Dynamic Chiropractic – September 4, 2000, Vol. 18, Issue 19

Hot and Shrill EVIDENCE in Health Care

By Anthony Rosner, PhD

While sifting through the annals of research evidence, I was taken aback by what appears to be a new classification (or at least a terminology) pertaining to medical evidence that appeared recently in *JAMA*. Citing the recent Institute of Medicine [IOM] report concerning medical errors,[1] built largely upon years of survey results at American hospitals by Lucien Leape,[2] McDonald and his co-authors lament the "hot and shrill" element of the message emerging from this report.[3] Hot and shrill? Sounds more like a withering dinner table putdown of a brassy relative who happens to make a living doing nightclub routines in Las Vegas!

This terminology owes itself to the authors' contention that the IOM report "shouts" about the 44,000-98,000 death and disability rates quoted annually. Should these figures have been "whispered" instead? The point is, preventable death rates in U.S. hospitals are no laughing matter, regardless of whatever volume setting may have been used to transmit the data. To allude to irritations to our auditory systems and thermo-receptors caused by the report seems a bit like trying to kill the messenger, throwing up a smokescreen, or both. I would rather contend that the "grating" characteristic of the IOM document is the emblem of true success-that the report has indeed found its mark.

The authors' argument is built upon the premise that most patients admitted to hospitals have high disease burdens and are high death risks even before they enter the hospital; that those patients selected for chart review in the Harvard Medical Practice Study (on which much of the IOM Report was based) were a high severity group and would of course reflect a higher mortality.[2] What McDonald and his co-authors overlook is that [i] the screened group contained many patients who were not very sick at all; [ii] a large proportion of the patients in the MPS sample who were severely ill, had complicated conditions, or who were admitted for planned terminal care were not included at all; [iii] adverse medical events occurring outside the hospital (including the six percent of events discovered after discharge) were excluded; and [iv] patient death and disability figures gleaned from actual prospective studies dwarf those indicated by the

large record-review studies.[4,5]

To set the record straight, the points are simply the following:

In a study of patients lost to acute myocardial infarction, pneumonia, or cerebrovascular accidents (conditions found to account for 36 percent of all hospital deaths,[6] percent were deemed preventable.[7]

- Up to 17 percent of invasive care unit patients had preventable serious or fatal adverse events in another study;[8]
- The Centers for Disease Control and Prevention estimate 500,000 surgical site infections each year.[9]
- Another large controlled study reported the excess mortality rates of surgical infections to be over four percent, suggesting 20,000 deaths annually in the U.S. from this cause alone.[10]
- Nonfatal medical injuries resulting in disability or prolonged hospital stay occur in 1.3M U.S. patients per year.[11]
- Up to two-thirds of medical injuries are deemed preventable under the prevailing standard of care.[11]

These findings are shrill indeed, but not shrill enough when you consider another recent report in the *New England Journal of Medicine* which informs us that in a systematic study of the reporting of drugs to the media, **over half failed to report their potential harmful effects to patients**.[12] And finally, as far as bemoaning " hot and shrill" is concerned, you have to take note that *JAMA* responsibly published both the McDonald and rebutting articles side by side. But only one of the papers got into press. Guess which? That's right, the paper denouncing "hot and shrill" got all the adoring media attention while the other (which defended the embarrassing figures obtained in medication error related deaths, citing additional disturbing problems in allopathic care as well) was left out in the cold. Am I missing something, or have we just witnessed one of life's great moments of irony?

The indignation comes, of course, when you look at the figures of safety in spinal manipulation, the untoward events of which are often lambasted mercilessly across the media. Even though the going death rate from neurological complications from cervical manipulation, most recently estimated at 0.3 per million manipulations,[13] is a figure that the chiropractic profession strives to improve upon, it is absurdly low when compared to death rates 400 times greater from GI bleeding due to the use of NSAIDs[14] or 700 times greater due to spinal surgery.[15,16] Or when compared to the following death rates reported in the past from such lifestyle activities as: 1/200 from cigarette smoking, 1/100,000 from canoeing, 1/5,900 from automobile driving in the United Kingdom, or 1/25,000 from playing soccer or football.[17]

"Hot and shrill" are the words that I would use to describe my reaction to the inequities of media coverage of the risk factors stated above. "Hot and shrill" should also describe the public response to the present quality of American health care. In a recent ranking of quality of health care, the United States ranked **37th** in a list of 191-while France, Italy, San Mariono, Andorra, Malta, Singapore, Spain, Oman, Austria and Japan ranked in the top 10. Add to this the fact that the United States spends an estimated $3,724 per person on healthcare each year, compared to almost half that in France and less than half that figure in Japan (which is ranked #1 in the length of life lived in good health). Perhaps the problem is best summed up by the remarks of a Princeton health economist Uwe Reinhardt, who indicates that "while good at expensive, heroic care, Americans are very poor at the low-cost preventive care that keep Europeans healthy."[18]

Considering this wake-up call of an assessment, a better invitation for chiropractic research and practice could not be found. This is the entire approach to health care that chiropractic has embraced for decades, now producing reverberations in the alternative healthcare movement worldwide. The point is to be able to fund this research and then to be certain that it is conveyed, digested and understood by the proper parties. Shouldn't the tone of my entreaty be "hot and shrill"?

