

# **Clearinghouse on Health Indexes**

**Cumulated Annotations**

**October 1973 -  
December 1974**

**U.S. DEPARTMENT OF  
HEALTH, EDUCATION, AND WELFARE**

**PUBLIC HEALTH SERVICE**

**Health Resources Administration**

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U.S. DEPARTMENT OF  
HEALTH, EDUCATION, AND WELFARE  
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# INTRODUCTION

Each year the Clearinghouse on Health Indexes disseminates four annotated bibliographies of recently acquired documents on the topic of developing composite measures of health status. The material in these bibliographies is categorized as to the source of the document, whether published or research in progress. However, to assure that this information is disseminated on a timely basis, these bibliographies are issued without either a subject or author index. Also to assure timeliness, these compilations are prepared in an informal format.

Current plans are to cumulate these informal issues into a formal volume for annual distribution. The purpose of this cumulative volume is to provide health status researchers with a reference guide to the literature, both published and unpublished, which appeared during the preceding year. To enhance its use as a reference tool, articles have been classified according to their major emphasis and an author index has been added. This is the first cumulation of the Clearinghouse bibliographies and includes material identified between October 1973 and December 1974.

## Health Index Defined

In providing information to assist in the development of composite health measures, the Clearinghouse on Health Indexes has adopted the following definition:

a health index is a measure which summarizes data from two or more components and which purports to reflect the health status of an individual or defined group.

## Subjects Covered

Implicit in the above definition is the measurement of health as opposed to disease. Much less is known about the positive aspects of well-being; and, what is known is generally more easily expressed qualitatively rather than quantitatively. According to the current state of the art, statistical methodologies coupled with measurement techniques of other disciplines within the social sciences will yield valid and reliable quantitative definitions of health.

Thus, this cumulated bibliography is, for the most part, comprised of literature which addresses the technical questions related to the concepts and definitions of health status. Within this, the documents deal with specific topics such as defining the parameters for the state of health; deriving appropriate transitional probabilities for moving from one state to another; determining whether or not individuals have preference for a given health condition; and, if so, assigning an appropriate value to the preference.

As the methodologies become more clearly understood, the number of available health status measures with known validity and reliability will increase. This will be reflected in an increase in the number of applications appearing in the literature, both published and unpublished. Composite health status measures can be used to describe the health status of a given group; to compare the health status of two or more groups and to evaluate the outcomes of a health care delivery system.

Two other topics of interest to persons developing a composite health status measure are health policy and the state of the art. The latter is probably more informative to the researcher about to develop a health status measure. However, policy statements within the health field are likely to be of general interest. This bibliography also includes reference to a few measures which the authors have termed health index but which fall outside the Clearinghouse definition as stated above.

## **Classification**

The categories used in the informal issues have been maintained. However, within the two major headings, Recent Publications and Current Research, the annotations have been organized according to the document's major focus. The following four category headings are used: Development—Conceptual; Development—Empirical; Applications; and, Policy Review. Each term and its use in this cumulative, annotated bibliography is described below.

Articles are referenced under the subheading "Development—Conceptual" if they discuss the theory of measuring health. These documents are expository in nature and contain little, if any, numerical information.

The second category, "Development—Empirical" consists of material which purports to evaluate a health model in terms of its validity, reliability or other measurement properties. Also included in this category are documents which deal with methodological considerations such as the construction of data collection tools specific to the measurement of health status. These articles generally report the findings of the pilot projects.

The "Applications" category references documents which use composite measures for assessing the health status of a given group. The index may be used for the purpose of evaluation or allocation of resources.

Lastly, the "Policy Review" category covers articles which review the state of the art of health index construction or which discuss policy areas of concern to health index developers.

## **Scope of Document Collection**

Documents cited in the Clearinghouse bibliographies focus on the conceptual and methodological aspects of developing and/or applying composite measures of health status. Sources of information include the following types of published and unpublished literature: articles from regularly published journals; books; conference proceedings; government publications and other documents with limited circulation; speeches and unpublished reports of recent developments; and, reports on grants and contracts for current research. Literature in this first year is limited to documents published in English. The Clearinghouse systematically searches current literature and indexes of literature to maintain an up-to-date file of documents.

## **Format**

Bibliographic citations will be given in the standard form; author, title, and source, respectively. In the case of multiple authors, as many as five names will be listed; the sixth and additional authors will be identified as et. al.

Printed immediately following the abstract are the number of references used in the preparation of the document and the source of the annotation. There are four sources: 1) the author abstract (designated as AA); 2) the author summary (AS); 3) the author abstract (or summary) modified by the Clearinghouse (AA-M or AS-M); and, 4) the Clearinghouse prepared abstract (CH-P) with the initial following the dash indicating the individual responsible for the abstract.

The two numbers following the abstractors designation identify the document. The six digit number locates the document within the Clearinghouse collection. The last number on the line indicates the position of this abstract within the cumulated bibliography. This abstract number appears opposite the author's name in the Author Index.

# **SOURCES of INFORMATION**

*(October 1973-December 1974)*

## **Current Contents: Social and Behavioral Sciences**

Volume 5 numbers 40-52 total issues

Volume 6 numbers 1-52 total issues

## **Index Medicus Subject Headings**

Cost and Cost Analysis  
Disability Evaluation  
Health  
Health and Welfare Planning  
Health Surveys  
Mental Health  
Models, Theoretical  
Morbidity  
Mortality  
Psychiatric Status Rating Scales  
Psychometrics  
Sociometric Technics

*The following journals, in addition to Current Contents and Index Medicus, were searched for information on health indexes.*

American Journal of Economics and Sociology  
American Journal of Epidemiology  
American Journal of Sociology  
American Sociological Review  
Annals of Economics and Social Measurement  
Behavioral Science  
Health Services Research  
Inquiry (Chicago)  
Inquiry (Oslo)  
International Journal of Health Services  
*Journal of Black Health*  
Journal of Chronic Diseases  
Journal of School Health  
Journal of Social Issues

Medical Care Review  
Milbank Memorial Fund Quarterly  
Perspectives in Biology and Medicine  
Population Studies  
Preventive Medicine  
Social Forces  
Social Science Research  
Social Service Review  
Society  
Socio-Economic Planning Sciences  
Sociological Quarterly  
Technology Review  
Theoretical Population Biology  
U.N. Chronicle  
World Health  
W.H.O. Chronicle  
W.H.O. Public Health Papers 54, 55  
W.H.O. Technical Reports 531-535

## RECENT PUBLICATIONS

### Development—Conceptual

**Berg, Robert L. (editor)**

*Health Status Indexes: Proceedings of a Conference Conducted by Health Services Research*

CHICAGO:HOSPITAL RESEARCH AND EDUCATIONAL TRUST, 1973

The conference brought together investigators working on health status indexes to define problems, to exchange insights, and to weigh the values of various approaches in this research area. Eleven disciplines were represented: computer technology, education, economics, health care administration, industrial engineering, management science, medicine, operations research, psychometrics, sociology, and statistics. Discussions are printed following each of the formal presentations.

(references not available) CH-P 74-0507 1

**Berg, Robert L.**

*Weighted Life Expectancy as a Health Status Index*

HEALTH SERVICES RESEARCH 8:153-156, 1973

The author suggests that weighted life expectancy offers advantages as an indicator of current health status and as a predictor of future status. That is, in addition to describing the health status of individuals or populations, it can also be used as a basis for estimating the social value of advances or gains made in health status due to medical or other interventions.

(0 references) CH-P 73-0166 2

**Bonnevie, Poul**

*The Concept of Health: A Socio-Medical Approach*

SCANDINAVIAN JOURNAL OF SOCIAL MEDICINE 1(2):41-43, 1973

The nature of disease requires a qualitative as well as a quantitative estimation. Diagnostic procedures take the former aspect, though not the latter, into consideration. Such an estimation might be made possible, however, by considering the various abilities by which the

individual may achieve a well-balanced adaptation and by taking into account the active socio-ecological factors.

(0 references) AA 74-1502 3

### **Breslow, Lester**

*A Quantitative Approach to the World Health Organization Definition of Health: Physical, Mental and Social Well-Being*

INTERNATIONAL JOURNAL OF EPIDEMIOLOGY 1(4):347-355, 1972

The Human Population Laboratory has been trying to apply the W.H.O. definition in the measurement of health and in ascertaining how to improve health. This paper discusses the various aspects of and approaches to this subject and describes a trial of their method of measurement and the preparations for another survey. It appears possible to measure health status through questions that only individuals can answer about themselves and through testing by physical means the extent of functional reserves; medicine would use these measures to improve health.

(29 references) AA-M 73-0168 4

### **Cardus, David**

*Editorial: Towards a Medicine Based on the Concept of Health*

PREVENTIVE MEDICINE 2(3):309-312, 1973

The need for and approaches to a definition of health are discussed. The author favors the form which contemplates the study of man's performance under a variety of circumstances. Appeal is made to private concerns and government agencies to participate in changing the current emphasis on disease to an emphasis on positive health.

(3 references) CH-P 74-2504 5

### **Cochrane, A. L.**

*The History of the Measurement of Ill Health*

INTERNATIONAL JOURNAL OF EPIDEMIOLOGY 1(2):89-92, 1972

The evolution of ideas about, and techniques for, the measurement of ill health in South Wales is summarized under 3 arbitrary headings: 1) the development of survey techniques; 2) the attempt to validate the survey findings and 3) the search for a dichotomy. Finally the suggestion is made that a better approach would be to determine the point(s) on the distribution curves of bio-chemical and haematological measurements at which treatment starts to do more good than harm.

(10 references) AA 74-3017 6

**Cornell, Richard G.**

*The Evaluation of Health Service Programs*

IN, RELIABILITY AND BIOMETRY, PROSCHAN, FRANK; SERFLING, R. J. (EDITORS), PHILADELPHIA, PENNSYLVANIA: SOCIETY FOR INDUSTRIAL AND APPLIED MATHEMATICS, 1974, PP 673-680

Models for health-service programs are presented to stimulate new approaches in evaluation. Program performance is assessed relative to 2 standards: one which represents a minimally satisfactory level of accomplishment and one which represents the achievement of intended program objectives. Methods of establishing such standards are described for several health-service settings. Of interest is the discussion of comparisons with predictions; literature on quantifying individual health status is reviewed and a risk function for evaluation is proposed.

(20 references) AA-M 74-4103 7

**Dolfman, Michael L.**

*Toward Operational Definitions of Health*

JOURNAL OF SCHOOL HEALTH 44(4):206-209, 1974

The author discusses some of the confusion associated with the meaning of the term "health." He states that a single definition is "an impossibility." Thus, a model of health based on function capacity and adaptation to stress is developed. The model serves as a format by which operational definitions can be generated.

