

localities in developing the plan for this community intervention project. Because our children are one of the nation's most important resources, we have made this project a priority at CDC. □

David Satcher
Centers for Disease Control
and Prevention
Atlanta, Ga

References

1. Murphy CC, Yeargin-Allsopp M, Decouffé P, Drews CD. The administrative prevalence of mental retardation in 10-year-old children in metropolitan Atlanta, 1985 through 1987. *Am J Public Health.* 1995;85:319-323.
2. Yeargin-Allsopp M, Drews CD, Decouffé P, Murphy CC. Mild mental retardation in Black and White children in metropolitan Atlanta: a case-control study. *Am J Public Health.* 1995;85:324-328.
3. Drews CD, Yeargin-Allsopp M, Decouffé P, Murphy CC. Variation in the influence of selected sociodemographic risk factors

- for mental retardation. *Am J Public Health.* 1995;85:329-334.
4. Kramer RA, Allen L, Gergen PJ. Health and social characteristics and children's cognitive functioning: results from a national cohort. *Am J Public Health.* 1995;85:312-318.
5. Ramey SL, Ramey CT. Early educational intervention with disadvantaged children—to what effect? *Appl Prev Psychol.* 1992;1:131-140.
6. Ramey CT, Campbell FA. Poverty, early childhood education, and academic competence: the Abecedarian experiment. In: Huston AC, ed. *Children in Poverty. Child Development and Public Policy.* Cambridge, England: Cambridge University Press; 1991; 190-221.
7. Herrnstein RJ, Murray C. *The Bell Curve. Intelligence and Class Structure in American Life.* New York, NY: The Free Press; 1994.
8. Birch HG, Richardson SA, Baird D, Horobin G, Illsley R. *Mental Subnormality in the Community.* Baltimore, Md: Williams & Wilkins; 1970.
9. Broman S, Nichols PL, Shaughnessy P, Kennedy W. *Retardation in Young Children.*

- A Developmental Study of Cognitive Deficit.* Hillsdale, NJ: Lawrence Erlbaum Associates; 1987.
10. Plomin R, DeFries JC. Genetics and intelligence: recent data. *Intelligence.* 1980; 4:15-24.
11. Bouchard TJ Jr, Lykken DT, McGue M, Segal NL, Tellegen A. Sources of human psychological differences: the Minnesota study of twins reared apart. *Science.* 1990; 250:223-228.
12. Wachs TD, Gruen GE. *Early Experience and Human Development.* New York, NY: Plenum Press; 1982.
13. Gottfried AW, ed. *Home Environment and Early Cognitive Development. Longitudinal Research.* Orlando, Fla: Academic Press; 1984.
14. Carnegie Task Force on Meeting the Needs of Young Children. *Starting Points: Meeting the Needs of our Youngest Children.* New York, NY: Carnegie Corporation; 1994.
15. The Infant Health and Development Program. Enhancing the outcomes of low-birth-weight, premature infants: a multisite, randomized trial. *JAMA.* 1990;263:3035-3042.

Annotation: Physicians' Attitudes and Decision Making Regarding the Withdrawal of Life Support

During the past few decades, there have been dramatic changes in both the treatment of critically ill patients and in attitudes about how decisions about care should be made. The development of sophisticated technologies has increased the ability to prolong life, which is usually of clear benefit. However, there is growing acceptance of the notion that in some cases treatment may merely prolong the dying process or lead to survival with a very poor quality of life. Indeed, it is now nearly 20 years since Karen Ann Quinlan ceased breathing on the night of April 15, 1975,¹ and the ensuing court case thrust decision making about withdrawal of life support into the public arena.

Formerly, choices about life-sustaining treatment were seen primarily as medical decisions for physicians to make. The debates about criteria for withdrawing life support led to clearer recognition that such decisions cannot be based only on objective facts but must always reflect value judgments about issues such as the meaning of life and death, the quality of life, and the proper use of technology. Therefore, in parallel over the past 20 years, the principle of patient autonomy has steadily gained ground. Court decisions, statutes, and professional standards have supported the right of competent

patients to make decisions to forgo treatments, either directly or through the use of advance directives (living wills and health care proxies).²

Despite the clear guidelines, empirical research has shown that many factors prevent adherence to patients' preferences about care at the end of life.³ This situation affects public health not only because care thought to be inappropriate can cause suffering for patients and families but also because the inappropriate prolongation of treatment uses health care resources for unwanted care. Little is known, however, about the extent to which actual treatment decisions vary from patient preferences. For many reasons, this topic is very difficult to study. One problem is that research would need to uncover patient preferences that may never have been explored; another problem is that these decisions are made when patients and their families are in crisis. One way to address the issue is to look at physician responses to hypothetical situations and ask them about how they would treat terminally ill patients. The research conducted by Christakis and Asch,⁴ reported in this issue of the Journal, is important because it demonstrates that physicians' characteristics affect both attitudes and practices related to the with-

drawal of life support. Although the response rate to their survey was lower than that usually reported in this Journal, the article is an important contribution because it is one of the first to provide data on the relationship of attitudes to practice.

Christakis and Asch presented hypothetical vignettes and asked physicians to indicate treatment choices in order to study responses to the most clear-cut type of case: a terminally ill, comatose patient who had previously stated, and whose family currently indicated, that under the circumstances presented they would want life supports withdrawn. Nevertheless, responses varied; many physicians chose to give life-sustaining treatments. In addition, unlike many previous studies that examined only attitudes, this study asked physicians to report on their actual practices. Professional characteristics such as specialty and work setting, personal characteristics such as age and religion, and the attitudes manifested in the responses to the vignettes were associated with the number of times the respondents said they had withdrawn life support during the last year.

