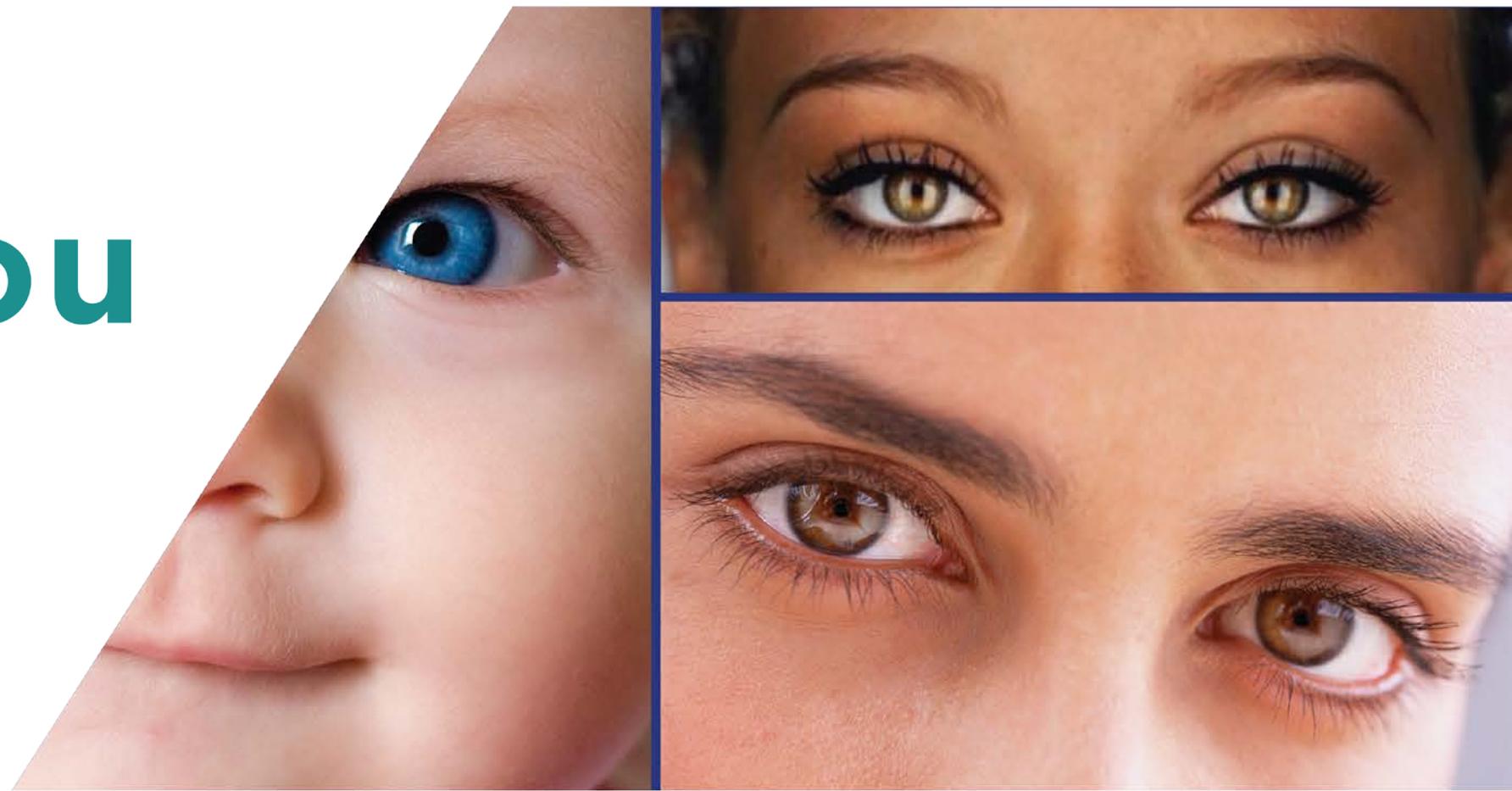




Did You Look?

Healthy Skin
Starts with
You!



