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SOCIAL HEALTH INDICATORS FOR PRIMARY HEALTH CARE

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Social Health Indicators for Primary Health Care

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Social Health Indicators for Primary Health Care[1]

1. Introduction

In meeting the mandate established by its charter, one of the long-standing concerns of PAHO-WHO has been the assessment of a wide range of factors associated with and/or determining the health status of a population. Integral to these objectives has been the stated importance of the social side of treatment and services, yet in many respects our understanding is still limited of which social factors and how their combined impact may affect the success or failure of enterprises often involving excellence in medical science and technology. The anomaly here is that while much rhetoric is devoted to this issue, in terms of its actual development and application, it all too often constitutes a forgotten part of health services' investigation.

As more social scientists have engaged in particular aspects of health-related research, a number of measures have been devised which are gradually becoming standardized. These measures deal with complex issues involving the interplay of social, physical and medical factors.

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[1]Prepared for the Eighteenth Meeting of the Advisory Committee on Medical Research, Pan American Health Organization, June 18-22, 1979.

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While some of this work is still relatively rudimentary, there are a number of analytical procedures and social health indicators already developed which have utility for clinical practice and the planning of health services.

1.1 17th ACMR-PAHO Meeting

At the Seventeenth Meeting of the Advisory Committee on Medical Research of the Pan American Health Organization held in Lima in May 1978, the Committee recognized the need "to develop new measures of the level of health which included social and psychological indicators" and considered the possibility of establishing "a directory of current health services research in the Americas."[1] Based on its review of this topic within the broader context of health services' research, Recommendation No. 3 of the A.C.M.R. to the Director of PAHO requested that, *inter alia*:

> "In view of the importance of the subject to the Region, it was recommended that PAHO itself organize and convene one or more task forces which would:
>
> . assess the scope of social indicators in evaluating the results of health services as well as their use and efficacy in health services research.
>
> . the reports of these task forces should be available no later than 18 months from the present meeting."

1.2 Scope of Review

The objectives of this review are:

[1] PAHO-ACMR (1978), *Report to the Director*, HRR 17/1

(1) to provide a general review of the concepts, some of the issues involved in the use and the classification of social health indicators.

(2) to consider ways that work in this field, particularly as it may apply to primary health care, might be strengthened for research within the Region.

2. Definition and Classification

2.1 Definition

The term 'social health indicators' as it is used here refers to those dimensions affecting health and disease which are social and psychological rather than those which are primarily physiological. The history of this field was reviewed for WHO in 1978-79.[1-2] While the use of social measures such as education or occupation has been employed for about a century and a half, on occasion with powerful consequences, the development of health indices in the modern sense of this term began during the 1930s. Since then, there has been a broad acceptance of what might be now considered as traditional health indicators in the assessment of morbidity or the utilization of services. In this broader field of health services' research dealing with health status, no single widely endorsed index has emerged, but rather a series of disease specific or situational measures have evolved. One dilemma inherent in many of these existing measures is that while they are still valid in assessing the health conditions of disadvantaged

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[1] Leowski, J. (1978), Review and Analysis of Health and Health-Related Indicators, WHO Report/HS/Nat. Com./78.359.

[2] Baylet, R. (1979), The Selection of Health Indicators under Specific Working Conditions in the Developing Countries. WHO report/HS/Nat. Com./y 79.361.

groups, as the standard of living of a people rises they tend to lose their predictive utility in distinguishing differential health behaviour or in assessing the effectiveness of particular programs.

2.2 Classification

Due to the growing and now sizeable volume of work being done with health indices involving both social variables and social health indicators, the U.S. National Center for Health Statistics in the 1970s established a Clearinghouse on Health Indexes. This agency now routinely compiles information on such methods and the findings of published research. This agency serves as the major referral source concerning social indicators related to specific health conditions, the utilization of services or the analysis of the distribution and financing of services. While most of the work is drawn from experience in the United States, a listing partially includes some work known to be completed in other nations. What is apparent from a preliminary review of the reports published by the Clearinghouse is the vastness and complexity of this field. It is evident that its work need not be duplicated, but that it should be used as a resource in tackling specific issues.

