Can Decision Support Improve Medical Decision Making?

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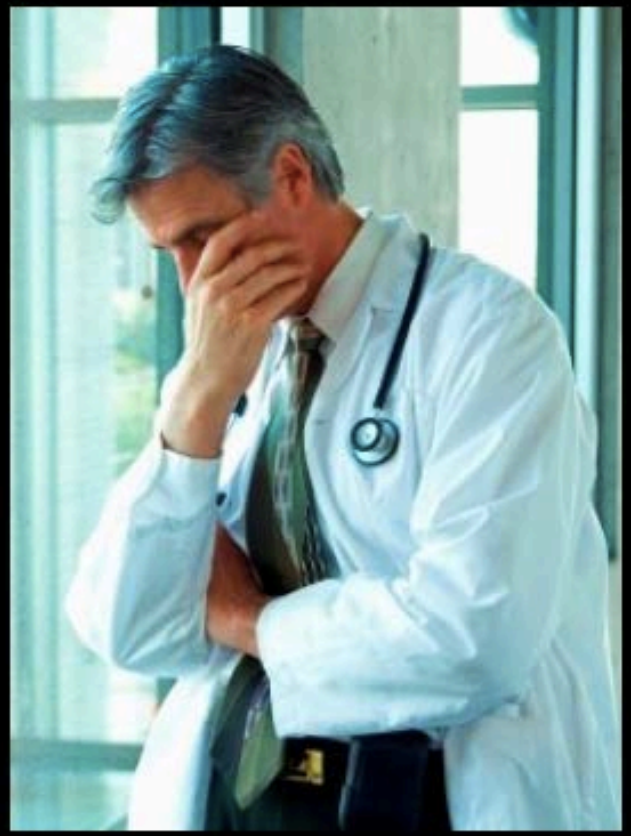
Would decision support have helped?

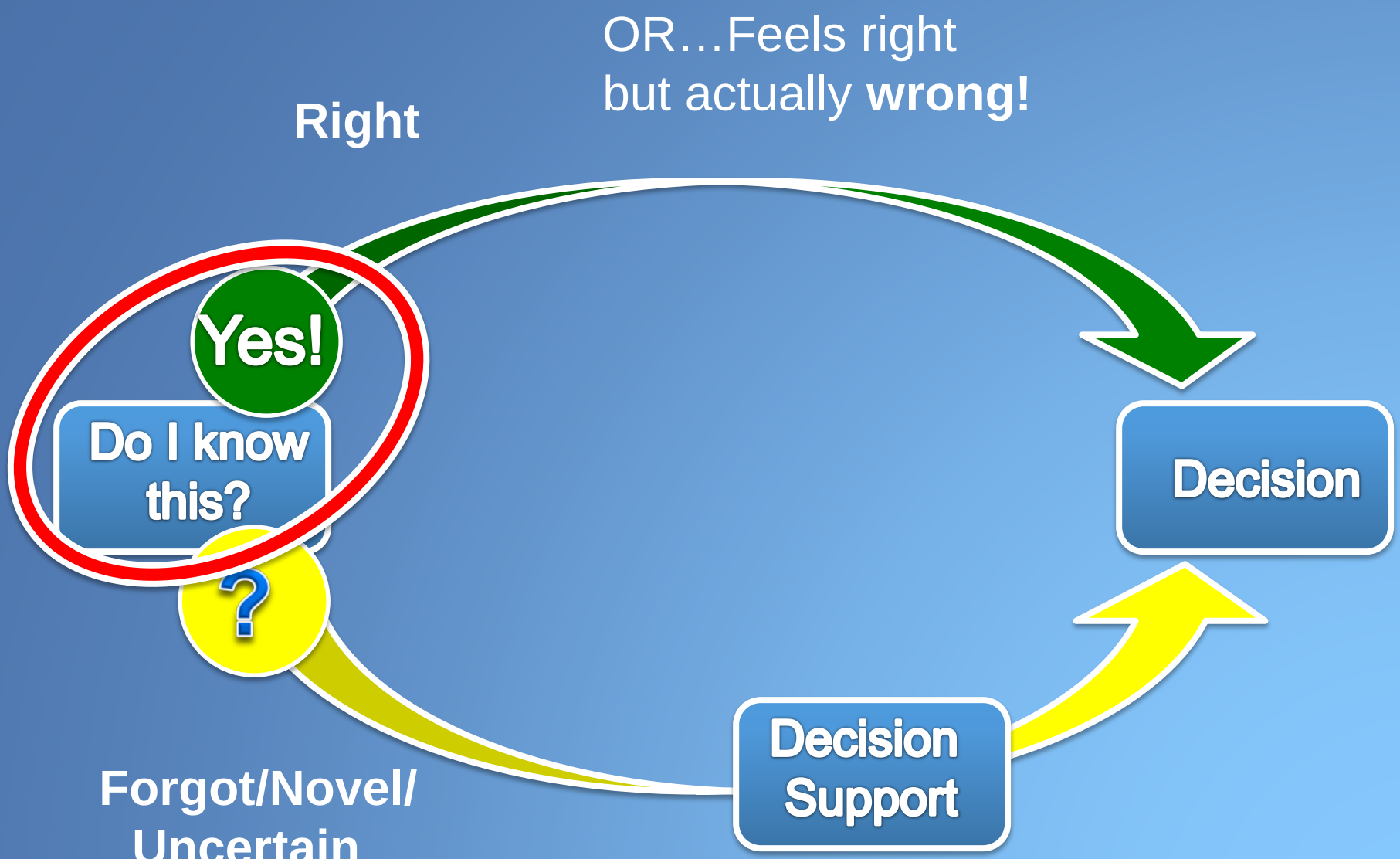
"I remember vividly the morning our medical examiner walked into my office to tell me…

