Composing a Collaborative Symphony to Decrease Hospital Acquired Pressure Ulcers (HAPUs)

Moses Taylor Hospital

Scranton, PA

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•Moses Taylor Hospital

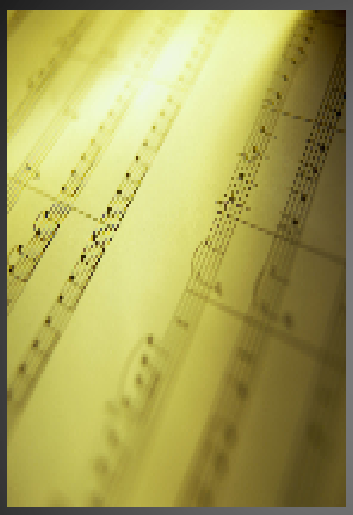
- Founded in 1892 in Scranton, PA
- A 214 bed institution
- Accredited by TJC

- Mission: Moses Taylor Hospital will provide continuously improving quality and cost effective health care that is customer and community focused

Demographics

- Lackawanna County: Total population: 213,295
  - Pop. ≥ 65 yrs: 41,542 (19.5% compared to 12.4% nationally) US Census Bureau: 2000
- Moses Taylor Hospital (FY 2005)
  - 59 % were 65 and older
  - 50 % were 70 and older

Composing a Collaborative Symphony to Decrease HAPUs



The Inspiration:

The Significance

The Burden of Pressure Ulcers

- Prevalence: 5-7% of acutely ill inpatients suffer from some form of Pressure Ulcer
- 2.5 million patients are treated annually for complications of Pressure Ulcers
- Nearly 60,000 of these patients die each year from those complications
- Avg. Patient LOS: 5 days with a cost of $10,000.
- Avg. LOS for a patient with a pressure ulcer:13-14 days with an associated cost of $16,755 - $20,430.
- Cost to the healthcare industry nationally: $11 billion per year

Sources: *National Pressure Ulcer Advisory Panel, Pressure Ulcers in America: Prevalence, Incidence and Implications for the Future (Monograph),2001* AHRQ Number 341, January 2009

Hospitals are being held accountable for negative outcomes.

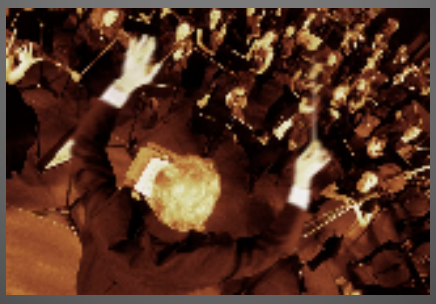
- PU's are a significant cause of hospital morbidity
- The trend towards Mandatory Reporting will require further quantification of PU incidence
- Regulatory agencies are making hospitals accountable for negative outcomes

A NEVER EVENT

- CMS and IHI : Providers must have pressure ulcers prevention measures with evidence based guidelines and protocols.
- ***No increased reimbursement for hospital acquired ulcers*** CMS-Inpatient Final Rule FY 2008
  - **Effective October 1, 2008, pressure ulcers will not be assigned a higher-paying DRG unless present on admission**

The Opus of Change

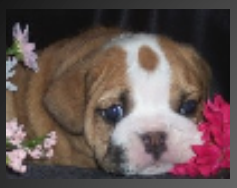
A multidisciplinary team
is assembled



The Serenade Begins

Pressure Ulcer Prevention!

- Pilot a prevention program on the Telemetry Unit. This unit has the largest population of cardiopulmonary and renal patients with many comorbidities, all high risk.
- Conductors: Chief Medical Officer
  Director of Nursing
  WOCN
  Telemetry Nurse Manager
  Clinical Coordinator Telemetry
  Nursing Administrative Assistant



Our mascot, Braden

A PUP is Born: Putting the team together

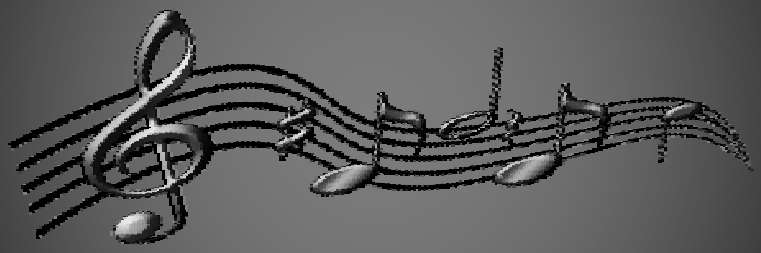
Overture

- The Skin Care Team, known now as the "PUP" team, quickly realized the enormity of their project. Members from other disciplines were needed to make the effort a success.
  - Added floor management from Orthopedics, Oncology, ICU, as well as the Geriatric CRNP and a Registered Dietician
  - PT/OT, IT, Staff Development also get on the bandwagon
- Team met weekly and became more visible by creating and implementing staff education and by publicizing in the PUP Newsletter.

