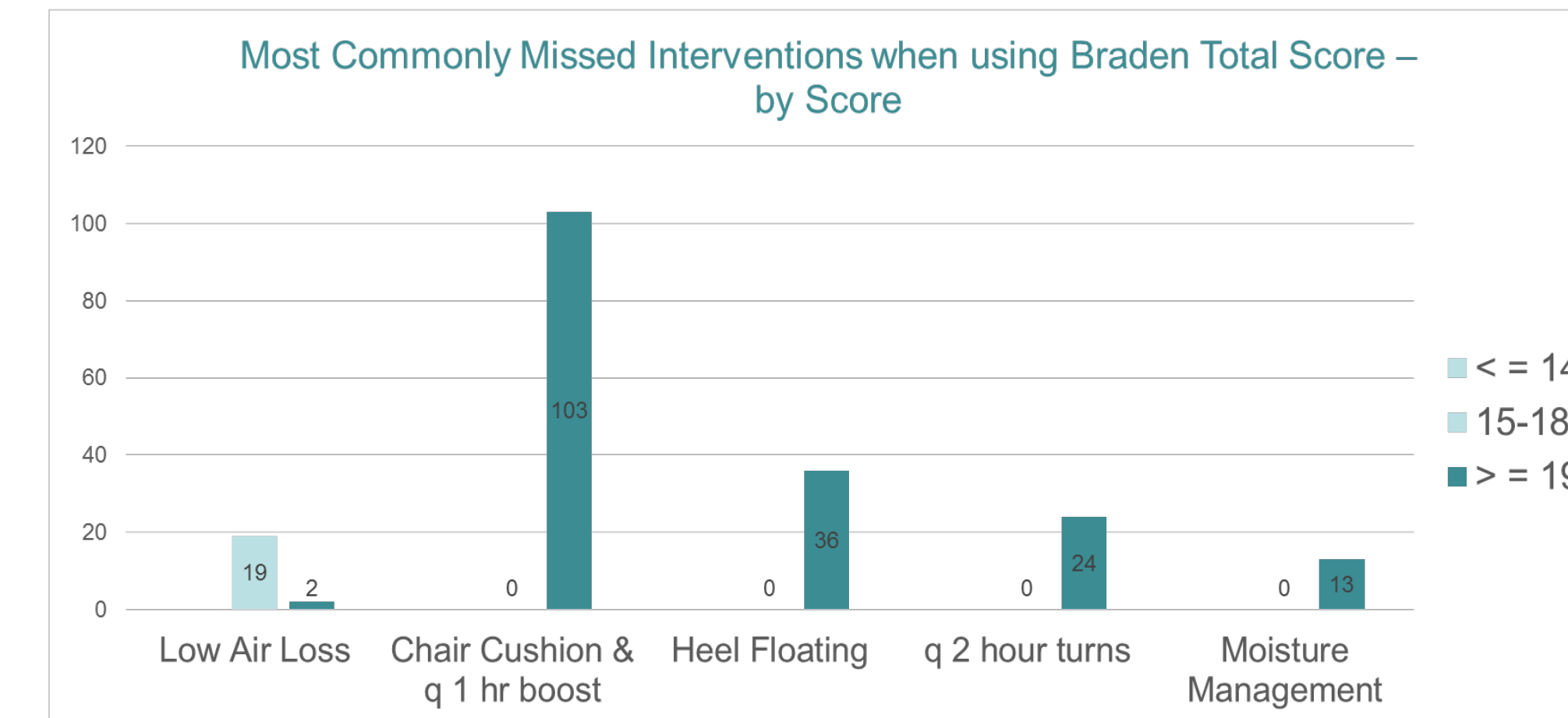
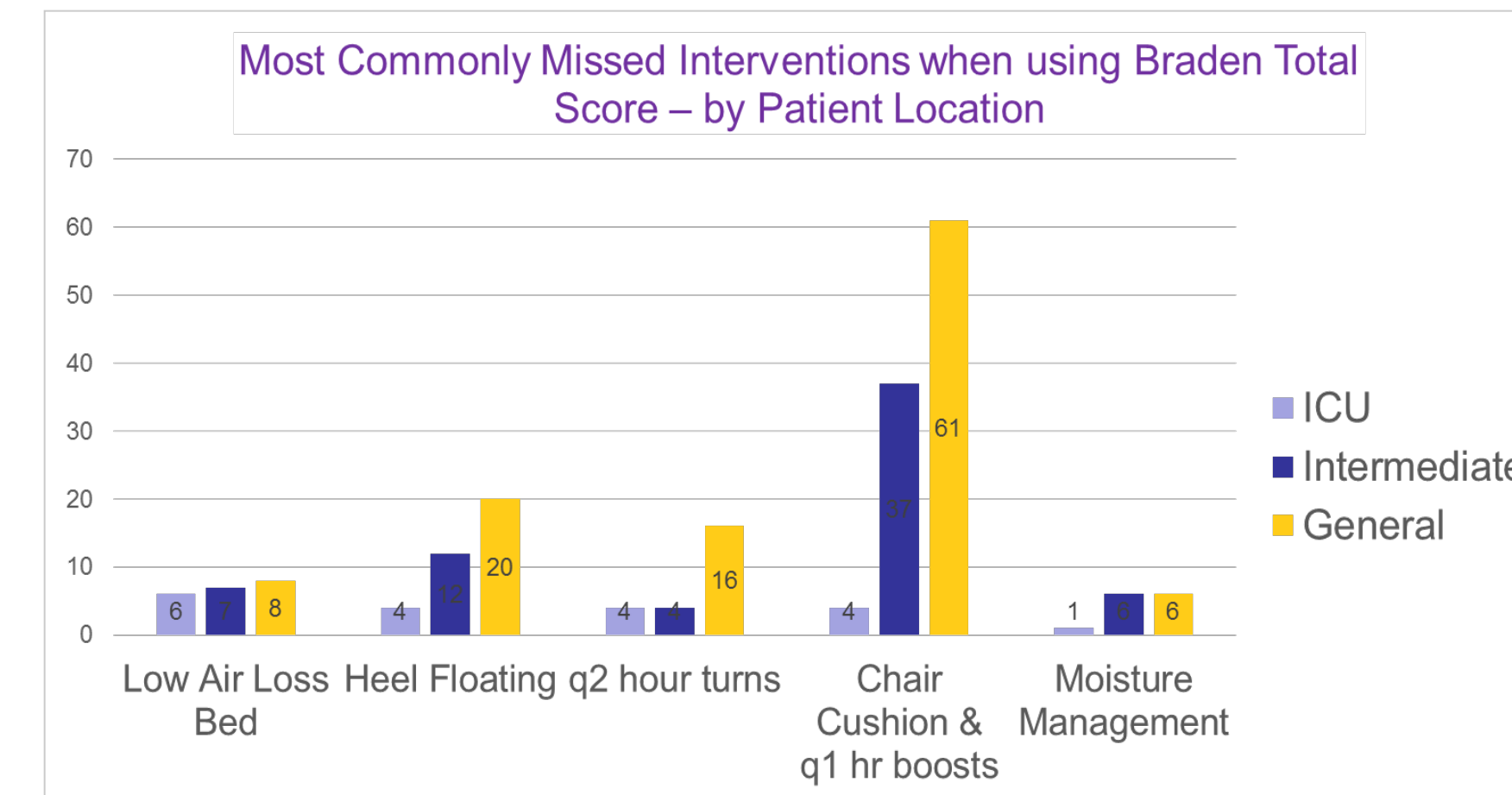
Patient Demographics by Unit N=300	
Intensive Care Units (ICU)	67 (22.33%)
Intermediate Units	104 (34.67%)
General Units	129 (43%)