She was a long-time patient of mine; I knew her well. She had come to me for her usual - 'just another migraine.'

Less than 24 hours later, **she was dead**."



Would decision support have helped?


OR…Feels right
but actually **wrong!**
Right
Yes!
Do I know this?
?
Decision
Decision Support
Forgot/Novel/ Uncertain

Two Part System of Reasoning

Intuitive

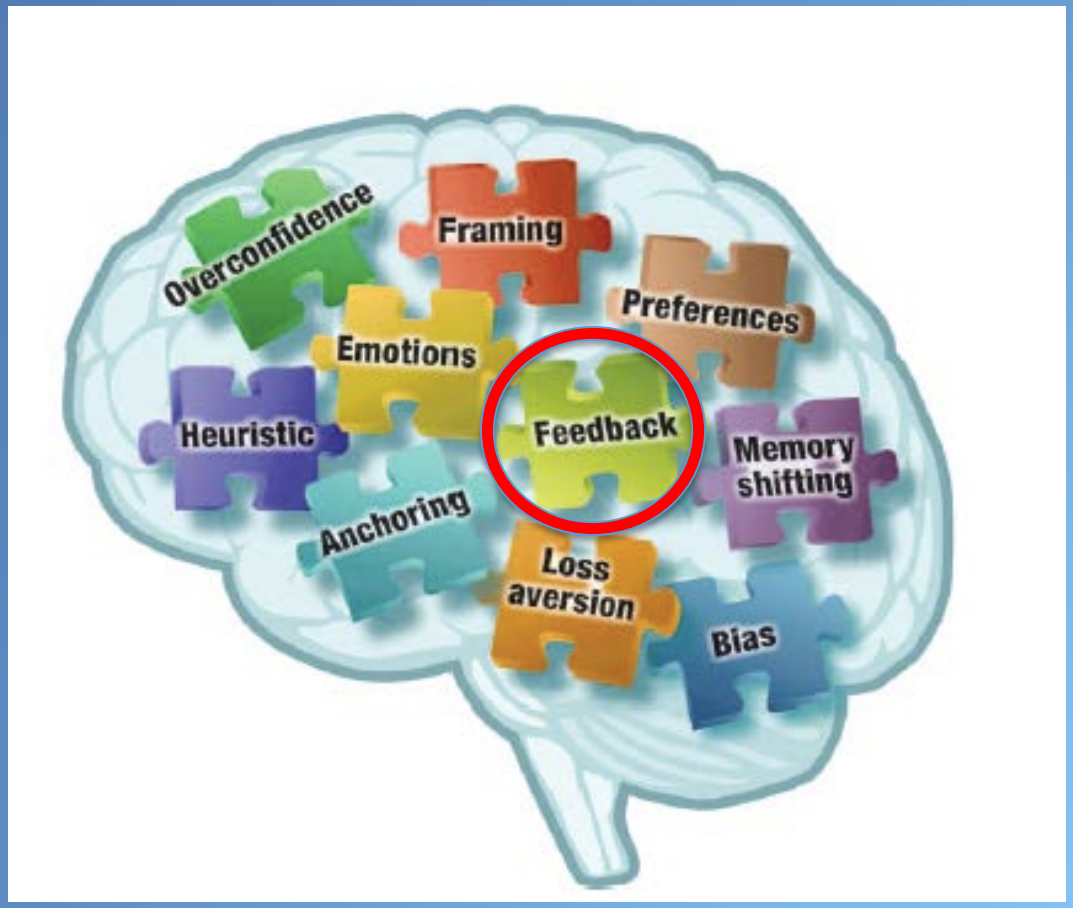
Analytical

Croskerry P. A universal model of diagnostic reasoning. *Acad Med* 2009

Effective decision support requires:

1. uncertainty
2. healthy skepticism even when confident

“No News is Good News!”



