



e-quilibrium

- "electronic briefs on behavior and health"

Volume 4, Number 10

October 2008

Numeracy

There has been a trend toward patients and consumers of health care resources having more responsibility for decision-making. The trend has been fueled by various factors, including the availability of health information (especially via the internet), certain forces in health economics, and proliferation in choices.

The effectiveness or benefit of giving patients more choice is dependent upon individuals making good decisions. One concern in this regard has been the problem of health literacy, that is, the ability to read and understand health-related information. Inadequate health literacy is a widespread and well-documented problem.

Related to but yet distinct from literacy is numeracy, which is defined as the ability to understand, use, and make sense of numbers. More specifically, health numeracy refers to these capabilities as they pertain to health-related information.

Dr. Wendy Nelson of the National Cancer Institute, along with colleagues from several other academic and governmental institutions, recently published an article on health numeracy in the Annals of Behavioral Medicine. The paper cites research indicating that numeracy affects health decisions, above and beyond the impact of health literacy, verbal intelligence, and educational attainment.

Consider the pervasiveness of numbers in health care. Vital signs, laboratory results, and medication dosages are just a few examples. Risks, probabilities, and the extent of disease

(e.g., cancer staging) are described with numbers. Few health care decisions are made that don't involve perception of the meaning of numbers.

Low health numeracy, as might be expected, is associated with inferior health, poorer management of chronic illnesses, and choosing lower quality health options. Furthermore, numeracy can affect relatively common processes (e.g., reading food labels), to rarer circumstances (e.g., making sense of the probabilities that arise from genetic testing).

Interestingly, self-reported numeracy is not necessarily a good predictor of objective numeracy. Also, there are very intelligent and well-educated persons who have difficulties with numeracy, including some physicians. Some people are simply better able to make sense of numbers than are others.

Although numbers certainly aren't going to disappear from health care, there are ways to reduce the impact of low numeracy. Health care professionals can ask patients whether they prefer to get information in numbers, words, or pictures (e.g., graphs or drawings) when alternatives are available. Patients can be assertive in asking that numbers be translated into words. Many patient education materials provide descriptions and illustrations along with numbers.

The importance of numbers is what they signify, that is, what they mean. Ultimately, their importance is determined by how behavior is affected. A number that depicts risk or risk reduction affects health only when a decision or other behavior is guided by that number.

I often include statistics or probabilities in these monthly newsletters. This month I have intentionally not used any numbers, even though the topic is all about numbers.

Paul J. Hershberger, Ph.D.

... is a clinical health psychologist. He is Professor of Family Medicine and Director of Behavioral Science for the Dayton Community Family Medicine Residency Program, Wright State University Boonshoft School of Medicine. His clinical practice includes psychotherapy, consultation, and coaching.

To subscribe or unsubscribe to this e-newsletter, send an e-mail message with your request to paul.hershberger@wright.edu

If you wish to read previous newsletters, you may find them at:
www.med.wright.edu/fm/equilibrium/

To contact Dr. Hershberger:

e-mail: paul.hershberger@wright.edu

phone: (937) 278-6251, ext 2021