

Impacting Quality Patient Care Through Evidence Based Nursing Practice and Education

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Overview

- What did we know about nursing and quality?
- Assessment of current environment
- History & evolution of EBNP
- Our Journey steps to implementation of ENBP
- Examples of EBNP
- Specific EBNP project
- Bringing education & service together
- Thoughts on future

What is Our Charge?

*Develop Integrated Educational and Practice
Strategies to Strengthen and Support
Evidence Based Nursing Practice*



Need For Better Education That Transcends Academia and Service

- Increasing complexity of patient care
- < half of hospital nursing administrators find new nurses prepared to deliver safe, effective care
- Newly licensed nurses report similar educational needs
- Limited mechanisms to evaluate competency
- Hospital orientation and CE programs scaled back
- Lack of clinical training sites

Begin With Assessment

- JCAHO National Patient Safety Goals
- Safety projects AHRQ
 - Medication administration
 - Health care acquired infections
 - Staffing and staff competence
- IOM reports
- Benchmark data

Understanding Some Work Processes Inherently Dangerous

Medication administration

- 770,000 annually killed or injured from adverse drug events in hospitals
- In two studies, 34-38% of medication errors occurred during nurse administration of medication

Handwashing

- 80,000 deaths / year from hospital-acquired infections
 - Most hospital-acquired infections transmitted by hospital workers
 - Handwashing most effective at decreasing infections
 - Handwashing rates at 16-81%
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How Does Nursing Decide?

- Need to “do the research that matters”
 - Disease prevention and treatment
 - Assuring patient safety
 - Health management across the continuum
 - Social and cultural context of health
 - Risk assessment
 - Behavior modification
 - Cognitive impairment



Identify Critical Success Factors

- Move beyond morbidity and mortality
- Larger role on functional status, caregiver burden, satisfaction with care, costs of care and cost-effectiveness
- Determine which interventions are most effective for which populations and in what settings
- Measure quality and outcomes across the entire trajectory of illness

Medicine Defined Evidenced Based

Sackett et. al., (1996) Evidenced Based Medicine

- Integrating clinical expertise and best available evidence from systematic research

Evidenced Based Medicine Working Group (1992)

- De-emphasizes: Intuition, unsystematic clinical expertise, and pathophysiologic rationale as basis for decision making
- Emphasizes: Examination of evidence from clinical research



Nursing Began to Define

Setler, et. al., (1998) Evidenced-Based Nursing

- De-emphasizes: ritual and isolated unsystematic clinical experience; ungrounded opinions and traditions
- Emphasizes: Research, findings from Q.A. data and other operational and evaluative data, consensus of experts, affirmed experiences

Mulhall (1998) *Evidenced-Based Nursing Journal*

- Research evidence
- Clinical evidence
- Patient preferences



Our Journey

- Established a Nursing Research Department- Research Institute
- Hired a doctoral prepared nurse research
- Developed a mission statement
- Communication plan & rolled out EBNP


Mission Statement

- The mission of the Nursing Research Department is to provide practical, cutting edge clinical and professional information to meet the needs of UNM Hospitals' nurses. Nursing research support, resources and methods for conducting and evaluating clinical nursing research are offered to all nurses. The three foci of nursing research are: Nursing Workforce, Evidence Based Practice and Risk Reduction.

What Did We Change

- Went to all unit staff meetings again, did focus groups with managers
 - Nurses afraid or didn't understand research, "I'll have to do a chi-square", "we had a class on it, but forgot it as soon as I could"
- Tied to TQM (PDSA)
- Developed research internships
 - Paid time
 - Technical support staff
- Joint program with CON for elective credit

Our Process of Nursing Research...Doing Whatever It Takes

- Ask the next most important question of health
 - Formulate problem statement and research question
 - Review the literature (teach process/get articles)
 - Design study to gather evidence
 - HRRC or TQM (technical support for HRRC)
 - Implement study and measure outcomes (technical support)
 - Disseminate findings (technical support)
 - Nursing Grand Rounds
 - Poster/Podium
 - Publish
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Nursing and Quality Outcomes

Nurses comprise the largest group of health care providers in both the public and private sectors
Patients have more contact with professional nurses than any other health care provider



Nursing Research and Patient Outcomes



- It is appropriate that nursing, as a vital component of the health care delivery-system, reaffirms its purpose as a research discipline in assisting patients to achieve positive health care outcomes (Pollard et al., 199

Nursing Shortage Concerns



- A significant nursing shortage combined with severe economic constraints of funding available for health care has prompted concern in the nursing community regarding patient safety and the quality of care provided to patients in hospitals