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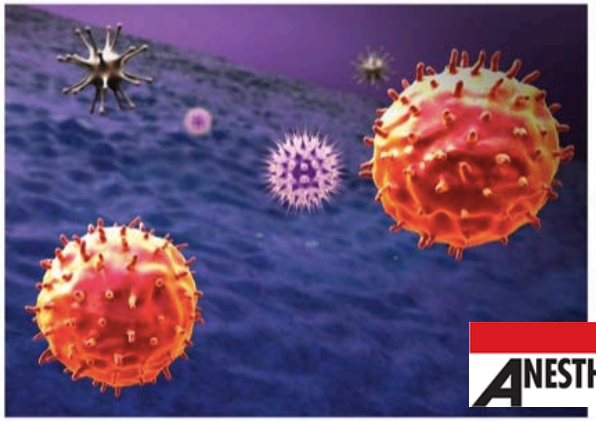
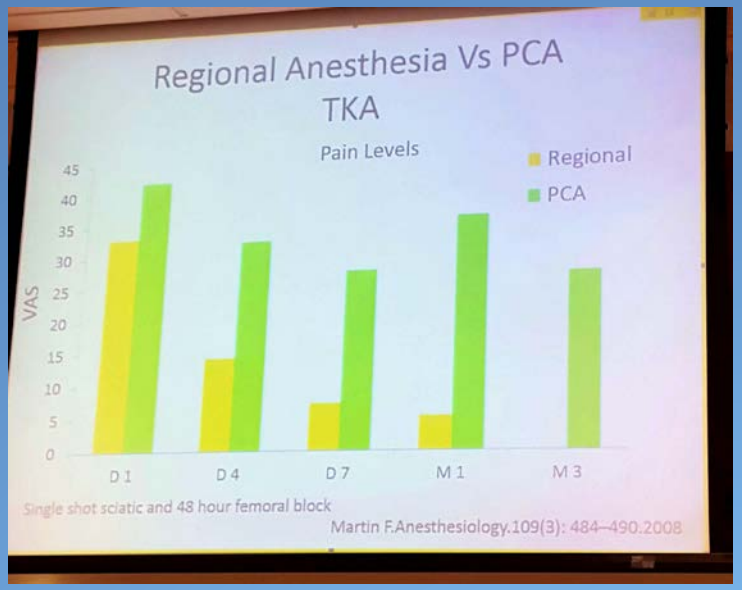
Link Between Anesthetic Agents, Technique And Cancer Outcomes Needs Research



ANESTHESIOLOGY NEWS



Dr. Brian Ginsberg, Duke University

Perioperative Medicine | May 2013 ANESTHESIOLOGY

The Journal of the American Society of Anesthesiologists, Inc.

Perioperative Comparative Effectiveness of Anesthetic Technique in Orthopedic Patients

LOS, $, complications and 30 day mortality!

Stavros G. Memtsoudis, M.D., Ph.D., F.C.C. [illegible] M.S.; Ya-Lin Chiu, M.S.; Ottokar Stundner, M.D.; Spencer S. Liu, M.D.; Amit Banerjee, Ph.D., M.Stat.; Madhu Mazumdar, Ph.D., M.A., M.S.; Nigel E. Sharrock, M.B., Ch.B.