PUP Team Goals

- Improve the process of identifying at-risk patients
- Follow evidence based guidelines and practice to develop standardized protocols
- Educate all licensed and unlicensed staff members involved in patient care
- Improve interdepartmental communication
- Develop educational materials for patients and families

The First Movement



Braden Scale: *Gold Standard*

Developed in 1984

Barbara J. Braden, PhD, RN

Nancy Bergstrom, PhD, RN

- Best Tool for predicting Pressure Ulcer Risk
- Valid, Reliable, Used for all Skin Colors

Braden Score

Lower Score = Higher Risk of Pressure Ulcer

MTH Score of 18 or Less Identifies Risk [consistent with the Research]

Braden Score: Prevention Levels

PREVENTION LEVELS

LEVEL 5	LEVEL 4	LEVEL 3	LEVEL 2	LEVEL 1
Not at Risk	**At Low Risk**	**Moderate Risk**	**High Risk**	**Very High Risk**
Braden Score > 18	Braden Score 15 - 18	Braden Score 13 - 14 *	Braden Score 10 - 12 *	Braden Score 9 or be
-No Skin Tear Risks		☐	☐ ☐	☐ ☐

Braden Score = _____

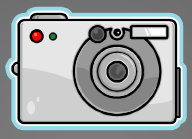
Risk Level =_____

If there is any risk for skin tears, advance risk level.

Additional Risk: ☐ Yes ☐ No

Risk Level = _____

Going Digital: Improving Assessment and Documentation



A state of the art digital camera was selected and put into use on each patient care department to improve initial and ongoing photo documentation.

IT and Informatics Helped to Streamline Documentation

- Revisions were made to Initial Skin Assessment and Ongoing Pressure Area Record.
- Laminated Pressure Ulcer Stages, Braden Scale, Risk Levels and Nursing Interventions . Placed in all Nursing documentation areas.

Monitoring Malnutrition

- Monitor albumin 3.4-4.8g/dL [risk below 2.8]
- Pre-albumin less than 5 mg/dL [risk 15 or less]

Prealbumin …important BECAUSE

- It has 48 hour half life and shows pt's current status
- It is sensitive to improved nutrition intake
- Better than calorie count
- Can tell us if pt is consuming & absorbing enough nutrition.

Pressure Ulcers Facts

- Pressure Ulcer can develop in 1 day
- Pressure Ulcers need additional Calories, Protein, Fluids, Vitamins & Minerals.
- Malnutrition was major cause of pressure ulcers in 30% of the Nursing Home cases

National Pressure Ulcer Advisory Panel, Pressure Ulcers in America: Prevalence, Incidence and Implications for the Future (Monograph),2001

Lyde CH, Pressure ulcer prevention and management. JAMA 289 (2) 223-226, January 2003.

Strategies to target At-Risk patients

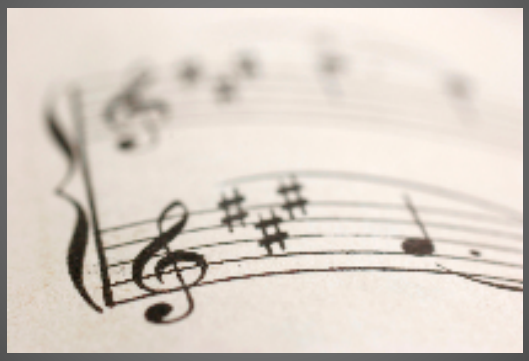
- Age and admitting diagnosis
- Braden Score and Risk Level
- Length of stay (inpatients with a LOS >5 days)
- Products/reports from the patient supply system and Pharmacy sent to floor management for further evaluation
- Laboratory studies (Albumin and Pre-albumin levels)

Optimizing Care at the Bedside

- **New Line of Incontinent Care products**
  - Adult wipes
  - Convatec 1-2-3™ skin care products

- **Making supplies readily available to patients and nurses**
  - air mattresses
  - Chair cushions

The Second Movement



Measuring needs through data
Proactive Not Reactive!

