



# Pressure Ulcers eCourse

## Module 2.3: Risk Factors & Implications

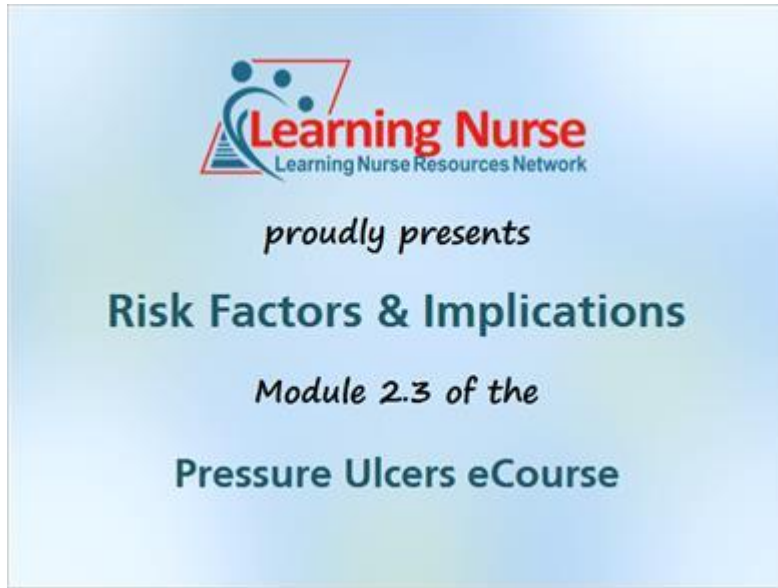
### Handout

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# Pressure Ulcers – 2.3 Risk Factors & Implications

## 1. General Risk Factors

### 1.1 Section Title



### Narration

**JILL:** Hi, I'm Jill ... along with Mark. Welcome to this final lesson in Module 2 of the Pressure Ulcers course. In this unit we will be covering 3 topics ... the general risk factors for developing pressure ulcers ... the risk factors for pressure ulcers in a hospital setting ... and the implications and consequences that pressure ulcers have on patients and the healthcare system. Are you ready, Mark?

**MARK:** Yes, I am ... let's go!

## 1.2 Populations at Risk



### Narration

**JILL:** So Mark, what types of individuals do you think are most at risk for developing pressure ulcers?

**MARK:** From what we have learned about the causes of pressure ulcers, I would guess that those with restricted mobility.

**JILL:** Yes, you're right. The patients or residents that are routinely considered at risk for pressure ulcers include the following: ... patients or residents who are bedridden ... or use wheelchairs. Other vulnerable individuals include stroke victims ... patients and residents with diabetes or dementia. Patients who are sedated for any reason and individuals with spinal cord injuries ... those who cannot feel their legs ... are both at risk for pressure ulcers.

**MARK:** So these are the types of patients and residents that we need to watch closely for possible pressure ulcer development.

**JILL:** Uh huh ... let' now take a look at some general risk factors.

### 1.3 General Risk Factors



#### **Narration**

**JILL:** Here are eleven common risk factors associated with the development of pressure ulcers.

**MARK:** Wow ... that list is longer than I expected! I imagine that we are going to examine each of these in a bit more detail.

**JILL:** Yes we are Mark. Let's start with immobility.

## 1.4 Immobility

**Immobility**

*Greatest risk factor*

*Less able to adjust to pressure sensations*

*Position changes are less frequent*

*Immobility may be due to:*

- *neurological impairment*
- *sedation or anesthesia*
- *restraints or dementia*
- *traumatic injury*

An illustration of an elderly man with a long nose, wearing a purple shirt and green pants, sitting in a wheelchair. The wheelchair is a simple, basic design with a large front wheel and a smaller back wheel. The man is looking towards the left of the frame.

### Narration

**JILL:** One of the greatest risks for pressure ulcers is impaired mobility. These patients are unable to adequately adjust their positions frequently enough to relieve pressure.

**MARK:** That certainly makes sense. I can think of several reasons why individuals become immobile. Some examples that come to mind are patients who are: neurologically impaired ... heavily sedated or anesthetized ... restrained or demented ... or recovering from a traumatic injury such as a pelvic or femur fracture. Did I miss any important ones, Jill?

**JILL:** No, I think you got the main reasons for impaired mobility. If immobility is prolonged, muscle and soft tissue atrophy may develop, decreasing the bulk over which bony prominences are supported. This increases the pressure at these sites, and thus increases the risk of pressure ulcers.

