

Selecting and Measuring Outcomes of Acute Care Advanced Practice

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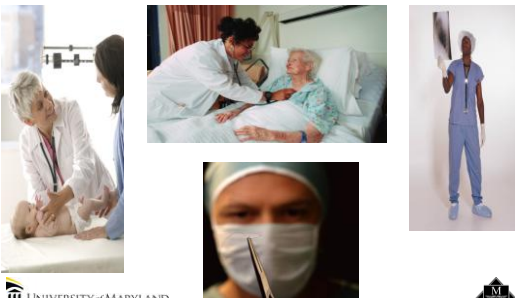


Objectives

- Describe the importance of identifying and measuring advanced practice-related outcomes
- Identify examples of patient and care delivery outcomes that can be attributed to advanced practice
- Identify challenges associated with the measurement and attribution of outcomes associated with advanced practice



How do we know that what we do matters?



Need for APNs and PAs

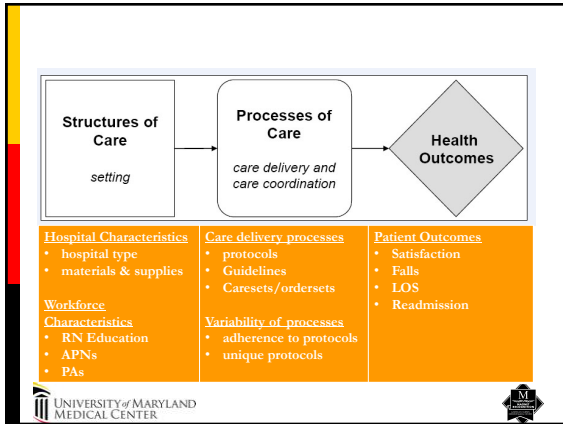
- Increasing costs of managing chronic illness
- Inadequate number of primary care physicians
- ACMG resident work hour restrictions
- Increasing complexity of inpatients
- Variation in care delivery

Drivers of Outcome Measurement

- Public
- Internal hospital departments
- Regulatory agencies
- Insurance companies/3rd party payors
- Recognition and Certification programs
 - Joint Commission
 - Magnet
 - Leapfrog Group
 - Baldrige

Outcomes Definitions

- “the result of a process, including outputs, effects and impacts”
-RWJ, 2011
- “end result”
-Ernest Codman, circa 1910
- “the ultimate validation of the effectiveness and quality of care”
-Avedis Donabedian, 1966



Relevance of Outcomes Measurement

- Evaluate effectiveness care
- Establish a base for clinical decision-making
- Identify areas for improvement
 - Patient care
 - Care delivery
- Identify research opportunities

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Process Measure or Outcome Measure?

- Nosocomial infection rates
- % of surgical pts who receive antibiotics within 1 hour of incision
- Rates of adherence to best practice
- Self-extubation rates
- Medication compliance
- Glucose control
- Ventilator days
- Cesarean section rate
- Median time to PCI for MI patients

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Nurse-Sensitive Outcomes (ANA & NQF)

- Patient Falls
- Pressure Ulcers
- Restraint prevalence
- Pain management
- Failure to rescue
- Nosocomial Infections
 - Ventilator Associated Pneumonia (VAP)
 - Central Line Blood Stream Infections (CL-BSI)
 - Catheter associated UTI (CA-UTI)
- Patient Satisfaction

APN Associated Outcomes

- Not well-defined
- Setting dependent
 - ICU
 - Acute care
 - Primary care
 - Procedural
- Number of studies that exist are not enough to describe the full scope of results of NP care
- Difficult to impact the effect of the advanced practice provider

Choosing Outcomes

- "If the function of a hospital were to kill the sick, statistical comparisons of this nature would be admissible. As, however, its proper function is to restore the sick to health as speedily as possible, the elements which really give information as to whether this is done or not, are those which show the proportion of sick restored to health, and the average time which has been required for this object..."

-Florence Nightingale
Notes on Hospitals, 1863

Think "Structure-Process-Outcome"

- How does your role fit into the structure of care delivery?
- What processes do you influence?

