

Letters to the Editor

Letters to the Editor will be reviewed and are published as space permits. By submitting a Letter to the Editor, the author gives permission for its publication in the Journal. Letters should not duplicate material being published or submitted elsewhere. Those referring to a recent Journal article should be received within 3 months of the article's appearance. The Editors reserve the right to edit and abridge and to publish responses. Submit three copies. Both text and references must be typed double-spaced. Text is limited to 400 words and fewer than 10 references.

Reprints can be ordered through the author whose address is listed at the end of the letter.

The Term "Years of Healthy Life": Misunderstood, Defended, and Challenged

1. A Shorthand Term for Policymakers

Robine and colleagues¹ rightly emphasize the need to clearly distinguish between concepts of health expectancies, health-adjusted life expectancies, and quality-adjusted life years. However, they undermine their semantic point with a serious factual error when they describe the use of the term years of healthy life in objective 17.1 of *Healthy People 2000*.²

Healthy People 2000 uses this term as shorthand for policymakers, not scientists. Its meaning is clearly spelled out on pages 445–446 of the report. An age-specific, national survey-based measure that used the Quality of Well-Being Scale is combined with the US life table to produce a statistic that is clearly a measure of health

expectancy, as Robine and his colleagues define this term. It is not, as they claim, a measure of disability-free life expectancy.

Perhaps Robine and colleagues are confused because of a calculation of disability-free life expectancy Jane Durch and I included in a paper about the national health objectives, which was published in this journal and which they quote. Our purpose was to indicate the impact of meeting both the mortality and disability objectives, and this approach seemed appropriate even though there is no disability-free life expectancy objective in *Healthy People 2000*.

Clarification of terms is important in public health assessment, but Robine and colleagues have done a disservice by mischaracterizing the only US national health goal that directly relates to their area of interest. □

Michael A. Stoto, PhD

Requests for reprints should be sent to Michael A. Stoto, PhD, Institute of Medicine, National Academy of Sciences, 2101 Constitution Ave, Washington, DC 20418.

References

1. Robine JM, Mathers CD, Bucquet D. Distinguishing health expectancies and health-adjusted life expectancies from quality-adjusted life years. *Am J Public Health.* 1993;83:797–798.
2. *Healthy People 2000: National Health Promotion and Disease Prevention Objectives.* Washington, DC: US Dept of Health and Human Services; 1990.
3. Stoto MA, Durch JS. National health objectives for the year 2000: the demographic impact of health promotion and disease prevention. *Am J Public Health.* 1991;81:1456–1465.

2. A Measure That Can Capture Gradations in Health States

Robine and coauthors, in their recent annotation,¹ call for precision in distinguishing between health-adjusted

life expectancies and quality-adjusted life years and for consistency within the public health community in the naming of these measures. The Public Health Service, in seeking to reframe the nation's view of health as more than simply longevity, is committed to developing and supporting health status measurements that convey information about the level of health of Americans. This commitment is seen in the first goal of *Healthy People 2000: The National Health Promotion and Disease Prevention Objectives*, which targets an increase in the span of healthy life for the populace.² The Public Health Service will track this goal through the measurement of "years of healthy life."

Contained within the article by Robine et al. is a basic misapprehension regarding the years of healthy life measure that is being developed and used in tracking the nation's health objectives for the year 2000. The authors make a distinction between "health expectancies," where dichotomous health states (such as "free of disability" vs "with disability") are weighted at zero or at unity, and "quality adjusted life years," a unit of measurement making use of value weights that can be used for adding years of life in different health states. Referring to objective 17.1 in *Healthy People 2000*, "Increase years of healthy life to at least 65 years" (baseline: an estimated 62 years in 1980) Robine et al. state that the "actual objective is clearly to achieve an increase of *disability-free life expectancy* at birth by 3 healthy years." In fact, the intention of the objective is to produce improvements in *levels* of health status that will be documented by the supporting measurement instrument, an instrument that assesses degree of dysfunctional life and permits its summation across populations.

In this era chronic illness and disability have taken on enormous public health and medical significance. The United

States shares with others in the international community a keen interest in lessening the burden of morbidity in the population. We do not assume, however, that these conditions will be completely vanquished. Accordingly, we look for a measure that can capture gradations in health states.

The commitment to build the years of healthy life measure signals an important change in the paradigm of public health for the United States. This is a measure that will be refined throughout the decade. We welcome the opportunity to work with the international community to develop a lexicon that allows us to converse usefully with other nations. It is therefore vitally important that others first understand what we have set out to accomplish. □

J. Michael McGinnis, MD

Requests for reprints should be sent to J. Michael McGinnis, MD, Deputy Assistant Secretary for Health, Office of the Assistant Secretary for Health, Washington, DC 20201.

References

1. Robine JM, Mathers CD, Bucquet D. Distinguishing health expectancies and health-adjusted life expectancies from quality-adjusted life years. *Am J Public Health.* 1993;83:797-798.
2. *Healthy People 2000: National Health Promotion and Disease Prevention Objectives.* Washington, DC: US Dept of Health and Human Services; 1991. DHHS publication PHS 91-5212.

