THE COMMUNITY AS AN EPIDEMIOLOGIC LABORATORY
A Casebook of Community Studies

IRVING I. KESSLER AND MORTON L. LEVIN, EDITORS

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The case method has long been accepted as an effective teaching technique. Legal education consists mainly of case teaching from the courtroom and the textbook. Bedside teaching is the cornerstone of clinical training in undergraduate and postgraduate medical education. Social casework has used this technique effectively, and more recently it has been adopted in medical care teaching. The United States Public Health Service published a series of case studies for use in medical care teaching,[1] and this method has been used by Penchansky as a teaching device in health services administration.[2] The community as a case study in medical sociology is illustrated by Paul's work in 1955.[3] In THE COMMUNITY AS AN EPIDEMIOLOGIC LABORATORY, Irving I. Kessler and Morton L. Levin have edited a book that attempts to apply the case study method, long a favored teaching technique in epidemiology, to a varied group of studies that originated in communities. The result is an uneven but instructive volume that deals more effectively with epidemiology and methodology than with the relation between research studies and communities.

In 1968, the Department of Chronic Diseases of the Johns Hopkins School of Hygiene and Public Health sponsored a series of seminars at which investigators discussed the background, methodology and pertinent findings of studies that had been carried out in communities of different sizes and char-

acteristics. The casebook prepared for these seminars served as the basis for this book. In addition to the case presentations, there is a bibliography at the end of each chapter followed by a series of provocative comments by the book's editors. These comments supplement an excellent first chapter, which discusses methodologic concepts, and provides a tabular summary of the chief characteristics of each study.

Included in the casebook are 13 studies in five general categories. These are: Comprehensive Disease Studies in the Total Communities of Tecumseh, Michigan and Rochester, Minnesota; Epidemiologic Surveys of Specific Medical Conditions in Washington County, Maryland, Framingham, Massachusetts, Evans County, Georgia, Charleston, South Carolina, and the state of North Carolina; Social Surveys in Alameda County, California, Washington Heights, New York City and the State of Rhode Island; Psychiatric Surveys in Sterling County, Nova Scotia, New York City and a New England Hospital; and finally National Health Surveys in the United States, Puerto Rico, and Colombia.

As is frequently the case with books written by many authors, the results are spotty and uneven. The chapter authors have different objectives. Some are concerned with predisposing factors of disease, some with methodology, one with statistical techniques and one chapter is purely descriptive. Methodology is presented by several in great detail, but others pass over it lightly with the obvious assumption that the reader is familiar with previous reports of their studies. The Chapter entitled "The United States as an Epidemiologic Laboratory" is concerned with the National Health Survey. It raises broad policy issues but does not deal with them in any detail, nor does it discuss sampling problems or methodology. One can only wonder why it was included inasmuch as it is treated so superficially. Hollingshead's chapter on "Impact of Illness on Families" is, in essence, a synopsis of SICKNESS AND SOCIETY[4] and is a refreshing inclusion.

The Rochester, Minnesota, studies have significance beyond

the methodologic issues raised by Kessler and Levin. Kurland, Elveback and Nobrega state that virtually all of this community receives its medical services from the Mayo Clinic and a smaller private group practice, the Olmsted Clinic. Complete records and record linkage have facilitated the measurement of time trends in disease incidence and survivorship studies. The Rochester situation points out an additional benefit of providing organized health care services to a defined population. Not only are services available and accessable, but with complete medical records, epidemiologic studies and assessment of quality can be carried out with relative ease. Many prepaid group practice programs that assume responsibility for the provision of medical services to a defined population, have the same potential for studies of utilization, disease prevalence and quality of care. Such data cannot be obtained accurately outside of the hospital in the nonorganized solo practice arrangements found in most of North America.

The editors in listing their objectives suggest that, ". . . the studies in this casebook be evaluated on the basis of the appropriateness of the methods to the investigational goals rather than in terms of the extent to which they are adjudged to be community studies . . . and . . . that the viewpoint of the editors was that of medicine and epidemiology rather than of social science." Certainly they have followed these principals and their comments after each chapter are perceptive but limited. For the student of epidemiology, the book fulfills its stated goals, but for one who is looking for insights into ways in which the community can participate in research, it is disappointing.