This program made possible
through an unrestricted educational
grant from Smith & Nephew

Overview

- This training bundle includes:
 - Information for providers about skin care for patients with spina bifida
 - Tools for providers to use in caring for patients with spina bifida
 - Tools for patients and families for self care

Training Objectives

- State the incidence of skin breakdown in children and adults with Spina Bifida
 - Discuss the rationale for this bundle
 - Describe the history of bundle development
 - Describe risk factors and strategies to prevent skin breakdown in individuals with Spina Bifida
 - Demonstrate documentation of the use of the bundle
- 

Overview of Spina Bifida

▶ Spina Bifida is:

- the most common, disabling birth defect, occurring in 3.1 individuals per 10,000 children and adolescents
- the failure of neural tube closure in the developing fetus
- potentially debilitating with possible impairments in mobility, cognition, urinary and fecal continence, and an accumulation of secondary conditions, which may require numerous medical and surgical interventions throughout the lifespan

Pressure Ulcers in Spina Bifida

- Pressure ulcers are a major co-morbid condition with Spina Bifida.
- Pressure ulcer prevalence in adults with Spina Bifida is reported at 34% (McCann, J. & McDonnell, G., 2003).
- Annual prevalence rates of pressure ulcers in individuals with Spina Bifida of all ages reported in the literature vary from 15% - 77%.

Pressure Ulcers in Spina Bifida

- Between 2009-2012, 26% of patients age 2 or older included in the National Spina Bifida Patient Registry reported having a pressure ulcer.
 - 19% of patients age 2 or older had one within the past year (Kim et al, 2015).
 - Cost of individual patient care ranges from \$20,900 to \$151,700 per pressure ulcer (AHRQ , 2016).
- 

Care Bundles

- A care bundle is a set of interventions that, when used together, significantly improve patient outcomes.
- Care bundles incorporating best practices are likely to lead to better outcomes (IHI, 2016).
- Research on priority populations has been emphasized and encouraged by AHRQ, but research results lag in their ability to identify evidence-based solutions to improving healthcare safety, quality, efficiency and effectiveness.
- Pressure ulcer prevention strategies in the form of a care bundle reduced the incidence in an inpatient setting (Baldelli & Paciella, 2008).

Skin Integrity Work Group

- The development of this care bundle grew out of our concern for Spina Bifida patients and their risk for skin breakdown.
- Practitioners from NSBPR Clinics partnered with the CDC and SBA to review best practices. This care bundle is based on the findings of that review.

Common Types of Skin Breakdown

- **Pressure Ulcers**

- localized injury to the skin and/or underlying tissue usually over a bony prominence, as a result of pressure, or pressure in combination with shear.

(NPUAP)

- **Incontinence dermatitis**

- Inflammatory response of the skin to prolonged or repetitive contact with urine, stool or both.

(Doughty, 2012)

- **Intertriginous dermatitis**

- Inflammation and denudation of the skin between opposing skin folds

(Doughty, 2012)

- **Burns**

Differentiating Skin Breakdown

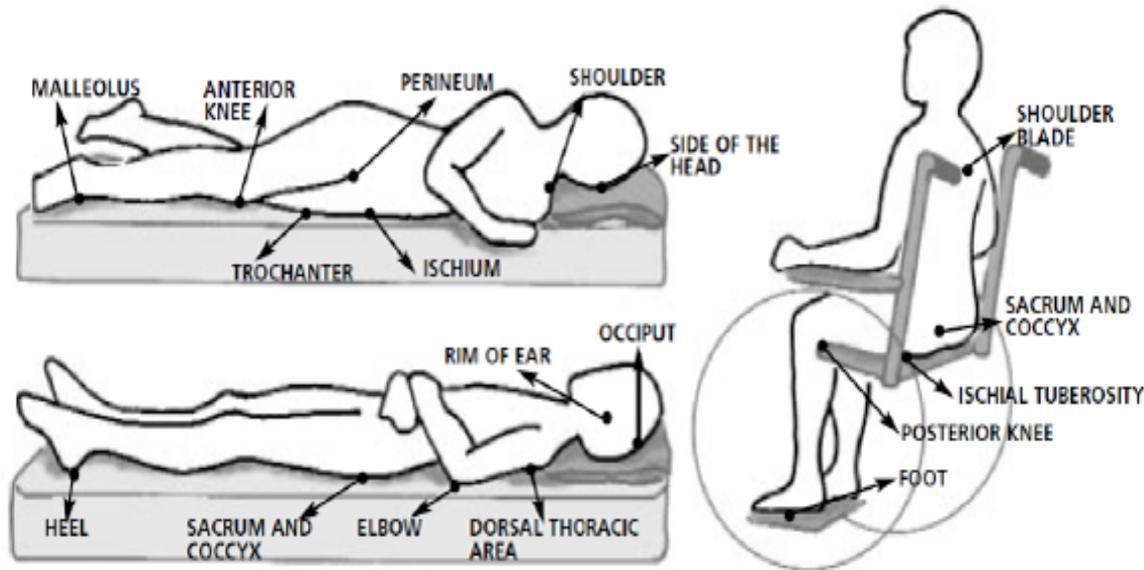
Wound type	Location	Depth	Characteristics	Exposure
Pressure ulcer	Over bony prominence Under medical device	Full-thickness* (extension to subcu, muscle, bone) May initially present as suspected deep tissue injury	Undermining and tunneling common Slough and eschar common	Pressure and/or shear
Incontinence- associated dermatitis	Perineal and perianal areas Inner thighs	Superficial/partial thickness	Maceration of surrounding skin common	Stool and/or urine
Intertriginous dermatitis	Buttocks Intergluteal cleft Base of pannus Underneath breasts Groin folds	Superficial/partial thickness	Maceration of surrounding skin common	Perspiration with or without friction

