



Improving Patient Safety Through a Dynamic Model for Graduate Medical Education

2009 Quality Colloquium at Harvard

Yosef D. Dlugacz, PhD, Charles E. Cal, RN, MS, MBA & Gisele Wolf-Klein, MD
August 18, 2009

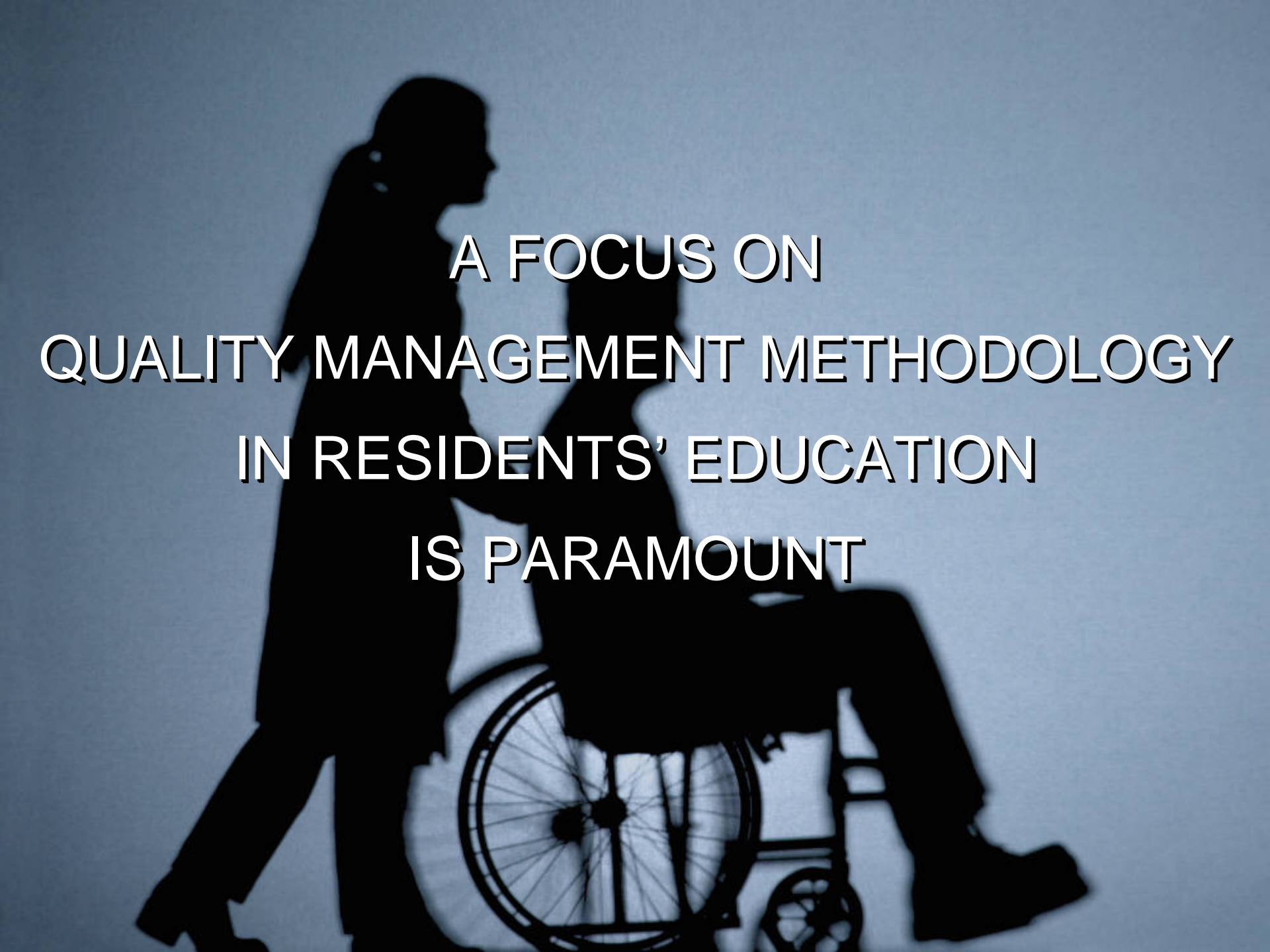
The background of the slide features silhouettes of a doctor in a white coat and a patient in a wheelchair, walking from left to right against a light blue gradient background. The doctor is in the foreground, and the patient is slightly behind and to the right.