Specific measures involving multiple social variable analysis and scaled social health indicators have been developed for a large number of health-related problems. Some examples include:

- child and adolescent care
- physical disability and social functioning
- impact of health programs

- social networks in seeking/using services
- social management of chronic disease
- indicators of health status
- health needs and community health status relative to resource allocation
- family health indicators
- sickness impact profiles (S.I.P.)
- efficiency of health services
- psychological and behavioural adjustment involved in rehabilitation

2.3 Utilitarian Application

In a number of program-oriented reviews of health indicators, a practical and utilitarian approach has often been adopted. In his 1978 review for WHO Professor J. Leowski of Poland for instance recommended that health indicators should be:[1]

- output-oriented rather than input-oriented
- simple and readily understandable
- comprehensive - all significant consequences associated with health
- based on information which is readily available, and cheap to obtain
- separated into geographical districts
- reveal the intensity and the extensiveness of shortcomings in achieving health objectives
- capable of revealing differential effects of trends affecting different groups

[1]Leowski, J. (1978), op. cit., p. 5-6, 15 and 31.

These ideal attributes of any health indicator, while desirable may be contradictory in their implications, and if adopted, might serve to limit the purposes for which such measures were intended. It is not apparent how a comprehensive assessment of factors associated with primary health care can be achieved if only output and not input factors are dealt with. A sizeable number of investigations have shown that utilization is affected by health needs and equally by the supply and the distribution of services. Likewise, while the use of simple measures may be economical and convenient, such an approach by itself may exclude valuable information which is fundamental to understanding why programs may be encountering dilemmas in their implementation. Or again, while readily available information may be valuable, it is usually collected either for accounting or vital statistics purposes, and as such, it may be narrow-gauged relative to the issues being studied.

While analysis involving social variables should be lean and direct, and such work can be done with modest resources, such undertakings involve complex and interrelated assumptions about behaviour and society, which if over-simplified, can misrepresent what was happening, and for this reason be inaccurate or of little more value than undocumented common sense. Of greater importance work of this kind would likely tell us little that we already know about why some people do not recognize early the symptoms of disease, may continue to use ineffective remedies, or fail to derive through non-compliance the full benefits of modern medical treatment.

2.4 Selection and Operationalization

There has been a widespread, but generally uncritical use of single social measures whose conceptual implications are rarely fully dealt with as they may affect health status, treatment or the organization of services. This is the case involving education, income and occupation which imply both social status and social class, two distinctive and separate ideas, as they may affect values, behaviour and opportunities involving health status. Such items are more often used indiscriminately in health services' research, either because "they are there" or due to research custom. This dilemma is even more apparent when other categories of social information are used whose full social meaning may be missed or misinterpreted. What is often missing in these inquiries is a carefully developed rationale of how and why certain variables may be expected to determine or affect stipulated outcomes. One such model which takes these concerns into consideration was the utilization model of the WHO International Comparability Study.

2.5 Interdisciplinary Collaboration

One central weakness in the field of social health indicators is that while much inherently useful work has been done by health investigators and social scientists, this has too often been done in separate research worlds. Clinical investigators have often devised their own measures of social variables while for their part, social scientists on occasion standing on the sidelines of what is happening, have developed conceptually elegant measures having little or no practical utility.

Such work is often not much more than a "seat of the pants" or "skirt" empiricism. While this approach may suffice in some circumstances where needs are self-evident and overwhelming, once the threshold of directly manageable conditions has been dealt with, other factors, almost invariably social in nature, come into force which affect the success or failure of a clinical or health services' program. It is when this "check-mate" situation occurs that there is greater recognition of the need for complementary research involving the social determinants of health care.

What has happened far too seldom is an integration of different disciplines in tackling a common problem. When this is done over a period of time, almost invariably, gains are made in extending our understanding of the relative contribution of various factors including social variables which may be involved in a particular problem. Such collaboration between disciplines does not come about easily or by itself. It must be fostered, primarily by leading health investigators who are prepared to sponsor and train social scientists in the complexity of health problems with which they are dealing. Where this has been done, and there has been momentum along these lines in recent years, effective and relevant predictive social health indicators have started to be developed.