3. A Short Term for "Quality-Adjusted Life Years"

The Annotation section of the June issue of the *American Journal of Public Health* discusses issues related to combining quantity and quality of life for monitoring health levels.¹ In their efforts to clarify distinctions between different types of measures Robine et al. seem to have misunderstood the methods that were used to calculate years of healthy life for *Healthy People 2000*.²

In drafting *Healthy People 2000*, the authors were well aware of the methodological distinctions between years of healthy life and active life expectancy as well as other forms of adjusted life expectancy. To make the distinctions apparent to readers of *Healthy People 2000* who might be unfamiliar with methods of adjusting life expectancy for disability and health-related quality of life, the term "quality-adjusted life years" was either included in parentheses or in a

footnote to the term "years of healthy life."

Estimates of years of healthy life that appear in *Healthy People 2000* include the three elements essential for calculating quality-adjusted life years: (a) health states, which are usually based on function levels; (b) quality adjustments, which are sometimes referred to as preference weights; and (c) prognosis, which can be represented by life expectancy. The health states and quality adjustments together form an estimate of health-related quality of life for a population; this is combined with mortality by using standard life table techniques to form quality-adjusted life years.³ For ease of communication, the Office of Health Promotion and Disease Prevention refers to the quality-adjusted life years as "years of healthy life."

Years of healthy life and active life expectancy,⁴ a related summary measure, are both to be tracked for people over 65 years of age in *Healthy People 2000*. Active life expectancy is a measure that adjusts life expectancy according to activity level without using quality adjustments. Although this measure is a less sensitive measure of population health, active life expectancy was included in the plan for promoting health at the request of specific agencies that were already using it to summarize the morbidity and mortality experience of elderly populations.

Since the publication of *Healthy People 2000*, the Department of Health and Human Services has developed an approach for calculating years of healthy life which is based on data routinely collected in the National Health Interview Survey. The health states in this new measure are based on questions about activity limitation and perceived health.⁵ Using these health states and associated quality adjustments, we can calculate years of healthy life from 1984 to 2000, which allows us to monitor progress in reaching the goal of increasing the healthy life span of all Americans.⁶ □

Pennifer Erickson
Ronald W. Wilson

The authors are with the National Center for Health Statistics, Hyattsville, Md.

Requests for reprints should be sent to Pennifer Erickson, Clearinghouse on Health Indexes, National Center for Health Statistics, 6525 Belcrest Rd, Hyattsville, MD 20782.

References

1. Robine JM, Mathers CD, Bucquet D. Distinguishing health expectancies and health-adjusted life expectancies from quality-adjusted life years. *Am J Public Health.* 1993;83:797-798.

2. *Healthy People 2000: National Health Promotion and Disease Prevention Objectives.* Washington, DC: US Dept of Health and Human Services, Public Health Service.
3. Patrick DL, Erickson P. *Health Status and Health Policy: Quality of Life in Health Care Evaluation and Resource Allocation.* New York, NY: Oxford University Press, pp. 19-25, 1993.
4. Katz S, Branch LG, Branson MH, Papsidero JA, Beck JC, Greer DS. Active life expectancy. *New Engl J Med.* 1983;309(20): 1218-1224.
5. Erickson P, Wilson RW, Shannon I. *Statistical Note: Years of Healthy Life.* Hyattsville, Md: National Center for Health Statistics; 1993.
6. National Center for Health Statistics. *Health, United States, 1992.* Hyattsville, Md: Public Health Service, p. 241, 1993.

4. Robine and Mathers Respond: Regrettable Inconsistencies

We thank the authors for their various letters and their clarification that the statistic "years of healthy life" is not a disability-free life expectancy—a point which does not appear to be clear in *Healthy People 2000*.¹ But that is not our argument.

We wish to underline the need for the consistent use of terms to avoid confusion, both among workers in the field and among the general public. Two recent examples will illustrate our point.

First, in its last report, the World Bank calculates that 1362 million disability-adjusted life years (DALYs) were lost in the world in 1993 because of disease.² What is the link between this figure and that of 65 "years of healthy life," also referred to as quality-adjusted life years, indicated in *Healthy People 2000*?¹ A priori, none: the World Bank statistic is the global sum of the years lost; the statistic "years of healthy life" is a mean duration of life. Similar terminology is being used for quite different constructs. Is this not troubling?

Next, in the last US Health Report, one reads in the part titled *Healthy People 2000 Review*: "As figure 1 indicates, in 1990, life expectancy in the United States was 75.4 years while years of healthy life was 64.0. On average, Americans spend 85 percent of their lifespan in a healthy state."³ This would be true if it were a true health expectancy; in this case the different states of health, "healthy" and "unhealthy," would have been complementary as Figure 1 suggests (healthy life expectancy + unhealthy life expectancy = life expectancy). But this is not the case because "years of healthy life" is a quality-adjusted