Documentation of Nursing Quality

There is a critical need for more definitive data to document the link between nursing interventions, staffing levels and patient outcomes. The need to define quality of nursing care and to determine how is it measured is urgent



Quality Healthcare

The importance of quality in health care provided by nurses cannot be over-emphasized as quality ties into every aspect of health care organizations (Lawrence, 1997)



Florence Nightingale and Research Quality

It is believed that Florence Nightingale was the first to research quality in nursing practice (Hogston, 1995)

Her achievements of quality improvements, using a modern concept, in the Crimean war are beyond what most individuals could hope to achieve in a lifetime (Simonsen, 1986)



EBNP

EBNP is an effort to combine the best scientific evidence from nursing and other research with the special clinical perspective of nurses in performing the full range of patient care activities

Nurses who use EBNP in their patient care show greater satisfaction with work experience and patients get higher quality nursing care



Examples of Research Projects

Pain

Validation of documentation tool to measure ambulatory nurses patient care interventions and reimbursement

Measurement of adherence team interventions to effect drug compliance for HIV/AIDS

Translator use and patient satisfaction

Patient transport and staffing patterns

- Preventing infections in central venous catheters
- GYN positioning in stirrups
- Effects of Demerol on colonoscopy pain and complications
- Effects of motivational interviewing and recidivism/readmission in patients with alcohol/drug addictions
- Patient education compliance and kidney rejection one year post transplant

Examples of Research Projects

Measurement of variance reporting after implementation of nursing peer review

Shared Governance and nurse turnover and satisfaction

Master Teacher/Master Clinician

Workplace satisfaction and retention strategies

Effect of nursing intervention on depression in elderly

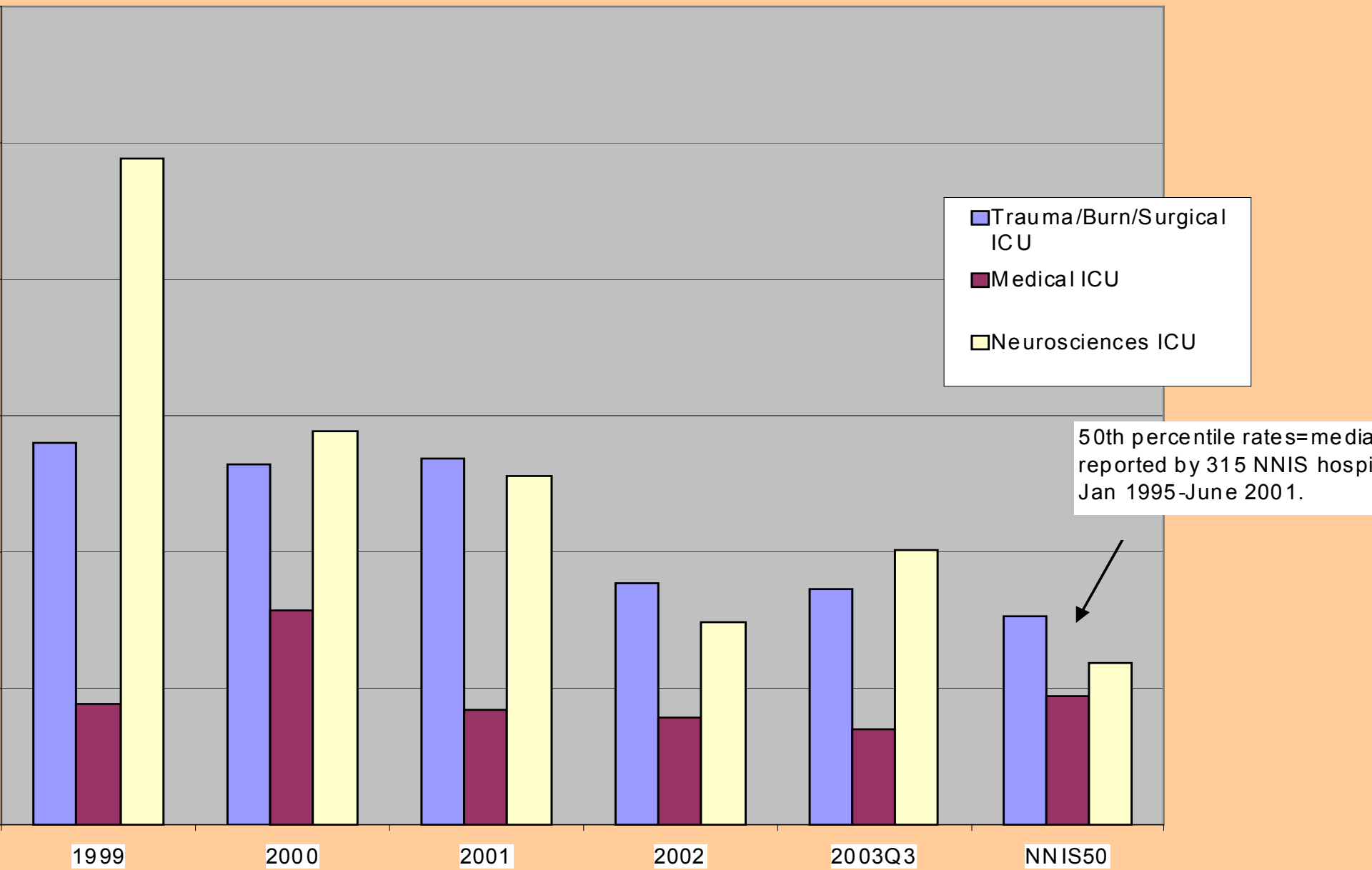
Psychotropic medications and weight gain in children

