BALANCING STATISTICAL DATA AND CLINICIAN JUDGMENTS IN THE DIAGNOSIS OF PATIENT EDUCATIONAL NEEDS

Lawrence W. Green, Dr. P.H., Frances Marcus Lewis, R.N., Ph.D., and David M. Levine, M.D., Sc.D.

ABSTRACT: Survey content is necessarily limited by the investigators’ foresight and by prior research on their subject of inquiry. Clinical data must supplement statistical data whenever the prior research is insufficient to delineate exactly what problems to expect. The differing perspectives on needs of patients sometimes set up competing demands. This calls for strategies based on a programmatic or population perspective that identifies the commonalities in patient educational needs from the statistical profiles, while at the same time allowing for the development of interventions that provide for as much tailoring of the educational experience based on clinical judgments as possible. By combining the community health education perspective with a clinical perspective, we were able to design interventions that responded to the educational needs of a population of low-income, black hypertensive patients. A needs assessment process that combined these perspectives began with a historical and community assessment of the problem in its most general terms. A second phase focused on the most important behavioral and organizational points for intervention. A third phase required formal assessment of predisposing, enabling, and reinforcing factors that may be determining the priority behaviors of health care organizational problems. Finally, clinical and administrative judgment sharpened and supplemented the educational interventions that were suggested by statistical data from formal surveys. Behavioral science theory was applied usefully in all these phases.

The diagnosis of patient educational needs is in its early stages of codification in health education. Although systematic needs assessment is the

At the time this study was conducted, the authors were all with the Health Services Research and Development Center and Division of Health Education, The Johns Hopkins Medical Institutions, Baltimore, Maryland 21205. Dr. Green is now Director of the Office of Health Promotion, DHEW. Dr. Lewis is currently with the Department of Community Health Care Systems, School of Nursing, University of Washington, Seattle. Correspondence and reprint requests should be addressed to Lawrence W. Green, Office of Health Promotion, Office of the Assistant Secretary for Health, U.S. Department of Health, Education, and Welfare, Room 721B, Hubert Humphrey Building, 300 Independence Avenue, S.W., Washington, D.C. 20201.

Parts of this paper were presented at the Second Annual Needs Assessment Conference, March 28–31, 1978, in Louisville, Kentucky; the National Conference on High Blood Pressure Control, Los Angeles, April 3, 1978; and Endocrinology Rounds at the Indiana University Diabetes Research and Training Institute, Indianapolis, January 29, 1979. This research was supported by Grant Nos. 1R25 HL 17016-03 and TT32-H10710 from the National Heart, Lung, and Blood Institute. The authors would like to acknowledge the support and consultation of Drs. Carol Johns and R. Patterson Russell of the Johns Hopkins Hospital and of Robert Bertera, Michael Bowler, A. Judith Chwalow, Sigrid Deeds, Marion Field Fass, Brian Flynn, Michael Gross, Donald Morisky, Patricia Mullen, and Sam Shapiro of the Health Services Research and Development Center and the School of Hygiene and Public Health, Johns Hopkins University.
prescribed practice, little work has elaborated the complex decision processes and the analytic use of data bases from which educational diagnoses arise. Some practitioners identify health education needs by fiat, some by stereotyping patients, and some by individualized case data. None of these approaches offers sufficient empirical evidence to justify major health education programs.1

This paper contrasts two perspectives in the needs assessment process: the clinical perspective and the epidemiological perspective. The clinician has firm roots in the individualized diagnostic medical or psychological model. In that model, each client is approached as a unique individual with unique learning needs. The community health perspective has its grounding in survey research methods, in which aggregated epidemiological or sociological and statistical data, more than the individual case data, play a significant part in identifying targets for intervention. This paper, by reviewing a three-year interdisciplinary project in hypertension education, argues that both perspectives provide the necessary ingredients for a meaningful educational diagnosis and program.

BACKGROUND: THE FIRST PHASE OF THE NEEDS ASSESSMENT

This study began in 1973 when we reviewed the literature on hypertension in applying for a grant to evaluate health education programs. These programs were designed to reduce the prevalence of uncontrolled high blood pressure in an inner city population. As a first step in our review, we had to determine where educational efforts were best focused: on the community, on counseling and referral of newly detected high blood pressure screenees, or on patients currently under treatment. For this, we examined the historical and epidemiological situation in high blood pressure control; the empirical evidence of trends in hypertension screening, referral, diagnosis, and treatment; the recent clinical experience with hypertensive patients; and the logic of an overall control strategy for elevated blood pressure.

1. Assessing the Context

The epidemiological picture indicated great strides in mounting the national program for the screening and detection of high blood pressure; the numbers of patients being referred into medical care had increased markedly since the beginning of these programs.2 The empirical literature gave sparse evidence of success in improving blood pressure control in those patients under treatment, and it gave considerable evidence from surveys, clinical trials of new drugs, and anecdotal accounts of an extensive problem that physicians called noncompliance.3-7 This problem referred to the failure of many patients to follow the medical and dietary regimens that the physicians prescribed and which, in turn, resulted in frequent failure to maintain adequate blood