“Doctors are well prepared in the science-
base of medicine.”

“Doctors are well prepared in the skills
necessary to care for individual patients.”

“Few are qualified or trained with the skills to
improve care and improve patient safety.”

- David B. Nash, MD, MBA
Dean, Jefferson School of Population Health
IHI Open School Audioconference: April 27, 2009

The background of the slide features a blue-to-white gradient. In the foreground, there are black silhouettes of a person in a wheelchair and a caregiver walking from left to right. The caregiver is on the left, leaning slightly forward, and the person in the wheelchair is on the right. The text is overlaid in the center of the image.

A FOCUS ON
QUALITY MANAGEMENT METHODOLOGY
IN RESIDENTS' EDUCATION
IS PARAMOUNT

Why Quality Management Methodology is the Focus of Residents' Education?

- To meet the National interest (ACGME)
- To orientate the physician towards a Just Culture by:
 - Reinforcing the researcher role
 - Empowering the clinician to make sustainable change
 - Providing the insight to view issues in the aggregate as opposed to a population of one
 - Aligning personal/professional goals with strategic healthcare goals
 - Making them the engine of change

Multidimensional Geriatric Medical Education

The Art of Observation™

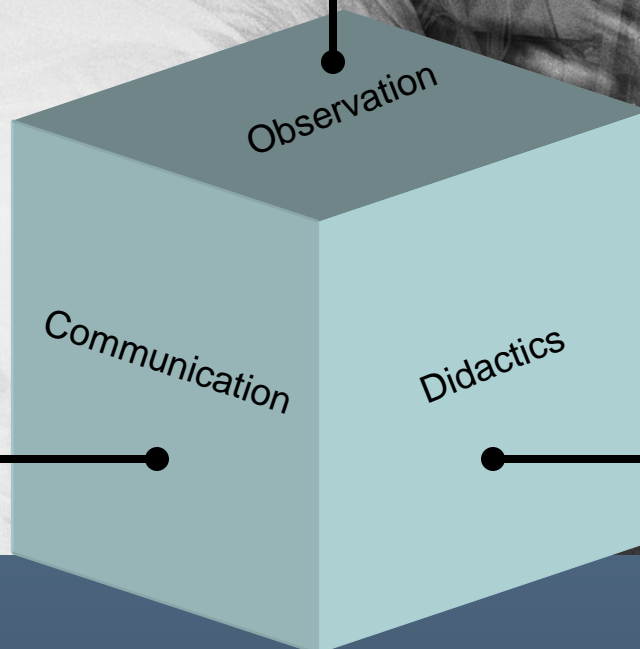
Field trip to **The Frick Collection**, a New York City museum, with a focus on improving skills of observation and description through the study of portraiture

Advanced Communication Skills Workshop

Focused on development of interpersonal communication skills and doctor-patient relationship

Didactic Educational Sessions

Geriatric Research and Education Summer Core Curriculum



Quality Management Methodology



How to Incorporate Quality Management into Medical Education

- ✓ Develop curricula to address the requirements for:
 - ✓ Systems-based Practice and
 - ✓ Practice-based Learning and Improvement competencies
- ✓ Combine didactic methods:
 - ✓ Lectures
 - ✓ Case studies/group
- ✓ Empower resident-initiated quality management research projects that involve:
 - ✓ Group feedback and mentoring
 - ✓ IRB approval

Changing Thought Encourages a New Way to Think About Clinical Practice

- Residents are asked to operationalize their clinical experience
- Residents are trained to examine assumptions underlying care
- Residents are taught to work in teams
- Residents are required to apply statistical analysis to evaluate their practice

Changing Thought Requires Residents to Ask – and Answer – Hard Questions

- Why is this procedure necessary?
- What are the risk/benefits of specific treatment options?
- How do physicians and patients/families determine whether palliative care or intervention is the appropriate option?
- How can physicians ensure that patients understand and consent to treatment?