http://www.o-wm.com/files/owm/owm_april2012_doughty_table1.jpg

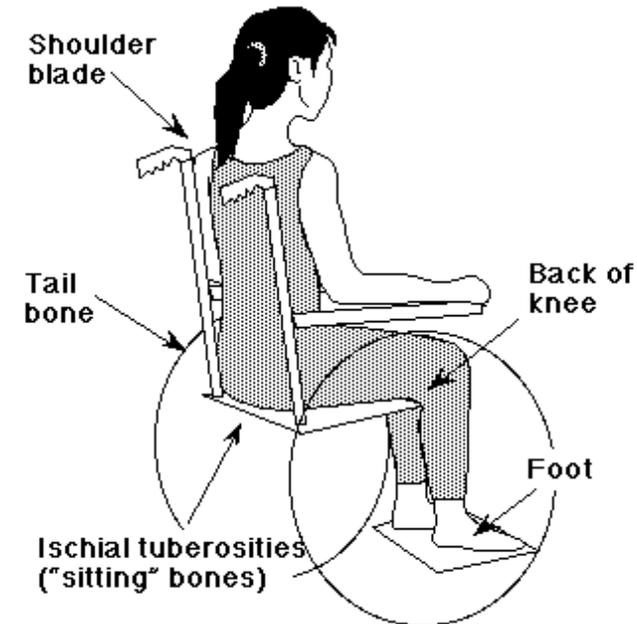
Common Areas of Skin Breakdown

The most common areas of skin breakdown related to pressure or sheering are the bony prominences. These diagrams highlight those pressure points that deserve special attention on daily skin checks.

#1



#2



http://sipa.ngo/wp-content/uploads/2015/11/pressure_ucler_drawing.png

<http://www.spinal-injury.net/spinal-injury-network/images/chair-pressure-points.gif>

Risk Factors for Skin Breakdown

Individuals with Spina bifida are at increased risk for skin breakdown secondary to:

- Sensory loss
- Excessive moisture
 - Bowel incontinence
 - Bladder incontinence
 - Perspiration
- Bony deformity
- Immobility
- Obesity
- Executive function challenges

Why should we look in clinic?

2010 study at Gillette Children's Specialty Health Care titled-"Lower Body Skin Inspection to Determine the Incidence of Pressure Ulcers in Individuals with Spina Bifida."

Results:

- 50% of patients with spina bifida (both adults and children) when asked if they had a wound said no and on skin inspection wounds were found
- Wound severity ranged from rashes to stage IV pressure injuries

Objectives of the Skin Integrity Bundle

- Complete the spina bifida skin risk assessment
- Complete a spina bifida skin assessment
- Teach parents/caregivers and patients how to prevent and identify skin breakdown

“Did You Look?” Skin Integrity Bundle

- Components
 - On line clinic staff training
 - Staff training manual- including patient goals and prevention activities for each risk factor
 - Skin risk assessment tool, the Risk Assessment Scale
 - Skin inspection tool
 - Mirror decal (available in the future)
 - Age specific parent/caregiver/patient handouts
 - Poster

Training Manual

- The training manual has been developed to teach providers to teach their patients and parents/caregivers how to check for skin problems every day, and how to prevent them from happening in the first place
- Sections include: assessment tools and chapters for each risk factor

Skin Inspection

- Explain procedure to patient/family
- Ensure adequate lighting in room
- Have a blanket to keep patient covered
- Wash hands, wear gloves
- Ask the patient/family about where sensation changes
- Have patient use hand mirror to follow along with inspection.
- Inspect all insensate skin for color changes and/or signs of breakdown
- Generally easiest to go from top to bottom
- Pay particular attention to bony prominences, contractures, skin folds, perineal area
- Palpate (touch) skin to feel for changes in temperature, texture, boggy feeling