(16 references) CH-P 74-3019 8

**Fabrega, Horacio**

*Toward a Model of Illness Behavior*

MEDICAL CARE 11(6):470-484, 1973

A theoretical model of the decision-making processes used by a person during a period of illness is presented. The model offers an abstract account of how such decisions may be viewed or explained. The model is the first step toward depicting in an abstract way fundamental behavior changes associated with an occurrence of disease. Illness occurrence data is currently being collected to provide empirical estimates of variables of the model such as frequency of treatment during the illness-medical care cycle.

(29 references) AA-M 74-0517 9

**Fanshel, S.**

*A Meaningful Measure of Health for Epidemiology*

INTERNATIONAL JOURNAL OF EPIDEMIOLOGY 1(4):319-337, 1972

An operational definition of "health" is offered, useful to those concerned with the allocation of resources for health services. A health status index (HSI) is described, based on social value judgments. The HSI makes it possible to give a quantitative definition of the outcome of health services, program effectiveness and population health status. An application which illustrates the methodology is shown.

(24 references) AA-M 73-0176 10

**Gitter, A. George; Mostofsky, David I.**

*The Social Indicator: An Index of the Quality of Life*

SOCIAL BIOLOGY 20(3):289-297, 1973

This paper discusses the field of social indicators as to appropriate scaling, objective vs. subjective indicators and weights for purpose of aggregation. An indicator model is given; the social variable health is used to describe this model.

(14 references) CH-P 74-1503 11

**Grace, Gaston-Rene**

*Disequilibrium as an Essential Component of Psychological Health*

PSYCHOLOGIA 17(2):65-70, 1974

The author observes that, apart from K. Dabrowski, 4 major North American Psychological theorists now view the positive aspect of psychological disequilibrium. Having compared the 4 approaches and noted their interrelationship, he argues that it is necessary to change the meaning of the concept of health and disease as related to psychological disequilibrium. A new definition of these concepts is thus offered and illustrated.

(11 references) AA-M 74-5267 12

**Grogono, A. W.**

*Measurement of Ill Health: A Comment*

INTERNATIONAL JOURNAL OF EPIDEMIOLOGY 2(1):5-6, 1973

Assumptions and scaling of 5 recently proposed health indexes are compared and contrasted. Also, points which are more, or less, acceptable to the clinician and patient clients are suggested. The existence of these different scores is evidence of the interest in this field. However, the role of any health index in the management of medical care and the satisfactory nature of any of the proposed schemes has yet to be shown.

(7 references) CH-P 74-3027 13

**Hoke, Bob**

*Healths and Healing: Beyond Disease and Dysfunctional Environments*

EKISTICS 37(220):169-172, 1974

The author presents a transactional approach toward the health-disease relationship. The concept of health as an activity rather than as a substantive, personal characteristic is argued; thus, there is a healthy way to live a disease. Considering health as an activity, the author discusses patterns and measures, how to reinforce and create appropriate environments for healing as well as how to promote it. (11 references) CH-P 74-3031 14

**Kisch, Arnold I.; Torrens, Paul R.**

*Health Status Assessment in the Health Insurance Study*

INQUIRY 11(1):40-52, 1974

The approach for assessing health status in the Rand Health Insurance Study is presented in detail. The need to assess health status is described, as is the difficulty in attempting such an assessment. An outline of procedures for gauging health status has also been presented. The proposed methodology is a compromise necessitated by the crude state of the art of health status measurement. (44 references) CH-P 74-3033 15

**Lerner, Monroe**

*The Relative Contributions of Health Care and Social Factors to Health Public Policy Implications*

IN, PROCEEDINGS OF THE SOCIAL STATISTICS SECTION 1973, GOLDFIELD, EDWIN D. (EDITOR), WASHINGTON, D.C.:AMERICAN STATISTICAL ASSOCIATION, 1974

The author's purpose is to provide a preliminary framework for the conceptualization of non-health services which may influence health levels. This framework is discussed in terms of independent, endogenous as well as external to the individual, and dependent variables. The public policy issue is clouded since as yet no aggregate index of health exists. (19 references) CH-P 74-4109 16

**Maddox, George L.**

*Interventions and Outcomes: Notes on Designing and Implementing an Experiment in Health Care*

INTERNATIONAL JOURNAL OF EPIDEMIOLOGY 1(4):339-345, 1972

This paper describes one illustration of the challenge to measure the performance and impact of health and welfare programs and the response of a research group to this challenge. The experience described deals with some timely and important questions: can vulnerable elderly persons who are at risk for institutionalization be appropriately, effectively, and efficiently maintained in a non-institutional setting? To assess the impact a function classification scheme has been developed. The study is mid-course.  
(7 references) AA-M 73-0192 17

**Messing, Simon D.**

*Discounting Health: The Issue of Subsistence and Care in an Underdeveloped Country*

SOCIAL SCIENCE AND MEDICINE 7:911-916, 1973

"Discounting health" is proposed as a heuristic model for analysis of differing perceptions concerning "cost-benefit" as these relate to systems of health care. This procedure became necessary during analysis of data gathered in rural Ethiopia to measure the effectiveness of new health centers.

(7 references) AA-M 74-0537 18

**Nichols, P. J.**

*The Assessment of Disability*

PROCEEDINGS OF THE ROYAL SOCIETY OF MEDICINE 66:141-143, JULY, 1973

The author urges a new look at functional assessment with regard to rehabilitation efforts and points to the need for a range of tests which will cover mental control, information recall, reasoning ability, vocabulary and personality. Both the clinical situation and social background should be considered in the assessment of disability.

(13 references) CH-P 73-0281 19

**Oelbaum, Cynthia Hastings**

*Hallmarks of Adult Wellness*

AMERICAN JOURNAL OF NURSING 74(9):1623-1625, 1974

Stressing nursing's responsibility to promote wellness, a nurse identifies 26 behaviors that characterize optimal health in adults. This scale can be used to assess wellness in an individual or population. Each item is assigned a score from 1 to 4; the item scores are summed to form a measure of wellness.

(9 references) AA-M 74-5226 20

**Russell, Robert D.**

*Social Health: an Attempt to Clarify this Dimension of Well-Being*

INTERNATIONAL JOURNAL OF HEALTH EDUCATION 16:74-84, 1973

This paper describes an attempt to clarify the meaning of "social health" as used in the W.H.O. definition. Two approaches were used: a consensus of authoritative judgment and development through the process of a four-week workshop on social health. Results using the two approaches are discussed.

(0 references) AS-M 73-0201 21

**Scheffler, Richard M.; Lipscomb, Joseph**

*Alternative Estimations of Population Health Status: An Empirical Example*

INQUIRY 11(3):220-228, 1974

As its prime purpose, this paper shows how sample survey data can become the crucial input for two alternative health status indexes. Expected pecuniary benefits of disease programs are estimated in a form more comparable to the expected physiological-emotional benefits of programs, as indexed by other researchers in this field. The methodology of the approach is illustrated with data from the Survey of Economic Opportunity. Directions for further research development are discussed.

(17 references) CH-P 74-4116 22

**Scheffler, Richard M.; Lipscomb, Joseph**

*The Consumption and Investment Benefits of Disease Programs*

GROWTH AND CHANGE 5(3):8-16, 1974

This paper explores methodological issues arising when a central planner attempts to fund disease programs so as to maximize their aggregate effectiveness, considering both the expected consumption and investment benefits. A model of consumption benefits, in which program impact is gauged by an health index, is presented. An evaluation scheme is also introduced.

(16 references) CH-P 74-4062 23

**Starfield, Barbara**

*Measurement of Outcome: A Proposed Scheme*

MILBANK MEMORIAL FUND QUARTERLY 52:39-50, 1974

The need to demonstrate that health care has an influence on health status is increasingly pressing. A scheme that is based upon the development of a "profile" rather than a single "index" for describ-

ing health status is proposed in the paper. The model is a conceptual framework whose usefulness will depend upon efforts of a large number of researchers from many disciplines to develop instruments which can be incorporated into it.  
(30 references) AA-M 74-4068 24

**St. Pierre, Carol**

*Health Planning and R. Buckminster Fuller's World Game*

EKISTICS 37(220):180-187, 1974

This paper presents Fuller's more important concepts and discusses the relation of World Game philosophy to global planning for health. Included in the discussion are definitions for health, and the need for goals and measures of health.  
(23 references) CH-P 74-3054 25

**Susser, Mervyn**

*Ethical Components in the Definitions of Health*

INTERNATIONAL JOURNAL OF HEALTH SERVICES 4(3):539-548, 1974

This paper argues that definitions of health contain ethical components that rest on value systems, and that these definitions have consequences as well as causes. The components of the definition of health are considered first in the vertical dimension of levels of organization and next in the horizontal dimension of breadth. Changes in these components are illustrated by three examples.  
(23 references) AA-M 74-5285 26

**Twaddle, Andrew C.**

*Illness and Deviance*

SOCIAL SCIENCE AND MEDICINE 7(10):751-762, 1973

This paper presents a review and appraisal of one way in which illness has been treated by sociology. Since 1951, sociologists most frequently have interpreted illness as a form of deviant behavior characterized by involuntary incapacities for participation in the social order. The nature of deviance, the ways in which illness "fits" the deviance model, the limitations of this model and the major unexplored questions suggested by the deviation orientation are examined.  
(36 references) AA-M 73-0289 27

**Twaddle, Andrew C.**

*The Concept of Health Status*

SOCIAL SCIENCE AND MEDICINE 8:29-38, 1974

This paper focuses on the problem of conceptualizing health as a social status. Health and illness can be viewed in a specifically sociological frame of reference, regarding biophysical changes in the organic states of individuals. Literature on the concept of health status and studies linking social stratification, ethnicity and situational factors with different designations of sickness is reviewed. A model which focuses on status designation and the circumstances under which individuals are defined as well or ill is presented.  
(38 references) AA-M 74-1506 28

**Weidman, Hazel H.; Egeland, Janice A.**

*A Behavioral Science Perspective in the Comparative Approach to the Delivery of Health Care*

SOCIAL SCIENCE AND MEDICINE 7:845-860, 1973

This paper focuses on the problems in the delivery of health care. By suggesting a behavioral science approach, it offers a better means of raising health levels than other discipline-bound efforts. This paper has six parts. Part 1 deals with the importance of behavioral science view. Part 2 consists of a literature review. Part 3 describes the comparative approach. Part 4 discusses its application to the delivery of health care. Part 5 stresses the need for behavioral science view. Part 6 refers to use of this approach in the U.S.  
(87 references) AA-M 74-0555 29

**Williams, Alan**

*Measuring the Effectiveness of Health Care Systems*

BRITISH JOURNAL OF PREVENTIVE AND SOCIAL MEDICINE 28(3): 196-202, 1974 (THIS PAPER ALSO APPEARS IN THE ECONOMICS OF HEALTH CARE, MARK PERLMAN (EDITOR), NEW YORK:MACMILLAN, 1974)

A strategy for devising output measures designed to test the efficiency of the health care system is outlined. The proposed index focuses on the duration and intensity of ill health and meets the author's criteria of 1) relating to the state of health of the individual; 2) being capable of wide application; and, 3) being easy to use. Currently this measurement scheme is being tested with 500 subjects; a larger scale study (N=10,000) is planned for 1975-1976.  
(14 references) CH-P 74-4118 30

**Wright, K.G.**

*Alternative Measures of Output of Social Programmes—The Elderly*

IN, YORK ECONOMIC ESSAYS IN SOCIAL POLICY, CULYER, A.J. (EDITOR), LONDON, ENGLAND:MARTIN ROBERTSON AND COMPANY, LTD.