## 1.5 Advanced Age

### Advanced Age

*Skin becomes more fragile*

*Less subcutaneous tissue to cushion bony parts*

*Poor nutrition and hydration*

*Impaired respiratory and immune systems*



### Narration

**JILL:** Mark, what features of old age do you think contribute to pressure ulcer risk?

**MARK:** The first reason is that as you get older, your skin becomes more fragile. You are more susceptible to skin and tissue damage.

**JILL:** Right. Skin become more fragile as epidermal turnover slows, vascularization decreases, and skin layers adhere less securely to one another. Another reason?

**MARK:** I would say that older people have less fat.

**JILL:** Yes, older adults have less lean body mass and less subcutaneous tissue to cushion bony areas. Anything else?

**MARK:** I would think that seniors generally have more health problems that would make them more vulnerable.

**JILL:** Yes, they do. Underlying problems such as poor nutrition and hydration ... and impaired respiratory and immune systems increase pressure ulcer risks.

## 1.6 Incontinence



### Narration

**JILL:** Another risk factor is incontinence. Mark, can you summarize the reasons why incontinence increases the risks for pressure ulcer development?

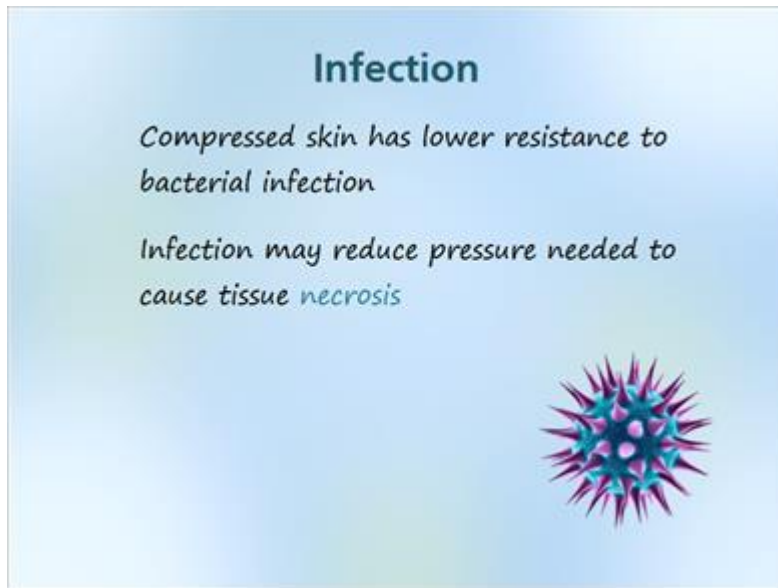
**MARK:** Sure thing. Incontinence increases a patient's exposure to moisture ... and over time increases the risk of skin breakdown. Urinary and fecal incontinence can result in excessive moisture and chemical irritation. Fecal incontinence can cause more damage because the pathogens in the stools may result in increased infections.

**JILL:** Yes, moisture is a predisposing factor with regard to the development of pressure ulcers. Moisture alters the resiliency of the epidermis to external forces. Shear and friction are increased in the presence of **mild to moderate** moisture. However, shear and friction actually decrease when there is a large amount of moisture.

**MARK:** Interesting ... so that means I should keep my incontinent patients either very dry, and let them get very wet! ... Just kidding! (chuckles)

**JILL:** Yes, I know you are.

## 1.7 Infection



### Narration

**JILL:** Infection is considered a risk factor. Compressed skin has a lower resistance to bacterial infections. Infection may also reduce the pressure needed to cause tissue death.




## 1.8 Low Blood Pressure

**Low Blood Pressure**

*Can lead to tissue ischemia*

*As tissue perfusion drops, skin is less tolerant of sustained external pressure*



### Narration

**JILL:** Low blood pressure is another risk factor.

**MARK:** Everyone knows that high blood pressure is bad for you, but I wasn't aware that low blood pressure is also a risk. Why is this?

**JILL:** Low blood pressure can lead to tissue ischemia, particularly in patients with vascular disorders. As tissue perfusion drops, the skin is less tolerant of sustained external blood pressure, increasing the risk of damage from ischemia.

**MARK:** Okay, that makes sense.

## 1.9 Malnutrition

**Malnutrition / Dehydration**

*Related to pressure ulcers*

*Protein required for healing*

*Decreased protein and albumin*

*Stage related to hypoalbuminemia*

*Dehydration*

- *essential nutrient*
- *normal cell functions*
- *critical to wound healing*



### Narration

**JILL:** A strong correlation exists between poor nutrition and the development of pressure ulcers.

Why do you think that is Mark?