Changing Thought Requires Residents to Ask – and Answer – Hard Questions

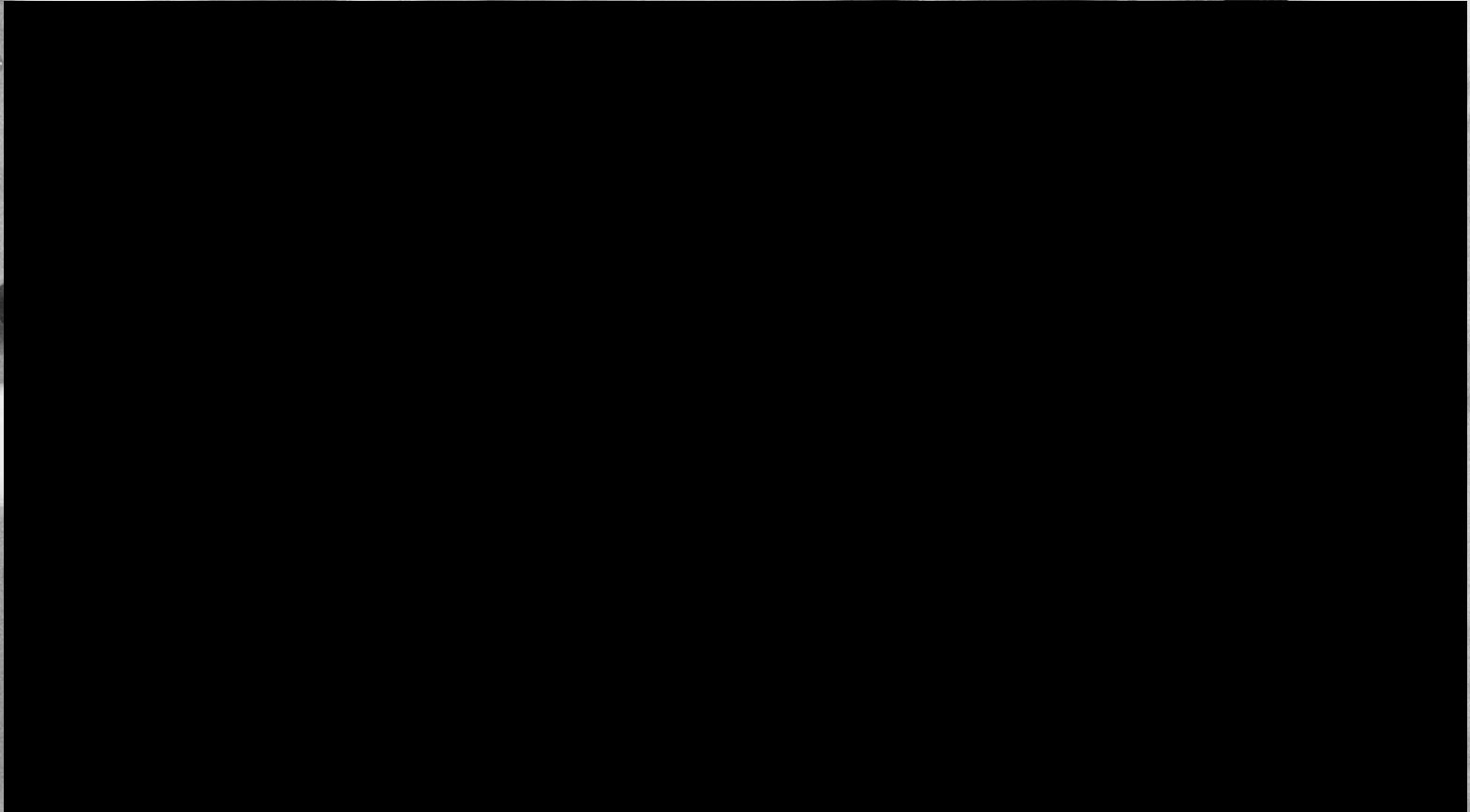
- What criteria should be used for patient selection for procedures/treatments?
- What ethical issues are involved with certain procedures/treatments?
- How can physicians assess the effectiveness of their communication with their patients?
- How can effective channels of information transfer with other professionals be evaluated?

