

CLINICAL DECISION ANALYSIS

Objectives:

At the end of this module, learners will be able to:

- Follow how a decision analysis is constructed
- Interpret a sensitivity analysis
- Explore how outcomes (utilities) are measured in DA
- Practice applying the results of a DA to patient care.

Assignment:

1. Guyatt G, Drummond R. *User's Guides to the Medical Literature: A Manual for Evidence Based Clinical Practice*, 3rd Edition (JAMA). New York, NY: The McGraw-Hill Companies, Inc, 2015. 27. Decision Making and the Patient.
2. Read The Clinical Scenario below.
3. Read the corresponding article: Med Decis Making 2005;25(4):387-97. Perioperative management of patients on oral anticoagulants: a decision analysis. Dunn AS, Wisnivesky J, Ho W, Moore C, McGinn T, Sacks HS
4. Complete the Critical Appraisal Form.
5. Return to the Clinical Scenario and formulate a plan addressing the question of whether it is safe to withhold warfarin and not bridge the patient with intravenous heparin prior to elective surgery.

Clinical Scenario:

Your patient is a 65 year old male with a history of hypertension, hypercholesterolemia, osteoarthritis, and atrial fibrillation. He has right knee pain related to his arthritis, which has been worsening over the past two years making it difficult for him to walk up stairs or play tennis. After several attempts at physical therapy and various injections of his knee with corticosteroids he has decided along with his internist and orthopedic surgeon to undergo total knee replacement.

His current medications include Coumadin 7.5 mg daily, HCTZ 25 mg daily, Pravastatin 20 mg daily, and Tylenol as needed for knee pain. You are seeing this patient for the first time for his preoperative assessment. He is very concerned about his 'blood thinner' and wants to know what's best in terms of peri-operative management. His physical examination is unremarkable with a BP of 124/70 and a painful and slightly swollen right knee.

You are certain that holding Coumadin preoperatively and simply re-starting it after surgery is the safest and best strategy but want to check the literature to reassure the patient and review his options. You vaguely recall seeing a past decision analysis on this issue, and also wonder if more recent evidence exists. You decide to search the literature.