References

1. Kohn LT, Corrigan JM, Donaldson M. eds. *To Err is Human: Building a Safer Health System.* Washington, DC: Institute of Medicine, 1999.
2. Brennan TA, Leape LL, Laird NM, Hebert L, Locallo AR, Lawthers AG, Newhouse JP, Weller PC, Hiatt HH. Incidence of adverse events and negligence in hospitalized patients: Results of the Harvard Medical Practice Study I. *New England Journal of Medicine* 1991;324(6):370-376.
3. McDonald CJ, Weiner M, Hui SL. Deaths due to medical errors are exaggerated in Institute of Medicine Report. *Journal of the American Medical Association* 2000;284(1):93-95.

Leape LL. Institute of Medicine medical error figures are not exaggerated. *Journal of the American Medical Association* 2000;284(1):95-97.

4.

Bates DW, Cullen DJ, Laird N, Petersen LA, Small CD, Servi D, Laffel G, Sweitzer BJ, Shea BF, Hallisey R, et al. *Journal of the American Medical Association* 1995;274(1):29-34.

5.

Kozak L, Lawrence L. *National Hospital Discharge Survey*: Annual Summary 1997. Hyattsville, MD: National Center for Health Statistics, 1999.

6.

Dubois RW, Brook RH. Preventable deaths: who, how often, and why? *Annals of Internal Medicine* 1998; 1988;109:582-589.

7.

Andrews LB, Stocking C, Krizek T, Gottlieb L, Krizek C, Vargish T, Siegler M. An alternative strategy for studying adverse events in medical care. *Lancet* 1997;349(9048):309-313.

8.

National Nosocomial Infection Surveillance System. Semi-annual Report. Atlanta, GA: Centers for Disease Control and Prevention, 1996.

9.

Kirkland KB, Briggs JP, Trivette SL, Wilkinson WE, Sexton DJ. The impact of surgical-site infections in the 1990s: Attributable mortality, excess length of hospitalization, and extra costs. *Infection Control and Hospital Epidemiology* 1999;20:725-730.

10.

Leape LL, Lawthers AG, Brennan TA, Johnson WG. Preventing medical injury. *QRB Qualitative Research Bulletin* 1993;19:144-149.

11.

Moynihan R, Bero L, Ross-Degnan D, Henry D, Lee K, Wakins J, Mah C, Soumeral SB. Coverage by the news media of the benefits and risks of medications. *New England Journal of Medicine* 2000:342(22): 1645-1650.

12.

Hurwitz EL, Aker PD, Adams AH, Meeker WC, Shekelle PG. Manipulation and mobilization of the cervical spine: A systematic review of the literature. *Spine* 21(15):1746-1760.

13.

Dabbs V, Lauretti W. A risk assessment of cerivical manipulation vs NSAIDs for the treatment of neck pain. *Journal of Manipulative and Physiolgical Therapeutics* 1995;18(8):530-536.

14.

Deyo RA, Cherkin D 15. C, Loesser JD, Bigos SJ, Ciol MA. Morbidity and mortality in association with operations on the lumbar spine: The influence of age, diagnosis, and procedure. *Journal of Bone and Joint Surgery Am* 1992;74(4):536-543.

15.

Survey data of the cervical spine, Research Society, 1982.

16.

Dinman BD. The reality and acceptance of risk. *Journal of the American Medical Association* 1980;244(11):1226-1228.

17.

The Week in Chiropractic June 26, 2000;6(36):1.

18.

Anthony Rosner,PhD
Brookline, Massachusetts

rosnerfcer aol.com

Dr. Anthony L. Rosner is the director of research initiatives at Parker College of Chiropractic. A 1972 graduate of Harvard University (PhD in biological chemistry/medical sciences), he is the former director of research and education for the Foundation for Chiropractic Education and Research (FCER).

Page printed from:
http://www.chiroweb.com/mpacms/dc/article.php?id=31889&no_paginate=true&p_friendly=true&no_b=true