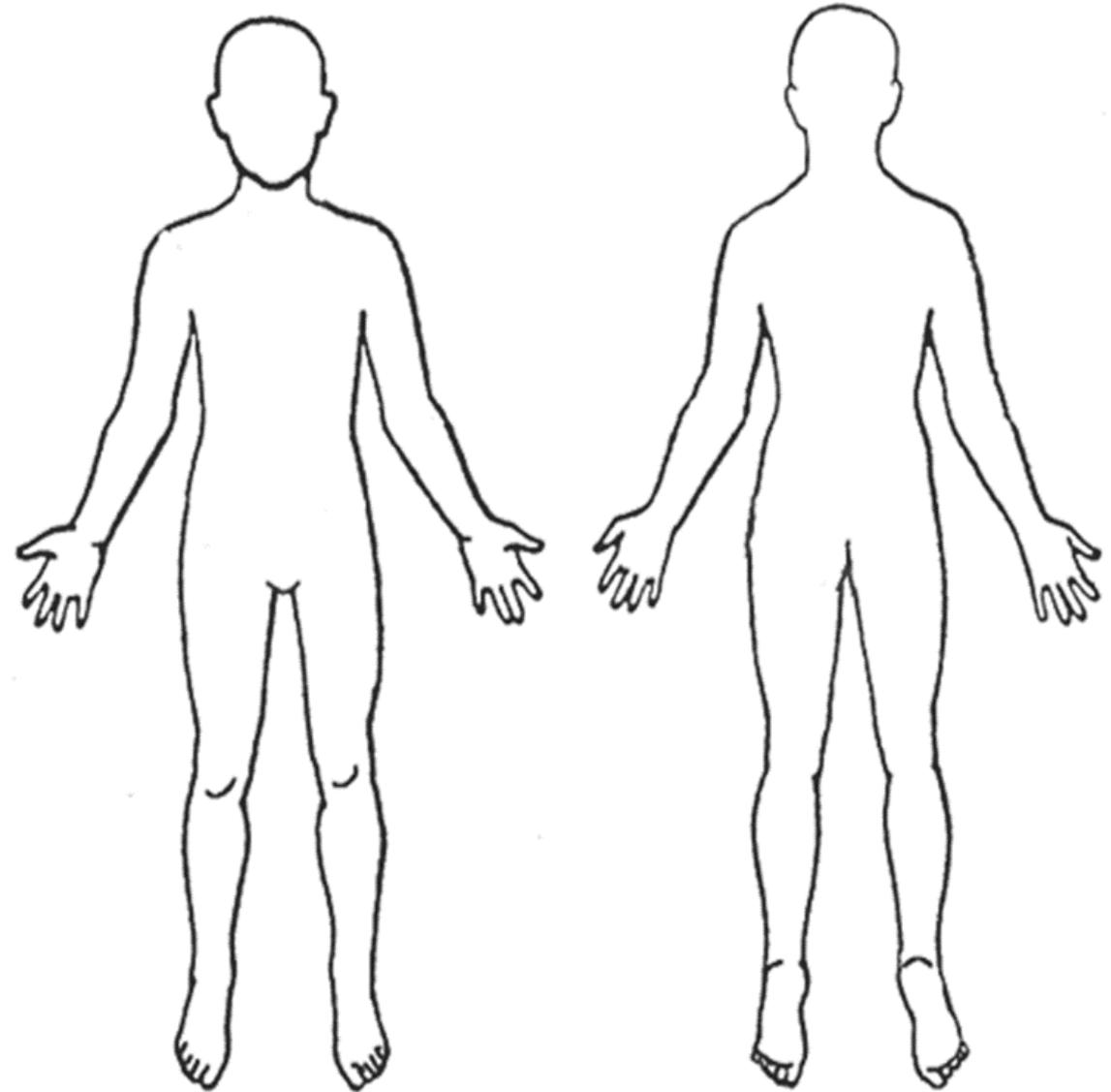
Skin Inspection Continued

- Inspect for redness, pain, open skin.
- Provide education to family/patient as you are inspecting
 - Areas to pay close attention to
 - Areas of redness
 - Areas of open skin
- Assist patient to redress and assume a comfortable position
- If needed created a plan to address any concerns noted in the skin inspection

Skin Inspection

A skin inspection is highly recommended at every clinic visit.