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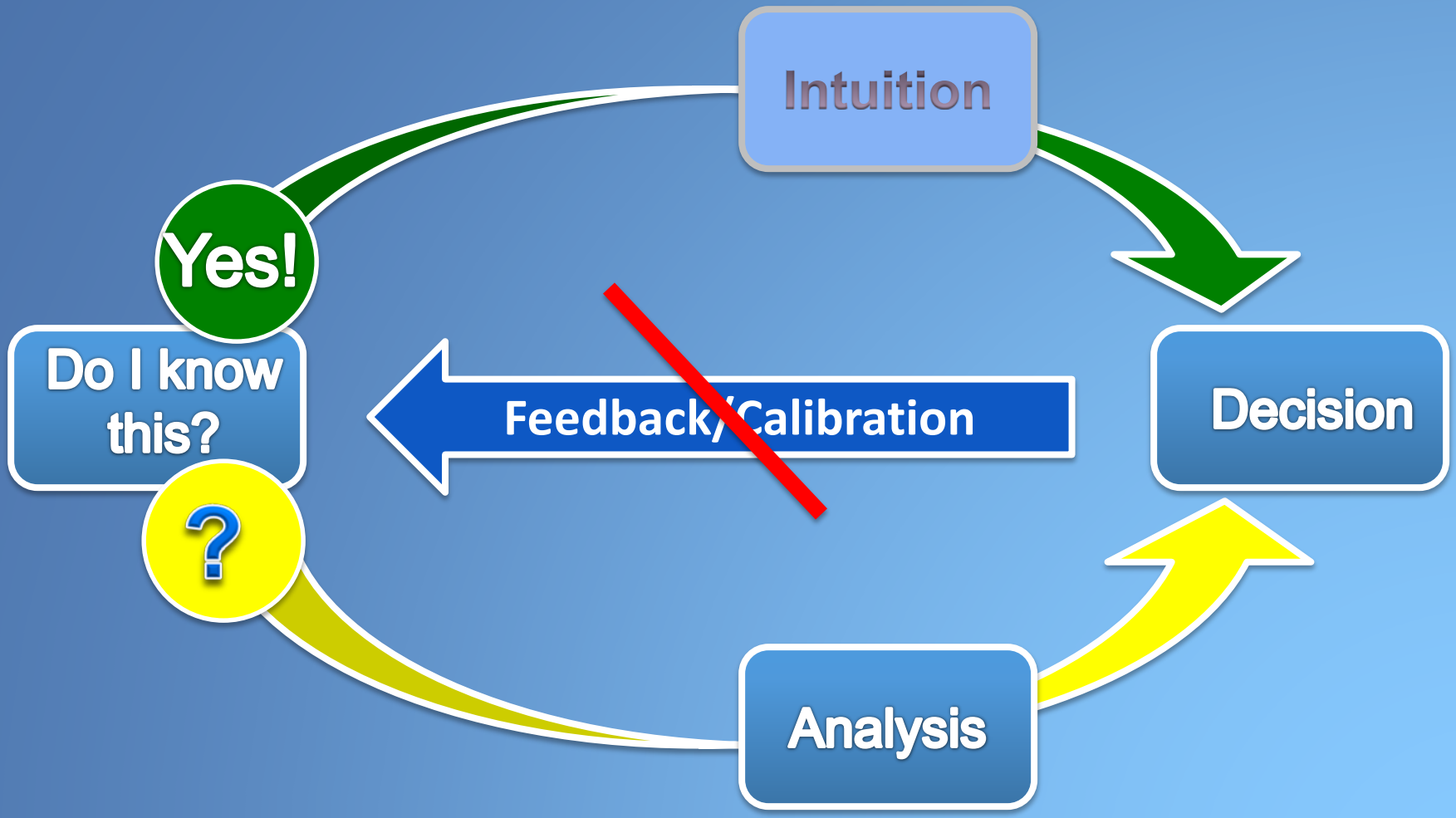
Lack of feedback promotes confidence and automaticity