Specific Course Instruction Includes Developing Research Skills and Techniques from Hypothesis to Publication

- Prioritizing an issue for analysis and improvement
- Understanding the role of the null hypothesis
- Using the medical record as a resource
- Developing assumptions for defined project
- Reviewing the relevant literature
- Defining a project
- Identifying variables
- Understanding issues about appropriate sample size

- Defining the appropriate numerator and denominator for the patient population being studied
- Defining appropriate measurements
- Collecting data
- Gaining familiarity with IRB approval requirements
- Communicating results effectively to peers via journal articles or professional presentations

Video Clip



Applied Clinical Quality Management and Research Methods Project Template for Project Development and Presentation

This template will be used as a logical framework for the presentation of all work throughout the course, beginning with the July 2, 2009 didactic session and ending with the July 28, individual project presentations.

July 14, 2009

- i. **Topic** – Why and how topic selected. Significance/Relevance of your selected topic.
- ii. **Research Question?** Formulate into one question and should be clear and concise and identify phenomena to be studied.
- iii. **Building your case** by conducting a thorough Literature Review (Why this topic is important and what is the impact to your study population). Summarize the literature.

July 23, 2009

- iv. **Hypothesis.** (Define the Null Hypothesis in quantifiable terms)
- v. **Definitions/Criteria:** Numerator/Denominator/Inclusion/Exclusion
- vi. **Variables:** Independent/Dependent (list key variables and identify the impact that they have on your study population)

July 28, 2009

- vii. **Data Collection Tool.** (Consider this your data abstraction instrument which will need to be pretested)
- viii. Where is the data located that you are considering collecting?

End Results: Manuscripts in Press and Publications

N = 6

- Lester P, Sykora A, Wolf-Klein G, Pekmezaris R. Do Geriatric Physicians Establish Advance Directives for Themselves. *Gerontology and Geriatrics Education*.
- Chang E, Wang J, Jacoby S, Hussain R, Wolf-Klein G. Mandatory Cognitive Screening in Hospitalized Elderly: Are We Missing the Diagnosis? *J Am Geriatr Soc*.
- George-Saintilus E, Tommasulo B, Cal C, Hussain R, Mathew N, Dlugacz Y, Pekmezaris R, Wolf-Klein G. Pressure Ulcer PUSH Score and Traditional Nursing Assessment in Nursing Home Residents: Do They Correlate? *J Am Med Dir Assoc*. 2009; 10:141-144.
- Nemat H, Khan R, Ashraf MS, Matta M, Ahmed S, Edwards B, Hussain R, Lesser M, Pekmezaris R, Dlugacz Y, Wolf-Klein G. Diagnostic Value of Repeated Enzyme Immunoassays in Clostridium Difficile Infection (CDI). *Am J Gastroenterology* advance online publication, April 14 2009; doi:10.1038/ajg.2009.174
- Cohen J, Jasimuddin SK, Tommasulo BC, Shapiro EY, Singavarapu A, Vernatter J, Hussain R, Cal C, Dlugacz Y, Mattana J, Wolf-Klein G. Underdiagnosis of Chronic Kidney Disease in the Nursing Home Population. *J Am Geriatr Soc*.
- Ashraf MS, Hussain SW, Rivera M, Agarwal N, El-Kass-G, Hussain R, Mathew N, Pekmezaris R, Cal C, Edwards B, Alano G, Louis B, Wolf-Klein G. Hand Hygiene in Long-Term Care Facilities: Are We Following the Guidelines? In press

End Results: Regional, National and International Presentations

N = 49

- American Medical Directors' Association
- American Geriatrics Society
- Society of Healthcare Epidemiology of America
- American Public Health Association
- Academic Internal Medicine Week
- American College of Preventive Medicine
- Accreditation Council for Graduate Medical Education
- Various other scientific meetings

