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THE SOCIAL AND ECONOMIC ASPECTS IN HEALTH SERVICES RESEARCH

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## THE SOCIAL AND ECONOMIC ASPECTS IN HEALTH SERVICES RESEARCH\*

Health services' research can be approached either from the perspective of its requisite technology (health and research) or its organizational dimensions which include social, economic, political and other considerations. The emphasis here is with the second aspect of the field, and in particular, deals with the definition, the classification and the use of social indicators in health services' research as well as considering their implications for the distribution of services and the formulation of social policy. What emerges from this review is the need at this time to re-examine critically the conceptual and methodological bases of social indicators, and to develop a new range of more analytically powerful measures.

### The development of the field

During the 18th and 19th centuries the concern with the health of the public grew out of a combination of fears of devastating epidemics of infectious disease and a search for greater social justice. Reformers, philosophers and physicians variously spearheaded this movement with the disclosure of appalling health conditions resulting in great risk to all and leading to high mortality rates. In concentrating upon the elimination of unsanitary conditions and infectious disease, the early statistical work also collected information about the social attributes of people as this related to mortality or the prevalence of particular killer diseases. These early steps in public health were to prove effective not only in leading to the control of infectious disease but in the development of recognized procedures for the collection and the tabulation of mortality and morbidity statistics. The more recent expansion of national health services in recent years has also lead to the compilation of related information statistical systems dealing with the nature of health manpower and facilities and the use of medical and hospital services. Great effort by concerned international agencies has been put forward to develop uniform classification systems for the coding of

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disease, such as the International Statistical Classification of Disease. Once established, these complex information systems have assumed a social momentum of their own not easily amenable to change. Started by precedent, law or for financial accounting purposes they have often developed a built-in rigidity which may have inadvertently limited the use or the search for new health outcome measures or the development of more relevant social indicators. On financial grounds alone it may become administratively difficult and costly to alter their course. While this anomaly may be recognized, it is often tacitly accepted with the result that extensive and expensive statistical analysis is undertaken with information which is of dubious validity.

The development of social and economic indicators has not kept pace either with the changing patterns of disease or the technological developments of medicine. Three steps appear to be indicated. These are:

1. The development of new health outcome measures incorporating the social and psychological indicators of disease (e.g., social stress, social functional ability/disability, etc.).
2. An expansion in the use of social indices in clinical epidemiological analyses.
3. A critical appraisal of the conceptual bases and the analytical relevance of commonly used social indicators (e.g., occupation, social class, education, recall times, residence, etc.).

#### Health outcome indicators

While infant mortality rates or abbreviated average lifespans are still powerful measures of deprived social and economic circumstances, their analytical utility is reduced when assessing the health status of people living in economically well-to-do nations and there may be reasonable doubt about their social meaning in certain circumstances for people living in poverty. In recent years the emphasis in social epidemiology has shifted more to an analysis of morbidity and this in turn has led to a greater awareness of the social correlates of some but still a still small grouping of diseases. The state-of-the-art in social survey and epidemiological work is still with the use of a limited number of variables, often considered singly for their potential

association with the occurrence of disease. It is apparent that these traditionally used measures need to be complemented by a wider range of variables than has usually been the case.

In one multivariate analysis for instance of life expectancy of 63 developing nations which included a range of health services', economic and social measures, it was found that less than a third of the variance was accounted for by health services. (1) In another analysis of life expectancy of nations in the western hemisphere using several measures, the strongest correlation ( $r = 0.21$ ) was found with literacy. (2) Low mortality in still another study of 11 Indian states which involved a consideration of economic development, several modernization, disease control activities and health services found the strongest association was explained by the level of literacy. (3) In one Indian state, Kerala, which had the lowest mortality rate coupled with below average income levels and fewer health services, the level of female literacy was three times the national average and the use of medical services and hospitals was higher than for other states. (4) These several studies not only indicate the potential relevance of social indicators in accounting for variation in life expectancy and mortality rates, but as well highlight the potential direction of control programs.

