Seamless Continuum of Care Relating to Pressure Ulcers

“Protocols are the Glue”

James G. Spahn, MD, FACS
©1995-2005, EHOR Inc.

Times are changing

Important to differentiate wound types

- Pressure ulcers
- Vascular
- Neuropathic
- Traumatic
- Other

Pressure ulcers can develop within 2 – 6 hours
Definition of pressure ulcer according to the Centers for Medicare & Medicaid Services (CMS) Tag F314

Pressure Ulcer: A pressure ulcer is any lesion caused by unrelieved pressure that results in damage to the underlying tissue(s). Although friction and shear are not primary causes of pressure ulcers, friction and shear are important contributing factors to the development of pressure ulcers.


---

Pressure ulcers

- Deep tissue injury is now recognized as a major occurrence and will change the way we approach pressure ulcer prevention and treatment.

- Discrepancy in time between when pressure ulcers (ischemic necrosis) develop and when it is clinically recognized.

---

Pressure ulcers

- A full thickness pressure ulcer is to be considered at-risk for future pressure ulcer formation.

Sentinel events cover nosocomial stage III and IV pressure ulcers.
Not all pressure ulcers are avoidable!

BUT precaution and treatment protocols must be in place and good medical practices must be used in an attempt to prevent and heal pressure ulcers.

Definition of avoidable vs. unavoidable pressure ulcers according to CMS. Tag F314

Avoidable: means that the resident developed a pressure ulcer and that the facility did not do one or more of the following: evaluate the resident's clinical condition and pressure ulcer risk factors; define and implement interventions that are consistent with resident needs, resident goals, and recognized standards of practice; monitor and evaluate the impact of the interventions; or revise the interventions as appropriate.

Definition of avoidable vs. unavoidable pressure ulcers according to CMS. Tag F314

Unavoidable: means that the resident developed a pressure ulcer even though the facility had evaluated the resident's clinical condition and pressure ulcer risk factors; defined and implemented interventions that are consistent with resident needs, goals, and recognized standards of practice; monitored and evaluated the impact of the interventions; and revised the approaches as appropriate.
Individual risk factors must be recognized and addressed in an individualized care plan.

Accumulative techniques (Braden/Norton) are no longer to be used exclusively.

Modifiable vs. Non-modifiable

Factors that influence the prevention and treatment of pressure ulcers must be recognized, addressed and documented.

Here or on the way...

- Higher Reimbursements
- Citations
- Civil Penalties
- Internet Reporting

...on evaluations for individual facilities/agencies.
Pressure ulcer litigation is still a major occurrence that seems to be spreading nationally and internationally.

The need to develop an immediate, low-tech and standardized mechanism to promote awareness concerning the risk factor relating to pressure ulcer prevention and treatment.

Prevention of pressures ulcers will be

PARAMOUNT
Pressure ulcers have become a core quality indicator.

Continuum of care will be a CMS initiative

...and it will have to be seamless!

By connecting the dots, proper Continuum of Care is accomplished.

*Pressure Ulcer Management from Admittance through Discharge and Beyond...*

- Acute Care
- Emergency Room
- Operating Room
- Post Anesthesia Care Unit
- Intensive Care
- Nursing Unit
- Step Down
- Sub-Acute Care
- Skilled Nursing Care
- Assisted Living Care
- Home Health Care
- Home (Self Care)
Developing an individualized care plan

Important to determine the wound types

- Pressure ulcers
- Vascular
- Neuropathic
- Traumatic
- Other

Determining the risk factor categories

- Cognition
- Mobilization & Ambulation
- Nutrition & Hydration
- Moisture and Incontinence
- General Medical Co-morbidities (Including Medication Usage)
- Existing Pressure Ulcers (Including Deep Tissue Injury)
- Previous Pressure Ulcers (Closed Stage III, IV and Unstageable)

Skin & Soft Tissue Assessment

- History & physical examination
- Visual inspection
- Palpitation of site
  - Texture
  - Temperature
  - Sensation
- High frequency ultrasounds evaluation as needed
Create Individualized Care Plan

- Address each risk factor separately
- Create a care plan
- Document expectations for care plan
- Re-assess care plan and perform skin/soft tissue assessment on a timely and scheduled basis
- Document results of care plan

---

Define

Modifiable or Non-modifiable risk factors relating to pressure ulcer prevention and treatment

Define

Avoidable vs. Unavoidable
Define conditions that determine pressure ulcer occurrence or deterioration

---

Document ALL events

- In real time

REMEMBER

Medical Records are Legal Documents!
Facility or agency creates awareness of the pressure ulcer problem

A protocol has been developed to be utilized on a timely basis

Protocol calls for:

- Soft tissue assessment
- Wound assessment, if present
- Pressure ulcer risk factor evaluation upon admission and on a scheduled basis
- Creation of an individualized care plan
- Maintenance of the individualized care plan through all levels of care in a seamless fashion
Recognize the specific risk factors that will effect the specific patient