**MARK:** Proper nutrition will keep your skin and body healthy and thus more resistant to pressure ulcers.

**JILL:** Yes, that is correct. Also the body requires increased protein for healing ... malnutrition decreases protein levels and albumin. A direct correlation exists between pressure ulcer stage and the degree of hypoalbuminemia.

**MARK:** I guess that makes a strong case to get my patients to eat lots of steak and peas ... to keep their protein levels up. (laughs).

**JILL:** One study found that patients admitted to hospital with pressure ulcers were below the usual body weight ... had low pre-albumin levels ... and were not getting enough nutrition to meet their needs. Certain vitamin deficiencies, particularly vitamins A, C and E may also contribute to pressure ulcer development.

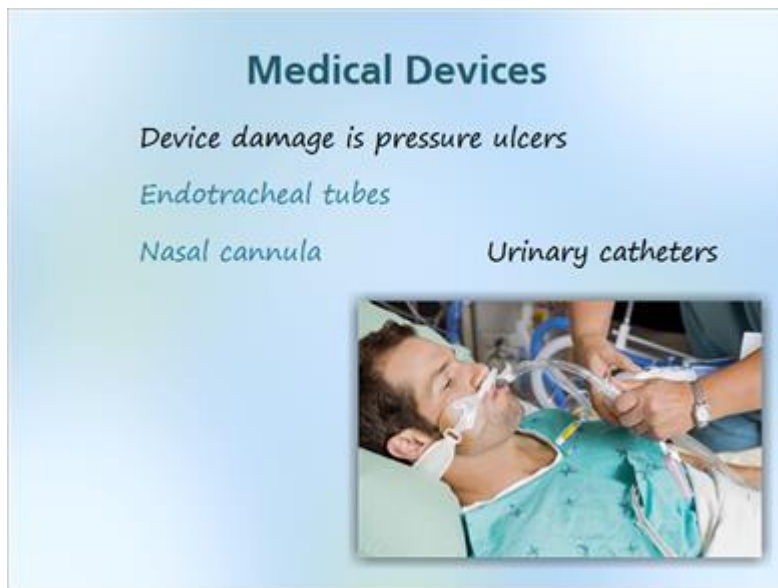
**MARK:** Interesting information about nutrition and vitamins. What other intrinsic factors are there?

**JILL:** Dehydration is another determining factor in poor nutritional status and susceptibility to pressure ulcers. Water is an essential nutrient and serves as a solvent for minerals, vitamins and amino acids. It also helps maintain normal cell function. In addition, water is critical to the hydration of wound sites and in oxygen perfusion. Adequate hydration is an essential part of wound healing.

**MARK:** I would think that, in a pinch, beer would work just as well to keep the patient hydrated. (laughs).

**JILL:** Yes, Mark, I'm sure your patients would appreciate the beer to go along with their steak and peas. (giggles).

## 1.10 Devices



### Narration

**JILL:** Here is one risk factor that we may not pay enough attention to ... medical equipment!

**MARK:** Are you saying that the devices we use to help patients get better, may actually contribute to development of pressure ulcers?

**JILL:** Yes. As we discussed before, any damage resulting from medical devices should be classified and recorded as a pressure ulcer. Here are some examples. Pressure ulcers occur on patients' lips due to pressure from endotracheal tubes ... ears due to nasal cannula ... and on thighs because of the hard surfaces of urinary catheters.

**MARK:** Now that I know that, I am going to be extra careful in checking these devices on my patients to make sure that no rubbing is happening. What other factors are there?

## 1.11 Friction

**Friction**

*Rubbing against sheets*

*Wrinkled bedding / clothing*

*Splints and casts*

An illustration showing a nurse in a white uniform standing by the side of a bed, feeding a patient who is lying in bed. The patient is wearing a white head covering and a green blanket. The nurse is holding a spoon and a bowl, and the patient is looking up at the nurse. The background is a light blue gradient.

### Narration

**JILL:** Well, remember our discussion about you ironing the bed sheets? Rubbing against sheets, wrinkled bedding or clothing, and poorly adjusted supports such as splints and casts are common causes of pressure ulcers.

**MARK:** Okay, something else to check.

## 1.12 Medications



### Narration

**JILL:** In addition to the increased risk of pressure ulcers caused by medical devices, we have the same problem with some medications.

**MARK:** I don't see how taking medications can possibly cause pressure ulcers.

**JILL:** Well, Mark, some medications can contribute to breakages in skin integrity. Tranquillizers, sedatives and opiates decrease sensory perception and mobility. Steroids can disrupt the normal healing process due to their anti-inflammatory properties, and decrease the general health of tissues.