PRESSURE ULCER MONITORING: OBSERVATIONAL VERSUS QUANTITATIVE MEASUREMENTS (PUSH TOOL) IN NURSING HOME RESIDENTS

Erica George-Saintilus, MD¹; Barbara Tommasulo, MD²; Charles E. Cal, MBA, MS, RN, CPHQ²; Roshan Hussain, MPH, MBA³; Nimmy Mathew, MA³; Yosef D. Dlugacz, PhD³; Gisele Wolf-Klein, MD¹



ABSTRACT

Introduction/Objective: Pressure ulcers are a major problem in the long-term care industry. They are common in nursing homes. The National Pressure Ulcer Advisory Panel (NPUAP) introduced in 1997 the Pressure Ulcer Scale for Healing (PUSH tool) to track healing. The tool consists of three parameters measured weekly: length times width, exudate amount, and tissue type.

Design/Methodology: A retrospective study was conducted in a nursing home. The observation from the nurse compared to the change in the correlation analysis was then performed. Agreement in nurse's assessment (improved score +1 or more, 0 or -1 or more) was determined.

Results: We performed a cross-sectional study of 30 residents. The average of 8 measurements. If documented improvement in ulcers, there was only 46% concordance. In 121 clinically improved ulcers, there was only 46% concordance. In 33 clinically deteriorated ulcers, there was only 46% concordance. In the longitudinal agreement between the clinician PUSH tool (kappa range: 0.04).

Conclusion/Discussion: Our clinical assessment of pressure ulcers using the PUSH tool is not standard of care. Since the multidisciplinary team, the PUSH tool is not used in all facilities to allow for an objective assessment. PUSH should become standard of care. Documentation should be uniform.

Objective: The National Pressure Ulcer Advisory Panel (NPUAP) introduced in 1997 the Pressure Ulcer Scale for Healing (PUSH tool) to track healing. The tool consists of three parameters measured weekly: length times width, exudate amount, and tissue type. We sought to study the correlation between the PUSH measurements and the traditional nursing observational records.

Publication: George-Saintilus E, Tommasulo B, Cal C, Hussain R, Mathew N, Dlugacz Y, Pekmezaris R, Wolf-Klein G. Pressure Ulcer PUSH Score and Traditional Nursing Assessment in Nursing Home Residents: Do They Correlate? *J Am Med Dir Assoc.* 2009; 10:141-144.

BACKGROUND:

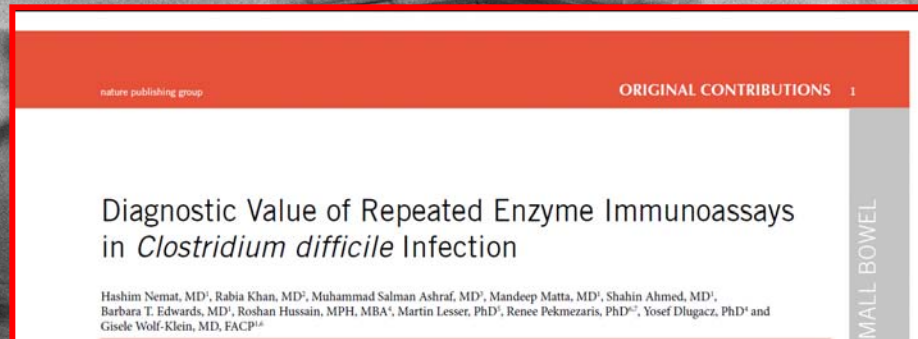
As of October 2008, the Department of Health and Human Services, Centers for Medicare and Medicaid Services (CMS) will no longer reimburse hospitalizations when pressure ulcers develop. Pressure ulcers can be prevented but continue to be one of the most challenging problems for clinicians in hospitals, nursing homes and health care facilities. Over a decade ago, the PUSH tool was recommended by the National Pressure Ulcer Advisory Panel (NPUAP). PUSH provides a quick visual method of analyzing relevant information in an efficient manner, allowing busy practitioners to efficiently assess the healing process of an ulcer and to decide on therapeutic changes. However the PUSH tool has not been uniformly accepted because the traditional nursing care protocols rely on observational alone. We hypothesize that there is no difference between clinical observation and quantitative measurement using the PUSH tool for monitoring the progress of pressure ulcer healing and designed this study to compare documentation of ulcers using observational.