Emphasis is placed on the problems of measuring output. Existing measures are discussed; a research project which synthesized these into an output measure designed to indicate change in the condition of an individual old person over time is described. The assessment schedule has 3 main divisions: 1) personal mobility; 2) self-care; and, 3) mental state. Preliminary approaches to assessing transitional data are presented.

(61 references) CH-P 74-5249 31

## **Development—Empirical**

**Aakster, C. W.**

*Psycho-social Stress and Health Disturbances*

SOCIAL SCIENCE AND MEDICINE 8(2):77-90, 1974

Based on a survey among the Dutch population, an analysis is presented of the inter-relationships of psycho-social stresses and health disturbances. A functional approach to health is used with separate scores being summed to yield a "General Index of Complaints." Factor analysis and correlation are also used in the analysis. The results are taken as support of the hypothesis that illnesses are more or less automatic result of a failure to adjust to stress. Main types of adjustment and of adjustive failure are discussed.

(37 references) AA-M 74-3001 32

**Anderson, James G.**

*Effects of Social and Cultural Processes on Health*

SOCIO-ECONOMIC PLANNING SCIENCES 8:9-22, 1974

A structural model has been developed and analyzed using the causal modeling technique of path analysis, in which social, economic and demographic characteristics of New Mexico counties have been related to the infant mortality rate as an index of health. In general, the model building techniques and the algorithms presented here provide a valuable means of generating and testing hypotheses regarding the effects of social and cultural processes on health.

(76 references) AA-M 74-1501 33

**Antonovsky, Aaron**

*The Utility of the Breakdown Concept*

SOCIAL SCIENCE AND MEDICINE 7:605-612, 1973

A previously advanced concept of "breakdown" suggested the need for a conceptual classification which unifies facets common to all states of a health-illness continuum. The data indicate that: 1) a relatively small number of breakdown profiles encompass almost half

the population; 2) the approach allows the identification of high risk groups parsimoniously; 3) complete health is statistically deviant; 4) it may be that different subcultural groups show different patterns of the dynamics of breakdown.

(6 references) AA-M 74-2503 34

**Blum, Arthur; Dean, Burton V.; Koleski, Raymond A.; Mantel, Samuel; Reisman, Arnold; et.al.**

*Measurement Model for Planning and Budgeting for the Jewish Community Federation of Cleveland*

IN, HEALTH CARE DELIVERY PLANNING, RIESMAN, ARNOLD; KILEY, MARYLOU (EDITORS), NEW YORK:GORDON AND BREACH SCIENCE PUBLISHERS, 1973

This chapter summarizes a 3 year study to apply techniques of operations research and systems analysis to a communal system. The model, based on the number of clients processed, the time each client receives from the system, the quality and the value of the services, can be used to enhance present decision-making. Some applications of the model are given. The model has the potential for linking budgets to output; however, the authors feel that it will be some time before this degree of sophistication is reached.

(29 references) CH-P 74-0509 35

**Grams, Ralph R.**

*A Statistical Systems Approach to Health and "Normal" Values*

MEDICAL INSTRUMENTS 8(1):3-8, 1974

Data are presented to support a multivariant concept of disease based on a highly technical statistical computer program operating on routine laboratory information. Clinical application is shown to both the acute and chronic disease situation. An example which demonstrates the tracking ability of this "systems approach" for disease is presented. The methodology pertains to a measure of an individual's health status.

(12 references) AA-M 74-3025 36

**Hausfeld, R. G.**

*The Social Prediction of Self Perceived Morbidity*

MEDICAL JOURNAL OF AUSTRALIA 2:975-978, 1973

This paper shows that the self-perceived morbidity (average number of "yes" responses on the Cornell Medical Index) of subcultural groups can be predicted by a measure of social difference (value dissonance). Evidence is offered to support the claim that clinically assessed morbidity is correlated with self-perceived morbidity.

ty; morbidity is caused by conflict generated by value dissonance. The hypothesis is advanced that life chances of a subcultural group are inversely proportional to its value dissonance.  
(18 references) AA 74-3029 37

**Hu, Teh-wei**

*Effectiveness of Child Health and Welfare Programs: A Simultaneous Equations Approach*

SOCIO-ECONOMIC PLANNING SCIENCES 7:705-721, 1973

This report examines the effectiveness of 2 welfare programs on the health status of children. A simultaneous equation approach is used to evaluate and compare the programs. Endogenous variables include indices of quality of health care, physical health and educational benefits. Exogenous variables include socio-demographic and health- welfare program data. The indices serve as proxies or partial indicators of health status. Results based on a sample of 652 first-graders allow for program comparison and some policy implications.  
(5 references) CH-P 74-0929 38

**Klemmack, David L.; Carlson, John R.; Edwards, John N.**

*Measures of Well-Being: An Empirical and Critical Assessment*

JOURNAL OF HEALTH AND SOCIAL BEHAVIOR 15(3):267-270, 1974

Three measures of well-being, the Life Satisfaction scale, the Social Isolation scale and the Willingness to Live scale, are evaluated in terms of their empirical similarity. Data were obtained from 507 interviewees selected by a random census block quota sampling system designed to reflect the population 45 and older in a rural area of southwest Virginia. The findings suggest that social isolation and life satisfaction items are largely redundant; implications for health-related and gerontological studies are discussed.  
(13 references) AA-M 74-5217 39

**Lawton, M. Powell; Cohen, Jacob**

*Environment and the Well-Being of Elderly Inner City Residents*

ENVIRONMENT AND BEHAVIOR 6(2):194-211, 1974

115 subjects were interviewed as part of a study designed to allocate the amount of variation in behavior attributable to environmental as compared to social factors. 11 independent variables, comprising demographic and environmental characteristics and health, are used to account for variation in 7 indices of well-being. Multiple regression is the primary analytical tool. Results of the study are presented and the methodology discussed.  
(13 references) CH-P 74-5219 40

**Lawton, M. Powell; Cohen, Jacob**

*The Generality of Housing Impact on the Well-Being of Older People*

JOURNAL OF GERONTOLOGY 29(2):194-204, 1974

The impact of rehousing on social and psychological well-being of older people was investigated in a longitudinal comparison-group design. Change over time was compared by means of multiple regression analysis which controlled for original state of well-being, state of health and demographic characteristics. The interview schedule was designed to obtain a wide variety of information. Nine indices of well-being, including functional health, were derived. Results of the study are presented and discussed.

(14 references) AA-M 74-2510 41

**Maddox, George L.; Douglass, Elizabeth B.**

*Aging and Individual Differences: A Longitudinal Analysis of Social, Psychological, and Physiological Indicators*

JOURNAL OF GERONTOLOGY 29(5):555-563, 1974

This paper reports on a longitudinal study of a defined older population (N=106) observed 6 times in a 13 year period. To determine the effect of aging on individual differences, Pittman's test for correlated variances was used. Included in the analysis were 2 measures of perceived health status and 2 measures of physical functioning related to activities of daily living. Findings show a general increase in variation over time; from this the authors infer that individual differences are maintained in late life.

(23 references) AA-M 74-4049 42

**Meile, R. L.; Gregg, W. E.**

*Dimensionality of the Index of Psychophysical Stress*

SOCIAL SCIENCE AND MEDICINE 7(8):643-648, 1973

Recent studies of the 22-item index of psychophysiological stress have questioned its validity. The bases of question have been that the index is multidimensional and that it measures both physical and mental disorders. Sex and age differences are presumed to represent cultural or subcultural variations in conceptualization of symptoms or differences in prevalence of physical rather than mental disorder. The results question the dimensionality of the index as reported by Crandall and Dohrenwend and indicate different interactions of symptom patterns, age and sex.

(13 references) AA-M 73-0243 43

**O'Leary, J.B.; Zaki, H.A.; Alexander, J.F.**

*The Relationship between Kisch's Health Status Proxy and Three Direct Measurements of Health Status*

MINNESOTA MEDICINE 56 SUPPL (2):82-86, 1973

This paper reports the health status of a stratified random subsample (142 persons) of a rural population. Health status was measured directly by determining the extent of oral debris, periodontal disease and physical fitness. There was no significant correlation between these three direct health status measurements and a proxy measure of health status (Kisch et.al.). The reasons for this apparent lack of correlation were discussed.

(21 references) AS-M 74-1504 44

**Patrick, Donald L.; Bush, J.W.; Chen, Milton M.**

*Methods for Measuring Levels of Well-Being for a Health Status Index*

HEALTH SERVICES RESEARCH 8(3):228-245, 1973

Category rating, magnitude estimation and equivalence were used to measure the levels of well-being that student and health leader judges associate with 50 case descriptions of function status representing the continuum from complete well-being to death. No significant differences were detected for order of method of presentation, interview situation, scaling method, student vs. leader judges, or most interactions among these factors. The results indicate the feasibility of measuring the social values of large numbers of cases in household interview surveys.

(22 references) AA-M 73-0271 45

**Pless, I.B.; Satterwhite, B.**

*A Measure of Family Functioning and its Application*

SOCIAL SCIENCE AND MEDICINE 7:613-620, 1973

This paper describes a measure of family functioning intended to assess the strength of relationships and life style as a whole. The emphasis on pediatrics is due to the family's primary role in child health. The index is the sum of scores (1, 2 or 3) to the 16 questions. A table shows the index scores according to the child's health. Responses were subjected to a factor analysis; 5 principal components emerged. The content of the index, its reliability and validity are described, and several applications are discussed.