	ICU N=67	Intermediate N=104	General N=129	Total
Total Score ≤ 14	45 (67.16%)	26 (25%)	22 (17.05%)	93/300 (31%)
Total Score 15-18	17 (25.37%)	37 (35.58%)	34 (26.36%)	88/300 (29.33%)
Total Score ≥ 19	5 (7.46%)	41 (39.42%)	73 (56.59%)	119/300 (39.67%)

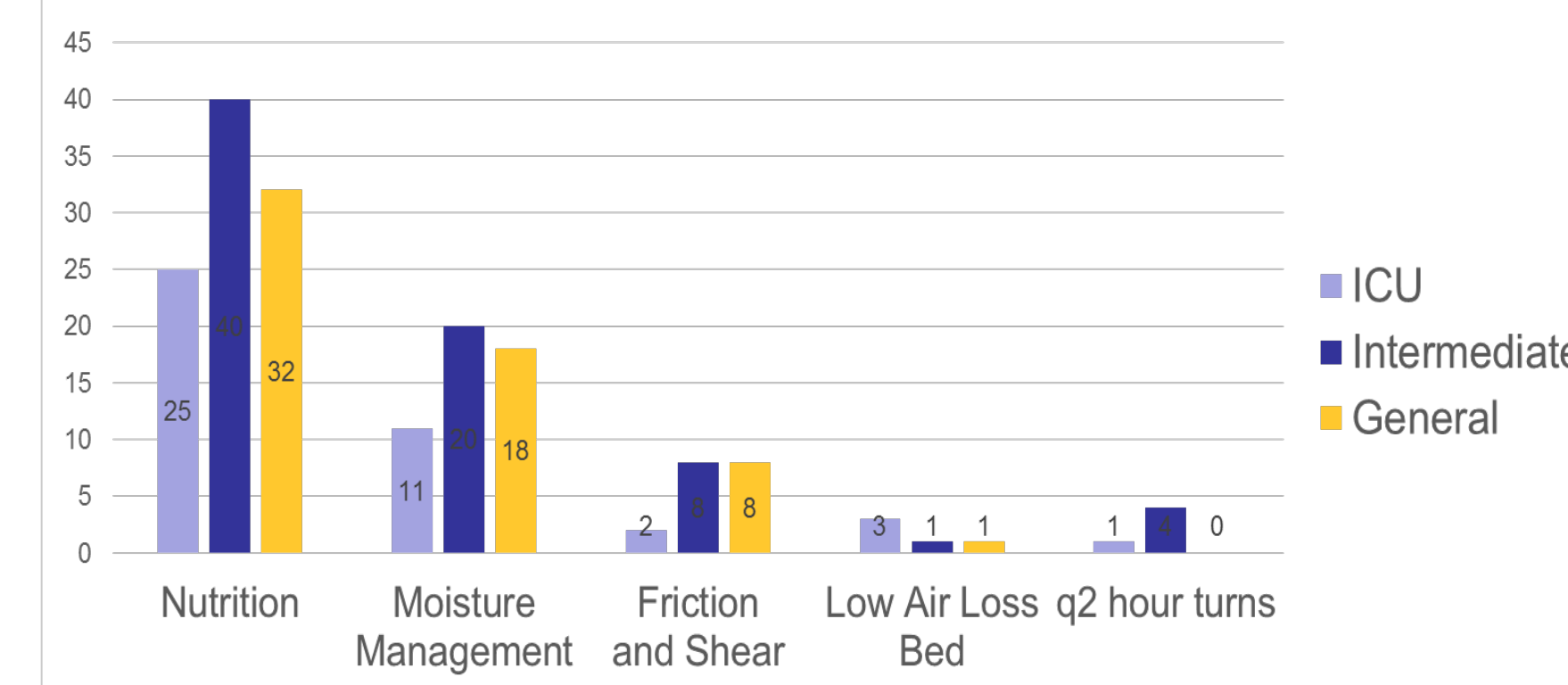
Average Number of Prevention Interventions Completed

	Total Score	Subscores
ICU	5.5 (range 0-7)	5.1 (Range 1-7)
Intermediate	3.53 (Range 0-7)	3.52 (Range 0-7)
General	2.6 (range 0-7)	3.1 (range 0-7)

