

In That Issue: The Burden of Skin Disease

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Answering the questions *How can we monitor the health of a population? How can we determine the effects of a specific disease on that health? How can we compare the health effects of many diseases, to determine which should be addressed?* requires rigorous inquiry based on established techniques in epidemiology, biostatistics, economics, psychometrics, and decision analysis. In addition to their scientific interest and significance to our patients and practices, these questions are important to the conduct and goals of our research efforts, and to the public health.

The Burden of Skin Disease focus issue of the *Journal* is devoted to studies that address these important issues. The editors' interest in this topic reflects a growing international trend driven by a powerful confluence of political and academic initiatives, including those of the World Bank and the World Health Organization (Murray and Lopez, 1997) and the US Institute of Medicine and the National Institutes of Health (Gross *et al*, 1999).

For the purpose of this issue, burden of disease was defined as the effects of disease on the overall welfare of a population, which can be assessed from the viewpoints of the person, the family, and society. Components of the burden of disease can be either economic (related to costs incurred or income lost) or non-economic (related to survival and well-being). Although traditional measures of incidence and mortality are important, they provide an incomplete picture of the impact of disease on affected patients, their families, and society.

Measuring such complex aspects of health is challenging, and schemes and tools have been developed to measure each of the components of the burden of disease. As with all measurement tools, these instruments must at a minimum be reliable (i.e., have a high signal-to-noise ratio) and valid (i.e., measure what they are intended to measure) (Chren, 2000).

In addition, we face unique challenges in attempting to describe and measure the burden of *skin disease*. First, the term "skin disease" is ambiguous, both with respect to the term "skin" and the term "disease." Biological conditions often involve multiple organ systems, and there may be no consensus on whether they primarily or predominantly concern the skin.

A second challenge is that many skin diseases are chronic, and their burden is experienced more in living with the disease, than in dying from it. Thus, as with all chronic diseases, accurate measures of well-being are especially important for comprehensive assessments of burden of skin diseases. These measures—of impairment, disability, and handicap—

can be difficult to develop, administer, and interpret, compared with more straightforward measures of incidence and mortality.

A third challenge relates to the complex relationship among impairment, disability, and handicap. For many—if not most—clinical conditions (Nease *et al*, 1995; Nichol *et al*, 1996), the severity of the impairment, or biological properties of the disease, does not correlate in a predictable, linear fashion with the disability of the patient. Likewise, a degree of disability does not always handicap patients in the same way. The complexity of this relationship, although true for most diseases, is perhaps most pronounced for skin diseases, which, because they can affect appearance and self-esteem, may handicap more than they impair or physically disable. A comprehensive assessment of handicap requires input from patients themselves, for clinicians are not able to predict accurately the quality-of-life effects of their patients' conditions (Parkerson *et al*, 1992).

It seems likely that national and global efforts to monitor and compare overall health and the burden of individual diseases will increase. As represented in the papers in this focus issue of the *Journal*, we in dermatology must articulate important and unique features about the burden of skin diseases, and promote rigorous scientific approaches to measuring this burden. At the centerpiece of our efforts should be our conviction that a comprehensive assessment of the burden of skin disease requires not only conventional measurements of incidence and mortality but also accurate assessments of other dimensions of health, including patients' reports of disability and handicap.

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References

- Chren MM: Giving "scale" new meaning in dermatology: Measurement matters [editorial; comment]. *Arch Dermatol* 136:788–790, 2000
- Gross CP, Anderson GF, Powe NR: The relation between funding by the National Institutes of Health and the burden of disease. *N Engl J Med* 340:1881–1887, 1999
- Murray CJ, Lopez AD: Global mortality, disability, and the contribution of risk factors: Global Burden of Disease Study. *Lancet* 349:1436–1442, 1997
- Nease RF Jr, Kneeland T, O'Connor GT, *et al*: Variation in patient utilities for outcomes of the management of chronic stable angina. Implications for clinical practice guidelines. *JAMA* 273:1185–1190, 1995
- Nichol G, Llewellyn-Thomas HA, Thiel EC, Naylor CD: The relationship between cardiac functional capacity and patients' symptom-specific utilities for angina: Some findings and methodologic lessons. *Med Decis Making* 16:78–85, 1996
- Parkerson GR Jr., Broadhead WE, Tse CK: Quality of life and functional health of primary care patients. *J Clin Epidemiol* 45:1303–1313, 1992