Bringing Research and Evidence-Based Practice to Life

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Patient Population

- What high volume patients do you care for on your unit?
  - Medical diagnoses?
  - Nursing diagnoses?
  - Symptoms?
  - Family issues?
- What practice questions have arisen?

Frequent Nursing Interventions

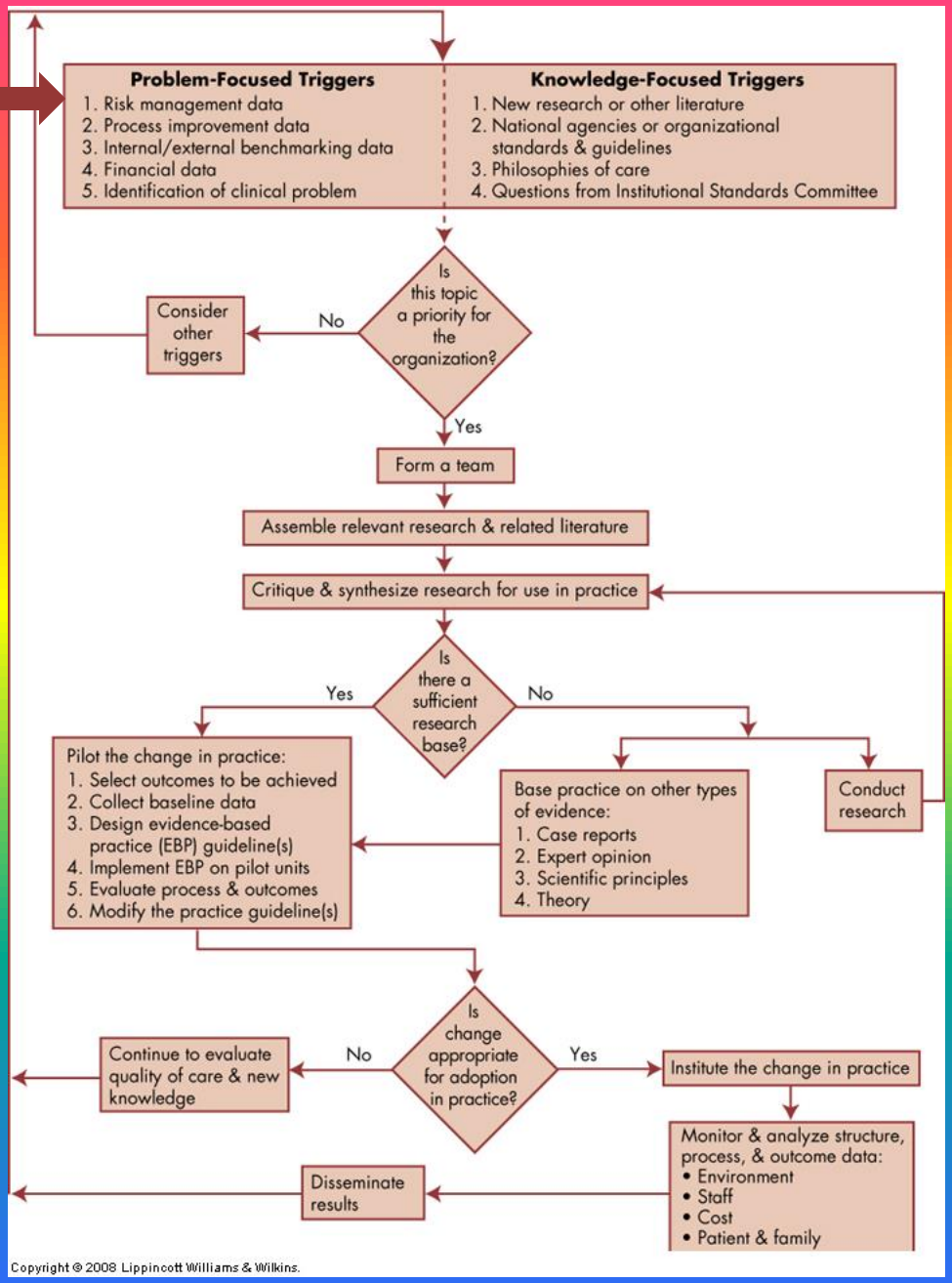
- What procedures are done frequently on your unit?