**MARK:** Okay, I see what you mean. What's left? I suppose next you will be telling me whether I am happy or sad increases my risk for pressure ulcers? (sarcastically)

## 1.13 Mental Health



### Narration

**JILL:** In a way, you are right ... it does! Mental health conditions, especially severe depression, can contribute to an increased risk of pressure ulcers. Depressed patients often neglect their personal hygiene, making their skin more vulnerable to injury and infection. Depressed individuals are also less likely to get up and move around. And as we know, restricted mobility is a significant risk factor.

Emotional stress has been associated with the formation of pressure ulcers. One of the most common stressors is hospitalization. Up to 75% of elderly patients experience a decrease in functional ability from hospital admission to discharge.

**MARK:** Oh great ... in addition to all my other nursing duties, now I have to keep my patients happy too?

**JILL:** Yes, Mark ... it all part of being an exceptional nurse! (Laughs)

## 1.14 Smoking



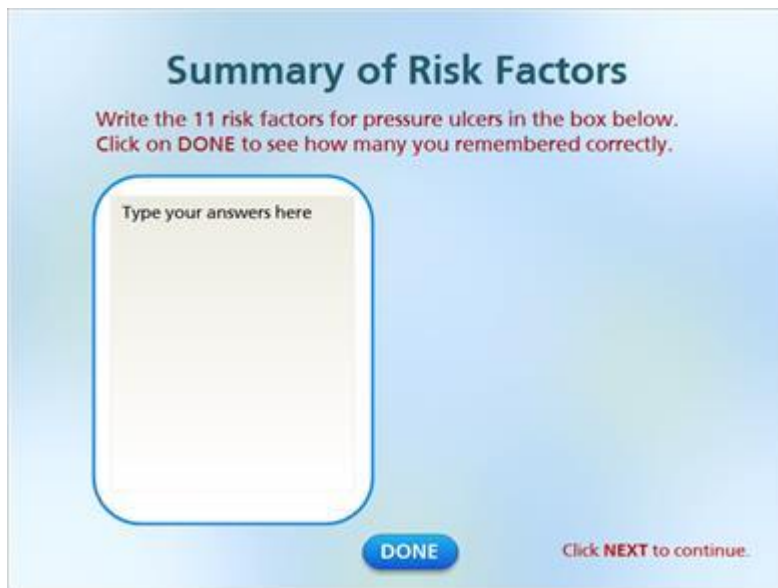
### Narration

**JILL:** And the last factor found to contribute to pressure ulcers is cigarette smoking. Heavy smokers have a higher incidence of pressure ulcers, and also appear to have higher recurrence rates.

**MARK:** Another good reason to stop smoking!



## 1.15 Summary



**Summary of Risk Factors**

Write the 11 risk factors for pressure ulcers in the box below.  
Click on **DONE** to see how many you remembered correctly.

Type your answers here

**DONE** Click **NEXT** to continue.

The image shows a slide with a light blue background. At the top, the title 'Summary of Risk Factors' is centered in a dark blue font. Below the title, there are two lines of red text: 'Write the 11 risk factors for pressure ulcers in the box below.' and 'Click on DONE to see how many you remembered correctly.'. In the center-left, there is a large, rounded rectangular text input box with a light beige background and a blue border. Inside the box, the text 'Type your answers here' is written in a small, dark font. At the bottom center, there is a blue button with the word 'DONE' in white capital letters. To the right of the button, the text 'Click NEXT to continue.' is written in a small, dark font.

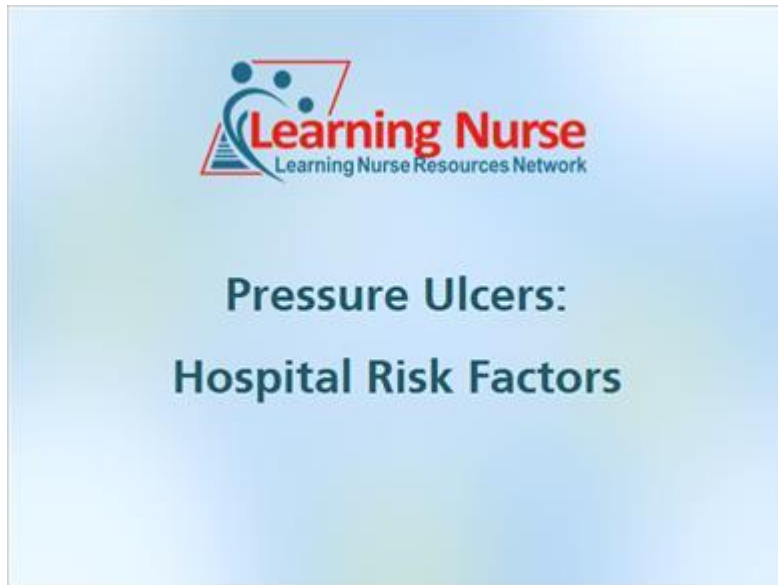
### Narration

**JILL:** We have now discussed the 11 known risk factors that contribute to the development of pressure ulcers. To see how many you remembered ... type the factors into the box on this slide. When you are finished, click on the **DONE** button to see how you did. After you have reviewed the answers, click on the **NEXT** button to continue this lesson. Mark ... you can do it too.