Improve Timeliness and Quality → Better Decisions

Case #1

Elderly woman for hip fracture s/p fall

History: aortic stenosis, carotid stenosis, strokes, seizures

Surgeon delayed…waiting on OR table for an hour…

Vitals signs normal but verbally unresponsive

Case #2

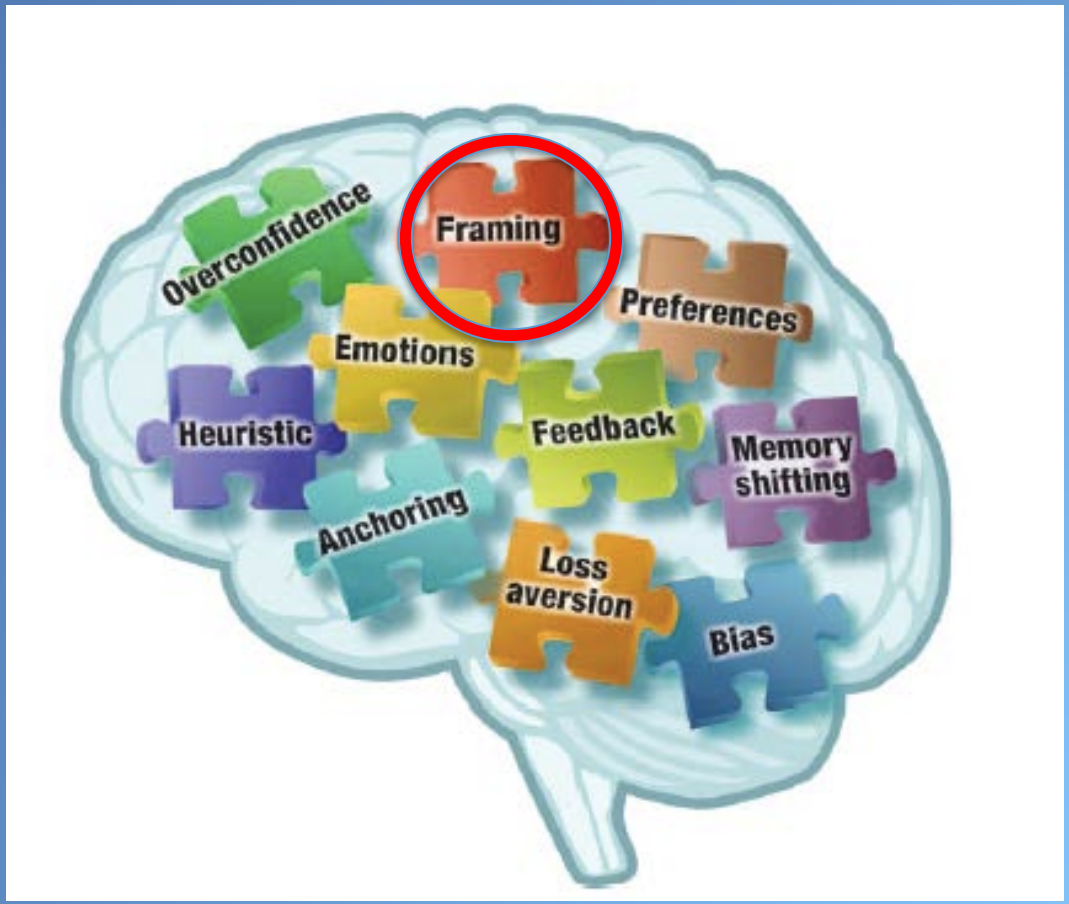
Female for hip fracture

Large volume LA for regional

Apparent LOC before surgery started

Then, cardiovascular collapse…

How do you see it?



EDUCATION

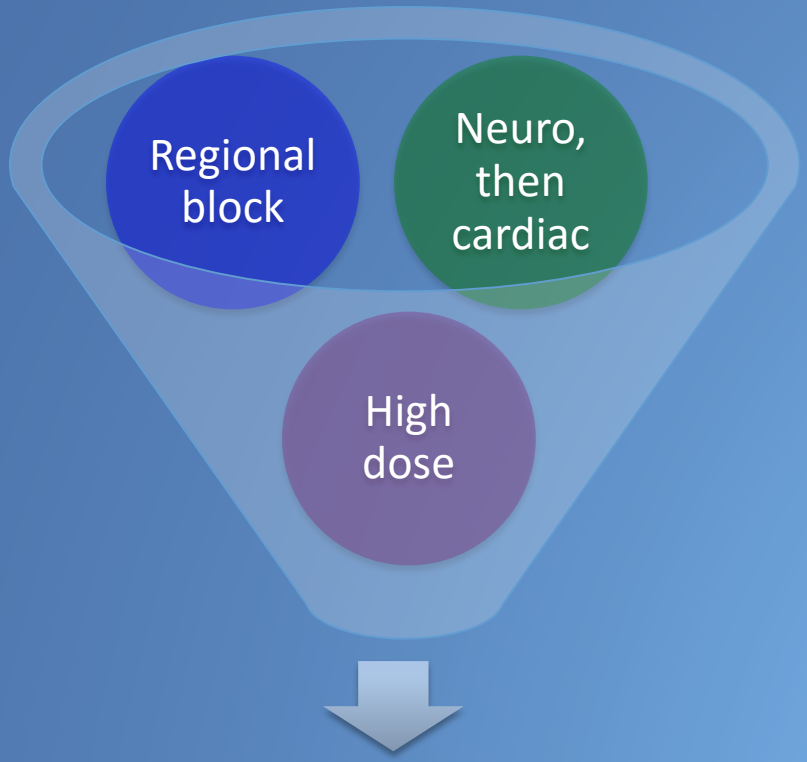
Jerrold H. Levy, M.D., F.A.H.A., F.C.C.M., Editor