Technology

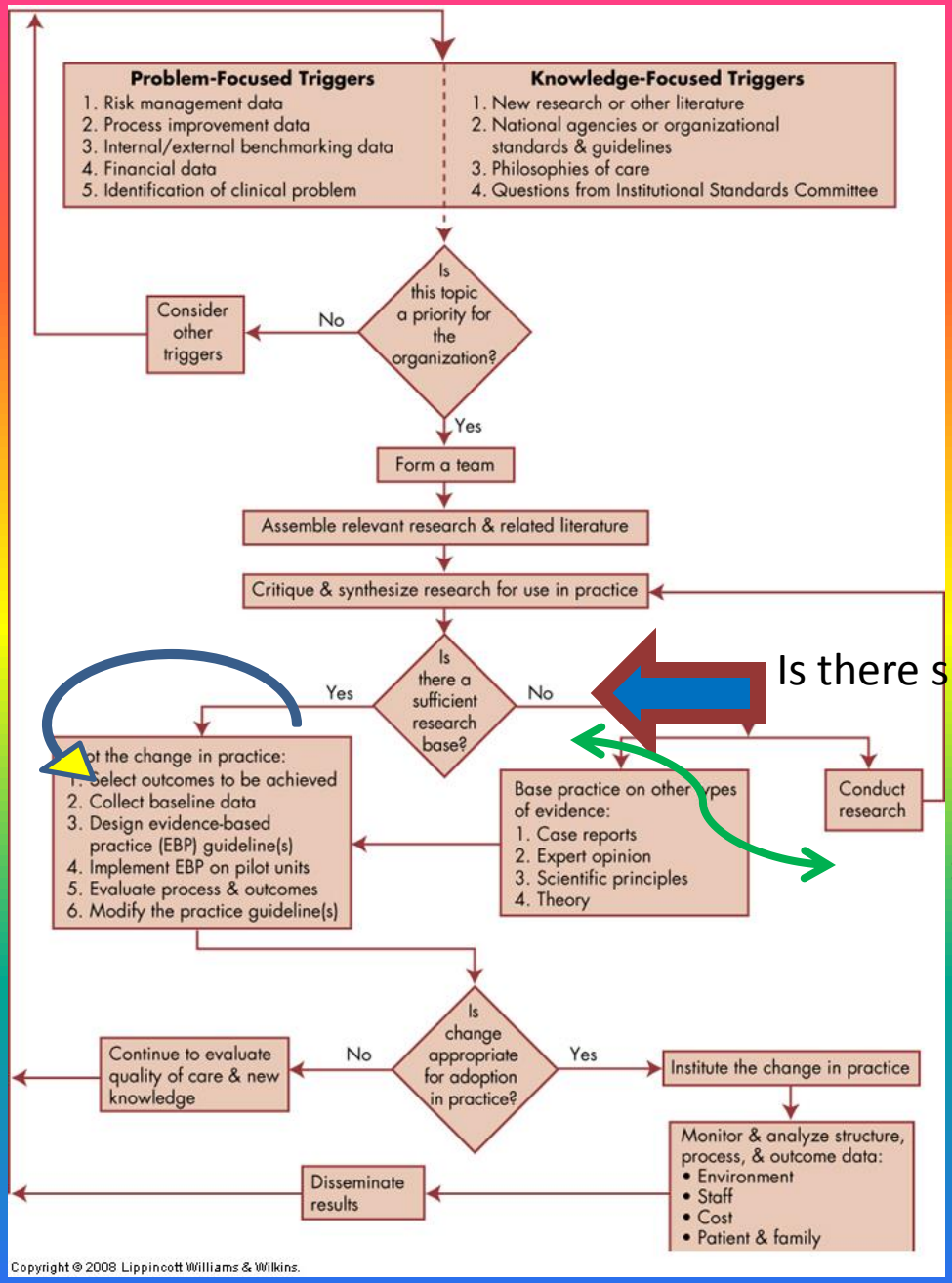
- What equipment/supplies do you frequently use on your unit?