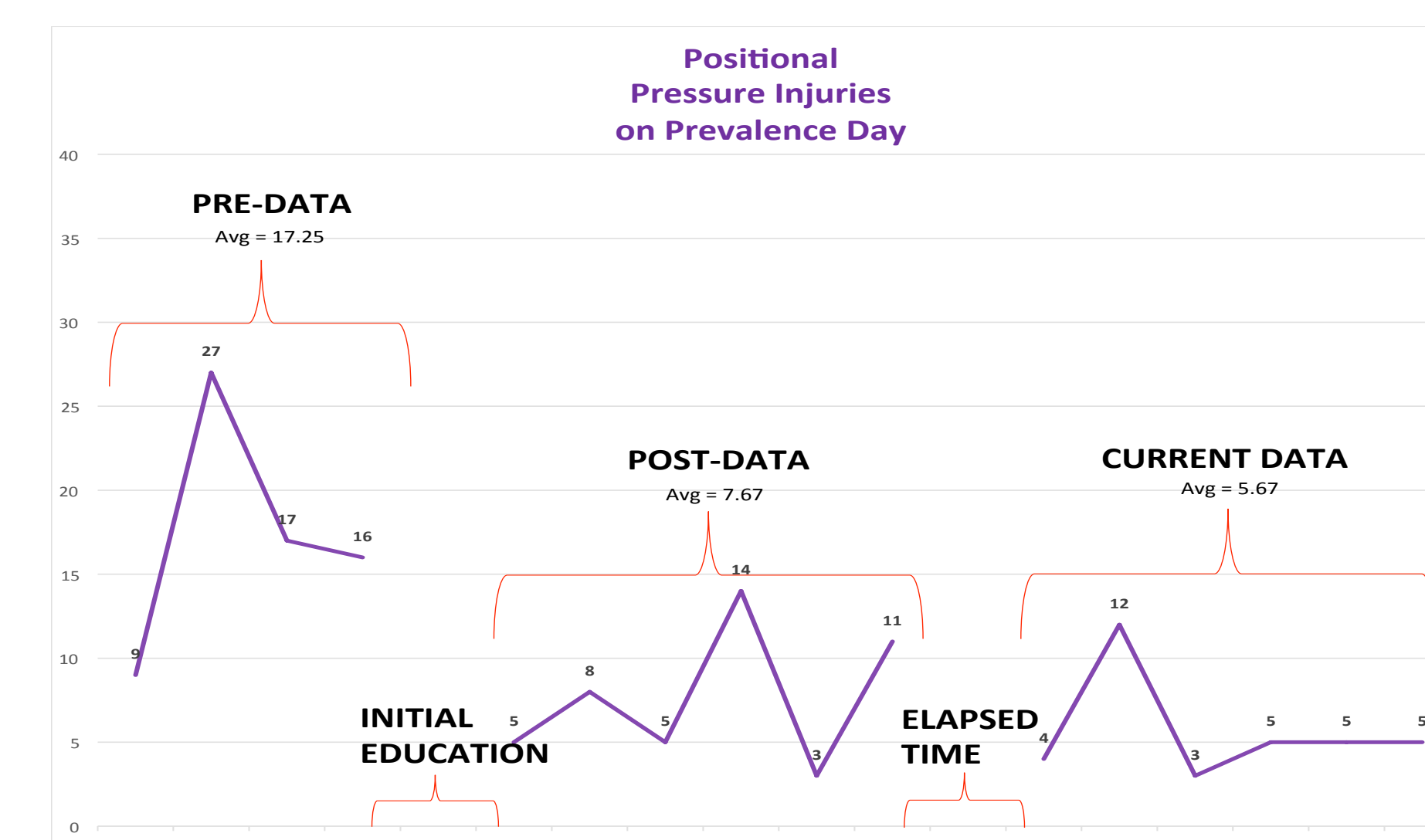
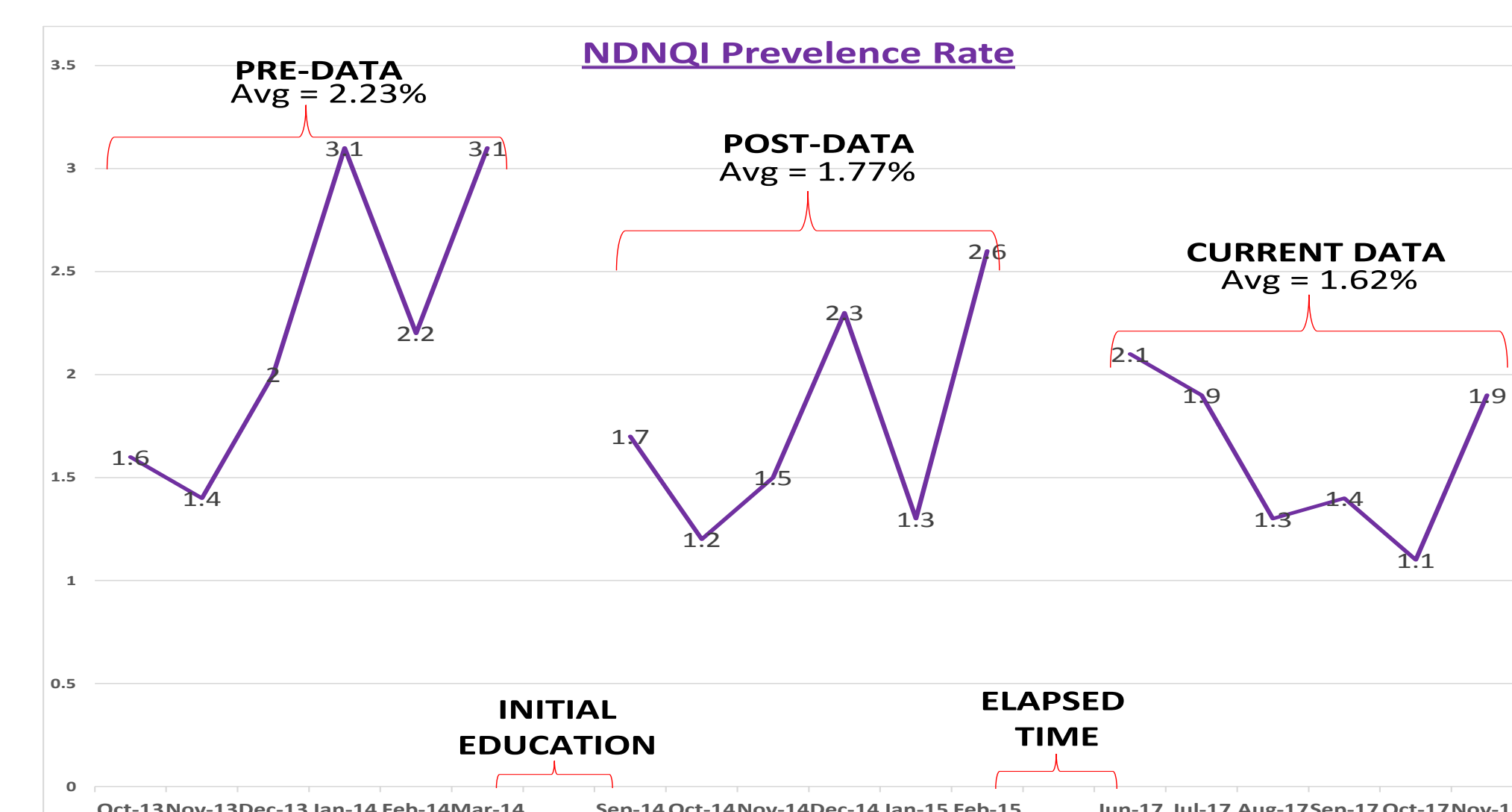
	Total Score	Subscores
≤ 14	6.10 (Range 6-7)	5.48 (Range 3-7)
15-18	5.70 (Range 5-7)	4.55 (Range 3-7)
≥ 19	0	1.67 (Range 0-4)