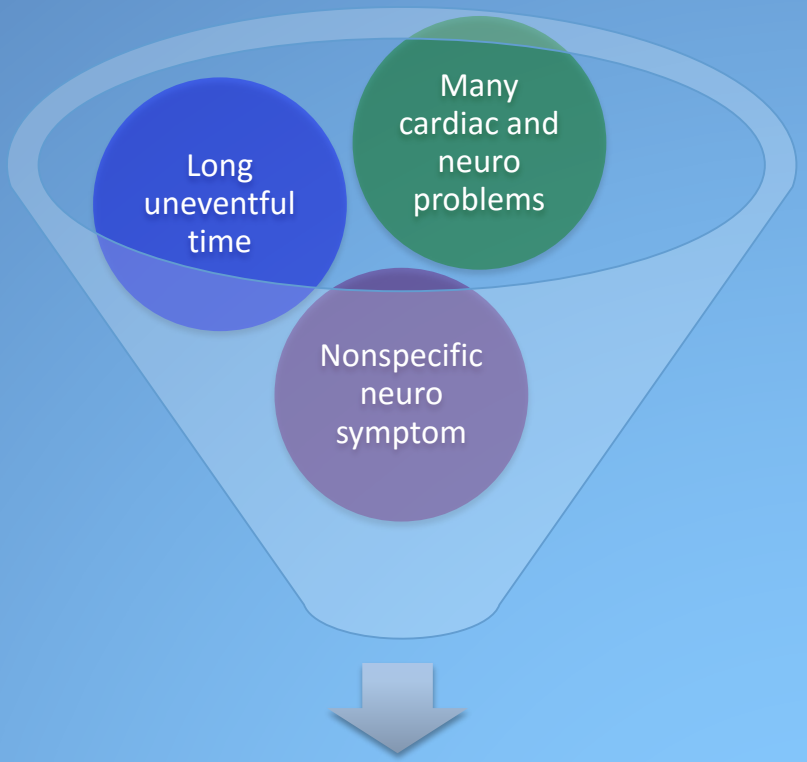
Case Scenario: Local Anesthetic Systemic Toxicity after Combined Psoas Compartment–Sciatic Nerve Block

Analysis of Decision Factors and Diagnostic Delay

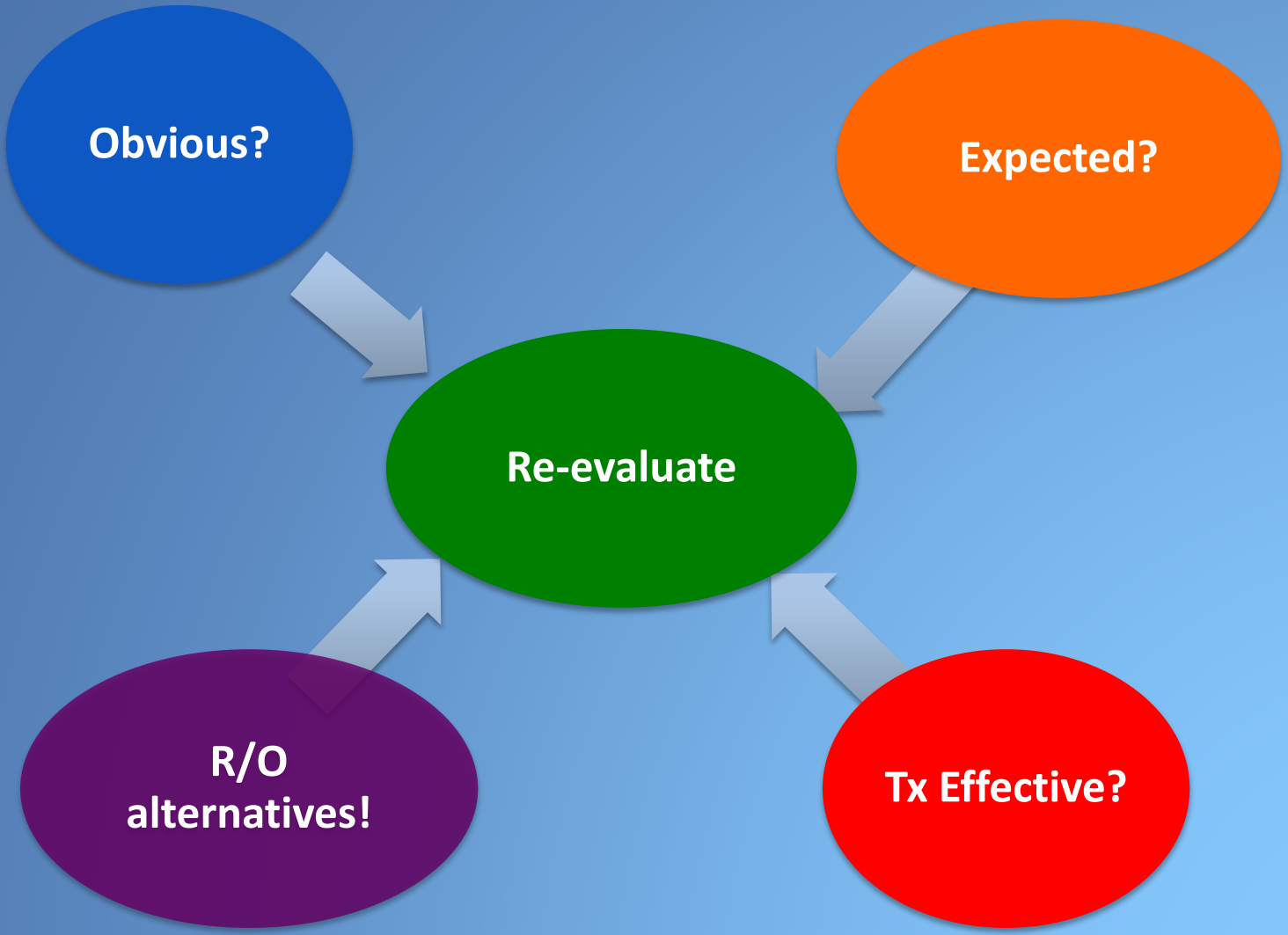
Marissa G. Vadi, M.D., M.P.H., Neesa Patel, M.D., Marjorie Podraza Stiegler, M.D.