The Iowa Model

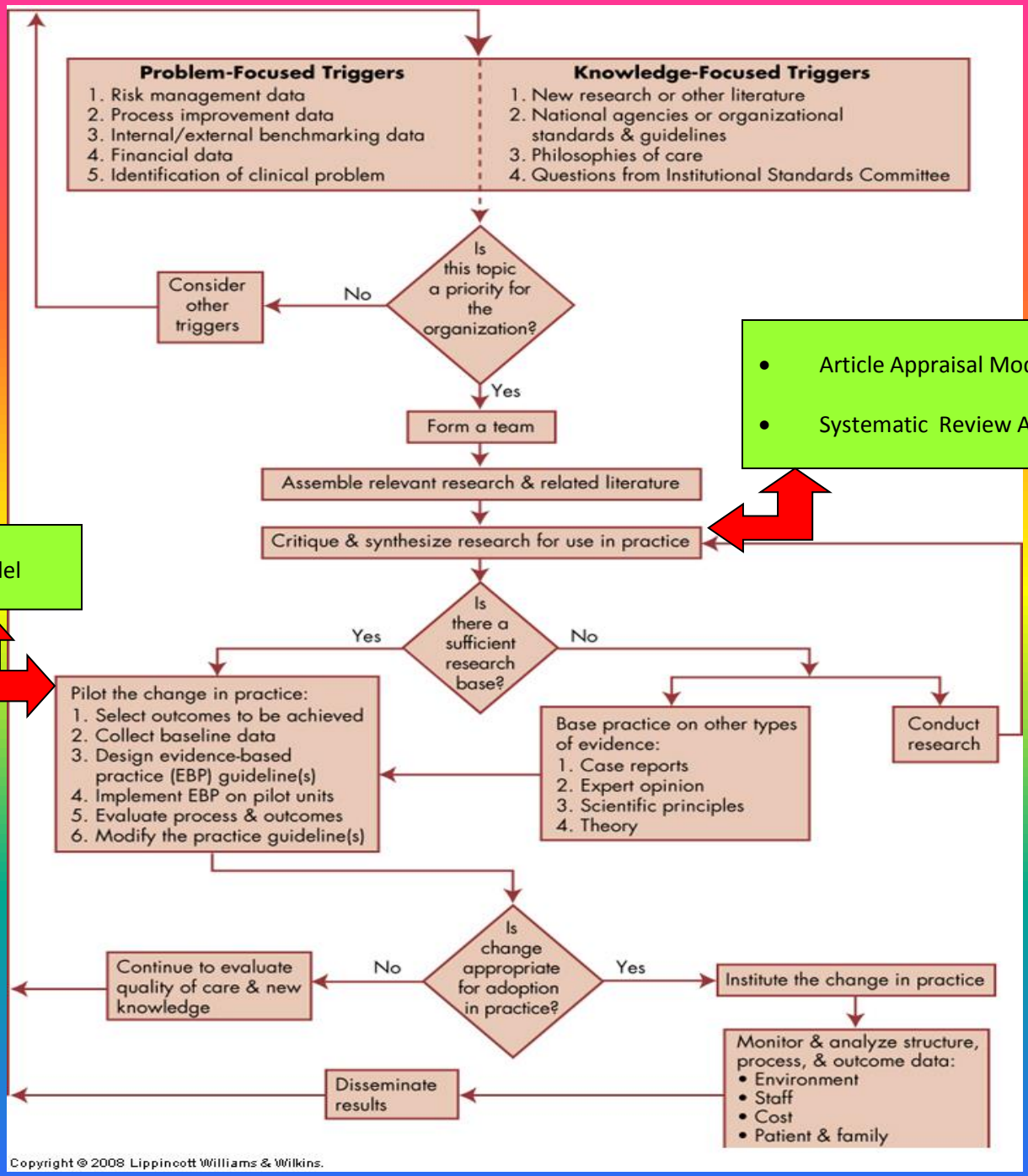
Clinical Problem



= EBP



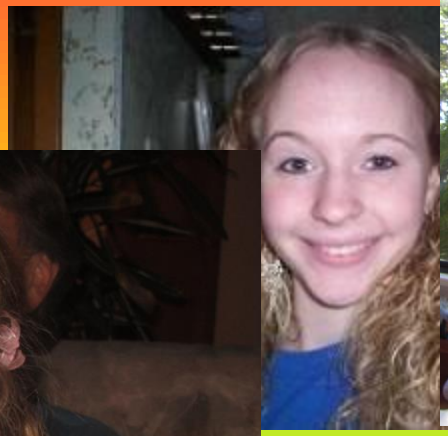
= **RESEARCH**



- Article Appraisal Model/
- Systematic Review Appraisal Model

- Change Model

Practice Changes in My Lifetime



Trendelenburg Position for Hypotension

- Physiological effects determined through 5 decades of research
  - CV: slight increased MAP, SVR; 0 increased preload, decreased cardiac output; decreased right ventricular EF; 0 change in O2 delivery, extraction, consumption; +JVD
  - Pulmonary: decreased vital capacity, tidal volume, lung compliance, PaO2; increased work of breathing, mechanical impedance of chest wall, pCO2
  - Neurological: possible increased ICP
  - GI: shift in abdominal contents; increased abdominal pressure; impaired diaphragmatic function ; impeded lung expansion