Types of Outcomes

□ Care Delivery Related

- Costs of care
- Length of stay
- In-hospital mortality
- Readmission rates
- Time to readmission
- Use of lab testing
- Use of diagnostic screening tests
- TPN usage
- Blood transfusion rate
- Procedure success/complication rate
- Rate of drug prescription
- Prenatal/postpartum visits
- Low-birthweight rates
- ED wait times
- Clinic wait times
- Other measures of efficiency

Types of Outcomes (cont.)

□ Performance Related

- Care collaboration
- Clinical competence
- Revenue generation
- Time savings for MDs/residents
- Performance ratings
- Job satisfaction

□ Patient Related

- Satisfaction
- Access to care
- Blood glucose levels
- Blood pressure control
- Lipid control
- Functional status
- Health Related QOL
- Return to work
- Symptom resolution or reduction

Critical Care Specific Outcomes

- CLABSI
- CAUTI
- Glucose control
- VAP rates
- ICU LOS
- ICU readmission rates
- Nutritional status
- Patient/Family Satisfaction ratings



Labor and Delivery (CNMs)

- C-Section rates
- Apgar score
- Epidural anesthesia rates
- Episiotomy
- Perineal lacerations
- Vaginal operative delivery (forceps, vacuum)
- VABC rates
- Breastfeeding



Challenges

- Unique contributions of advanced practice to the “art” of care have not been well-conceptualized in the literature
- Care delivered by APNs/PAs often compared to care delivered by MDs
- Measurement of outcomes



Outcome Assessment & Measurement

□ Measure

- Standardize
- Use reliable and valid measures
- Retrospective or prospective
- Establish reporting frequency

□ Evaluate

- Trend over time
- Compare to "benchmarks" (measure of best practice)
- UHC, APACHE III, NSQIP
- Disseminate



Research Example (Pandian, et al., 2011)

□ NP role created to facilitate perc trach service

□ Purpose - To determine whether the addition of a dedicated trach NP improved:

- Standard of care (use of screening tool, obtaining consent, consent completeness, documented time-out, use of trach post-op order set, documented procedure note, documented operative note)
- Efficiency of care (timeliness of service)
- Patient outcomes (ICU LOS, hospital LOS, complication rate)

□ Methods - 110 charts randomly selected and retrospectively reviewed



Results

□ Standard of Care

- Significant improvements in 4/7 variables:
 - Use of screening tool
 - Completeness of consent
 - Time out performance
 - Post-op order set use

□ Efficiency

- Significant decrease in time from consult to trach

□ Patient Outcomes

- No significant difference in LOS or complication rate

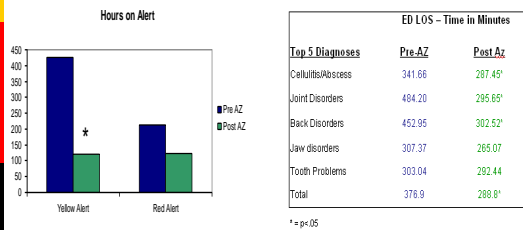


Quality Improvement example

- NP-staffed Ambulatory Zone (AZ) initiated
- Purpose:
 - To evaluate the effectiveness of the new AZ by comparing:
 - ED LOS for the top 5 diagnoses pre and post AZ implementation
 - Time spent on alert pre and post AZ implementation
 - To evaluate the effectiveness of the NP model of care within the AZ by comparing ED LOS by provider



Results



In Summary...

- Identification and measurement of the various outcomes sensitive to advanced practice care is imperative
- Outcome evaluation can identify opportunities for clinical research and operational improvements
- Recent literature supports several patient and care delivery outcomes as being sensitive to advanced practice care
- Advanced practice providers need to continue to identify and scientifically evaluate other possible advanced-practice sensitive outcome measures



Challenges

- Identification of outcomes that are sensitive and specific to APN/PA care
- Isolating the effect of the APN/PA
- Measurement strategies
- Data availability
- Ability to analyze data

Recommendations

- Practice-level outcome studies
 - Need to measure APN intervention
 - Role for quasi-experimental, descriptive, qualitative studies
- Use of nationally recognized outcome measures and instruments
 - Create equivalent comparisons
- Research about outcomes that affect health policy
 - Cost, access to care, QOL
- Successful methods need to be disseminated