- This is a suggested method that can be used to document issues related to skin integrity. Though we realize clinics are using EMRs, this is a tool that can be used as you examine the skin which will document the skin issues pictorially.
- Directions:
 - Ask the patient where there is little to no sensation and note on the diagram using dashed lines - - - .
 - Inspect the skin, especially at and below the dashed lines and carefully look at areas under pressure, under braces, exposed to moisture, and bony prominences (hip bones, tailbone, heels, outer ankles, and between knees).
 - Use the diagram to note breakdowns, using these labels: C=cool, M=open area, R=redness, H=hot, U=unknown irritation, #=swelling or edema
- **Check box if no insensate areas**



Assessing Risk for Skin Breakdown

- A validated tool used commonly for assessing risk of skin breakdown is the *Braden Scale for Predicting Pressure Sore Risk* (Copyright, Braden and Bergstrom, 1988)
- The scale being implemented here was developed specifically for the spina bifida population and has not yet been validated
- The goal is to distinguish patients who have different degrees and types of risk so that interventions can be tailored to the risk level
 - The red, yellow, and green zones correspond to the calculated risk with red being the greatest concern
- The following tool assesses risk of patients with spina bifida for skin breakdowns. Columns A-E are risk factors that account for skin breakdowns. Check one box per column that best describes the patient's current status, then look to column F for guidance on how to proceed with patient and caregiver education.

Risk Assessment Scale

A. TOUCH PERCEPTION	B. MOISTURE	C. MOBILITY	D. FRICTION/SHEARING	E. SKIN BREAKDOWN	
<input type="checkbox"/> Completely Limited Sensory impairment of the <i>sitting surface and both legs</i> OR more severe (i.e., impairment over most of body)	<input type="checkbox"/> Constantly Moist Skin is moist by perspiration or incontinence almost 100% of the time.	<input type="checkbox"/> Completely Immobile In an average hour, almost never makes even a slight change in body position either independently or by directing others.	<input type="checkbox"/> Problem Constant pressure/ shearing on bony prominence and requires maximum assistance in moving	<input type="checkbox"/> Problem with Breakdown in the past year.	If at least 1 red box checked: Highest Risk Category <ul style="list-style-type: none"> ➤ Provide verbal education relevant to the checked red and yellow categories to the left. ➤ Distribute the Did You Look pamphlet.
<input type="checkbox"/> Very Limited Sensory impairment of <i>both legs</i> that limits ability to feel/respond to touch	<input type="checkbox"/> Very Moist Skin is moist by perspiration or incontinence about 75% of the time.	<input type="checkbox"/> Very Limited In an average hour, makes slight changes in body position 1-3x either independently or by directing others.	<input type="checkbox"/> Problem Constant pressure/ shearing on bony prominence and requires minimum assistance in moving, OR uses leg braces that <i>repeatedly</i> rub against the skin.		
<input type="checkbox"/> Slightly Limited Sensory impairment in <i>one leg</i> that limits ability to feel/respond to touch	<input type="checkbox"/> Occasionally Moist Skin is moist by perspiration or incontinence about 50% of the time.	<input type="checkbox"/> Slightly Limited In an average hour, makes frequent changes (at least 4x) in body position but may be too slight to be effective.	<input type="checkbox"/> Potential Problem Offloads on bony prominence but may require minimum assistance in moving esp. when lying, OR uses leg braces that <i>occasionally</i> rub against the skin.		If no red, but at least 1 yellow box checked: Moderate Risk Category <ul style="list-style-type: none"> ➤ Provide verbal education relevant to the checked yellow categories to the left. ➤ Distribute the Did You Look pamphlet.
<input type="checkbox"/> No Impairment <i>No sensory impairment</i> that would limit ability to feel/respond to touch	<input type="checkbox"/> Rarely moist Skin is usually dry OR individual is not incontinent.	<input type="checkbox"/> No Limitations Makes major and frequent changes in position.	<input type="checkbox"/> No Apparent Problem Maintains <i>good</i> sitting or lying position and requires no assistance in moving. If needed, leg braces fit properly.	<input type="checkbox"/> No Apparent Problem No breakdown in the past year.	If all green: Lowest Risk Category <ul style="list-style-type: none"> ➤ Provide verbal education on general skin integrity principles using the poster

Care Recommendations

The modified Braden provides a risk assessment that can be carried over to the teaching. This table demonstrates the use of the modified Braden risk assessment and relates it to the educational effort that should correspond to the risk.