- 1990s research showed 80% of respondents would consider using Trendelenburg for hypotension (despite 4 decades of research)
- Repeat survey needed

Gastric Residual Volume and Aspiration Risk

- Problems
  - Measurement inaccuracy: syringe size – may not aspirate all contents, may collapse tube; position of tube; position of patient
  - What is a high GRV?
    - Saliva & gastric fluid production = 188ml/hour
      - Withholding feedings for < 188 ml is inappropriate
  - Aspiration can occur with GRV 5ml – 500 ml
  - Other reasons for aspiration
  - Little evidence for stopping or holding feeding 2nd position change for procedures
  - Little evidence for discarding GRV as high as 400 ml
  - Patients are underfed → malnourished

Gastric Residual Volume and Aspiration Risk (cont)

- ASPEN Practice Guidelines

Memorial Hermann The Woodlands ICU

- Miranda Kelly, DNP, APRN, ACNP-BC
  - Capstone Project

Assessment of Body Temperature

- Physiological temperature = core and peripheral temperature
- Core temperature = stable, reflects 60% of body mass, tightly regulated
- Peripheral = near core; may vary over time, be influenced by environmental conditions and physiological variables
- PA catheter = most accurate

Assessment of Body Temperature (cont)

- Site and variation from core
  - Temperature from 2 sites SHOULD vary but < 0.5 degrees
  - Oral : < 0.4 degrees C
  - Esophagus: < 0.1
  - Bladder: < 0.2
  - Rectum: < 0.3
  - Temporal artery: < 0.4
  - Tympanic membrane: not recommended for temperature monitoring for postoperative and critically ill patients (5 research studies)
    - User error
    - Patient's anatomy reduces accuracy

Assessment of Body Temperature Using Tympanic Membrane Thermometer

- What about YOUR patient population?
  - how would you determine?

Assessment of Body Temperature Using Tympanic Membrane Thermometer

- What about YOUR patient population?
  - how would you determine?
- ***Answer: Review the Research Evidence in the Literature!!***

Restricted “Visitation”

- 1800s non-paying patients had restricted visitors to establish order
- 1900s paying patients non-restricted
- 1960s ICUs to protect patients and families from exhaustion
- 27 research studies found in a non-systematic review (1956-2009)

Restricted "Visitation"

- Hospitals' problems (5 studies)
  - Space: interference with privacy & confidentiality
  - Conflict: crowding, traffic, loss of authority by RNs
  - Burden: caring for patient & family
- Patients
  - No effect on HR, BP; lower CV complications with patients selecting who, when, how long visitors (4 studies)
  - TBI: no increased ICP, HR, BP, RR, restlessness; some lower ICP (3 studies)
- Families
  - Reduced stress, anxiety, burden
  - Historian, protector, coach, facilitator, collaborator, caregiver, respect and support of healthcare providers (3 studies)