Completed Interventions based on Total Score that are not needed with Subscores - by Patient Location



NDNQI STUDY RESULTS:



LESSONS LEARNED

- Chart reviews only capture documented Braden Scores and infer the interventions that should have been done.
- The reviewers did not:
 - (1) verify if the scores accurately reflected the clinical picture,
 - (2) verify if the interventions were actually being completed, or
 - (3) perform a visual inspection to ensure that interventions were being performed effectively.
- Implementation of this practice change was not smooth, and ongoing education continues to be required.
 - Using subscores requires the staff to understand the individual definitions and critically think to implementing prevention measures.
- Individualizing the prevention has made a positive outcome for our patients.

IMPLICATIONS FOR PRACTICE

- Utilization of Braden Subscores was found not only to help reduce the hospitals overall NDNQI numbers, but also the number of positional related pressure injuries.
- Nursing practice is directly impacted by the interventions required for patient care. By using Braden subscores to guide the plan of care, interventions are individualized to a specific patient needs, and leads to better patient outcomes.
- This information demonstrated not only how the change in practice individualized prevention for the patient, but also affected nursing work load by altering interventions required.
- Ongoing Education is required to hardwire changes and as nursing work force is continually changing.

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Braden Scale. <http://www.bradenscale.com> (Accessed 1/2/2018)

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