- Measurement of anemia and use of transducer system to reinfuse blood waste
- Immunization in ED
- EDLOS for Trauma Patients
- Prevention of post-surgical complication in bariatric patients through development of an interdisciplinary care map
- Bacteremias (BSI) and Ventilator-Associated Pneumonias (VAP) in the intensive care units

MICU EBNP to reduce Ventilator-associated pneumonia (VAP)

- Hospital-associated pneumonia is a common problem and has been reported to be the number one cause of death from nosocomial infection.
- VAP is identified as a pneumonia that occurs at least 48 hours after intubation.
- In 2000, the MICU VAP rate was greater than the 75th percentile of the NNIS rates (National Nosocomial Infections Surveillance). The unit was very concerned about their rate and wanted to improve patient care.

ADULT Intensive Care Unit Ventilator-Associated Pneumonia Rates UNMH 1999-2003 with 50th percentile rates specific for unit type in the National Nosocomial Infection Surveillance System (NNIS).



50th percentile rates=median reported by 315 NNIS hospitals Jan 1995-June 2001.

ACTIONS TAKEN BY MICU TO REDUCE VAPS

- Interventions

- **Protocol** > When a patient is intubated and mechanically ventilated, the following interventions are initiated:

- **Infection Control**

- all staff and visitors thoroughly wash hands
 - gloves are worn and changed between procedures
 - practice aseptic techniques

- **Patient Hygiene**

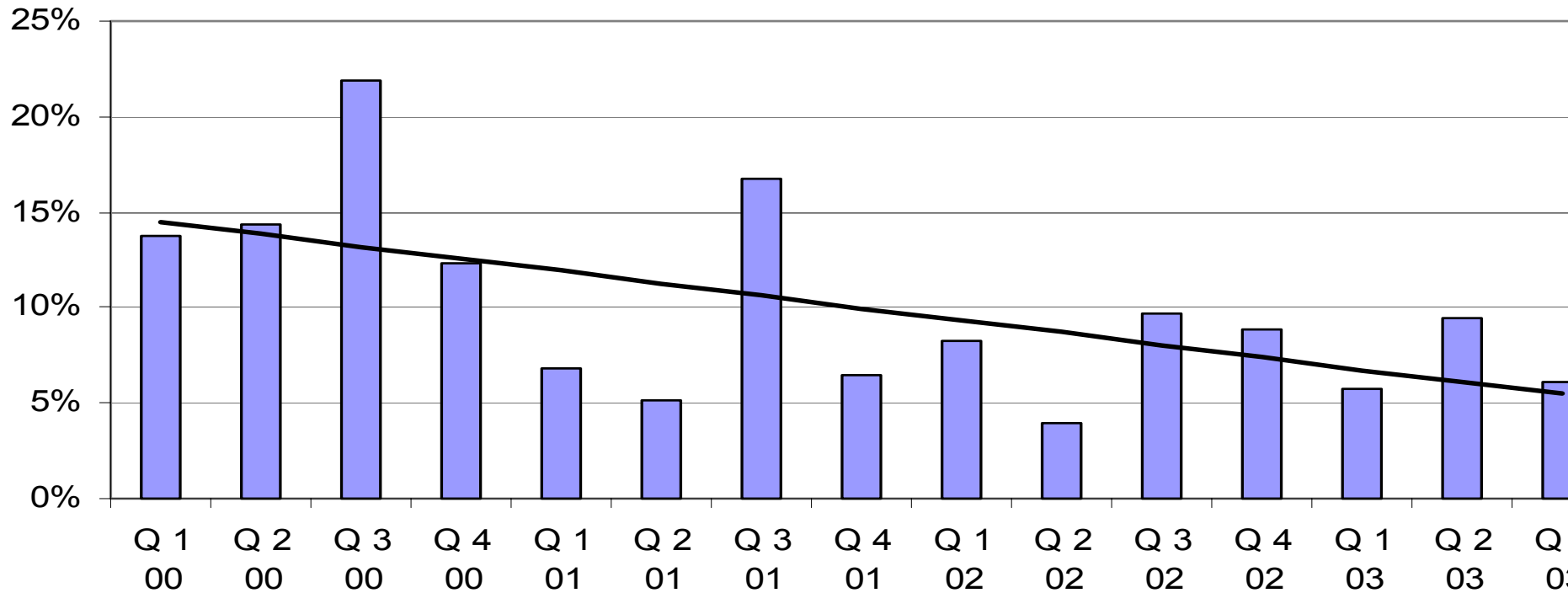
- Utilize Sage tooth brushing system to provide oral hygiene q6-8 and prn
 - Use covered Yankaur system