**MARK:** Okay!

## 2. Hospital Risk Factors

### 2.1 Section Title



**JILL:** Over the next few slides we are going to take a look at the risk factors in specific hospital environments. These include the operating room, intensive care, pediatrics and the emergency department.

**MARK:** Gee, it never occurred to me that hospitals add to the risks of developing pressure ulcers.

**JILL:** Yes they do. Accurate and current statistics are difficult to come by. However, the prevalence of pressure ulcers ranges from 10% to 23% in hospitalized patients in western societies. The proportion of newly hospitalized patients developing pressure ulcers ranges between 7% and 38%.<sup>1</sup> Estimates suggest that 50% of the most dangerous hospital acquired pressure ulcers are preventable.<sup>2</sup> Finally one study found that the incidence of pressure ulcers in surgical patients can be as high as 45%.<sup>3</sup>

**MARK:** Gee ... those numbers are much higher than we what would like to see.

[Reference: <sup>1</sup> Schoonhoven; <sup>2</sup> Virgo; <sup>3</sup> Pressure Ulcer Toolkit, p. 10 ]

## 2.2 Surgery



### Narration

**JILL:** Yes they are! Let's start by looking at the risks for pressure ulcers associated with surgery. Lack of mobility is a particular problem for patients recovering from the effects of surgery. Impaired mobility is present in individuals who have been sedated or anesthetized ... have undergone spinal surgery ... or may be recovering from a traumatic injury. All of these patients lose the ability to independently change position in bed.

**MARK:** What about the anesthesia? I'm sure that increases the risk.

**JILL:** Anesthesia blocks a patient's sensitivity to pain and pressure, causing tissue damage vulnerability. Anesthesia agents can result in some degree of vasodilation that is reflected in lowering of blood pressure and a decrease in tissue perfusion. Finally the compound effect of anesthesia and the cold operating room table causes decreased perfusion.

**JILL:** Another factor is the intensity and duration of pressure. Low-intensity pressure over a long period of time can cause tissue damage, just as high-intensity pressure can cause tissue damage in a short period. Most tissue can withstand excessive pressure only for short periods. It has

been found that even the healthiest patient is at risk for tissue damage if a surgical procedure is more than 4 hours.

**JILL:** And not surprisingly, increased age increases the risks of pressure ulcers during and after surgery. We have already talked about why older people have skin that is more vulnerable to pressure, shear and friction.

**MARK:** Wow, those are a bunch of risks! I can now see why extra care and attention needs to be paid to patients who may have had surgery.

**JILL:** Wait, we're not finished yet ... there are a few more risk factors.

**MARK:** Really? What are they?

## 2.3 Surgery 2



### Narration

### Narration

**JILL:** Peripheral vascular disease has an impact on pressure ulcer development for patients undergoing surgery. The blood supply in the legs becomes restricted due to the buildup of fatty substances in the arteries of the legs.

**MARK:** And thus with a reduced blood supply to the lower parts of the body, this increases the risk of pressure ulcers developing there.

**JILL:** Right. Another factor that affects risk is the type of surgical procedure. Patients that have heart, vein, trauma injury, transplant, or bariatric surgery, or procedures that involve at-risk positioning ... such as sitting ... are considered a high risk.

**MARK:** What about medications ... do they contribute to risks for developing pressure ulcers?

**JILL:** Unfortunately ... yes they do. Some medications contribute to breakage of skin integrity. Opiates can decrease sensory perception and mobility. Medications given to reverse hypotension can increase oxygenation, particularly in older adults. Hypnotics and sedatives can contribute to a decrease in blood pressure, causing peripheral hypo-perfusion.

**JILL:** Finally, patients being treated for other health conditions may be at greater risk. For example, diseases such as cancer, cardiovascular and peripheral deficiencies, diabetes and neurological or respiratory diseases, also affect tissue perfusion.

**MARK:** ... which contributes to the development of pressure ulcers. That is some list of risks! Hopefully this is a good reminder to nurses caring for post-operative patients that they need to be extra vigilant and careful.