Anesthesiology 2014; 120:987–96


Regional block
Neuro, then cardiac
High dose

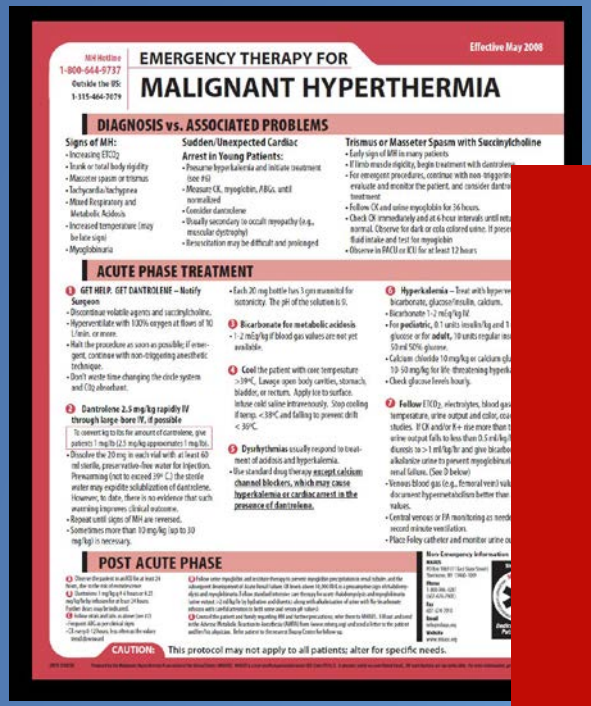

Long uneventful time
Many cardiac and neuro problems
Nonspecific neuro symptom

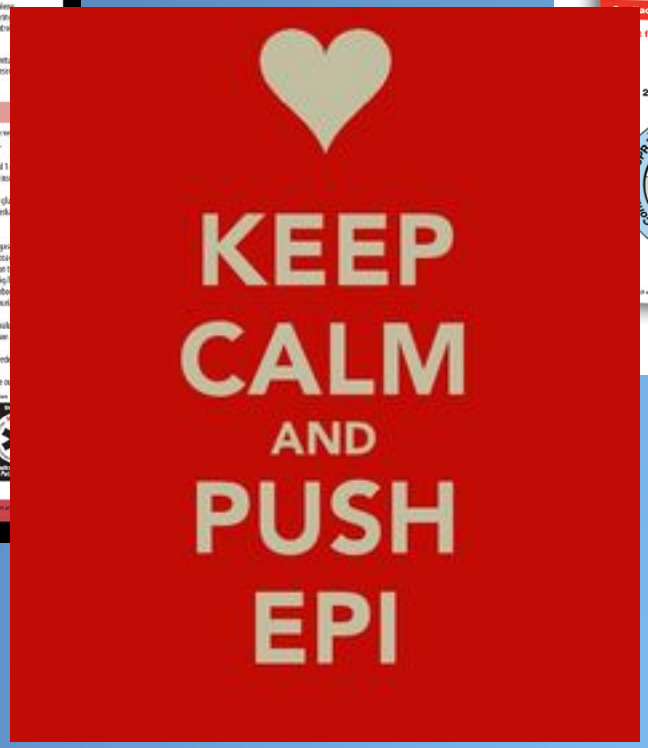
Avoid “Premature Closure”



