

Practice Guidelines You Need to Know

Andy Jagoda, MD, FACEP
Professor of Emergency Medicine
Mount Sinai School of Medicine
New York, New York

Steve Huff, MD, U Virginia - Syncope
Ed Sloan, MD, U Illinois - Seizure
Andy Godwin, MD, U Florida - Hypertension
Scott Silvers, MD, Mayo Jacksonville - DHF



Why are clinical policies being written?

- Differentiate “evidence based” practice from “opinion based”
 - Clinical decision making
 - Education
 - Reducing the risk of legal liability for negligence
- Improve quality of health care
 - Assist in diagnostic and therapeutic management
- Improve resource utilization
 - May decrease or increase costs
- Identify areas in need of research



Guidelines support the practice of urban paramedic RSI protocols for TBI patients:

- a) True
- b) False



All of the following are used in deciding to admit a 55 yo with syncope except:

- a) ECG
- b) Noncontrast head CT
- c) History of heart disease
- d) All of the above



An elderly woman with known hypertension and chronic heart failure presents with acute shortness of breath several hours after eating a bag of potato chips. Chest X ray reveals pulmonary edema. Which of the following represents best initial therapy?

- A. Nitroglycerine monotherapy
- B. Lasix monotherapy
- C. Nesiritide monotherapy
- D. Aspirin monotherapy



Clinical Policies / Practice Guidelines

- Thousands in existence
- ACEP: 16
 - Chest Pain 1990
 - Sunsetting - no longer distributed
- National Guideline Clearinghouse:
 - www.guideline.gov
 - Over 1700 guidelines registered



Clinical Policies in Review / Preparation

- Toxic ingestion
 - Acetaminophen / hyperbaric oxygen
- Abdominal pain
- Syncope
- Community acquired pneumonia
- Headache
- Early pregnancy
- Pulmonary embolism
- Deep vein thrombosis
- Pediatric fever
- Acute stroke



Critically Appraising Clinical Policies

- Why was the topic chosen
 - t-PA in stroke
 - Sedation and analgesia
- What are the authors' credentials
 - Were emergency physicians included
- What methodology was used
 - Consensus vs evidence based
- How as it reviewed
- When was it written / updated



Do clinical policies change practice?

- Wears. Headaches from practice guidelines. Ann Emerg Med 2002; 39:334-337
 - 60% of practicing EPs use narcotics as first line medications
 - Canadian Headache Society. Guidelines for the diagnosis and management of Migraine in clinical practice.
 - Can Med Assoc J 1997; 156:1273-128US Headache Consortium.
www.aan.com/public/practice guidelines



Guideline Development

- Consensus
- Evidence based



Consensus

- Group of experts assemble
- "Global subjective judgement"
- Recommendations not necessarily supported by scientific evidence
- Limited by bias



Consensus: Examples

- MAST trousers in traumatic shock
- Hyperventilation in severe TBI
- Narcotics in migraine headache therapy
- Blood cultures in CAP / 4 hour time antibiotic rule of CAP
- "Keep the brain dry" in severe TBI



Consensus: Examples

- Gastric freezing for ulcers
 - Case series, historical controls in 1960s
 - ~15,000 pts treated
 - RCT showed ineffective in 1969
- Lidocaine prophylaxis in AMI
 - Intermediate outcome: suppression PVCs, VT
 - Pt-centered outcome: increased mortality



Evidence Based Guidelines

- Define the clinical question
 - Focused question better than global question
 - Outcome measure must be determined
- Grade the strength of evidence
- Incorporate practice patterns, available expertise, resources and risk benefit ratios



Two Separate Questions

- How strong is the evidence from one study?
 - Critical appraisal
- How strong is the combined evidence from multiple studies?
 - Synthesis
 - Consistency in magnitude, direction
 - Sufficiency
 - Greater risk, cost, implausibility require greater evidence



Interpreting the literature

- Terminology
 - MTBI: GCS of 15 or GCS 13-15?
- Patient population
 - Adult vs children
 - ED patients vs hospitalized patients
 - AHA / ACC recommendations
- Interventions / outcomes
 - Head trauma: abnormal CT or neurosurgical lesion?
 - Status epilepticus: end of motor activity or end of abnormal neuronal firing?