As the patterns of morbidity shift more toward chronic illnesses and those conditions which may have an associated social or psychological aetiology, what is required is the development and more widespread use of indicators which deal with: measures of social stress; occupational and social risks; the nature of human alienation in its social and economic components; and the assessment of what is involved in levels of social functional ability-disability related to chronic illness. Many of these indicators are still being developed, but equally, there has been a limited use of those which are now available.

### Clinical epidemiological investigation

The use of social and psychological measures in the analysis of disease morbidity has been selective and uneven occurring more frequently for some conditions than others. For yet a sizeable number of diseases the predominant emphasis is given to a consideration of biological and genetic determinants with social indicators either being not included or dealt within a predominant way. A review of a number of texts in surgery, for instance, dealing with conditions such as large bowel cancer shows a predictable concern with clinical treatment and operative procedures, but little attention is given to the possible effects of social correlates as diet or lifestyle. (5) Likewise, in the assessment of the aetiology of particular diseases or in the development of therapeutic trials while considerable care may have been given to the control of biological or genetic factors, a comparable concern with the potentially biasing effects of social or cultural variables is often absent. Along similar lines the medical effects of a particular treatment given in a single setting tend to remove from consideration the potential impact of alternative case procedures. This may be the case for the treatment of acute myocardial infarction which in one study was shown to be treated as effectively for patients at home as in intensive coronary care units. (6-7) These findings underline not only the need for carefully mounted random clinical trials (about which there would be little dispute) but the need to include in these analyses a consideration of social and psychological factors involved in the clinical management of a larger number of diseases than is generally recognized.

### Conceptual bases of social indicators

The usual "shopping list" of social and economic variables found in household health surveys or in some clinical trials includes such items as: age, sex, residence, occupation, education, income, family size, among others. The typical questions which may be asked of respondents may inquire about the occurrence of illness, the use of medical and hospital services, the number and kind of drugs taken, and attitudes toward or knowledge of health matters.

Lists of questions such as these have come to be widely used, and for the most part, their social meanings have been uncritically accepted. The resultant analysis of such items, it is assumed, depicts the social circumstances of individuals as these relate to the occurrence of disease or the use of services. Yet rarely is any rationale given for instance for the social meaning of age classifications which may have, as used, little to do with the stage of maturity development for children, family circumstances, the actual nature of work or the conditions involved in retirement. The selection of age intervals in many instances appears capricious and not based on the social stages of living. The importance of work as it relates to health risks or life chances is well known and numerous studies have examined the nature of particular occupationally associated diseases. But this degree of care is not taken in the use of broader occupational scales which place work on a continuum from professional to unskilled employment. These broad aggregate occupational groupings (as they are usually used), because no functional rationalization is given, lead to meaningless or spurious conclusions for they do not account for how outcomes relate to the substantive nature of work itself. It is not self-evident within any of these broad occupational categories what it is qualitatively that may induce risk, result in stress or lead to the variable use of services. The results obtained may simply represent a statistical artifact, a social indicator tool which is used because it is customary or convenient to do so, but whose social meaning in terms of work skills, job demands or risks has been forgotten.

Somewhat a similar dilemma arises when attitudinal or knowledge variables are used in health surveys. A common question in these inquiries involves memory recall such as: "when did such an .... occur?" or "when did you see a .... (doctor, dentist, hospital, etc.)?" - during the past 24 or 48 hours, one or two weeks, one, two, three, six or 12 months. Usually no rationale is given to explain the variable use of different memory recall periods or what may be the psychological salience associated with particular health items. From basic psychological research it has been established that the accuracy with which a particular event is remembered varies both by the length of time involved in the salience, or social importance, of a particular occurrence for an individual. Recent and important events tend to be well remembered. These considerations should constitute a fundamental part of clinical treatment and social and epidemiological inquiry.

The accessibility and distribution of services

In recent decades many nations have introduced extensive public health programs as well as comprehensive social security and national health insurance schemes. What is common to many of these large-scale public measures is their intent to eliminate or reduce infectious diseases, to provide for sanitary living conditions and to assure a comprehensive range of hospital and medical services, often on a universal basis for a total population, or for designated medically indigent groups. While some of these objectives have been attained, it is apparent that single legislative measures have not ameliorated the over-riding impact of prevailing social and economic circumstances. Despite considerable public effort in the health field, the poor and those who are economically less fortunate still constitute the largest number of persons in many high risk disease groups, often have less access and make less use of services and, in general, are not well-informed on health matters.