Visitation

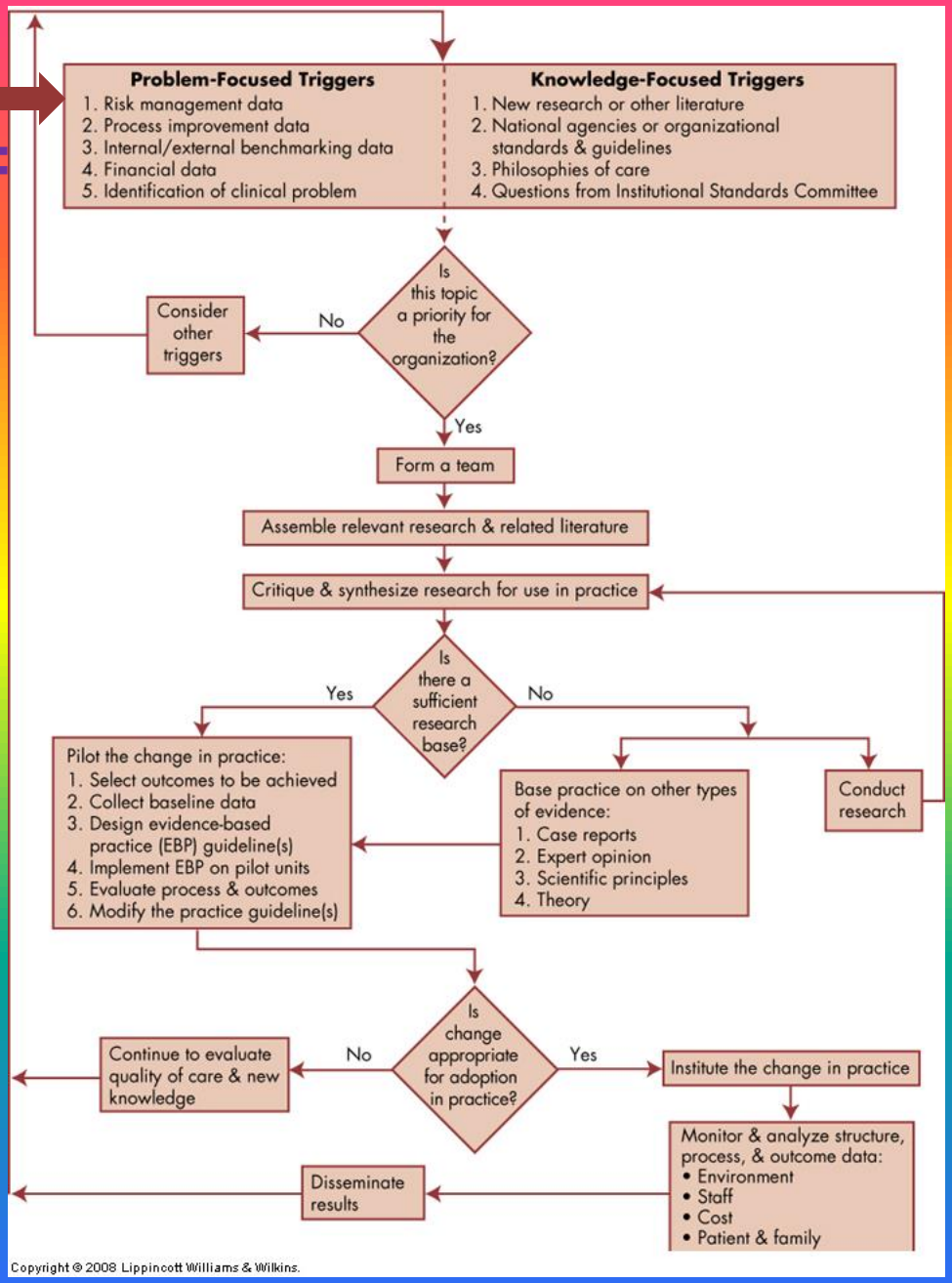
- Patients preferred < 3 visitors, 35-55 minutes, 3-4 times per day (Gonzalez, Carroll, Elliott, 2004)
- ACCM recommendations (2004)
  - Open->>flexibility for patients/families, established on case-case basis
  - Schedule determined thru collaboration of patient/family/RNs – best interest of patient
  - Encourage family presence/participation whenever possible and at comfort level for patient/family (rounds, resuscitation, care)
  - ***Clean, immunized pets allowed to visit***

Safe Practice Standard – NQF

- 28. Evaluate each patient upon admission, and regularly thereafter, for the risk of developing venous thromboembolism/deep vein thrombosis (VTE/DVT).
- Utilize clinically appropriate, evidence-based methods of thromboprophylaxis.

The Iowa Model

Clinical Problem: Skin breakdown



Memorial Hermann The Woodlands Skin Care Team

- DVT Prophylaxis *and Skin Breakdown*

Implementation of EBP for DVT Prevention

- Form a team
- Review the literature; guidelines (www.NGC.gov)
- Select the outcome/s
- Design/develop the plan
- Select or develop a data collection instrument - Validity, reliability, etc
- Identify data collection process – who, when, where, what
- Implement the evidence-based practice change
- Collect post-intervention data
- Analyze data

DVT Prophylaxis *and Skin Breakdown* (cont)

- Guidelines for various patient populations

DVT Prophylaxis *and Skin Breakdown* (cont)

- Practice change:
  - NO MORE TEDS!

Take Home Points

- Evaluate your practice
- Ask “why am I doing this when it *never* works?”
  - Patient outcomes, complaints
    - “I always end up with a sore arm after this medication”.
      - For patients receiving IV potassium , does the use of a lidocaine patch reduce the pain compared with no lidocaine patch?
- Challenges from other care providers
  - Cleanse the open abdominal wound with betadine QID
    - What does the literature say about betadine and newly forming cells?
- New/revised procedures
  - Flush the CVC with heparin Q shift
- New technology/equipment/supplies
- Always ask what is Best Practice?
- How do you know it is Best?

Makic, VonReuden, Rauen, Chadwick (2011). Evidence-based practice habits: putting more sacred cows out to pasture. Critical Care Nurse, vol. 31(2), 38-61.

160 references on various topics