Consistently used to provide an objective and sensitive method in the approach to pressure ulcers	212 (57%)	111 (50%)	48 (19%)
Not consistently used	158 (43%)	111 (50%)	212 (57%)
TOTAL	370	222	260

This study showed correlation between PUSH and the nurses assessment. Since the PUSH tool is not consistently used to provide an objective and sensitive method in the approach to pressure ulcers, the PUSH tool should be readily implemented and standardized.

3. The nurses documented only 89 concordant PUSH scores. Finally, there was only 46% agreement between the PUSH scores and the traditional nursing observational records. 42.9% of observations

The American Journal of Gastroenterology



Objective: The most commonly used test is stool enzyme immunoassay (EIA) detecting toxin A and / or B, but there are no clear guidelines specifying the optimal number of tests to be ordered in the diagnostic workup, although multiple tests are frequently ordered. Thus, **we designed a study with the primary objective of evaluating the diagnostic utility of repeat second and third tests of stool EIA detecting both toxins A and B (EIA (A & B)) in cases with negative initial samples, and sought to describe the physicians' patterns of ordering this test in the workup of suspected CDI.**



2009-2010 Research Projects

GERIATRIC MEDICINE:

- Differences in Attitudes and Knowledge of Pressure Ulcers Between Nursing Homes and Hospitals Employees
- When Physicians Become Caregivers for Older Family Members: Communication Challenges with Primary Care Practitioners
- Impact of Physician Order Protocol on Bladder Re-Catheterization in Hospitalized Elderly
- The Two-Step Tuberculosis Skin Testing: Knowledge, Attitudes and Behaviors of Health Care Practitioners
- Post-Mortem Family Satisfaction with PEG Placement Decisions in the Older Terminal Ill Patient
- Why Are Physicians Not Prescribing Vitamin D Supplementation in Long-Term Care Facilities?
- Correlation Between MOLST Penetration in Long Term Care Facilities and Rehospitalization Rates
- EMS Responses to Advance Directives in Older Patients
- Impact of Geriatric Health Problems on Caring For Pediatric Population
- Correlation Between Attending Physicians' Attitudes Towards Physical Exam and Bedside Teaching

2009-2010 Future Improvements

ANESTHESIOLOGY: A Prospective Analysis: Comparing the Rates of Neuraxial Anesthesia Administration on Laboring Patients Before and After Implementation of a New Departmental Assessment and Education Policy

OB/GYN: Investigation of incidence, etiology and intervention of postpartum anemia in obstetric patients

PEDIATRICS: Compliance of Parents with Safe Sleep Practices Advocated by Pediatricians during the First Month of Life

PATHOLOGY: Pathology Collaboration Enhances Dysplasia Recall Rate

PHYSICAL MEDICINE & REHABILITATION: A test/questionnaire such as "The Test of Practical Judgement" may be used as an adjunct in the discharge process of patients with mild-moderate traumatic brain injury and patients suffering from cerebrovascular accident to assess their ability to comprehend and make well-informed decisions regarding their follow-up care

RADIOLOGY: Is it necessary to check serum creatinine levels in diabetic patients on Metformin 48-hours after the administration of intravenous nonionic contrast?

INTERNAL MEDICINE: Analysis of RIFLE Criteria for Acute Kidney Injury in Diabetic versus Non-diabetic Patients admitted to the Critical Care Unit

INTERNAL MEDICINE: Early Nutrition Therapy in a Critical Care Unit and its Impact on Morbidity and Mortality

Getting a Leg Up on the Competition

Residents/Fellows are graduating as desirable candidates equipped with tools and valuable experience in research and publication





Questions?

Contact us at

www.theKQMI.org