**JILL:** Good point Mark. Surgery patients are already in enough pain and distress. The last thing they need is to develop pressure ulcers.

## 2.4 Intensive Care



### Narration

**JILL:** Patients admitted to an intensive care unit are among the main groups at high risk for pressure ulcer development.

**MARK:** I can understand why. These patients are often immobile for long periods of time. And because they are in intensive care, they obviously have more serious illnesses.

**JILL:** The most common sites for pressure ulcers in intensive care units are the sacrum and heels. This is because most intensive care patients are bedridden.

**MARK:** So that takes care of the intensive care unit. What was next ... oh yes ... pediatrics.

## 2.5 Pediatrics



### Narration

**JILL:** Yes, on to pediatrics. Acutely ill and immobilized neonates and children are particularly at risk for the development of pressure ulcers. The most common body sites include the ear, sacrum, occipital area and scapula. Infants and children are susceptible to pressure ulcers in areas different from those of adults. Knowledge of the more common pressure ulcer sites in children is important in preventive measures.

**MARK:** Good to know. What are the other risks to hospitalized children?

**JILL:** The length of time of endotracheal tube placement is related to the development of pressure ulcers. Intubation is designed to protect the child's airway but often requires restricting movement and immobilizing the child's head. The use of sedation and paralyzing agents also plays a role in reducing spontaneous body movements.

**MARK:** I see anemia is on the list. What role does anemia play?

**JILL:** Anemia has emerged as a highly significant factor in pressure ulcer development in children. However, the reasons for this are still unclear.



**MARK:** I see that nutrition is on this list as well. Same effects as for adults?

**JILL:** Yes. An estimated 15% to 20% of patients admitted to the pediatric intensive unit are malnourished. Nutritional factors, such as impaired intake, low birth weight, low body weight, unintentional weight loss and dehydration may all contribute to the development of pressure ulcers. Malnutrition may cause systemic and immunologic effects. These may further compromise this pediatric population if the effects limit their tissue tolerance to pressure, frictional forces and shear.

## 2.6 Pediatrics 2

**Pediatric Related Risks ... continued**

- Medical equipment*
- Limited sensory perception*
- Tissue tolerance*
- Chronic illness / conditions*



### Narration

**MARK:** So medical devices can cause tissue damage in children as well as adults?

**JILL:** Yes. Early staff identification of medical equipment or usage problems can help prevent skin injuries. Daily checks and care of the skin under continuous monitoring devices will prevent the development of pressure ulcers.

**JILL:** Another risk factor with the pediatric population is limited sensory perception. The decreased ability for patients to perceive or to respond to pressure discomfort means they are unable to change position. Infants may not be able to respond to perception of pressure because of immaturity or level of health.

**MARK:** Tissue tolerance ... is this the same as we discussed before?

**JILL:** Yes it is. Tissue tolerance is the second major determinant of pressure ulcer development. Tissue tolerance in pediatrics involves three extrinsic factors. One ... exposure to moisture ... such as perspiration, urine, feces, drainage from fistulas, and wounds. Two ... Exposure to friction such as casts or orthopedic devices; and three ... exposure to shear.

**MARK:** Chronic illness or conditions such as cerebral palsy, place the pediatric population at a high risk for developing pressure ulcers. These patients need special attention if medical equipment is used to stabilize them.

**JILL:** Good point Mark. Just to add that for patients with spina bifida, ill-fitting braces may irritate the skin. Because these patients lack feeling in certain parts of their body, they may not realize that wounds are developing. With these patients, devices such as prosthetics, wheelchairs and casts may also cause pressure ulcers.

**MARK:** So, now we go on to the emergency department.

## 2.7 Emergency



### Narration

**JILL:** Yes Mark. What do you think are the risk factors in the emergency unit?

**MARK:** One is that ... it is not uncommon for patients to spend hours, or even days, in emergency. These patients are often laying on hard support surfaces which can create pressure areas. Depending on the severity of their illness, they may not be able to adjust their position to relieve the pressure. The only other risk I can think of is ... that there may be tissue damage resulting from the transport to the hospital.

**JILL:** Yes, you have covered the main risk factors for pressure ulcers in emergency.

## 2.8 Summary



### Narration

**JILL:** That brings us to the end of this section on pressure ulcer risk factors in the hospital. Care to summarize Mark?

**MARK:** Sure thing. We started with surgery ... the risks for pressure ulcer development include immobility ... anesthesia ... pressure ... peripheral vascular disease ... type of surgery ... medications and comorbidities. Next we went to intensive care. The risk factors there are immobility for extended periods of time ... these patients have serious health issues ... and the most common pressure ulcer sites are the sacrum and heels.