If at least 1 red box checked:

- Highest Risk Category
- Provide verbal education relevant to all checked red and yellow categories
- Distribute the Did You Look Pamphlet

If no red, but at least 1 yellow box checked:

- Moderate Risk Category
- Provide verbal education relevant to all checked yellow categories
- Distribute the Did You Look Pamphlet

If all green:

- Lowest Risk Category
- Provide verbal education on general skin integrity principles using the poster

Adjusting the Risk Level

- Clinicians can increase the risk level if additional clinical risk factors are present:

presence of shunt or reduced executive functioning	any recent surgery	increased body temperature	restraint use
myelomeningocele subtype	male gender	presence of a pressure sore	epidural/spinal pain medication
elderly or adolescent	immobility	prior history of a pressure sore	end of life care
higher level lesion	impaired sensation	hypoperfusion state	prolonged procedures
wheelchair use	not wearing shoes	peripheral vascular disease	emergency room stay of > 4 hours
urinary incontinence	obesity	diabetes	general poor health
above the knee orthopedic surgery	poor nutrition	smoking	

Principles of Patient/Family Education

- Several factors may influence how a patient/family uses the information including:
 - A family's cultural concepts of self-care and independence
 - Not all families value self care equally
 - The prevalence of NTDs is highest among Hispanics, therefore culturally appropriate SB education is important
 - The patient's executive functioning (a set of skills that help people get things done, like paying attention, managing time)
 - Many children and adults with spina bifida struggle with executive functioning and this can have an impact on self care
 - Challenges with executive functioning may not be obvious by looking at someone
 - The model of transition care within the patient's care center
 - Transition programs may be formal or informal, and may begin as young as 12 or as old as 21
 - Education, especially in the area of self care, will be an important component of a transition program

Section 1: General Skin Care

- Patient goals:

- To develop awareness of areas where there is limited or no sense of touch
- Remember to conduct daily skin assessment
- Identify differences in skin color, temperature and texture
- Recognize and report concerns

- Suggested activities:

- Tickling, peek-a-boo with body parts, hide a sticker
- Daily reminders using chart, phone app, or calendar
- Practice checking skin to learn to recognize changes
- Protect insensate areas with long pants, shoes – especially when outside or swimming
- Wash, dry and lotion your skin

Section 2: Pressure/Friction/Shearing

- Patient goals:
 - Be aware of movement or activities that may scrape the skin
 - Become familiar with activities that relieve pressure
 - Remember to relieve pressure every 15 minutes
 - Become familiar with appropriate seating
 - Independently engage in activities to relieve pressure
 - Recognize and report concerns
- Suggested activities
 - Encourage “wiggles” when watching TV, reading, or during other sedentary activities
 - Look for devices that remind you to move – Wobl watch
 - Check tightness of clothing, diapers, braces, shoes
 - Review pressure relieving activities and appropriate pressure relieving cushions

Section 3: Moisture

- Patient goals:
 - Conduct skin inspection for moisture
 - Learn to keep skin healthy
 - Recognize and report concerns
 - Aim for continence
- Suggested Activities
 - Change diapers often in little ones
 - Work towards continence from early age
 - Wash areas affected by incontinence ASAP – reminding them that bacteria increases the risk of skin breakdown
 - Keep skin clean and dry
 - Clean, dry, seamless socks
 - Deodorant isn't just for under the arms

Section 4: Heat

- Patient goals:
 - Be able to identify heat sources
 - Learn to check bath and shower water and temperature of surfaces
 - Learn to avoid direct and indirect contact with warm/hot surfaces
- Suggested activities
 - Check water temperature and encourage to use a bath water thermometer
 - Check playground and other surfaces that have been exposed to sun
 - Check car seats
 - Check radiators – both direct and indirect contact

Section 5: Overall Physical Condition

- Patient goals:
 - Maintain appropriate weight for age
 - Support good nutrition through a varied diet
 - Encourage healthy food choices and appropriate portion sizes
 - Continually reassess overall physical condition
- Suggested activities
 - Encourage them to monitor weight using charts or apps
 - Drink water!
 - Encourage foods high in Omega 3 fatty acids
 - Discuss other health issues that may affect skin such as scars, poor circulation, diabetes

Did you look?

Healthy skin starts with you!

- Prevention starts with a look- poster content
 - Conduct daily skin checks
 - Control moisture
 - Avoid pressure
 - Eat right and drink enough fluids
 - Act quickly if you see areas of redness or other problems

When to call your clinic team

- A reddened area of skin that does not fade after 15 minutes
 - Unusual warmth or swelling that lasts longer than 15 minutes
 - Blisters, open areas on the skin, scrapes, or draining wounds
 - A black leathery area
 - Equipment that needs repair, like braces
- 

Patient/parent/caregiver handouts

- As part of the Skin Integrity Bundle, age specific handouts are available to reinforce information about skin care and for your patients and families to take home to reinforce the messages
 - Ages include infants and toddlers, school age children, adolescents and adults
 - The handouts should be downloaded and printed for your use
- 

Process for in clinic use of the Skin Integrity Bundle

- Conduct a comprehensive skin assessment using the Risk Assessment Scale and the Skin Inspection form
 - Introduce the Skin Care Training to the patient/parent/caregiver
 - Review the content of age specific handout, covering all areas
 - Use the poster to reinforce the message
- 

