Content Description

This presentation reviews the need for the use of more nurse driven protocols in the acute care setting as well as briefly looks at several protocols that are already in existence. The process of putting together a nurse driven protocol will be reviewed as well as the barriers faced when initiating this change in practice. Ways to improve compliance with the utilization of the protocol as well as monitoring its outcome will also be discussed.

Learning Objectives
At the end of this session, the participant will be able to:

1. Identify the reasons for utilizing a nurse driven protocol.
2. Review current nursing protocols being utilized in the acute care setting
3. Discuss the steps needed to implement a nurse driven protocol in the clinical setting.

Outline (see power point slides)

A. Purposes of nurse driven protocols
B. Examples of protocols currently in use in the acute care setting
C. How to identify the need for a protocol on your unit
D. Development of the protocol
E. Implementation of the protocol
F. Sustaining the change

References


**Speaker Contact:** dbarto@virtua.org
LET'S BE THE DRIVER OF THIS BUS – NURSE DRIVEN PROTOCOLS IN ACUTE CARE

DONNA BARTO, DNP, RN, CCRN
NO FINANCIAL DISCLOSURES

OBJECTIVES

- Identify the reasons for utilizing a nurse driven protocol
- Review current nursing protocols being utilized in the critical care setting
- Discuss the steps needed to implement a nurse driven protocol in the clinical setting

It is 2 AM; your patient has a temperature of 101.

• Dr. Smith
• Dr. Brown
• Dr. Jones
NURSE DRIVEN PROTOCOL

• Definition of a medical protocol from Webster’s Dictionary: “Detailed plan of a medical treatment”
• A nurse driven protocol is one in which the nurse initiates the detailed plan of the medical/nursing treatment according to a set plan

ADVANTAGES OF NURSE DRIVEN PROTOCOL

• They have been shown to improve patient care outcomes and contain cost
• Staff nurses have identified “success” as being able to give their patients quality care
• Quality care leads to nursing job satisfaction
• Nursing empowerment
• Healthy work environment (increased retention rates, increased patient satisfaction)

THE PROBLEM IN SOUTHEASTERN MICHIGAN

• Several elderly, anticoagulated patients with minor head injuries rapidly deteriorated and died
• 48% mortality rate in warfarin anticoagulated patients compared to a 10% in non-anticoagulated patients
• Coumadin protocol initiated

PATIENT ON COUMADIN PROTOCOL

- Nurse notifies ECP to evaluate
- Nurse calls blood bank for T&C and FFP
- Nurse arranges for CAT scan

Positive CT: Transfuse FFP
Negative CT: Admit patient

Give Vitamin K
Stat neurosurgery consult

OUTCOMES OF COUMADIN PROTOCOL

PRE-PROTOCOL
- MD initial evaluation 31 minutes
- Time to CT scan 2 hours
- Mortality 48%

POST-PROTOCOL
- MD initial evaluation 15 minutes
- Time to CT scan 40 minutes
- Mortality 10%

WEANING PROTOCOL

- Used to wean patients from mechanical ventilation in a medical respiratory unit
- Combined nurse driven/respiratory therapy protocol
- Outcomes: reduced duration of mechanical ventilation as measured by ventilator days
- Downward trend in the stay of intensive care unit from a mean of 8.6 days to 7.9 days (p=0.7)

SCREEN 1
1. Hemodynamics stable?
2. Off vasopressors
3. PaO2/FIO2 ratio ≥ 150
   (If ABG’s not available, SaO2 ≥ 95% on 50% or less)
4. PEEP set at 8 cm H2O or less?
5. RASS of -2 or higher?
If NO to any questions, STOP!
Otherwise, ALWAYS proceed to screen 2

SCREEN 2
- Rapid Shallow Breathing Index (RSBI).
  RSBI of 125 or less?
  If YES, proceed to spontaneous breathing trial. If NO, rest patient until the next day and reassess starting with screen 1.
- Spontaneous breathing trial:
  Criteria such as heart rate, blood pressure, respiratory rate taken on a two hour continuous trial. If spontaneous breathing trial is passed, patient is extubated.

