

New Paper Exposes Dangers of Evidence-Based Medicine

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May 5, 2010—Two leading neurologists at the University of Illinois College of Medicine boldly expose the dangers of relying on probability-based statistics in medicine in a paper published in a specialist journal April 14. Evidence-based medicine, which is based on the application of probability theory to medical decision making, has been the rallying cry for medical cost cutters, including those behind the genocidal intentions of the Obama Administration's health care reform.

"The requirement of evidence-based medicine to apply probabilities to the individual patient leads necessarily to underdiagnosis, undertreatment, and missed diagnoses," Drs. Cathy M. Helgason and Thomas H. Jobe argue in the paper. Their paper also addresses the fundamental irrationality and anti-scientific nature of the use of probability-based statistics to a medical diagnostic situation, and shows how it degrades the reasoning capabilities of the physician: "Taking a bet or chance on being right is justified because of the basic belief in a random universe in which truth is not based on principle, but on statistical probability."

Using the example of the treatment of stroke, the authors demonstrate how "betting on the match between the patient and the known statistics" can lead to decisions to forego diagnostic testing or to search for other diagnoses. "Thus, the probability based mindset of the physician who must practice probability-based evidence-based medicine turns the one-on-one patient-physician interface into an imaginary, but false, statistical situation."

"If one abandons the requirement of probabilities, then it is not necessary to apply statistics to the clinical encounter. The physician is free to think about the clinical situation in terms of principles of basic science, physiology, biology, chemistry, pharmacology, anatomy, and pathology."

The authors offer an example of a patient presenting with uncontrollable hypertension. The physician may suspect an unusual cause, pheochromocytoma. But the previously reported incidence of this syndrome is a small percentage, and the statistical mindset causes the physician to judge it unlikely. This leads to a tendency not to test for this condition. From a legal standpoint, if there is a 51% chance the patient does not have pheochromocytoma, the physician who does *not* test for it is off the hook.

"Probability theory reinforces the physician's tendency to think in terms of legal liability, and to use the legal formula 'more likely than not' ...

rather than asking what is actually wrong with this patient and applying physiologic principles.” The authors also point out that, ironically (as opposed to the common arguments of the cost-cutters), probability-based thinking leads to the excessive ordering of unnecessary tests, rather than ordering the correct tests required by physiology-based thinking:

“The decision not to order frivolous tests is based on the confidence that comes with physiology-based thinking. Intimate knowledge of neuroanatomy and neurophysiology is the only source of confidence that can safeguard the neurologist against the urge to order frivolous tests, but also gives him/her the confidence to request tests that may be relatively arcane and experimental when necessary. The solution to the malpractice crises lies in emphasizing physiology-based thinking at both the medical and legal levels of understanding and freeing both areas from relying on the 18th century mathematical model of probability-based statistics.”

The paper, “Principled versus Statistical thinking in diagnosis and Treatment of Stroke,” was published online 14 April 2010 in the journal *Current Treatment Options in Cardiovascular Medicine* (2010) 12:292-296. It is available at <http://www.springerlink.com/content/f8523v8047115648/>