ACTIONS Con't.

- **Positioning**
 - turn at least q2h and prn
 - maintain HOB (head of bed) 30-45 degrees
- **Suctioning/ETT Care**
 - suction prn using aseptic technique
 - reposition oral ETT q day
 - drain condensate in ventilator tubing away from patient
 - Circuits and Ballards changed weekly
- **Gastric Tubes/Nutrition**
 - place gastric tubes orally, rather than nasally
 - for tube feeding, check for residual volume at least q4h
 - hold tube feeding and notify physician if abdominal distention, nausea or vomiting occur
 - rinse tube feeding bag with tap water q8h, hang no more than 8 hrs, change tubing and tube feeding bag q24h

Medical Intensive Care Unit VAPs 2000-2003

MICU VAPs



Compared to the NNIS benchmark, MICU is now well below the 50th percentile (9.7%).

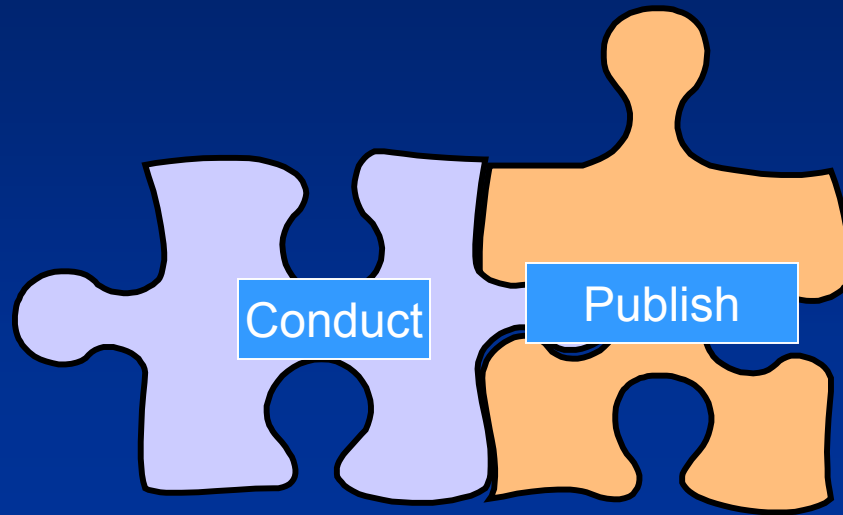
MICU's annual VAP rate fell from 15.7% in 2000 to 7.0% in 2003.

CONCLUSIONS OF VAPS IN MICU

- As a result of EBNP, MICU has been able to reduce their number of VAPs
- Several monitoring systems have been implemented:
 - Surveillance to identify cross transmission of resistant organisms within MICU
 - Weekly monitoring for increased documentation of position and HOB elevation
 - Incidence of VAP over one year compared to prior year
- ACT> Continue to monitor VAP rates and educate staff on interventions.
- Implement practice in all ICU's
- Publish data