(36 references) AA-M 74-2514 46

**Schach, Elisabeth; Starfield, Barbara**

*Acute Disability in Childhood: Examination between Various Measures*

MEDICAL CARE 11(4):297-309, 1973

This study was designed to develop and test new measures of acute childhood disability against standard measures used in surveys performed by the National Center for Health Statistics. Child-specific measures defined as days with specific disability in terms of eating and sleeping problems and irritability within a 2-week period were compared with the prevalence of bed days, restricted activity days and other health problems in the same period and of chronic disease, impairment or handicaps. Results are based on a random sample of 1103 children under age 15.  
(12 references) AA-M 73-0253 47

**Schroer, B.J.**

*Analysing a Patient's Health Using Computers*

INTERNATIONAL JOURNAL OF BIO-MEDICAL COMPUTING 5(2): 119-132, 1974

A technique for assisting the physician in analyzing an individual's health is presented. Using a sample of 3,825 male employees, age group norms were developed for 28 selected clinical variables. Multivariate statistical techniques are used. Three outputs are generated for each individual: 1) a health profile; 2) a graph which shows change in the individual's health over time; and, 3) a summary. Verification of this model is discussed.  
(2 references) CH-P 74-5231 48

**Seiler, Lauren H.**

*The 22 Item Scale Used in Field Studies of Mental Illness: A Question of Method, A Question of Substance, and a Question of Theory*

JOURNAL OF HEALTH AND SOCIAL BEHAVIOR 73(3):252-264, 1973

The 22-item scale developed through the Midtown Manhattan Study is considered from methodological, substantive and theoretical perspectives. This paper concludes that the instrument is a very incomplete measure of mental illness. A literature review suggests that it measures psychological stress and physical malaise, although even for these it is a less than ideal measure. Confounding of independent and dependent variables discourages using the instrument for examining the relationship between stressful life experiences and mental illness.  
(58 references) AA-M 73-0256 49

**Slater, S. B.; Vukmanovic, P.; Prvulovic, T.; Cutler, J.**

*Definition and Measurement of Disability*

SOCIAL SCIENCE AND MEDICINE 8(5):305-308, 1974

This article describes 6 different measures of disability which were devised for a study begun in 1972 intended to develop methods for estimating the prevalence of disability and for identifying possible causes and consequences. The project is being conducted in Belgrade, Yugoslavia on a sample of 8,000 men and women aged 35-54 years. The authors discuss the cross-national aspects of the 6 definitions. At its present stage, the study is largely heuristic and methodological; if efforts prove productive, replication in other countries will be reasonable.

(32 references) CH-P 74-4065 50

**Vaillant, George E.**

*Natural History of Male Psychological Health: II. Some Antecedents of Healthy Adult Adjustment*

ARCHIVES OF GENERAL PSYCHIATRY 31(1):15-22, 1974

This report addresses the question of identifying the antecedents of adult psychological health. 95 men, originally considered to be comparatively free of emotional, physical and academic difficulties, have been prospectively followed from age 18 until age 47. Mental health was defined in terms of 1) the quality of human relationships observed over time, 2) a 32-item adjustment to life scale and, 3) absence of signs of mental illness per se. Results are presented.

(23 references) CH-P 74-5237 51

**Webster, Ian W.; Logie, Alexander R.**

*An Assessment of Aging Based on Screening Data*

JOURNAL OF THE AMERICAN GERIATRIC SOCIETY 22(8):360-364, 1974

Biologic age is quantified and calculated from 7 measures of biological function made in subjects who were objectively and subjectively well. 29 "well" subjects were selected on the basis of the medical questionnaire, chest x-ray, urinalysis and EKG, from 705 "apparently well" females. The subjects had a lower calculated biologic age compared with the reference group. The model could be of value in assessing the aging rate and comparing the effect of social and environmental factors on aging in different populations.

(14 references) AA-M 74-5242 52

**Williams, Joseph R.**

*Preliminary Studies Aimed at Increasing the Reliability of a Behavior Rating Scale for Use with Geriatric and Infirm Patients*

JOURNAL OF GERONTOLOGY 28(4):510-515, 1973

This report deals with developing a reasonably accurate means of assessing behavioral condition and change in the aged and infirm.

Four studies in which graphic rating scale reliability is studied as a function of definition and/or clarification of the rating task are described. Three studied the effects of different subjective versions of the scale on rater agreement; one centered on the same effects of a number-guided-subjective system. The greatest improvement in rater agreement occurred with the latter approach.  
(18 references) AA-M 74-2518 53

**Wilson, L. A.; Brass, W.**

*Brief Assessment of the Mental State in Geriatric Domiciliary Practice.  
The Usefulness of the Mental Status Questionnaire*

AGE AND AGEING 2(2):92-101, 1973

In a preadmission domiciliary study of geriatric patients (physical illness and physical disability predominating) intellectual deterioration was identified and quantified by means of simple arithmetical calculations, digital space forwards and reverse, interpretations of proverbs, mental status questionnaire (MSQ) and physical overall assessment. Analysis showed the MSQ to be more powerful than any other of the individual tests. The routine use of the MSQ in practice with elderly patients is recommended.  
(12 references) AS-M 74-3417 54

**Wilson, L. A.; Grant, K.; Witney, P.M.; Kerridge, D. F.**

*Mental Status of Elderly Hospital Patients Related to Occupational Therapist's Assessment of Activities of Daily Living*

GERONTOLOGICA CLINICA 15(4):197-202, 1973

The mental state of 100 female geriatric inpatients (whose physical handicaps did not interfere with the examinations) was related to tests of activities of daily living (ADL) given by the occupational therapist. Of the simple mental assessments used, the mental status questionnaire correlated best with the ADL test results, and could stand on its own as a good predictor of current ability in simple self care.  
(4 references) AA-M 74-3418 55

## **Applications**

**Akhtar, A. J.; Broe, G. A.; Crombie, Agnes; McLean, W. M.; Andrews, G. R.; et.al.**

*Disability and Dependence in the Elderly at Home*

AGE AND AGEING 2(2):102-111, 1973

A random sample from those over 65 living at home was studied in 3 groups designed to identify "disability" and "dependence" and

their causes. Each subject was clinically examined and an assessment made of mobility, continence, domestic care, self-care and psychiatric state. Rating scales, similar to activity of daily living scales, for assessment of disability and dependence are given in the appendix. Findings are discussed in the light of previous studies of disability in the elderly.

(13 references) AA-M 74-3401 56

### **Census Use Study—Atlanta**

*Social and Health Indicators System Part 2*

WASHINGTON, D.C.:BUREAU OF THE CENSUS, 1973

This report covers the construction and implementation of the Social/Health Indicator Program (S/HIP) for Atlanta. S/HIP is a Census Use Study aimed at providing indicator data for small areas. Operational problems such as selection of appropriate denominators, using local, or available, data for the numerators, are discussed. One long range goal is to develop S/HIP into indicator network capable of providing a social report representative of the national as well as local levels. To date health is measured by single measures such as infant mortality.

(8 references) CH-P 73-0307 57

**Evenson, Richard C.; Sletten, Ivan W.; Hedlund, James L.; Faintich, David M.**

*CAPS: An Automated Evaluation System*

AMERICAN JOURNAL OF PSYCHIATRY 131(5):531-535, 1974

CAPS compares a patient's community adjustment prior to treatment with his adjustment after treatment, using a statewide computerized information system. Ten areas of community adjustment are measured by 60 items on a questionnaire completed by a community correspondent, usually a relative living with the patient. Data obtained at the time of admission are compared with data obtained 90 days after the patient has left the hospital.

(23 references) AA-M 74-3407 58

**Gish, Oscar**

*Resource Allocation, Equality of Access and Health*

INTERNATIONAL JOURNAL OF HEALTH SERVICES 3(3):399-412, 1973

Based on the experience of Tanzania, this paper relates resource allocation in the health sector to the output of health, by contrasting access to and utilization of available health services by urban and rural populations. The writer argues that increased health expenditures alone cannot yield an efficient health care return unless the ad-

ditional expenditure is spread "thinly," in keeping with the realities of population distribution, transportation and disease patterns in most poor countries.

(4 references) AA-M 74-2507 59

**Kane, Robert L.; Jorgensen, Lou Ann; Pepper, Ginette**

*Can Nursing Home Care Be Cost Effective?*

JOURNAL OF THE AMERICAN GERIATRIC SOCIETY 22(6):265-272, 1974

The Nursing Home Demonstration Project (University of Utah) was established to test the cost effectiveness of nurse clinician and the social worker in the primary care role. The goal is to measure the effectiveness of different combinations of these services in improving the patients' level of functioning and behavior. Special scales of function and behavior have been developed and are presented. It is too early to determine if the scales will be able to detect changes in the function or behavior of the patients. Preliminary results on other aspects are given.

(3 references) CH-P 74-4042 60

**Maddox, George L.; Douglass, Elizabeth B.**

*Self-Assessment of Health*

IN, NORMAL AGING II, PALMORE, ERDMAN (EDITOR), DURHAM, NORTH CAROLINA:DUKE UNIVERSITY PRESS, 1974

This paper tests 2 hypotheses: 1) a positive relationship persists over time between self and physicians' health ratings; 2) incongruence between self and physician ratings tends toward individual overestimating of health. Longitudinal data on self-assessment of health among noninstitutionalized persons 60 years or older (N=83) are presented. The data span 15 years and involve 6 observations for each subject. In addition to supporting the hypotheses, the findings provide insight into health among the elderly.

(5 references) CH-P 74-4111 61

**Office of Management and Budget: Statistical Policy Division**

*Social Indicators 1973*

WASHINGTON, D.C.:U.S. DEPARTMENT OF COMMERCE, 1973

This collection of statistics is selected and organized to describe social conditions and trends in the U.S. Eight major social areas, including health, are examined. Indicators which measure individual and family well-being and which measure output from social systems are presented. In health, three major social concerns are: long life as measured by life expectancy at birth; life free of disability as measured by average number of days of disability per person per year;

and access to medical care as measured by perceived access and rate of insurance coverage.

(6 health references) CH-P 74-1507 62

**Office of the Senior Advisor on Integration, Statistics Canada**

*Perspective Canada: A Compendium of Social Statistics*

OTTAWA, CANADA:MINISTRY OF INDUSTRY, TRADE AND COMMERCE, 1974 (FOR SALE BY INFORMATION CANADA, OTTAWA, 171 SLATER STREET AND OTHER INFORMATION CANADA BOOKSHOPS. PRICE: CANADA \$6.75; OTHER COUNTRIES \$8.10. CATALOGUE 11-507/1974.)