“Prospective Hindsight”

Counterbalancing Strategies: Algorithms





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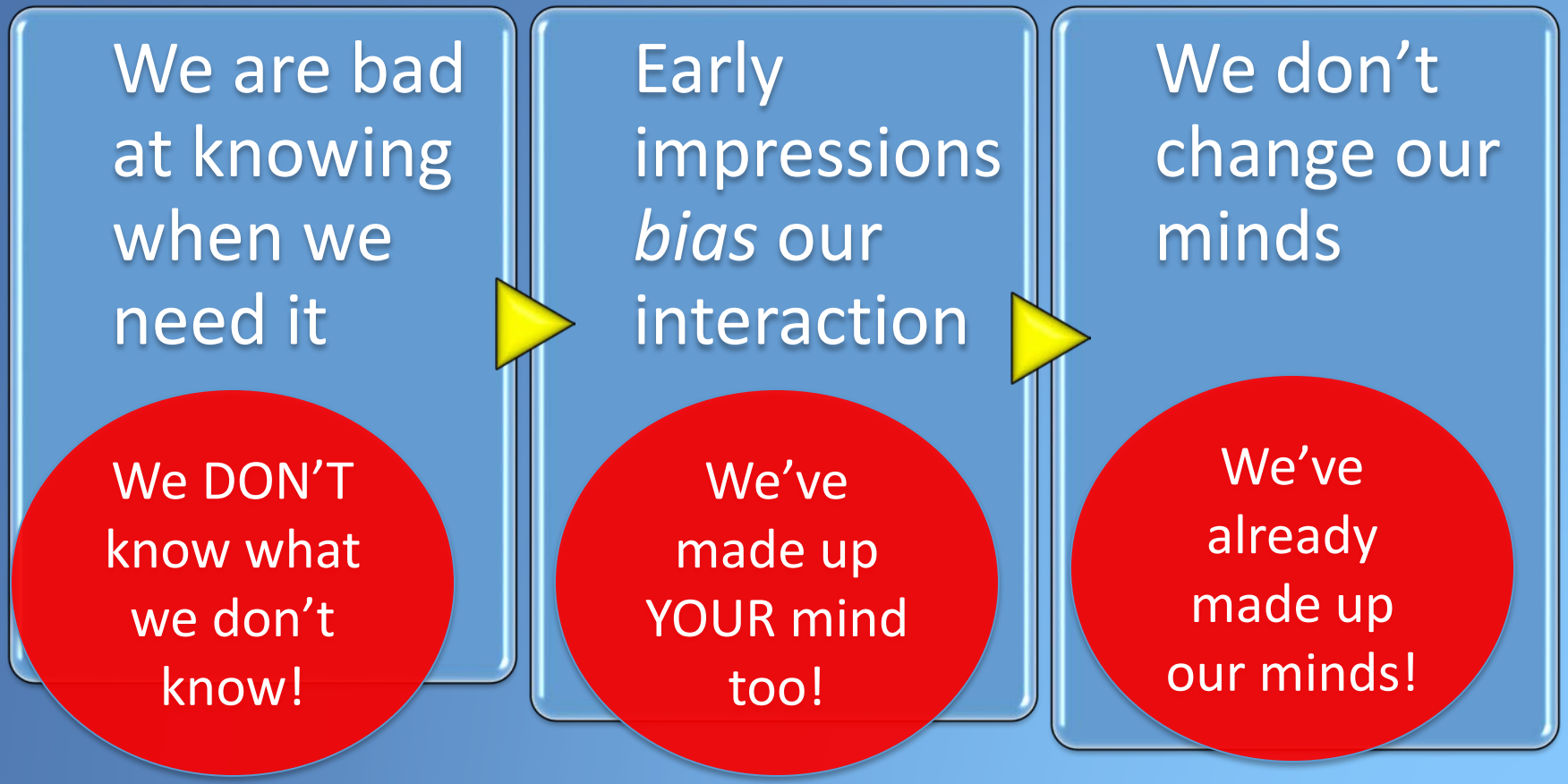
Why Decision Support Fails



Everyone Makes Mistakes

But not at the same time.

Kathryn Shulz: Wrongology

Thank you!

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