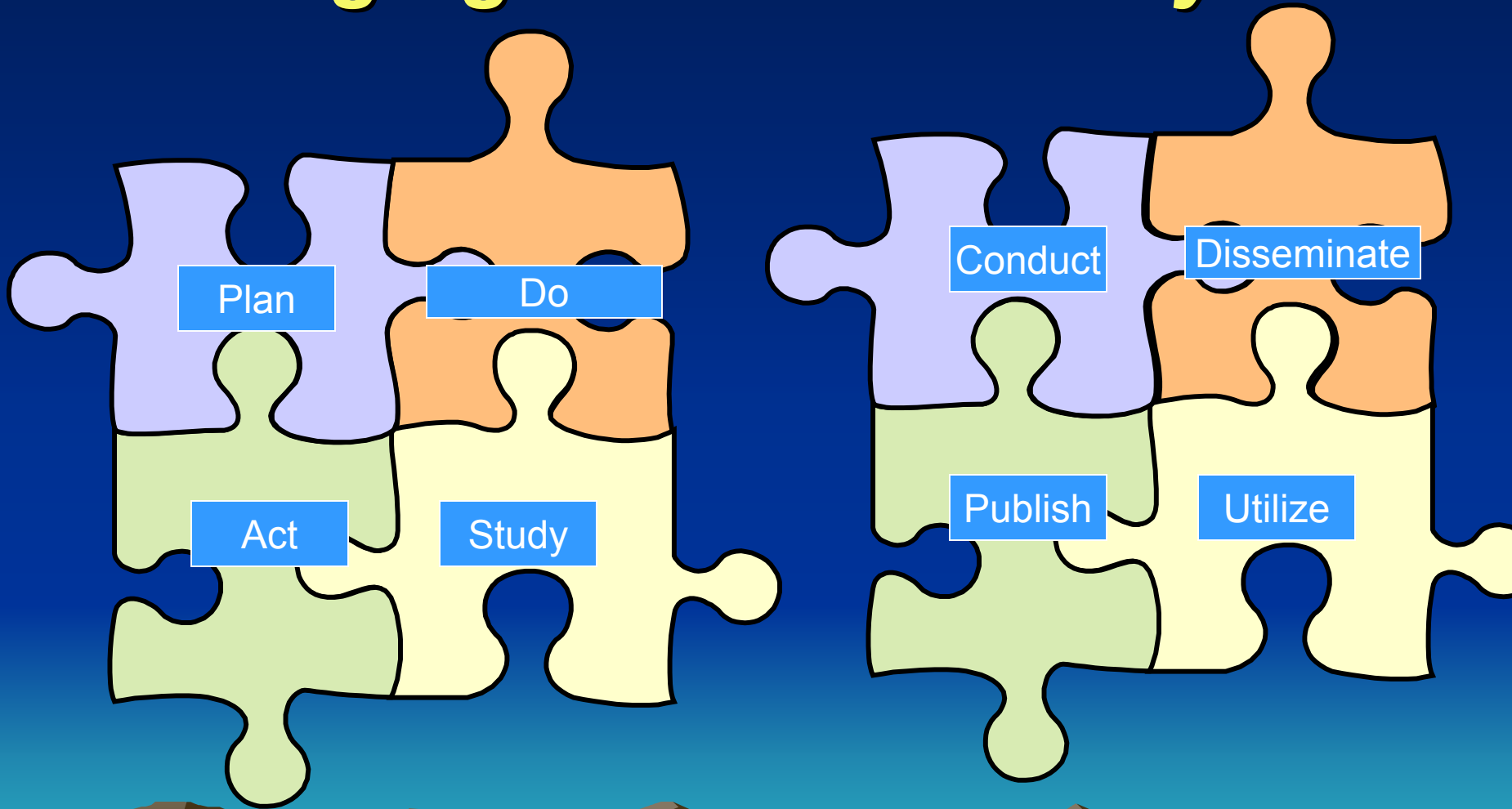
Lesson Learned...

Changing the Research Cycle



Lessons Learned...

Changing the Research Cycle



Lessons Learned...

Changing the Data Paradigm



Lessons Learned...

What Facilitates EBNP?

Support from administration, directors, managers

- Environment where questioning practice is valued
- Small grants
- Culture-expectations of staff
- Administrators provide resources
- Collaborative teams across disciplines
- Collaboration with colleagues at local college

Lessons Learned...

Necessary Joint Infrastructure

JOP- Hospital's/CON

- Office of Nursing Research (jointly funded)
- Research Councils- part of shared governance
- Research internship (work time/credits/CEU's)
- Nurse scientists mentors- CAP
- Evidenced-based practice champions for change
- Grand rounds
- Journal clubs
- Annual research symposium

Future Research Needs...The Holy Grail That Everyone Wants But No One Has

Measurement of nurses' work

Descriptive studies of nursing-related errors

safer and more efficient work processes and workspace, including
 information technology

standardized approach to measuring patient acuity

safe staffing levels based on outcomes in different types of nursing units

effects of successive work days/sustained work hours on patient safety

descriptive studies of levels of educational preparation and outcomes

models of collaborative care, including care by multi-disciplinary teams