The major social statistical time series available in Canada are published. Health is one of the 14 social areas discussed. Indicators of physical health, mental health, accessibility of medical services and fitness are presented. The analysis draws attention to the use and limitations of current data for evaluating health conditions and suggests desirable new directions for developing social indicators of health.

(6 health references) CH-P 74-5227 63

**Plutchik, Robert; McCarthy, Martin; Hall, Bernard H.; Silverberg, Shirley**

*Evaluation of a Comprehensive Psychiatric and Health Care Program for Elderly Welfare Tenants in a Single-Room Occupancy Hotel*

JOURNAL OF THE AMERICAN GERIATRICS SOCIETY 21(10):452-459, 1973

This hotel project provides a model for the development of a comprehensive treatment program for elderly tenants and psychiatric patients living in urban hotels. The aim is to improve the quality of life and to establish a sense of community and personal autonomy among the tenants. Quantitative indices based on responses to 8 interview forms are used to evaluate the project. Among the forms mentioned are daily living scale, life style, and emotions profile index.

(8 references) AA-M 74-2515 64

**Romedor, Jean-Marie; Gellman, Derek D.**

*Hospital Morbidity and Total Mortality in Canada*

OTTAWA, CANADA:HEALTH AND WELFARE—LONG RANGE HEALTH PLANNING AND HEALTH PROGRAMS BRANCH, 1974

This report attempts to identify and measure Canada's main health problems with implications for research, health education and health care planning. Available data is used; morbidity is restricted to hospital admissions since non-hospital data is non-existent. This ap-

proach highlights areas needing work rather than assessing priorities among existing programs. Mortality trends and causes by sex and age are discussed. Authors use concept of premature death to determine the potential years of life lost.

(5 references) CH-P 74-0934 65

**Sackett, David L.; Spitzer, Walter O.; Gent, Michael; Roberts, Robin S.**

*The Burlington Randomized Trial of the Nurse Practitioner: Health Outcomes of Patients*

ANNALS OF INTERNAL MEDICINE 80(2):137-142, 1974

Newly developed methods that could be applied easily and objectively were used to assess "outcomes" of clinical effectiveness and safety. These outcomes are expressed in terms of physical, emotional and social function. These measurements were used to show comparability between treatment and control groups at the outset and after one year. The results indicate that the nurse practitioners were effective and safe.

(9 references) AA-M 74-3052 66

**Shanas, Ethel**

*Health Status of Older People*

AMERICAN JOURNAL OF PUBLIC HEALTH 64(3):261-264, 1974

Self-reports of physical capacity among persons 65 years of age and over are presented for 6 countries: Britain, Denmark, Israel, Poland, United States and Yugoslavia. Data is based on nationwide probability samples of the non-institutionalized elderly. Scores based on 6 questions relating to self care form the basis for cross-national comparison. The author uses the findings to draw implications for public health and the provision of services.

(29 references) CH-P 74-1505 67

**Steiner, Kenneth C.; Smith, Harry A.**

*Application of a Cost Benefit Analysis to a PKU Screening Program*

INQUIRY 10(4):34-40, 1973

After a brief discussion which differentiates between cost benefit and cost effectiveness, the author states that cost benefit is usually the best approach for disease screening. This study used both retrospective and prospective approaches. The author recognizes the difficulty of measuring an individual's feeling of well-being; thus, the focus is on the reduction in use of health resources and on gains in economic output. Results are presented and discussed. A comment on this paper and the authors' reply appear in Inquiry 11(2):151-152, 1974.

(13 references) CH-P 74-3413 68

**Yaung, Chih-Liang; Chen, Kung-Pei; Lan, Chung-Fu**

*A Survey of Physical Health in a General Population in North Taiwan*

JOURNAL OF THE FORMOSAN MEDICAL ASSOCIATION 73(1):8-15, 1974

2,291 adults randomly sampled from 10 townships in North Taiwan were surveyed in 1972. The respondents were asked about disability, chronic conditions, symptoms and energy level. From their answers, they were categorized along a physical health spectrum ranging from being unable to work to having a high level of energy. The sample was also divided by selected economic and cultural variables. To simplify the data and compare these subgroups, the mean ridit and health spectrum, a modified version of that used by the Human Population Laboratory, were used.

(7 references) AA-M 74-5250 69

## **Policy Review**

**Andrews, Frank M.**

*Social Indicators and Socioeconomic Development*

JOURNAL OF DEVELOPING AREAS 8(1):3-12, 1973

This article notes some of the characteristics of the "social indicators" movement, reviews some of activities leading to development of new social indicators and indicates some of the contributions which new indicators seem likely to make to worldwide socioeconomic development.

(19 references) CH-P 74-2502 70

## **Blue Cross Association and National Association of Blue Shield Plans**

*Selected Studies in Medical Care and Medical Economics*

CHICAGO, ILLINOIS: NATIONAL ASSOCIATION OF BLUE SHIELD AND BLUE CROSS ASSOCIATION, 1974 (AVAILABLE WITHOUT CHARGE FROM OPERATIONS DIVISION, NATIONAL ASSOCIATION OF BLUE SHIELD PLANS, 211 EAST CHICAGO AVENUE, CHICAGO, ILLINOIS 60611)

A mail survey has been conducted to obtain abstracts of current research in the fields of hospital and medical economics and health care organization and administration. Some 490 abstracts, stating the purposes and conclusions, are categorized by major focus and sub-categorized within these 8 major topics: health planning; health economics; organization of the delivery system; service components; utilization; education; professional; and, population characteristics. An index of investigators is included.

(490 references) CH-P 74-4008 71

**Blumstein, James F.; Zubkoff, Michael**

*Perspectives on Government Policy in the Health Sector*

MILBANK MEMORIAL FUND QUARTERLY 51(3):395-431, 1973

Brief reference is made to the need for an operational definition of health, and to the difficulty of measuring this. The primary focus of the authors, a lawyer and an economist, is on the basis for government intervention. The range of choice for intervention is also discussed and illustrative programmatic interventions are presented. (51 references) CH-P 74-0510 72

**Cappon, Daniel; Lawrence, David**

*Psychosocial Indicators*

EKISTICS 37(220):188-193, 1974

The aims and applications of social indicators, including health, are reviewed. The authors urge continued development and construction of social indicators stating that the benefits outweigh the disadvantages and costs. Toward this belief in social indicators, the authors offer a "re-orientation" towards social indicators aimed at overcoming objections and at evolving theory and method to offset other critiques.

(17 references) CH-P 74-3012 73

**Dolfman, Michael L.**

*The Concept of Health: An Historic and Analytic Examination*

JOURNAL OF SCHOOL HEALTH 43(8):491-497, 1973

In this article, the historic examination traces the evolution of the definition of health from 1000 A.D. to the present. The analytic examination critically reviews some of the more recent health concepts and definitions.

(22 references) CH-P 73-0222 74

**Editorial**

*Measuring Health and Disease*

LANCET 1(7815):1293-1294, 1973

The author cites health status material which was presented at the International Epidemiological Association meeting in Yugoslavia. While this research is recognized as valuable, its practical application is questioned. The view is expressed that a sensible research balance *must be kept between the relatively long-term possibilities and the immediate needs for a means to judge outcomes of the health-care system.*

(8 references) CH-P 74-2501 75

**Fein, R.**

*Priorities and Decision Making in Health Planning*

ISRAEL JOURNAL OF MEDICAL SCIENCE 10(1-2):67-80, 1974

In this presentation, the author points out the primitive and fragmented condition of health planning in the United States. Questions concerning equality of health care, role of the elite in the planning process, the use of output and outcome measures in evaluating the health care system are addressed. A strategy for implementing health plans is also urged. Discussions which followed this speech are published at the end of the text.

(0 references) CH-P 74-4026 76

**Goldsmith, Seth B.**

*A Reevaluation of Health Status Indicators*

HEALTH SERVICES REPORTS 88(10):937-941, 1973

This paper updates and enlarges a previous paper, "The Status of Health Status Indicators." According to this review article, health services research is moving toward more sensitive and workable indicators of health status.

(25 references) CH-P 74-0520 77

**Haber, Lawrence D.**

*Some Parameters for Social Policy in Disability: A Cross National Comparison*

MILBANK MEMORIAL FUND QUARTERLY 51(3):319-340, 1973

Rational approaches to policy problems of disability require some level of agreement on both the conceptual basis and the measurement of disability. Measurement problems are reviewed and prevalence estimates from the Social Security Survey of the Disabled are compared to those of the National Health Interview Survey and other studies in the U.S. Disability and impairment estimates from 5 nations are compared and the differences are reviewed in terms of their possible effects on the level of disability reported.

(51 references) AA-M 74-0524 78

**Himatsingani, C.**

*Approaches to Health and Personal Social Services Planning in the National Health Service and the Place of Health Indices*

INTERNATIONAL JOURNAL OF EPIDEMIOLOGY 2(1):15-21, 1973

Various approaches to the planning of health services are outlined. Deficiencies of the "muddling through" approach are noted and the

use of more scientific planning methods is urged. The author categorizes the scientific approach as input or output based and discusses the complexities of such measures. Some of the issues raised demand long range solutions; thus, intermediate steps involving mathematical programming should be undertaken to improve the planning process. While oriented to the United Kingdom, the technical problems can be viewed more generally.  
(13 references) AA-M 74-3030 79

**Kasius, Richard V. (editor)**

*The Challenge of Facts: Selected Public Health Papers of Edgar Sydenstricker*

NEW YORK CITY, NEW YORK:PRODIST, 1974

The papers in this collection have been assembled in 4 categories: Public Health and Evaluation; Health Policy; Illness and Illness Surveys; and, Epidemiological Studies. The 17 papers presented here were selected from Sydenstricker's bibliography, 1914-1936. The criteria for selection included relevance to current issues, historical interest and significance. Preference was given to papers concerned with program evaluation and single authorship.  
(232 references) CH-P 74-5150 80

**Kennedy, Donald A.**

*Perceptions of Illness and Healing*

SOCIAL SCIENCE AND MEDICINE 7:787-805, 1973

Patients, physicians, scientists and public health officials hold variant views of the processes of illness, injury and unnecessary death. As these different role performers interact, numerous conflicts arise because the full set of operating values and are not explicitly revealed. Recognition of central variations in orientation and special interest can assist policy formulation and decision-making. Significant improvements in health status for specific population groups will be retarded until this deeper level of understanding is achieved.  
(24 references) AA-M 74-0275 81

**Klages, Helmut**

*Assessment of an Attempt at a System of Social Indicators*

POLICY SCIENCES 4(3):249-262, 1973

Following the publication in 1968 of "Indicators of Social Change," a relatively large number of papers and books have appeared. This review article systematically assesses some first attempts at the development of comprehensive systems of social indicators.  
(3 references) AA 73-0234 82

**Laszlo, C.A.; Levine, M.D.; Milsum, J.H.**

*A General Systems Framework for Social Systems*

BEHAVIORAL SCIENCE 19:79-92, 1974

In this paper the relationship between general systems theory and social systems is explored, including an introduction to the general system characteristics which seem basic to social systems. Emphasis is placed on the discussion of social indicators and social accounts in the system theoretic context, and adaptability of system and control concepts to the social environment.