2.6 Single or Multiple Measures

The use of single social measures in assessing the general health status of individuals or groups have lacked both sufficient

discrimination or had a limited utility. More relevant work has emerged which is grounded on specific health related problems. It is also now well recognized that in any analysis involving social or psychological variables that a multi-dimensional approach is required if the statistical variance in health trends is to be adequately accounted for. At a rudimentary level this is typically done by controlling for the age or sex of individuals, but this step is usually more often neglected than used when other social variables are involved. Items tend to be considered by themselves, not for how they may be related to each other or what their combined effects may be in explaining or accounting for different treatment outcomes or how particular services may be used. At its minimum such analysis requires the coordinated consideration of the actual health status of individuals, their social attributes, the accessibility of services and how they are paid for, and the adequacy and the composition of the supply of resources and health manpower.

3. Sioux Lookout Health Region: Northern Canada

3.1 Economically Developing and High Health Risk Area

An example involving some of these issues can be drawn from the experience of an economically poor and high risk health area in a relatively affluent nation. The problems here are analogous in some respects to the situation occurring in developing nations which seek to extend primary health care services. The inadequacy of the solution of simply providing more health care in this northern region of Canada may also have its counterparts elsewhere.

In the case of the Cree and Ojibwa Indians living in communities of northern Ontario, a vast area extending in the north to Hudson's Bay, it was concluded that poverty and a lack of sufficient health resources were the root causes of extensive disease and high infant mortality rates. In dealing with these conditions, only one component of the situation was dealt with, in this instance involving the provision of extensive new health resources which were provided with energy and great competence. The assumption was made that these new benefits would both improve the health of the people concerned and alter social circumstances affecting health status. That these objectives were not met was due to an anomalous "blind spot" which almost exclusively emphasized the efficient provision of high quality care without otherwise altering the extent of economic indigence or seeking through health promotion to change values and health lifestyles.

3.2 Special Health Services Program

Starting in the late 1960s in cooperation with the federal government's program of Medical Services, the nation's foremost children's hospital associated with a major medical faculty undertook an ambitious long range program of medical assistance for treaty Indians living in a vast and remote area of northern Canada. Several years after its inception this program resulted in sharply upgraded services including lay dispensers, midwives and nurse practitioners, regular medical services and direct access to foremost clinicians. Major gains were made in detecting and treating a large number of previously unrecognized conditions but after these benefits had been gained, additional gains were marginal.

3.3 Overview of Research Findings

The findings of the extensive health services research[1] undertaking involved: anthropological studies, household health surveys, a clinical physical examination of a fifth of the population and analyses of the staffing, organization and financing of services. On the basis of this longitudinal inquiry it was concluded that no appreciable differences in health status had been gained by the residents of communities which received more extensive and a professionally higher order of care than had occurred among Indian people living in more remote settlements where first-line assistance was given by lay dispensers who had limited training. These communities were also served by a satellite communication network which linked them directly to the regional base hospital, and when required, were served by air ambulance services. In both types of communities there was an equal level of satisfaction with and acceptance of the health care which was provided.

In evaluating this program, if only the volume of services had been considered, which had risen sharply and been upgraded, then it could have been concluded that a notable success had been achieved, a conclusion reached in some publications dealing with this program. This information was used as a basis of obtaining more extensive financing for the provision of additional specialty services and new equipment and facilities. But when the program is viewed from the perspective of those who were served, the patients, then the actual gains in health status for the population as a whole were negligible. Infant

[1] Badgley, R. F. (principal investigator), Sioux Lookout Project II. Delivery of Health Care: 1970-75. Research Reports. Toronto.

mortality remained relatively unaltered, longevity stayed the same, and there was little change in clinically assessed disability levels. In 1976-77 the amount of money spent by the federal government in the region on housing, roads, sanitation, electrification, the construction of community facilities, fire protection and planning amounted to $2.9 million, or 64 percent of the $4.5 million which was spent on health care alone that year.