A true community study implies a partnership between researchers and the community and a trade-off of community demands for research interests. This means that both the community and the researcher should agree on community needs and priorities. One of Organic and Goldstein's conclusions following their description of the Brown University Population Laboratory was ". . . data should be of value to social and medical scientists as well as to government officials and others

engaged in policy making or execution." No questions were asked as to whether the data would be of any value to the community and whether the studies would represent significant community priorities. In a previous description of the Washington Heights survey, Elinson said, "The Washington Heights Community Master Sample Survey, was conceived as a natural human population laboratory where social scientists, epidomiologists and health care specialists could be engaged in research of their own choosing."[5] The fact that the data from this study have proven to be of interest to planners, administrators and community groups is additional evidence that community involvement and action goals should have been incorporated into the original objectives of this study. If this had been done, Haberman probably would not have concluded that the study data were not fully utilized and are now permanently stored in research archives.

Although not an issue considered by the editors, it appears that differing views of what constitutes a community study may be reflected in the differing views of what constitutes a department of community medicine. Departments range from microorganisms, infectious diseases, epidemiology, biostatistics and public health to community health, comprehensive care, medical care, family practice and social medicine, with occasional side trips to medical jurisprudence, occupational health and environmental medicine.[6] Ideally departments should eliminate themselves.[7] The department of community medicine should be replaced by a total faculty commitment to the community with faculty members available for consultation, collaboration, research, evaluation and service.

In the description of the Tecumseh and Framingham projects, the book provides insight into how these communities were selected for study. Both were chosen because of their proximity to major teaching institutions and resources, rather than because of traits that qualified either as a community in need of study. Kessler and Levin state, "The most compelling considerations in the selection of the communities appear to have been

pragmatic or administrative, rather than theoretical or methodologic." Although denominators were obtained and rates calculated, any relation between the studies and the communities was accidental and unplanned.

What emerges is that most epidemiologic studies are not true community studies. Retrospective studies that attempt to establish risk factors must be done in areas where the prevalence of disease and risk factors is sufficiently high. Prospective studies, which follow leads developed in such retrospective studies, investigate a group of nonaffected individuals in an attempt to relate particular risk factors to the subsequent development of a disease. Because prospective studies are carried out on selected groups of individuals living in a community they have been confused with community studies, but they merely take place in communities.

The Tecumseh and Framingham studies were used to accumulate vast quantities of data rather than to test specific hypotheses. Considering that their major objectives were the study of the natural history of disease, and that both had arbitrary and accidental starting points and poorly defined end points, it is not surprising that neither study included any plan of community or social action based on specific conclusions. Although research of this kind is carried out primarily to establish the causes of a disease, the epidemiologist has an additional responsibility to the community. He should make himself and his methodologic excellence available to the community for their exploitation. They should use his skills to solve their problems.

Perhaps some answers can be found in the national health surveys and the social surveys. In the case of a smaller underdeveloped country, a national health survey can be used to identify problems and set national priorities. In larger and more developed countries, national health surveys are useful to establish major problems, but social surveys in particular target areas are necessary to establish local needs and priorities. The social survey can be used to answer specific questions raised

by a community. Decisions such as whether a metropolitan hospital should establish a neighborhood comprehensive care clinic instead of maintaining a hospital-based outpatient department could be answered using a social survey. By using the skills of the epidemiologist, the social scientist and the survey methodologist, a community could make decisions based on scientifically valid data. As Wiebe[8] said in a recent reference to research activities in Northern Canada, "There is a constant flow of requests from professionals of all kinds who see the Indian or Eskimo as a suitable object of research which could lead to a Ph.D. or a paper to be published at least. We welcome research, but only when the results will benefit the native population directly. In such cases we will even provide or arrange financial support, but in general one must decline such offers. We could not contemplate proceeding with any such projects, in any event, without the consent of the individuals and the communities concerned."

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