- Collected baseline data March through October 2008
- Concurrent chart reviews conducted, not retrospective.
- Monthly reports and outcomes
- Began tracking of pressure ulcer incidence

Pressure Ulcer Definition

We found that we needed to re-educate bedside nurses to the original 4 stages as well as:

- deep tissue injury
- unstageable pressure ulcers

Clarification was necessary to avoid over-reporting of skin issues

Can not have a pressure ulcer without pressure

More Risk Factors

Malnutrition

- Malnutrition can be seen even at desired body weight or Overweight with Protein malnutrition
- Less fat make bones more prominent, causing a pressure gradient, putting patient / resident at increased risk
- Can lead to edema & reduced blood flow in the skin, causing ischemic damage **[Weeping Edema is a sign of severe protein malnutrition]**
- Causes muscle loss and the inability to shift position, which leads the resident to spend a longer time in one position

Dehydration:

- Can cause poor skin turgor
- Impaired cell metabolism
- Decreased functional ability
- Confusion / Change in mental status

Significant Weight Loss:

- Risk of pressure ulcers increased by 74% with involuntary weight loss
- Significant unintended weight loss may indicate under-nutrition or worsening health status
- Low Body Weight BMI below 19

Optimizing Nutrition for "At-Risk" population

IT department helped by adding RD alerts for the Risk Prevention

Food Service Dept. improved timing of supplement delivery for better compliance

Nutrition Intervention

- 30-40 kcal/kg Ideal weight/day
- 30 cc/kg body weight/day of fluid
  - Renal patient specific calculations
  - CHF patients 25cc/kg Ideal Weight
- Unless contraindicated:1.2-1.5 gm Protein /kg of Ideal Weight
- Multivitamin /Minerals as appropriate

Pharmacologic and Nutrition Intervention

Vitamin & Mineral Literature Review:

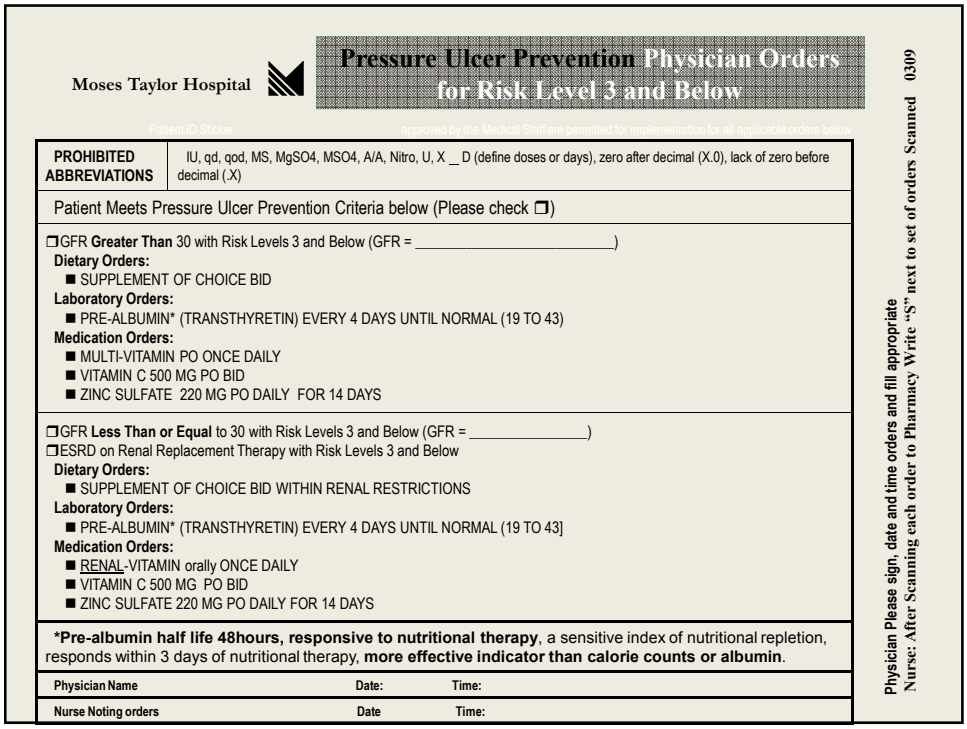
- Vit. C – 1000-2000 mg/day to aid in collagen synthesis
- Vit. A – 20,000-25,000 IU/day to enhance collagen formation
- Zinc – 66-110 mg ZnS/day – collagen formation and protein synthesis-reassess after 4-6 wks.

Nutritional Risk Protocol order sticker developed and approved.