(11 references) AA-M 74-2509 83

**Maddocks, Ian**

*Patterns of Disease in Papua New Guinea*

MEDICAL JOURNAL OF AUSTRALIA 1(23 MARCH):442-446, 1974

This article is indication that developing nations are also struggling with monitoring health for planning purposes. The author discusses population characteristics, policy considerations, data collection and one localized attempt at establishing an ongoing health status measure.

(10 references) CH-P 74-4048 84

**May, Jean T. (editor)**

*Family Health Indicators: Annotated Bibliography*

ROCKVILLE, MARYLAND:NATIONAL INSTITUTE OF MENTAL HEALTH, PUBLICATION NUMBER (ADM) 75-135, 1974 (FOR SALE BY THE SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, D.C. 20402. PRICE \$2.85. STOCK NUMBER 1721-00022. WHEN ORDERING USE BOTH THE STOCK NUMBER AND THE PUBLICATION NUMBER.)

This bibliography is a guide to contemporary studies of the family from numerous definitional and disciplinary vantage points. A total of 1,024 citations are given, of these, 344 have been abstracted. The abstracted items have been cross-classified according to perspective or approach and to the type of exposition of the subject.

(1,024 references) CH-P 74-4052 85

**Mushkin, Selma J.**

*Policy Research and Health Status*

IN, PROCEEDINGS OF THE SOCIAL STATISTICS SECTION 1973, GOLD-FIELD, EDWIN D. (EDITOR), WASHINGTON, D. C.:AMERICAN STATISTICAL ASSOCIATION, 1974 (PROCEEDINGS FOR SALE BY THE AMERICAN STATISTICAL ASSOCIATION, 806 15TH STREET N.W., WASHINGTON, D.C. 20005 NON-MEMBER PRICE \$9.00)

Policy research uses analytical and evaluative techniques to examine public policies, programs and projects. It is important to restate the issues as health status input. Three policy issues, lead paint poisoning prevention, transportation as a component of health care and drug abuse are summarized. The author also discusses the actual use of policy research in effecting decisions.  
(25 references) CH-P 74-4057 86

**Pole, J. D.**

*The Use of Outcome Measures in Health Service Planning*

INTERNATIONAL JOURNAL OF EPIDEMIOLOGY 2(1):23-30, 1973

The application of health indices for planning purposes depends on the availability of information about the costs and effectiveness of the activities to which the indices relate. The author, an economist, discusses the technical and operational aspects of health measurement. The Department of Health and Social Security, England, is experimenting with broad grouping of activities based on medical speciality, but more detailed analysis of activities presents conceptual and practical difficulties.

(17 references) AA-M 74-3047 87

**Rutstein, David D.**

*Quality Control of Medical Care*

TECHNOLOGY REVIEW 76(3):34-41, 1974

A national health program is needed to improve health care quality. A dual system of quality control is proposed to reduce unnecessary disease, disability and death and/or to prevent their recurrence. Establishment of a federal health board to implement the dual system is advocated. Requirements for data collection needed to implement the system are listed. Discussions center on existing resources, NCHS and CDC in particular. In addition, the duties and responsibilities of the proposed health board are presented.

(adapted from A Blueprint for Medical Care) CH-P 74-0545 88

**Shuman, Larry J.; Wolfe, Harvey; Speas, R. Dixon**

*The Role of Operations Research in Regional Health Planning*

OPERATIONS RESEARCH 22(2):234-248, 1974

This paper explores the growth of regional health planning in the United States and highlights its important problem areas. The literature of operations- research applications to health planning is reviewed critically with respect to the feasibility of models and the appropriateness of assumptions. Specific problems with the types of studies currently in the literature are identified and recommendations

are made for improved coordination between operations-research workers and health planners.  
(65 references) AA-M 74-3053 89

**Sokolowska, Magdalena**

*Social Science and Health Policy in Eastern Europe: Poland as a Case Study*

INTERNATIONAL JOURNAL OF HEALTH SERVICES 4(3):441-451, 1974

This paper deals with aspects of sociology, social policy, and health, with particular reference to the Polish experience. Some traits of Polish sociology are characterized, especially its pragmatic approach and its relationship with social practice. An attempt is made to show how health is being incorporated in the applied social sciences and social engineering. The current situation relating to utilization of sociologic studies in various spheres of Polish practice is discussed particularly in the area of health.

(16 references) AA-M 74-5281 90

**Stone, Leroy O.**

*Some Principles for a System of Socio-Demographic Statistics*

SOCIO-ECONOMIC PLANNING SCIENCES 7:661-680, 1973

The changing demand for social statistics indicates a need to rearrange the statistical products so that interrelationships between population characteristics and institutional operations are more effectively reflected. A blueprint which focuses on socio-economic and demographic processes for Canada and its sub-populations is discussed. Basically, this system is a collection of related data files, concepts, classification schemes and accounts. Mapping patterns of change in population characteristics within various fields, including health, is emphasized.

(20 references) AA-M 74-0941 91

**Vaisrub, Naomi; Balfe, Bruce E.**

*Health Status Indicators*

IN, SOCIOECONOMIC ISSUES OF HEALTH AMERICAN MEDICAL ASSOCIATION CHICAGO:AMERICAN MEDICAL ASSOCIATION 1973

This article summarizes recent thoughts on health indexes. Included are a list of possible uses; a list of characteristics of an index and a brief discussion of the "state of the art."

(0 references) CH-P 73-0163 92

**Veney, James E.**

*Health Status Indicators*

INQUIRY 10(4):3-4, 1973

The author encourages the development of health measures, especially composite measures. However, he stresses that we should not be too quick to abandon some of the more traditional measures of health nor to automatically assume that such measures have exhausted their usefulness.

(3 references) CH-P 74-3414 93

## CURRENT RESEARCH

### Development—Conceptual

**Blischke, W. R.; Bush, J. W.; Kaplan, R. M.**

*A Successive Intervals Analysis of Social Preference Measures for a Health Status Index*

PRESENTED AT THE ANNUAL MEETING OF THE AMERICAN STATISTICAL ASSOCIATION ST. LOUIS, MISSOURI, AUGUST 26-29, 1974

Ordered category scales are useful in health index research because they are not demanding of subjects and can be used to judge large numbers of case descriptions in a short time. Successive intervals, a procedure for obtaining equal intervals from category data, has been applied to social preference data for a health index, with several innovations. The procedures alleviate a specific problem for the health index common in utility measurement and social indicator construction.

(37 references) AA-M 74-4080 94

**Bush, J.W.; Blischke, W.R.; Berry, C.C.**

*Health Indices, Outcome, and the Quality of Medical Care*

PROCEEDINGS OF THE ENGINEERING CONFERENCE IN HEALTH SERVICE DELIVERY AUGUST 1973 SOUTH BERWICK, MAINE (EDITED BY R. YAFFEE AND D. ZALKIND)

A Function Status Index overcomes the major problems of a comprehensive outcome indicator so that, with prospective data on large series of cases within ongoing health system operations, regression analysis provides a practical statistical method for measuring significant differences, inferring causal correlations and establishing standards for high quality treatment in defined episodes of medical care. Emergency Medical System variables illustrate the model.

(49 references) AA-M 73-0266 95

**Chen, Milton M.; Bush, J.W.; Patrick, Donald L.**

*Social Indicators for Health Planning and Policy Analysis*

POLICY SCIENCES 6(1):71-90, 1975

The concept of health involves 1) the level of function at a point in time and 2) the probability of transition to other levels in future times. The "Function Status Index" summarizes the level-of-well-being of a population at a point in time. By incorporating empirically determined transition probabilities into a simple stochastic model, a "Quality-Adjusted Life Expectancy" can be computed. These indicators possess the statistical properties required for time series and interpolation comparisons, and for studying outcomes and quality of medical care.

(24 references) AA-M 74-0513 96

**Densen, Paul M.; Kamons, Susan**

*Final Report on Contract HSM 110-73-382*

UNPUBLISHED, BOSTON, MASSACHUSETTS, 1974

This paper reviews the motivation for developing a national health account system, summarizes the feasibility of such a system and describes direction for exploration. One goal for a system of health accounts is to provide a framework for data collection; a second is to provide answers to the relationship of inputs and outputs in the health care system. The authors propose a 2-stage system at the microlevel; the first relates resources and services via the allocation mechanism, the second relates services to health status via consumption.

(38 references) AS-M 74-4018 97

**Gilson, Betty S.; Gilson, John S.; Bergner, Marilyn; Kressel, Shirley; Bobbitt, Ruth et.al.**

*The Sickness Impact Profile: Development of an Outcome Measure of Health Care*

PRESENTED AT THE ANNUAL MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION NEW ORLEANS, LOUISIANA, OCTOBER 20-24, 1974

The Sickness Impact Profile (SIP), a behaviorally based measure of sickness-related dysfunction, is being developed to provide an appropriate and sensitive measure of the effects of health care services. Rationale for the behavioral approach is discussed. Methodology of SIP instrument construction is reviewed; selection of items for the interview and approaches to scaling are briefly explained.

(10 references) AS-M 74-5146 98

**Gilson, Betty S.; Gilson, John S.; Bergner, Marilyn; Vesselago, Michael; Kressel, Shirley; et.al.**

*Development and Application of the Sickness Impact Profile A Pilot Study, 1972-1973*

UNPUBLISHED, SEATTLE, WASHINGTON:UNIVERSITY OF WASHINGTON,  
1973

The Sickness Impact Profile is an instrument designed for evaluation of complex health care programs and assumes that reduction of sickness is the ultimate product of these programs. The project focuses on a behavioral approach to sickness. This report discusses the methods used to develop the items and categories, and to construct, scale and score the instrument. Arrangements for a field trial to assess the feasibility of using the instrument in a comprehensive health care setting and to provide tentative estimates of reliability and validity are given.

(31 references) CH-P 73-0317 99

**Kempinski, Ralph; Krasnick, Allan**

*Community Medicine and Primary Health Care*

UNPUBLISHED, COPENHAGEN, DENMARK:JOINT CENTER FOR STUDIES OF  
HEALTH PROGRAMS, 1974

The authors suggest combining community medicine with primary health care to extend both elements within the health care system. This would yield a more inclusive system aimed at changing the state of community health by intervention at the individual and group level. This theory is being applied in Naestved, Denmark. Currently an epidemiologic community survey is being conducted to provide an analysis of health status. Other information being assembled includes a description of the community, demographic data and a description of group practice.