The well-known arguments of Brian Abel-Smith, Rene Dubos, A.L. Cochrane or Thomas McKeown and others, of the limited impact of medical achievement in extending longevity or limiting disease, and the resulting misuse of resources in meeting health needs have rightly placed emphasis on the conditioning importance, economic circumstances and social environment. (8-11) But a recognition of this fact heightens rather than lessens the social responsibility by the state that health services be provided efficiently, effectively, and equitably. The extensive literature on the socially uneven use of medical care has been aptly put by Julian Hart in his paper in Lancet on "The Inverse Care Law."<sup>12</sup> Hart's law contends that the availability of good medical care tends to vary inversely with the needs for care in the population which is served. He observes further that "The best trained doctors who can choose where they will work tend to go to middle class areas, and areas with the highest mortality and morbidity tend to get those doctors who are least able to choose where they will work ... middle class patients are both more critical of health services and are better served." These trends appear to be indicated in three nations, each of which has a comprehensive national health insurance service.

Writing in 1968, Richard Titmuss observed of England and Wales that:

"We have learnt from 15 years' experience of the Health Service that the higher income groups know how to make better use of the service; they tend to receive more specialist attention; occupy more of the beds in better equipped and staffed hospitals; receive more elective surgery; have better maternal care, and are more likely to get psychiatric help and psychotherapy than low income groups — particularly the unskilled."<sup>13</sup>

Based on a 1972 survey of maternal and infant care in Wellington, New Zealand, George Salmond, the Director of the Department of Health's Management Services and Research Unit concluded that "not all New Zealanders have equal access to these medical and nursing required to meet their social needs for care."<sup>14</sup> Referring to a low income suburb (Pōrirua) he noted that:

"Health services are for the most part orientated towards meeting the needs of middle class consumers and are provided by health care professionals who are themselves aspiring members of the middle class ..."

A similar situation may obtain in Canada which introduced national hospital insurance in 1958 and national medical care insurance in 1968. These services are provided on a universal and comprehensive basis with minimal or no direct charges. Over a period of years in one western province, Saskatchewan, the use of elective services was found to vary by income with the higher income groups making more extensive use than low income carriers. Between 1963-71 the average dollar value of all medical services for each person rose from \$ 67.04 to \$ 109.25. For the lowest income group this increase was \$ 36.10 and for the highest, \$ 61.24. During this period the differential by income (lowest to highest) more than doubled (from \$ 30.96 to \$ 66.10). While all individuals in the province had gained, the high income earners had gained the most in terms of the amount of services which were used.<sup>15</sup>

The experience in England and Wales, New Zealand and Canada indicates that we do not know enough about the nature of health needs or the selective use of services. In each of these three nations there is an anomaly for while much information exists about the formal use and management of services, for the most part this information contributes little in furthering our understanding of the needs of special groups. All too often the emphasis has been with the esthetic of style in handling available information in the



formulation of several policy and not with assessing the broader social consequences of existing health programs. What is indicated is that existing types of several and economic information which are usually used need to be augmented by focussing in greater detail on individual and family ways of living, the nature of economic pressures and opportunities, personal ideas and attitudes towards sickness and health, and the range of individual and group priorities. If the effects on health of existing social and economic disparities are to be seduced, new and imaginative programs are required. In particular, the rate of health services' research calls for careful delineation, for it does not operate in a social vacuum. It is apparent that the establishment of a comprehensive national health services' information system can have powerful effects in re-aligning and rationalizing a nation's health system. This is beginning to happen in Canada where an extensive range of economic and service indices are being used to examine inter alia: profiles for types of patients; patterns of medical and hospital practice; patters of treatments, procedures and diagnoses by utilization and economic measures. The impact of these analyses in leading to a cost-benefit approach, a re-defining of health manpower resources, and the establishment of medical practice norms and standards.<sup>16</sup>

By dealing with the measurement and the evaluation of the organization and the delivery of health care, health services' research, by definition, has implicit if not direct implications for the setting of social policy. For these reasons not only the setting up of national health information systems but also the types of information collected can be shaped by political purposes or to serve the behest of special interest groups.