UNMEASURED SUCCESS
- Discussions with nursing staff indicated that the use of the protocol has increased nursing’s sense of autonomy
- Increased their direct involvement in decisions related to patients’ care
- Provided an additional avenue for communication with the healthcare team
- Increased their knowledge of respiratory assessment and mechanics
NURSE DRIVEN SEDATION PROTOCOL

- Implemented in a Canadian hospital in June 2006
- Had four pathways: pain, anxiety, delirium and neuromuscular blockade
- Pain and anxiety were one order sheet
- Delirium and neuromuscular were separate order sheets
- Utilized the Richmond Agitation Sedation scale, the visual Analogue scale, and the Confusion Assessment method-ICU Delirium Tool to determine how to dose medications

REASONS FOR STARTING PROTOCOL

- Differences in physician practice, variety of pharmacologic agents, nurse’s level of expertise, personal preferences makes managing anxiety, pain and delirium an ongoing challenge
- Wanted to help the critical care nurses make decisions that promote positive outcomes for patients receiving sedation and analgesia


OUTCOMES

- Descriptive study of 75 nurse
- Looked at the perceived benefits of implementing the protocol in terms of medication errors and staff perceptions
- No medication errors or near misses reported throughout implementation
- Staff perceived an improvement in the quality of care when using the protocol
ELECTROLYTE REPLACEMENT PROTOCOL

- Initiated in an intensive care unit in Canada in 2007
- Started in response to different physicians prescribing practices that led to inadequate replacement, less timely administration of electrolyte replacement, and the evidence that showed that protocol driven interventions are associated with improved outcomes
- Pre-printed order form from which ICU nurses can administer replacement doses of potassium, magnesium and phosphate

PURPOSE OF THE STUDY ON THE PROTOCOL

- Is this protocol effective by providing timely replacement of electrolytes?
- Are nurses and physicians satisfied with the electrolyte replacement protocol?
- Retrospective chart review and nursing/physician survey conducted
OUTCOMES OF ELECTROLYTE PROTOCOL

- Number of replacement doses indicated but not given was reduced for magnesium from 60% to 35% (p=0.18) and for phosphate from 100% to 64% (p=0.04)
- Time to replace potassium and magnesium decreased
- Nurses and physicians were satisfied with the electrolyte protocol


NURSE DRIVEN PROTOCOL FOR PAIN MANAGEMENT

- Used in a step down unit in the Netherland
- In 2008, improvement areas were identified for the hospital
- A total of 34% of all pain measurements were found to be above an acceptable upper level for pain
- 60% of this group still scored above this upper level eight hours later
- Task force started consisting of anesthesiologists, cardio-thoracic surgery, nurse practitioner, intensive care unit nurse, hospital safety officer rewrote the pain protocol

PAIN PROTOCOL

- Allowed nurses to administer analgesic medications without consulting the attending physician
- Utilizes acetaminophen and Morphine based on the patient’s Visual Analog Score and other parameters
- Saw a reduction in VAS scores as well as a reduction in time to achieve an acceptable pain score with the protocol

PAIN PROTOCOL

- Starts when patient arrives in step down
- If vital signs are stable, and VAS reveals pain, Tylenol is given
- VAS score repeated 60 minutes
- Depending on VAS score, patient is observed, given morphine (sc), or physician is consulted
- Ramsay score is also carried out to make sure patient is not over sedated
- No greater than 0.2 mg/kg morphine is given per shift without consulting MD/nurse practitioner
  (200 lb man = no more than 18 mg morphine)

ENTERAL FEEDING PROTOCOL

- 2010 study carried out to evaluate the effect of enteral feeding protocols on key indicators of enteral nutrition in critical care areas
- International in scope, two year observational study
- 269 intensive care units
- Compared sites that did not use a feeding protocol with those that did
- Findings: Sites using protocol used more enteral nutrition alone, started enteral feedings sooner, caloric requirements attained were higher

CONCLUSIONS OF ENTERAL PROTOCOL STUDY

“Presence of an enteral feeding protocol is associated with significant improvements in nutrition practice compared with sites that do not use such a protocol”

NURSE-LED ENTERAL FEEDING ALGORITHM

- 22 bed intensive care unit in London
- Algorithm was designed to enable nurses to initiate enteral feeding as well as set the calorie target rate based on the patient’s body weight
- Established that the gastric residual should be not greater than 200 mL
- Residuals are checked every 4 hours until target; then q 8 hours
- Discard all aspirates

ENTERAL PROTOCOL

- If three consecutive aspirates are greater than 200 mL, nurse can give metoclopramide
- Algorithm allows for dietician referral
- There are patient specific criteria for not starting enteral feedings (e.g. bowel resection, unable to insert NG tube)


WHAT PROTOCOL SHOULD YOU DESIGN?