Editor's Note. See related article by Christakis and Asch (p 367) in this issue.

In the discussion, the authors note "an unexpected finding of this study is the extent to which subjects tended *not* to withdraw life support."⁴ If the principle that patients should determine treatment choices is accepted and the vignettes presented clear-cut cases in which patients did not want life support, why was there so much variation in responses? One reason is that even when clinicians agree that life support should be withdrawn, the choice is not a global decision to treat or not to treat—in other words, to give all possible treatments or none at all. In a modern hospital, critically ill patients receive many treatments. In managing their care, physicians make decisions about each treatment. They may decide to withhold or withdraw some treatments while continuing to give other treatments.⁵ Physicians vary in these management decisions about the withdrawal of life support.

A number of studies have shown that most physician respondents agreed that competent patients have the right to refuse life-sustaining treatments. The same studies also identified attitudes that affect the choices that clinicians make; these can limit adherence to patient wishes. For example, Fried et al.⁶ found that almost all physicians responding to their survey would comply with a patient's refusal of a respirator but many would refuse to discontinue its use; many thought such withdrawal of care was illegal and/or would mean "I would be killing a patient." Solomon et al.⁷ reported that most of their respondents believed that there were ethical distinctions between withholding and withdrawing treatment and that it is useful to differentiate between ordinary and extraordinary means when making treatment choices. Christakis and Asch,⁸ in another article based on data from the same survey reported in this issue of the Journal, demonstrated that

many physicians were less likely to withdraw treatments that patients had been receiving for a longer time or that were being given for iatrogenic conditions.

Physicians, the people who are most knowledgeable about treatments and their effects, differ in their views about appropriate treatment choices and also differ in their practices concerning the withholding of life support. Patients and proxy decision makers, however, almost always choose their providers for other reasons and are usually not aware of these variations. Patients and their physicians may, therefore, have very different attitudes about terminal care.

The public needs more education about decisions at the end of life to enhance the ability of lay people to raise questions and discuss issues. However, even educated patients and their proxies will be limited by their lack of technical knowledge; therefore, they will always be dependent on their own physicians or other health care providers to frame treatment options and tell them about the possibilities and implications of the provision or withdrawal of specific treatments for specific patients.

Christakis and Asch conclude their article by stating that physicians should "explore their own (preferences) and communicate them to their patients."⁴ That is important but it is not enough. To truly do what is necessary to support the principle of patient autonomy and empower patients to determine the course of care, physicians and other health care providers need to do more. Just as they provide information about alternative courses of treatment when seeking informed consent to medical procedures, physicians should inform patients or their proxies about alternative treatment choices when discussing the withdrawal of life support. They should not only explain their own reasoning for recommending a

particular option but also should inform patients about why other knowledgeable, caring people make different decisions to give or withdraw particular treatments. Without this information, the ability of patients' wishes to determine end-of-life care will continue to be limited by physicians' attitudes. □

Betty Wolder Levin
Department of Health and
Nutrition Sciences
Brooklyn College
City University of New York

References

1. *In re Quinlan*, 70 NJ 10, 355 A2d 647, (argued January 26, 1976; decided March 31, 1976).
2. *When Others Must Choose: Deciding for Patients without Capacity*. New York, NY: New York State Task Force on Life and Law; 1992.
3. Teno JM, Hill PT, O'Connor MA. Advance care planning: priorities for ethical and empirical research. *Hastings Cent Rep*. 1994; 24(suppl to No. 6):S1-S36.
4. Christakis NA, Asch DA. Physician characteristics associated with decisions to withdraw life support. *Am J Public Health*. 1995;85:367-372.
5. Levin BW. The cultural context of decision making for catastrophically ill newborns: the case of Baby Jane Doe. In: Michaelson KL, ed. *Childbirth in America: Anthropological Perspectives*. South Hadley, Mass: Bergin & Garvey; 1988:178-193.
6. Fried TR, Stein MD, O'Sullivan PS, Brock DW, Novack DH. Limits of patient autonomy: physician attitudes and practices regarding life-sustaining treatments and euthanasia. *Arch Intern Med*. 1993;153:722-728.
7. Solomon MZ, O'Donnell L, Jennings B, et al. Decisions near the end of life: professional views on life-sustaining treatments. *Am J Public Health*. 1993;83:14-23.
8. Christakis NA, Asch DA. Biases in how physicians choose to withdraw life support. *Lancet*. 1993;324:642-646.

Topics for Our Times: Clausewitz vs Sun Tzu—The Art of Health Reform

The Clinton administration deserves high praise for compelling attention to a legislative goal—the need for a national health program. By framing it as a health "reform" measure, it was also able to defuse some of the long-standing arguments and focus attention on accessibility and affordability, since it centered on an insurance approach and on the portability

of such insurance as well. After two years of discussion, debate, and political mischief, the bills in consideration—and whatever law eventuates—will scarcely embody or, indeed, hardly resemble the initial clear-cut objectives. Since the unfulfilled objectives have political resonance, changes and "improvements" are bound to be future concerns. Analysis of the fate

of the original utopian plan may be helpful in achieving the original goals through these modifications.

The Clausewitz dictum,¹ now a cliché, that war is simply the extension of politics by other means, might be rephrased to read that politics is successfully guided by military principles. The other great war-waging strategist, the Chinese