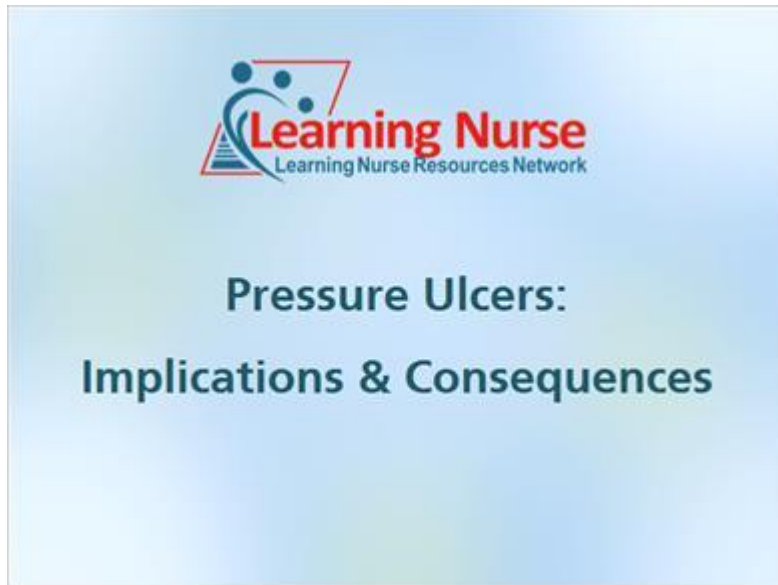
With the pediatric population we learned that sites for pressure ulcers often differ compared to adults ... length of intubation is a risk factor ... as are anemia and poor nutrition. Other risk factors for development of pressure ulcers among children are ... medical devices ... limited sensory perception ... tissue tolerance and ... chronic illness such as cerebral palsy.

Finally, we looked at the risks in the emergency ward. These include tissue damage due to transport to the hospital as well as laying on hard surfaces for long periods of time.

**JILL:** Good job, Mark.

## 3. Implications

### 3.1 Section Title



### Narration

**JILL:** We are now at the last section of this unit ... the implications and consequences of pressure ulcers. We are NOT going to overwhelm you with statistics to prove pressure ulcers are bad! Those of us caring for patients and residents already know that we need to do more to prevent pressure ulcers. We are only going to give a broad overview of the magnitude and implications of the problem.

**MARK:** Oh good ... I hate statistics! They make my head spin. (laughs)

## 3.2 Implications



### Narration

**JILL:** So Mark ... we have already taken a look at some the implications and consequences of pressure ulcers in our Introduction to this course. Why don't you briefly review these implications for us? ... Feel free to elaborate on any of these points.

**MARK:** Sure thing Jill!

The most obvious consequence is that pressure ulcers are a source of pain and discomfort to patients and residents. This is particularly true of category 3 and 4 pressure ulcers.

The second point is that pressure ulcers can lead to fatal complications. If the wound becomes infected, it can lead to a serious septic infection, making it difficult for patients to recover. Other common implications include acute bone infection, skin infections, joint infection and acute kidney failure. Fortunately, if pressure ulcers are detected early, they are treatable.

When a pressure ulcer develops, it adds to the burden of pre-existing illness or condition for the patient or resident. This means that when pressure ulcers develop while in hospital for treatment of other diseases, length of hospital stay and costs increase.

Speaking of costs, treating and healing pressure ulcers is extremely costly for health care organizations. One estimate<sup>5</sup> I saw places the overall annual cost in the United States at between \$5 billion and \$8.5 billion, with the cost of health care-acquired pressure ulcers running between \$2.2 billion and \$3.6 billion. That is **B** for billion! These expenses include additional nursing time, physician visits, prolonged stay in acute care or long term care, diagnostic and operative procedures, wound care products and equipment, and increased need for rehabilitation services. Jill, these are only the costs for one country ... America. So imagine the costs associated with pressure ulcers worldwide!

**JILL:** Yes, they are huge!

**MARK:** The final major consequence we want to mention is increased legal liabilities. Because pressure ulcers are preventable and avoidable, the development of them in patients under care may be considered negligence. As a result, more and more successful lawsuits are being filed by the patients and families against the health care organization and care givers involved.

**JILL:** Lawsuits are very stressful, time-consuming, costly and can be career killers. It is best to try and avoid them. Thanks for doing that Mark.