- Performance indicators for your unit
  - Hand washing
  - HCPS scores
- Look at “never” events
  - Catheter associated urinary tract infections (CAUTI)
  - Central Line Blood Stream Infections (CLABSI)
  - Ventilator Associated Pneumonia (VAP)
  - Pressure ulcers
  - Surgical site infections
What Protocol?

- Look at the evidence supporting nurse-implemented protocols
  - Sedation /analgesia
  - Ventilator Management
  - Delirium
  - Early Mobility

Balas, M. et al. (2012). Critical Care Nurses’ Role in Implementing the “ABCD Bundle” into practice. Critical Care Nurse, 32: 35 – 47.

MOST IMPORTANT

**CAUTI PROTOCOL**

- Most common hospital acquired infection
- Cost ranges from $1,200 to more than $2,700 per case
- Responsible for 13% of nearly 100,000 HAI deaths
- Will no longer be reimbursed by CMS
- Value Based purchasing incentives
- Our unit had CAUTI’s
GATHER THE EVIDENCE

- Use your medical librarian to do searches or to teach the staff how to do literature searches
- Use the evidence gathered by specialty practice organizations (AACN) aacn.org
- Query other organizations
- Use the strongest evidence

LEVELS OF EVIDENCE (John Hopkins)

- LEVEL I
  - meta-analysis of randomized control trials
  - randomized control trial
- LEVEL 2
  - Quasi-experimental study (not randomized)
- LEVEL 3
  - Non-experimental study (descriptive, comparative, relational)
    - Qualitative study (interview, focus group, observations)

DESIGN THE PROTOCOL

- Make sure corporate level is on board with the protocol and can provide the necessary support
- Select a multidisciplinary team
- Create “buy in” from those involved
- Communicate, communicate, communicate
LEWIN'S CHANGE THEORY

- Kurt Lewin (1890 – 1947) is the originator of change theory
- Also wrote on group dynamics
- Interested in investigating the conditions and forces which bring about change or resist change in groups
UNFREEZING OLD BEHAVIOR

- Educate all involved with the new protocol
  - Formal classes
  - On-line educational program
  - “TRIP” sheets posted
  - Unit based council meetings
  - Use bulletin boards
  - Have it be placed as the computer background
  - Utilize a “buddy system”

DRIVING AND RESTRAINING FORCES

MAY THE FORCE BE WITH YOU
**DRIVING FORCES**

- Presence of change champions
- Staff training, education and problem solving related to the guidelines
- Strong unit or organizational leadership
- Collaboration with multidisciplinary teams


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**RESTRAINING FORCES**

- Staff time
- Workload and resource constraint
- Lack of access to equipment and resources
- Staff resistance to change

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**BARRIERS TO USE OF SEDATION PROTOCOLS**

- No physician order
- Lack of nursing support
- Fear of over sedation
- Concern about risk of patient initiated device removal
- Inducement of respiratory compromise or patient discomfort

Monitor compliance with outcome
Discuss during multi disciplinary rounds
Share data of patient outcomes with staff
Education “blitzes”
Make education about the protocol part of orientation to the unit
Celebrate the success of the protocol

EXTRINSIC REWARDS TO INCREASE COMPLIANCE

- Study done in Tulsa, Oklahoma
- A total of 35 beds in several intensive care units
- Sampling of 9 protocols (vent weaning, DVT prophylaxis, Enteral nutrition, insulin drip, insulin sliding scale, sedation/analgesia, skin care, stress ulcer prophylaxes, rotation therapy
- Observation indicated protocols were not being used consistently by physicians


EXTRINSIC REWARDS

- Each staff member of any adult ICU with a 90% compliance rate for 9 selected protocols after four months received an award
- Rewards consisted of catered dinner party for the ICU staff, drawings at the party for individual rewards such as personal digital assistants, gift certificates, scrubs and a grand prize of a continuing educational trip valued at $3,000.
- Protocol compliance rates increased from 62% to 99%