The single major outcome which did occur was in the sharp raising of the level of expectations held about the requisite level of professional health care. Patients who had been regularly treated by physicians wished to continue to have such care and tended to downgrade the services respectively of nurses or lay dispensers.

3.4 Principles of Investigation

While the research just reviewed had its limitations, it attempted to put into practice some of the principles previously cited involving the use of social variables in health services investigation. Specifically, the inquiry involved the following steps.

- interdisciplinary - involving medicine, nursing, anthropology, psychology, sociology, economics.
- lay-professional involving health professions, government, Indian organizations, community leaders, Indian researchers and interpreters.
- multiple dimensions - a wide range of variables associated with the use of health services and health status were considered, and these were analyzed both separately and in multi-variate statistical analyses.

- goal-oriented - the main purpose of the inquiry was directed to a series of clinically and service relevant questions - viz., the care of patients in hospital; the training of health personnel; the home care of ambulatory patients; health-related child-rearing practices; the differential cost of various mixes of health services; the outcome of services in terms of affecting mortality, morbidity and utilization, etc.
- utility of findings - in some instances the research served as a basis involving the re-alignment of some services and the targeting of care for certain high risk groups and communities.
- research costs - funded by research grants the inquiry cost the equivalent of 0.8 percent of the program's operating budget.

4. Next Required Steps

Rather than dealing with explicit examples of research involving social health indicators, this review has dealt with a number of issues involving their application. The proposition is accepted here that this growing field of analysis can make a valuable contribution to both clinical and health services' service, and that its development should be assisted on a demonstration basis within the Region. The principles dealt with in this review which it may be useful to consider if such a decision is made include: specific program/problem orientation; interdisciplinary approach; the use of multiple rather than single measures; multi-variate analysis; and longitudinal study. It is believed that relatively little work along these lines has been undertaken within the Region. Relative to specific health problems a compilation of what has been done should be assembled and assessed and pilot types of inquiries started which could

serve as demonstration models and as a basis for the training of researchers. At the Seventeenth Meeting of the ACMR in 1978, the Advisory Committee recommended that a task force be established to consider the issue of social health indicators. With the return of this item to the agenda of the 1979 meeting, the Advisory Committee may choose to consider more detailed steps relating to this recommendation. In this connection the following points are listed for review.

4.1 Designation of Primary Health Care Problems to be Studied

Rather than dealing with a full range of health problems, 2-3 major issues in primary health care occurring in Latin America could be selected for intensive review involving the potential application and utility of social variable and social health indicator analysis (e.g., infant and maternal mortality; child and/or adolescent health; use and acceptance of primary health care personnel etc.).

4.2 Composition of Task Force

Membership to be drawn from: senior clinical investigators working with the designated primary health care problems; social scientists experienced in survey research in the Region; and experts in the design and analysis of social health indicators related to the problems selected.

4.3 Meetings and Site Visits

Following the appointment of a Task Force in addition to convening of meetings to review its Terms of Reference, site visits be made to selected major programs dealing with the designated primary health care problems.

4.4 Terms of Reference

The ACMR may wish to list the general scope of the Terms of Reference set for the Task Force. These terms might stipulate:

(i) an assessment of the work now being done in the Region involving social variable and social health indicator analysis relative to the designated primary health care problems.

(ii) the compilation and assessment of measures used elsewhere which may be applicable to the analysis of these problems.

(iii) the development of demonstration research designs including social variable analysis which are related to the designated clinical and/or service questions.

(iv) the designation of sites where pilot work might be undertaken, and if appropriate, to bring forward recommendations about implementation.

(v) an evaluation of the predictive utility, the requisite staffing and resources, and the operational costs of such inquiries.

(vi) a consideration of ways that PAHO might facilitate the development and the application of these inquiries, for instance, through training fellowships, the commissioning of review papers or the sponsoring of pilot demonstration programs.

4.5 Reporting and Timetable

If the work outlined here were to be initiated, then sufficient time to achieve these purposes should be designated. In this regard a period of 2-3 years might be required to complete this work with the Task Force requested to submit annual Interim Reports on the work which was done.