(0 references) CH-P 74-5151 100

**Leighton, Alexander H.; Beiser, Morton; Benfari, Robert; Murphy, Jane M.; Rasmussen, Sandra**

*The Measurement of Health in Populations—Second Year Terminal Report*

UNPUBLISHED, BOSTON, MASSACHUSETTS:HARVARD UNIVERSITY, 1973

A 5 year study was designed to develop a technique for measuring the health of populations. Work to date consists mainly of empirical analysis of existing data banks, based on multi-data samples and data sources. This report comments on the work of the first year and briefly reviews work in progress during the second year. Actual construction of indices was scheduled to begin in the third year. Since the contract was not renewed, there are no present plans to continue with this work.

(250 references) CH-P 74-0558 101

**Lipscomb, Joseph**

*Addendum: Formal Statement of the Resource Allocation Model*

UNPUBLISHED, ROCKVILLE, MARYLAND:BUREAU OF HEALTH SERVICES RESEARCH, 1973

The author along with Richard Scheffler in an earlier paper stated that, given information on the current disease- and module- specific distribution of disability, a linear programming model could be implemented which would suggest the optimal allocation of resources to disease programs. This addendum states the model more formally. (2 references) CH-P 74-0534 102

**Maklan, Claire; Cannell, Charles F.; French, John R. P.**

*Subjective and Objective Concepts of Health: A Background Statement for Research*

UNPUBLISHED, ANN ARBOR, MICHIGAN:INSTITUTE FOR SOCIAL RESEARCH, SURVEY RESEARCH CENTER, 1974

This conceptual statement presents the view that both "subjective" and "objective" views of health and health care are important and useful. This paper focuses on variables relevant to development of subjective measures of health and quality of available health care resources. The proposed measures are considered important to indicate and predict health behavior and satisfactions. Health is viewed as one component in an individual's perception of his overall quality of life.

(64 references) AA-M 74-4050 103

**Newman, John F.**

*Problems in the Development of Indicators of Health Status: Some Demographic Considerations*

PRESENTED AT THE ANNUAL MEETING OF THE POPULATION ASSOCIATION OF AMERICA NEW ORLEANS APRIL 25-28, 1973

Trends and related problems in the construction of health status indexes are discussed. Consideration is given to some of the problems that often arise in the use of such measures. A model which highlights some of the demographic prerequisites which should be acknowledged or implemented for health indexes is developed. Using the same data, the author applies 2 life table approaches to show the variation in the indexes and to point out that health status measures might be more sensitive if demographic variables were considered.

(19 references) CH-P 74-3043 104

**OECD Working Party on Social Indicators**

*Specific Proposals for Social Indicators in the "Health" Primary Goal Area*

UNPUBLISHED, PARIS, FRANCE, 1973

This document provides information to enable the "working party" to reach agreement on a select number of indicators in the health area. Each of the proposed 21 indicators is discussed in terms of current availability of data, meaning and implications for "positive health." Use of function states and more complex measures of health status is viewed as a long range objective.  
(30 references) CH-P 73-0282 105

### **OECD Working Party on Social Indicators**

*Supplement to Specific Proposals for Social Indicators in the "Health" Primary Goal Area*

UNPUBLISHED, PARIS, FRANCE, 1973

This supplement to "Specific Proposals for Social Indicators in the 'Health' Primary Area" contains 11 statistical annexes. The tables are based on existing data.  
(16 references) CH-P 73-0283 106

### **Scheffler, Richard M.; Lipscomb, Joseph**

*Joint Consideration of the Consumption and Investment Benefits of Disease Programs*

UNPUBLISHED, CHAPEL HILL, NORTH CAROLINA: UNIVERSITY OF NORTH CAROLINA, 1973

This paper explores methodological issues involved in the funding of programs to maximize their aggregate effectiveness. Expected consumption and investment benefits of each program are considered simultaneously. The authors introduce an evaluation scheme with 2 separate decision criteria, one reflects health benefits, the other reflects "change in health status" with the former measuring investment aspects and the latter, consumption benefits of health care expenditures.  
(26 references) CH-P 73-0285 107

### **Torrance, George W.**

*The Health Status Scale: An Output Measure for Productivity*

PRESENTED AT THE CONFERENCE ON PRODUCTIVITY IN THE HEALTH PROFESSIONS PITTSBURGH, PENNSYLVANIA, OCTOBER 3-4, 1973

Productivity calculations require a measure of output. A new approach to measuring the output of health care programs and activities based on the concept of a health status scale is proposed. The scale and its use is described, instruments to measure the scale values are specified, applications are reported and unresolved problems are discussed. It is concluded that the new approach, although still experimental, holds considerable promise and that cautious and thoughtful applications should be encouraged.

(11 references) AA 74-4071 108

**Ware, John E.; Snyder, Mary K.**

*Fifth Short Narrative Progress Report Measuring Concepts Regarding Health Care*

UNPUBLISHED, CARBONDALE, ILLINOIS:SOUTHERN ILLINOIS UNIVERSITY,  
1973

This report summarizes research activities July-Sept, 1973. The most significant developments during this period have been the completion of two small sample pretests, receipt of OMB clearance of scales and item pools and initiation of the first formal reliability and validity studies. An overview of methodology used for the pretests is given. Also, conceptual progress is summarized and reliability data and/or additional findings related to administration of scales is given.

(0 references) CH-P 74-0554 109

**Ware, John E.; Snyder, Mary K.; McClure, Robert E.; Jarett, Irwin M.**

*The Measurement of Health Concepts*

CARBONDALE, ILLINOIS:SOUTHERN ILLINOIS UNIVERSITY SCHOOL OF  
MEDICINE TECHNICAL REPORT NUMBER HCP-72-5

This monograph summarizes progress of the research project between July 1 and December 31, 1972. During the first year, the goal is to develop and validate scales to measure health concepts commonly addressed in health services research and evaluation. The concepts are patient satisfaction with health services, perceived health, and perceived value of health. This is the first statement of goals and methods of the research project, thus the authors offer a complete statement about it.

(23 references) CH-P 74-3057 110

**Williams, Alan**

*Measuring the Effectiveness of Health Care Systems*

PRESENTED AT THE INTERNATIONAL ECONOMICS ASSOCIATION MEETING  
ON THE ECONOMICS OF HEALTH AND MEDICAL CARE IN DEVELOPED  
COUNTRIES TOKYO, JAPAN, APRIL 1973

After presenting certain essential characteristics which any outcome measure should fulfill, the author outlines an approach for devising a weighted health status index. The elements are: 1) categories which describe pain-free social functioning; 2) an evaluation process that converts these states into index points; and, 3) an absolute valuation of points in money terms. The elements are

discussed; plans for a pilot study on 500 elderly persons are presented. The purpose of this longitudinal survey is to determine categories of social functioning.

(25 references) CH-P 74-4118 111

**Williams, Alan; Wright, K.G.**

*Monitoring the Care of the Elderly*

UNPUBLISHED, YORK, ENGLAND:UNIVERSITY OF YORK

An attempt to measure the health and well-being of the elderly is outlined. A central interest is in eliciting what background factors explain transition from any initial dependency state to one observed subsequently. Thus, the study design is longitudinal, not service-specific and aims at broad coverage. The interview schedule was pilot tested in May 1973; response to the questionnaire is discussed.

(20 references) CH-P 74-5246 112

## **Development—Empirical**

**Abrahamse, Allan F.; Kisch, Arnold I.**

*An Age Predictive Index for Health Status*

SANTA MONICA, CALIFORNIA:THE RAND CORPORATION, 1975

A new health status index, defined to be that linear combination of 6 health-related physical measurements which best predicts a person's chronological age, is derived. 5313 records from the national Health Examination Survey for 1960-62 are used. The principal assumption is that, for a given age, there are "normal" levels of these physical parameters. Deviations from the norm which classify the individual as either younger or older than his actual chronological age, are felt to relate to the overall health status. Limitations are discussed.

(8 references) AA-M 74-5134 113

**Bergner, Marilyn; Bobbitt, Ruth A.; Pollard, William E.; Martin, Diane; Gilson, Betty S.**

*Comparison of Physician and Patient Rating of Sickness*

PRESENTED AT THE ANNUAL MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION NEW ORLEANS, LOUISIANA OCTOBER 20-24, 1974

Preliminary studies of validity were undertaken during a pretest of the Sickness Impact Profile (SIP) on a sample of 278 subjects. The SIP is an interviewer-administered outcome measure of health status. Two types of validity measures were used: 1) self-assessment of health status; 2) clinician assessment of health status. In general, the findings provide support for the validity of the SIP. Studies to further

validate the SIP are planned as part of the development and testing of the instrument.

(0 references) CH-P 74-5137 114

**Dever, G.E. Alan**

*Non-White Disease Patterns in Georgia: A Prospective Analysis*

PRESENTED AT THE ANNUAL MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION NEW ORLEANS, LOUISIANA, OCTOBER 23, 1974

Ten specific disease categories are demonstrated to have a substantial impact on the health status of this population group. Two methods were used to synthesize the selected disease patterns into a health status measure: 1) an unweighted z-score additive model; 2) factor analysis. A prospective analysis is attempted using computer graphics. This approach may be used as a basis for allocating resources, if the methodology is standardized.

(17 references) CH-P 74-5143 115

**Dupuy, Harold J.**

*Utility of the National Center for Health Statistics's General Well-Being Schedule in the Assessment of Self Representations of Subjective Well-Being and Distress*

PRESENTED AT THE NATIONAL CONFERENCE ON EVALUATION IN ALCOHOL, DRUG ABUSE AND MENTAL HEALTH PROGRAMS WASHINGTON, D.C., APRIL 1-4, 1974

Self-representations are assumed to be valid and relevant indicators for assessing the current mental health status of the individual. The author aims to combine these indicators into an overall evaluative index of level of well-being. Provisional analysis for 3,380 persons examined in the national Health and Nutrition Examination Survey (HANES), ages 25-74 years, is presented. Internal consistency and comparative validity are discussed.