NSBPR Documentation

- Purpose
 - Indication of education, risk and skin assessment provided
 - “Did You Look” bundle
 - Other materials
 - Documentation of skin breakdown
 - Location
 - Previously reported
 - Primary cause

Questions Related to Education

- Was the patient or the patient's caregiver given education on skin breakdown prevention?
 - Yes, using education materials from the Did You Look bundle.
 - Yes, using other education content/materials **not** from the Did You Look bundle
 - No
- Was a skin breakdown risk assessment completed?
 - Yes, using the Risk Assessment Form from the Did You Look bundle
 - Yes, using a tool **not** from the Did You Look bundle
 - No
- Was a skin breakdown skin assessment completed?
 - Yes, using the form from the Did You Look bundle
 - Yes, using another tool **not** from the Did You Look bundle
 - No

Documentation of Skin Breakdown

Skin Breakdown Education

Was the patient/caregiver educated on skin breakdown prevention?

Was a risk assessment completed?

Was a skin assessment completed?

Was the patient/caregiver educated on skin breakdown prevention?

Was a risk assessment completed?

Was a skin assessment completed?

Was a risk assessment completed?

Was a skin assessment completed?

Was a skin assessment completed?

Yes, using education materials from the "Did You Look?" bundle.

Yes, using other education content/materials not from the "Did You Look?" bundle

No

Yes, using SB Braden from the "Did You Look?" bundle

Yes, using a tool not from the "Did You Look?" bundle

No

Yes, using the form from the "Did You Look?" bundle

Yes, using another tool not from the "Did You Look?" bundle

No

Questions and Answers



Additional Resources

- Braden Scale for Predicting Pressure Sore Risk
www.bradenscale.com
- Institute for Healthcare Improvement. (2011). How to guide: Prevent pressure ulcers.
www.ihl.org/resources/pages/tools/howtGuidePreventPressureulcers.aspx
- National Pressure Ulcer Advisory Panel www.npuap.org
- Center for Disease Control and Prevention. Spina Bifida
www.cdc.gov/ncbddd/spinabifida/treatment.html

Program Evaluation

- Program Logic

Activities

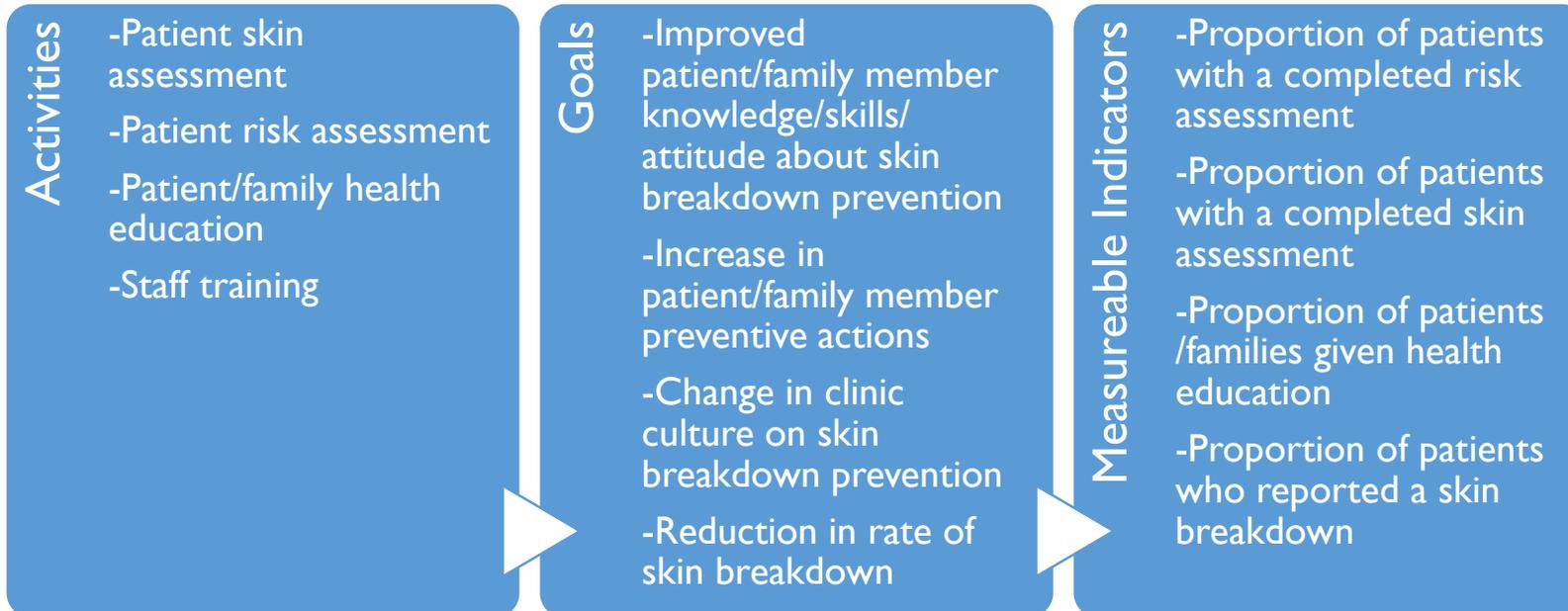
- Patient skin assessment
- Patient risk assessment
- Patient/family health education
- Staff training