**MARK:** Happy to oblige!

[Ref: JCR p. 41]



### 3.3 Some Numbers

**Some Pressure Ulcer Statistics**

*Second iatrogenic cause of death after adverse drug reactions*

*PU prevalence rates vary:*

- *Acute care - 10% to 18%*
- *Long term care - 2% to 28%*
- *Home care - 0% to 29%*

The infographic features a cartoon nurse character in blue scrubs standing on the right side, gesturing towards the text. The background is a light blue gradient.

#### Narration

**JILL:** Now for some general statistics. However, I want to remind everyone that statistics can vary significantly due to country, year data was collected, and differences in what is being measured!

Having said that, pressure ulcers are the second leading cause of iatrogenic cause of death in the United States, second only to adverse drug events. Approximately 60,000 U.S. patients are estimated to die each year from complications related to health care-acquired pressure ulcers. An estimated 1.3 to 3 million patients in the United States have pressure ulcers, with the highest incidences occurring among older patients, particularly those who are hospitalized or in long term care organizations.

**MARK:** Again, this is one country. But these numbers show that pressure ulcers are a significant problem that needs to be addressed.

**JILL:** Here is one set of statistics about prevalence rates for different types of care organizations ... in acute care ... 10 to 18 percent ... in long term care ... 2 to 28 percent and in home care the

rates range from 0 to 29%. Obviously, these rates will vary depending on the risk factors associated with the individual and the institution.

**MARK:** I would think when planning and implementing pressure ulcer prevention programs, it is probably more important to focus on the risk factors for each individual rather than the type of institution.

**JILL:** Yes, I agree. Pressure ulcers are found in all types of health care organizations and institutions.

[Ref: JCR 37]

### 3.4 More Numbers



#### **Narration**

**JILL:** And here are few more statistics. The predominant ages of patients and residents developing pressure ulcers are between 71 and 80 years. Pressure ulcer prevalence in long term care organizations is estimated to be from 11 to 30 percent.

Children also develop pressure ulcers, primarily in the occipital region in infants and toddlers, and on the sacrum in the young child. It is estimated that pressure ulcers in pediatric intensive care units are as high as 27% and 20% in neonatal intensive care units.

**MARK:** Those numbers are in the ranges that we mentioned before.

**JILL:** There is no ONE correct number. All we are trying to do is provide a general sense of the prevalence of pressure ulcers.

[Ref: JCR p. 38]


### 3.5 Wound Implications

**Wound Implications**

*PU cause of death in 7-8% of all patients with paraplegia*

*One third of patients with PU die during hospitalization*

*Over half of patients who develop PU in acute care will die within 12 months*



#### Narration

**JILL:** Finally, here are just a few numbers about the wound implications of pressure ulcers.

Pressure ulcers are listed as the direct cause of death in 7 to 8 percent of all patients with paraplegia. Evaluation of large groups of patients has shown that one third of hospitalized patients with pressure ulcers die during hospitalization. More than half the patients who develop pressure ulcers in the acute setting will die over a 12 month period. We are NOT saying that pressure ulcers were the primary cause of death. However pressure ulcers were contributing factors in some instances.

**MARK:** Any more statistics?

**JILL:** No, Mark ... I think that these are enough to make our point. For those who want more statistics and research data, we have provided a very good resource on the next slide.

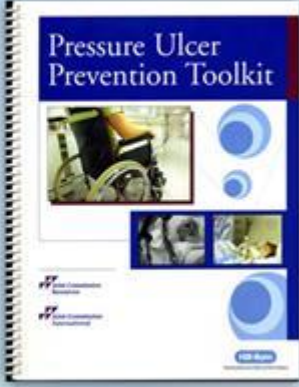
**MARK:** I am now convinced more than ever that we need to do a much better job in assessing, preventing and treating pressure ulcers. What I really, really, really want to learn now is ... what do I ... as a nurse ... have to do to make a difference?

**JILL:** That Mark ...is what you will learn in the remaining modules! This is Jill ... along with Mark saying thanks for being with us for this module. We will see you again soon.

### 3.6 Resources

**Resources**

*These and many more statistics can be found in Chapter 2 of the Pressure Ulcer Prevention Toolkit by the Joint Commission.*

The image shows the cover of a spiral-bound notebook titled "Pressure Ulcer Prevention Toolkit". The cover is primarily white with a blue header and footer. The title is in white text on the blue header. Below the title, there are three small images: a person in a wheelchair, a person lying in a hospital bed, and a close-up of a person's leg. The Joint Commission logo is visible in the bottom left corner, and a small blue button with the text "View More" is in the bottom right corner.

### Narration

[No narration]

### 3.7 The End



### Narration

[No narration]