1. Cognition

2. Mobilization & Ambulation
   Limited mobility and/or ambulation secondary to motor and/or sensory afflictions

3. Nutrition & Hydration

4. Moisture and Incontinence
   Fecal
   Urinary
   Combination

5. General medical co-morbidities
   Medical condition and/or medications that may be a risk factor for the development and/or delay of healing of pressure ulcers
6. Existing Pressure Ulcers
   Partial or full thickness wounds
   Deep tissue injury

7. Previous Pressure Ulcers
   Closed Stage III, IV and
   Unstageable

Understand why the risk exists and
how it affects the specific patient

History and physical exam
   Including skin and soft tissue
   assessment

Lab, x-ray and misc. tests
Modifiable or non-modifiable
Diagnosis and prognosis

Create an individualized care plan that
addresses the recognized risk factors

Recommended Individualized
Treatment Plan
+
Individual’s Choice

= Individual Care Plan
Continuum of care is part of discharge planning requirements and legal responsibilities

- Document the individualized care plan
- Define expected results

Re-analyze the care plan if no improvement occurs, new risk factors develop or no longer become a problem

Insure the care plan is communicated to all staff, at all times and for all surfaces, door-to-door and beyond to the next level of care
Continuum of care is part of discharge planning requirements and legal responsibilities

Develop a simple, low cost and standardized pressure ulcer alert system that allows immediate response to the at-risk patient so as to maintain a seamless continuum of care — one that the pressure ulcer problem is recognized

Summary

1. Recognizing the Problem

“Despite the publication of clinical practice guidelines addressing pressure ulcer prevention and treatment by the Agency for Health Care Policy and Research (AHCPR) within the past decade, the length of stay and cost associated with pressure ulcers continues to rise.”


Summary

1. Recognizing the Problem

Clinical Outcomes

Makris J. An update on horizontal support surfaces. Ostomy/Wound Management 1999; 45(3A (Suppl):70S-77S.


2. Understanding the Problem

Pressure Ulcer: Mechanical stress induced ischemic necrosis of three-dimensional soft tissue predominantly of nutritionally and mobility impaired individuals due to placement on a support surface.

Pressure ulcer definition according to Dr. Spahn.

---

Pathophysiology and Aetiology of Pressure Ulcers

![Graph showing pressure intensity-duration curve]

Figure 2.5: Parabolic pressure-intensity-duration curve. Reproduced with permission from Reesink & Rogers (1990). Bedside Biomechanics, Macmillan Press.


---

2. Understanding the Problem

Understanding the relationship between soft tissue injury and support surfaces (i.e. bed, ER cart, OR table, chair, etc)

Since The body is 3-dimensional.

Then Deliverance of gradient pressure and shear mechanical stresses by the support surface (solids, gels and powered fluids).

Will Cause soft tissue distortion, change in velocity and flow pattern of the circulation, causing endothelial damage resulting in ischemia and possible infarction of the soft tissue at risk (pressure ulcer).
2. Understanding the Problem

When Selecting a Support Surface

Thus
Selection of these types of media must be evaluated by
Scientific facts and soft tissue strain visualization
(CT or MRI scanning) since pressure mapping is
2-dimensional and unreliable in defining causation
Of soft tissue distortion.

Therefore
If the body is 3-dimensional then volumetric support
(flotation) is needed to maintain proper tissue orientation.

Then
A static media (gas, liquid, sol) is needed to float the body in a
flexible container that is properly filled or inflated.

And
Static air is preferred to liquid or sol because it has less
density and no viscosity.

FLOTATION THERAPY
“Equalized distribution of the body’s weight”

Nature’s
Flotation
ALL SUPPORT SURFACES SHOULD:

- Redistribute weight equally in a 3-dimensional manner.
- Minimize pressure, shear and friction injury.
- Assist in moisture and temperature control.
- Minimize surface contamination and bioaerosol spread.
- Be easy to clean.
- Aid in patient transferring and mobilization.
- Be compatible with multiple surfaces.
- Be cost effective.

Summary

Please Remember

○ No support surface can protect the ankle/heel region from pressure ulcers at all times

Not because they are bad products

This occurs because of:

○ Recumbent Physiologic Changes
○ Hemodynamics
○ Anatomy of the Region

3. Addressing the Problem

Usage of pressure-reducing devices alone can cause an increase in the incidence of pressure ulcers while protocols decrease incidence by 50%.


3. Addressing the Problem

Protocols are the “Glue” that holds everything together throughout the Continuum of Care and beyond.

Clinical Protocols for Pressure Ulcers Should Address:
- Cognition
- Mobilization & Ambulation
- Nutrition and Hydration
- Moisture and Incontinence
- General Medical Co-Morbidities (Medication Use)
- Existing Pressure Ulcers (Deep Tissue Injury)
- Previous Pressure Ulcers (Closed Stage III, IV and Unstageable)

WHO
By all caregivers and support staff

HOW
With a timely assessment and risk analysis

WHEN
On admission and through scheduled assessments throughout a patient’s stay and discharge

WHY
Health-impaired people develop pressure ulcers

WHERE
In all places and on all surfaces utilized throughout the Continuum of Care.
Conclusion

SEAMLESS