Goals

- Improved patient/family member knowledge/skills/attitude about skin breakdown prevention
- Increase in patient/family member preventive actions
- Change in clinic culture on skin breakdown prevention
- Reduction in rate of skin breakdown

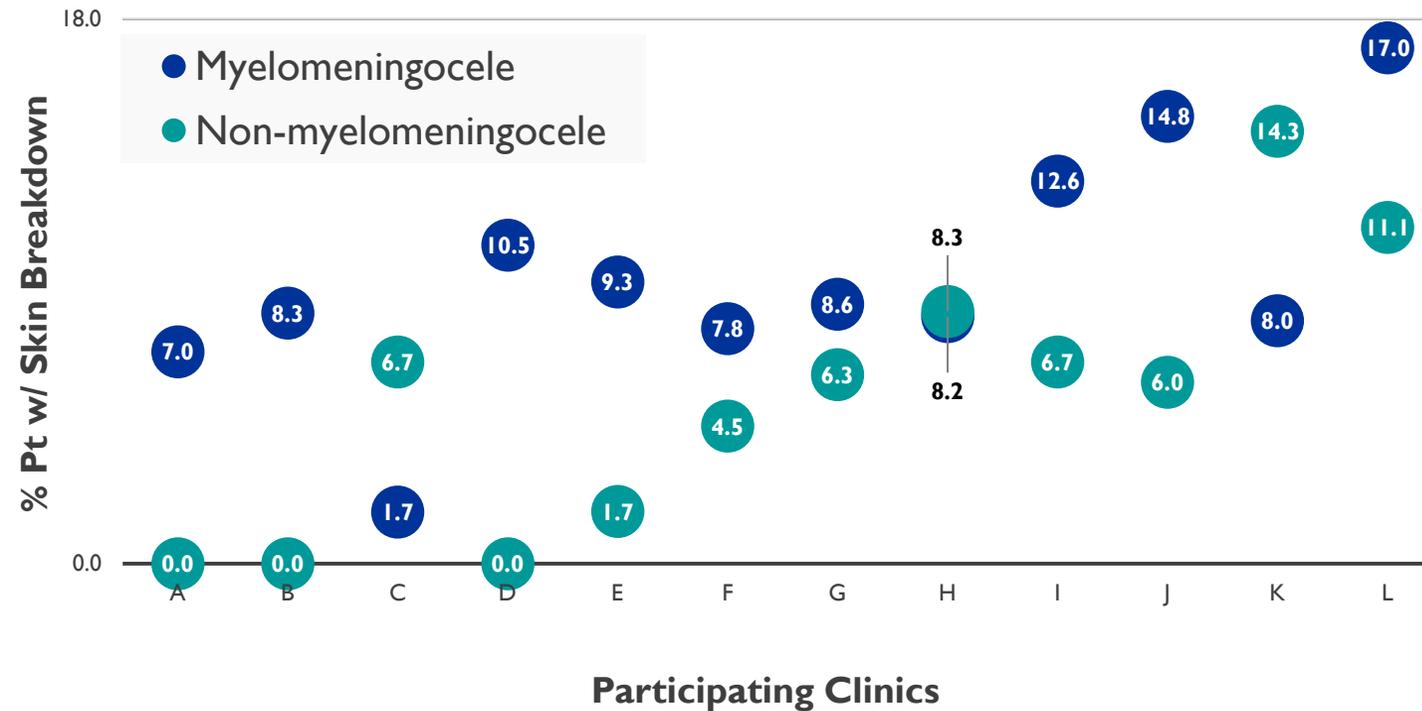
Program Evaluation

- Gathering Credible Evidence
 - CDC pulls NSBPR data for participating clinics
 - Quarterly examination of data (CDC generates reports for clinics)



Program Evaluation

- Baseline breakdown rates in participating spina bifida clinics



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