Nutritional Risk Protocol Orders dev: Dec 04, revised: Sept 2008

- ❒ 1. supplement of choice BID #213
- ❒ 2. serial prealbumin every 4 days until normal value
  [non-fasting transthyretin PRAL] #940 [normal 19 to 43]

Physician Signature _____ date: ____ time: _____



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Pressure Ulcer Prevention Physician Orders for Risk Level 3 and Below

Patient ID Sticker

approved by the Medical Staff are permitted for implementation for all applicable orders below

PROHIBITED ABBREVIATIONS	IU, qd, qod, MS, MgSO4, MSO4, A/A, Nitro, U, X _ D (define doses or days), zero after decimal (X.0), lack of zero before decimal (.X)

Patient Meets Pressure Ulcer Prevention Criteria below (Please check ❒)

❒GFR **Greater Than** 30 with Risk Levels 3 and Below (GFR = _____)

Dietary Orders:
- SUPPLEMENT OF CHOICE BID

Laboratory Orders:
- PRE-ALBUMIN* (TRANSTHYRETIN) EVERY 4 DAYS UNTIL NORMAL (19 TO 43)

Medication Orders:
- MULTI-VITAMIN PO ONCE DAILY
- VITAMIN C 500 MG PO BID
- ZINC SULFATE 220 MG PO DAILY FOR 14 DAYS

❒GFR **Less Than or Equal** to 30 with Risk Levels 3 and Below (GFR = _____)
❒ESRD on Renal Replacement Therapy with Risk Levels 3 and Below

Dietary Orders:
- SUPPLEMENT OF CHOICE BID WITHIN RENAL RESTRICTIONS

Laboratory Orders:
- PRE-ALBUMIN* (TRANSTHYRETIN) EVERY 4 DAYS UNTIL NORMAL (19 TO 43]

Medication Orders:
- RENAL-VITAMIN orally ONCE DAILY
- VITAMIN C 500 MG PO BID
- ZINC SULFATE 220 MG PO DAILY FOR 14 DAYS

***Pre-albumin half life 48hours, responsive to nutritional therapy**, a sensitive index of nutritional repletion, responds within 3 days of nutritional therapy, **more effective indicator than calorie counts or albumin**.

Physician Name	Date:	Time:
Nurse Noting orders	Date	Time:

Physician Please sign, date and time orders and fill appropriate
Nurse: After Scanning each order to Pharmacy Write "S" next to set of orders Scanned 0309

Multidisciplinary Approach

- Identified needs for education of Transporters in turning, moving and repositioning patients.
- Worked closely with documentation specialists to better meet guidelines.
- RD: provided expertise on the impact of nutrition on skin integrity.
- IT: contributed clinical and technological pearls by revising and revising and revising forms.

Finale

All disciplines working in harmony for optimal patient centered outcomes.

NDNQI

The Process is refined and streamlined

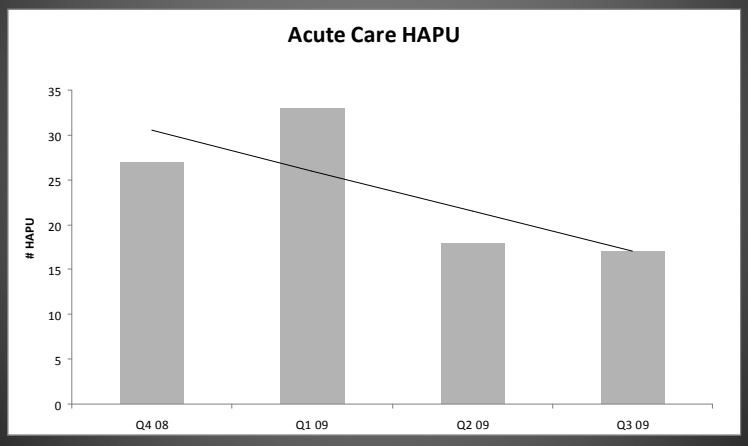
Pressure Ulcer Prevalence study process was streamlined and collected data are submitted to NDNQI to see how MTH compares to national benchmarks

The Outcomes

- Decreased pressure ulcer incidence
- Limited complication from hospital acquired pressure ulcers
- Improved quality service/ customer satisfaction
- Reduced costs attributed to pressure ulcer complications
- Participation in **NDNQI**

37% Decrease in HAPU

4th Qtr '08 thru 3rd Qtr '09



The beat goes on…

All HAPU charts are reviewed monthly to identify failures or weakness in our processes.

RNs pick up the baton and become the maestros that conduct

The HAPU Serenade

Empowering the RNs to orchestrate positive outcomes was the chief motivating factor for change…

References & WEB Sites

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- www.medqic.org
- www.wocn.org

NDNQI participation and Pressure Ulcer Prevalence studies make RNs virtuosos that continually review the process, identify failures and weaknesses and course correct in real time….giving way to a crescendo of improved patient care!

Thank You

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