Toward a definition of the field

The importance of health services' research in the development, the planning and the evaluation of health care has been widely recognized and much valuable work in this regard has been done directly or under the auspices of the Pan American Health Organization. In developing a definition the 1976 Report of the Task Force for Health Services Research of the WHO Regional Office for Western Pacific observed:

"Health services' research (HSR) is an integral part of health services development and can be defined as any group of activities which involve the generation of information or the application of knowledge on a scientific basis with a view to providing more effective, efficient and equitable care for the defined populations. Giving due regard to the social, epidemiological, economic, legal, operational, theoretical and political dimensions, health services' research aims to assist in the improved design and management (planning, implementation and evaluation) on health services."

This definition sets out the broad dimensions of the field, but what emerges from the review undertaken here of the social and economic aspects of health services' research is the need to strengthen this component in almost every phase of its use. In general, there is little uniformity in the classification or the use of several and economic indicators, and their application to the analysis of disease or the use of services has been variable. As has been indicated, there is an urgent need to consolidate the work which has been done and to develop new measures dealing with the nature of health behavior, the aetiology of disease and the effects of illness. In terms of the definition of health services' research, only a modest start has been made in examining the several and economic aspects of health services toward the stated purposes of "providing more effective, efficient and equitable health care for the defined populations."

Considerable assistance in the development, the codification and the analytical use of social and economic indicators as they relate to health services' research might be gained by the support of some of the following activities in the Americas:

1. Compilation of a Directory of Current Health Services' Research. There is often a lack of knowledge or coordination between similar types of research. An account of current work would provide a registry for the review of the

current state of the field and a listing of researchers involved in particular research activities who could be turned to for counsel.

2. Task Forces for the Development of Social and Economic Indicators. There are few comprehensive source-book references to which health services' researchers can turn to review or select from among available social and economic indicators. Like the extensive work which was done in the development of the International Statistical Classification of Diseases, this field now requires a detailed listing and codification of available measures providing for each: its conceptual framework; measurement details; methodological and statistical procedures. Experts in relevant fields could be assembled to develop working reports. Included here could be the development of prototypical research models which could be drawn upon for particular purposes in health services' research.
3. Interdisciplinary workshops. The sponsorship of interdisciplinary workshops bringing together medical and health services' researchers as well as social scientists could start an evaluation of the need and the utility of social and economic indicators and set priorities for the pilot testing and analysis of measures.
4. Health Services' Research Training and Evaluation Seminars. The methodological quality of health services' research for social and economic work varies greatly, and this side of the field does not often compare well with work done in basic medical science. To assist researchers who are preparing or are already involved in analyzing the social and economic aspects of health services, a series of regional seminars could be convened to which investigators would bring forward their research for evaluation, and receive counsel about design and analysis from recognized experts in epidemiology, statistics and social survey research. There has been experience with this format in Canada where a dozen such seminars have been held across the country, each bringing together some 16 - 20 researchers with 8 - 10 experts for a week. The results appear to indicate that methodologically better designed health services' research has been developed.
5. Health Services' Research Training Fellowships. The training of researchers in the field, particularly in social services, varies considerably between universities. Recognized programs for social survey and health services' research

are beginning to emerge. The designation of research training fellowships in this field is called for to expand the number of rigorously trained social survey researchers.

6. The funding of pilot health services' research programs dealing with social and economic indicators. Because the financing of new research activities is often not easily obtained, limited "start up" funds could be made available which would help in the design of research and subsequently in obtaining national research funding.

Writing in 1951 about these issues the late C.E.A. Winslow called upon the member states of the United Nations to "focus on those particular problems of death and disability which can now be solved with minimum costs and maximum results." To act on Winslow's challenge will require more extensive information than is usually available, and information which is more rigorously designed and analyzed than is the case in many existing studies. Winslow concluded with an observation equally relevant a quarter of a century later. "This is a period ... when it behooves every nation ... to take stock of its human and natural resources and to do all that is possible to build up its material and moral strength; and there is little time for delay."

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