Description of the Process

Strength of evidence (Class of evidence)

- **I:** Randomized, double blind interventional studies for therapeutic effectiveness; prospective cohort for diagnostic testing or prognosis
- **II:** Retrospective cohorts, case control studies, cross-sectional studies
- **III:** Observational reports; consensus reports

Strength of evidence can be downgraded based on methodologic flaws



Description of the process:

Strength of recommendations:

- **A / Standard:** Reflects a high degree of certainty based on Class I studies
- **B / Guideline:** Moderate clinical certainty based on Class II studies
- **C / Option:** Inconclusive certainty based on Class III evidence



Description of the Process

- Different societies use different classification schemes which may impact applications of the recommendation
- ACEP Class I evidence must have high quality support; AHA allows Class I evidence to include “general agreement that a given procedure or treatment is useful and effective”
 - AHA Class Ic recommendation is based on consensus of experts



Medical Legal Implications

- Clinical policies can set standards for care and have been used in malpractice litigation
- May protect against “expert” testimony
 - Regional practice vs national “standards”
 - Steroids in spinal trauma
- Clinical policies developed using flawed methodology may be challenged
 - Consensus / Policy statements



Deposition of Dr. X in a case of missed meningitis

Q. Do you read the policies of the American College of ER physicians?

A. I don't recall reading that policy. Is it something published by ACEP?

Q. Yes.

A. I don't recall reading it.



Deposition of Dr. X in a case of missed meningitis

Q. So if toradol relieves a headache, does that cause you to believe the patient does not have meningitis in a patient in whom you are suspecting meningitis a possible cause of their headache

A. It's an indicator that would decrease the likelihood.

Q. If toradol relieved their headache, would you rely on that as a factor in ruling out meningitis?

A. It is part of the package.



Clinical Policy: Critical issues in the evaluation and management of patients presenting to the ED with acute headache. Ann Emerg Med 2002; 39:108-122

- Does a response to therapy predict the etiology of an acute headache?
 - Level A recommendation: None
 - Level B recommendation: None
 - Level C recommendation: Pain response to therapy should not be used as the sole indicator of the underlying etiology of an acute headache



Guidelines for Prehospital Management of TBI

- Multidisciplinary: Brain Trauma Foundation / Grant from NHTSA
- Evidence Based
- Prehospital care is the “first link” in appropriate care in TBI
- Prehospital providers play a key role in determining the need for trauma center access



BTF Recommendations: Level 3

- Establish an airway in patients who have severe head injury, the inability to maintain an adequate airway, or hypoxemia not corrected by supplemental O₂
- Confirm intubation by utilization of auscultation plus at least one other technique that includes end-tidal CO₂ measurement.
- In ground transported patients in urban environments, the routine use of paralytics to assist endotracheal intubation in patients who are spontaneously breathing and maintaining an oxygen saturation above 90% on supplemental is O₂ not recommended
- EMS systems implementing endotracheal intubation protocols including the use of RSI protocols should monitor blood pressure, oxygenation, and ETCO₂.
- Avoid hyperventilation (unless the patient shows signs of herniation) and correct immediately when identified.



Conclusions

- Guideline development lends itself to a multi-disciplinary approach and helps to identify best practice patterns
- Evidence based clinical policies are useful tools in clinical decision making
- Clinical policy development must be rigorous
- Clinical policies do not create a “standard of care” and do not necessarily override “expert witness”
- Clinical policy dissemination continues to be a challenge

ferne_pv_2007_clinpolicy_jagoda_062307_finalcd