(0 references) CH-P 74-5144 116

**Gilson, Betty S.; Bergner, Marilyn; Bobbitt, Ruth A.; Pollard, William E.; Martin, Diane**

*Revision and Test of the Sickness Impact Profile 1973-1974*

UNPUBLISHED, SEATTLE, WASHINGTON:UNIVERSITY OF WASHINGTON, SCHOOL OF PUBLIC HEALTH AND COMMUNITY MEDICINE, 1974

The preliminary results of the 1974 pretest, N..278, provide evidence of the reliability, validity and administrative feasibility of the revised Sickness Impact Profile (SIP). The data will be further analyzed to assess the usefulness of items dealing with disorders of

mobility, ambulation, communication and intellectual functioning. The 1974 data will be used in revising the SIP preparatory to a major field trial.

(7 references) AS-M 74-5145 117

**Goldsmith, C.H.**

*Development of Positive Indices of Health*

UNPUBLISHED, HAMILTON, ONTARIO, CANADA:McMASTER UNIVERSITY

The development of a lay-interviewer administered questionnaire is described; its purpose is to predict health status using at least 1 positive health index. Questions of demographic function and morbidity, as well as items related to the W.H.O. components of health, are included. The instrument was tested on a sample of 274 persons selected from a family practice associated with the University. To determine predictability of health professional assessment, each subject was also rated by his physician. Preliminary conclusions are presented.

(8 references) CH-P 74-5147 118

**Gonnella, Joseph S.; Louis, Daniel Z.; McCord, John J.**

*The Staging Concept—An Approach to the Assessment of Outcome of Ambulatory Care*

PRESENTED AT THE JOINT MEETING OF THE OPERATIONS RESEARCH SOCIETY OF AMERICA/THE INSTITUTE OF MANAGEMENT SCIENCES SAN JUAN, PUERTO RICO, OCTOBER 16, 1974

The paper describes a method to evaluate patient care based on the staging concept. The basic premise is that the seriousness of a patient's condition at some point in the treatment process is a good indicator of the outcome of the previous parts of the process. Data were collected for 5,000 hospital patients with a primary diagnosis matching one of the diseases for which staging criteria had been developed. Results indicate that the staging technique can be used to distinguish between the outcomes of ambulatory care received by different population groups.

(6 references) AA-M 74-5213 119

**Grossman, Michael**

*The Correlation between Health and Schooling*

UNPUBLISHED, NEW YORK CITY:NATIONAL BUREAU OF ECONOMIC RESEARCH, INC., 1973

The relationship of health status and schooling is studied in this preliminary report. The household production function approach to consumer behavior is used to develop recursive and simultaneous

models of decision-making to formulate these relationships. A recursive system of demand curves for children's health, schooling and adult's health generates relationships of schooling and health. Sample data has been used to empirically estimate a recursive health-schooling model. Health status is measured either by self rating or by the author's "sensitivity analysis."  
(56 references) AS-M 74-0925 120

**Grossman, Michael; Benham, Lee**

*Health, Hours and Wages*

UNPUBLISHED, NEW YORK CITY:NATIONAL BUREAU OF ECONOMIC RESEARCH, INC., 1973

This paper obtains structural health parameters and examines the effects of health on the labor market when health is endogenous. A composite index of health has been constructed through principal components analysis of 4 variables: 1) number of symptoms selected from a checklist of 20 and 2-4) individual's self-evaluation of general health. A NORC sample provides the data for measures of health status and the empirical results which are presented.

(37 references) CH-P 74-0926 121

**Hanumara, R. C.; Branson, M. H.; Shao, D.; Chen, J. C.; Thornberry, O.**

*Mathematical Models for Health Survey Data and Associated Measures of Health Status*

PRESENTED AT THE ANNUAL MEETING OF THE AMERICAN STATISTICAL ASSOCIATION ST. LOUIS, MISSOURI, AUGUST 26-29, 1974

Approximately 9,000 persons, selected by stratified cluster sampling, were interviewed. The purpose of the survey was to study the health problems of the people of Rhode Island. This paper is concerned with validating the mathematical model proposed by C. L. Chiang and with computing indexes of health using the survey data. Also, techniques of the analysis of multidimensional contingency tables to describe the relationships between variables are applied to the data.

(13 references) CH-P 74-4034 122

**Hennes, James D.**

*A Consumer Oriented Strategy for the Measurement of Health*

UNPUBLISHED, DENVER, COLORADO:PLANNING AND EVALUATION UNIT, DEPARTMENT OF EDUCATION

Health is a characteristic of individual health care consumers. When consumers were asked what they meant by health, and when

existing health indices were reviewed, at least 3 dimensions emerged that should be spanned in a comprehensive measure of health: 1) a conceptual domain of physical and psychosocial health; 2) a criteria dimension of function, feeling-state and symptoms; and, 3) a methodology of assessing health by self-reports from consumer vs. observing the individual and his behavior. Additional factors are considered.

(10 references) AA-M 74-3409 123

**Martini, Carlos J.M. (Project Director)**

*Health Indices Sensitive to Medical Care Variation: Progress report 1973*

UNPUBLISHED, NOTTINGHAM, ENGLAND:UNIVERSITY OF NOTTINGHAM  
1973

This report states the work conducted during the second year of NCHS contract for developing health indexes. Two additional projects were started in 1973 to provide information about the quality of hospital and patient-oriented data for developing new health indexes. The 3 studies are briefly described; methodology for building composite indexes is presented and preliminary results are given. Factor analytic methods using a standard statistical computer package (SPSS) are used for formulating the indexes.

(11 references) CH-P 74-4128 124

**Martini, Carlos J.M.**

*Health Indices Sensitive to Medical Care Variation Progress Report Covering January-May, 1974*

UNPUBLISHED, NOTTINGHAM, ENGLAND:DEPARTMENT OF COMMUNITY HEALTH, UNIVERSITY OF NOTTINGHAM, 1974

Data on socio-economic information, medical care resources and utilization and immediate admissions have been collected for the 15 hospital regions of England and Wales. This complements the data already obtained. The data is being cross-correlated; approximately 50 variables will be selected for final analysis and construction of composite indices. Work on applying a modified "Sickness Impact Profile" is in progress. Another study, concerned with general practice and hospital interaction, provides patient-oriented data for developing new health indices.

(2 references) CH-P 74-4051 125

**Martini, Carlos J.M.; Garroway, Mary; Allan, Boris**

*An Approach to the Evaluation of Health Outcomes*

UNPUBLISHED, NOTTINGHAM, ENGLAND:UNIVERSITY OF NOTTINGHAM,  
1974

This paper reports work on the development of sets of combined health outcome indices. The research objectives are to 1) extend current knowledge concerning outcomes of medical care and the effect of extraneous variables in determining these outcomes; and, 2) develop a more comprehensive set of measurements. Preliminary results using available data are presented; the 15 regions of England and Wales are the units of analysis. Factor analytic and regression techniques are used.

(19 references) CH-P 74-5155 126

**Martini, Carlos J.M.; Garroway, Mary; Allan, Boris**

*Health Indices Sensitive to Medical Care Variation: Progress Report Covering June-August, 1974*

UNPUBLISHED, NOTTINGHAM, ENGLAND:UNIVERSITY OF NOTTINGHAM, 1974

Progress on 3 interrelated studies, health indices (prepared from published data), hospital activity analysis validation and general practice and hospital interaction, is reported. For the health indices study the data is discussed as to classification of independent and dependent variables, reduction of the number of variables, etc.; results are presented. Also, work on developing new inductive indices of sickness behavior is continuing. Data collected for the other 2 studies are currently being analyzed.

(3 references) CH-P 74-5154 127

**May, Jean T.; Sprague, Homer A.; Thomas, Luttrell**

*Family Health Indicators in the Bend of the Cumberland: Part III. A Survey of Health in Lower-Income Areas of Nashville*

UNPUBLISHED, NASHVILLE, TENNESSEE:EVALUATION, SURVEY AND HEALTH RESEARCH CORPORATION, 1974

The sample consists of 594 family housekeeping units (FHU) containing 2,057 individuals. The U.S. Census Bureau's definition of FHU was adopted for this analysis. Originally the data was collected at the individual level and had to be aggregated for this family level analysis. Methods used for aggregation are discussed. Most analysis is done using the Multiple Classification Analysis.

(137 references) CH-P 74-5156 128

**Monteiro, Lois A.; Burgess, Alex M.**

*The Severity Scale Construction*

UNPUBLISHED, PROVIDENCE, RHODE ISLAND:BROWN UNIVERSITY 1973

The severity scale generalizes the average severity of each condition. Illnesses mentioned by subjects in an aging survey were

categorized by ICD and were rated by physician judges as to 1)threat to life, 2)painfulness and 3)extent of disabling condition. Each of these scales had a 7 point range. The 3 scales can be combined, by giving equal weight to each, into a single index with a 5 point range. A validation study and several applications are discussed by the authors.

(2 references) CH-P 74-0540 129

**Pollard, William E.; Bobbitt, Ruth A.; Bergner, Marilyn; Martin, Diane; Gilson, Betty S.**

*Factors Influencing the Reliability of Self-Reports of Sickness Related Behavior*

PRESENTED AT THE ANNUAL MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION NEW ORLEANS, LOUISIANA, OCTOBER 20-24, 1974

The test-retest reliability of the Sickness Impact Profile (SIP) was investigated using different interviewers, different forms, different administration procedures, and a variety of subjects (N=119) who differed in terms of type and severity of dysfunction. Reliability did not appear to be significantly affected by the variables examined; this suggests that the SIP is potentially useful for measuring dysfunction under a variety of different administrative conditions and with a variety of different kinds of subjects.

(5 references) AS-M 74-5158 130

**Torrance, George W.**

*The Health Utility Index: Measurements on the General Public*

PRESENTED AT THE 44TH NATIONAL MEETING OF THE OPERATIONS RESEARCH SOCIETY OF AMERICA SAN DIEGO, CALIFORNIA, NOVEMBER 12-14, 1973

Interim results are presented for an ongoing research program designed to determine the reliability, validity and applicability of utility measurement techniques as well as to gain information about health states. A random sample of 240 members of the general public in Hamilton, Ontario are responding to 2 utility measurement instruments: a time trade-off technique and a category scaling method. From work completed to date, the author concludes that such techniques can be applied to a broad sample of the general public to measure the utility of health states.

(3 references) CH-P 74-4072 131

**Ware, John E.; Miller, William G.; Snyder, Mary K.**

*Comparison of Factor Analytic Methods in the Development of Health Related Indexes for Questionnaire Data*

CARBONDALE, ILLINOIS:SOUTHERN ILLINOIS UNIVERSITY SCHOOL OF  
MEDICINE TECHNICAL REPORT NUMBER MHC 73-1, 1973

In this report the authors address 2 questions regarding the use of factor analysis in the development of health related indexes: 1) is there a preferred factor analytic strategy and 2) to what extent is a particular index likely to result from a given factor analytic method. Comparisons were made among 6 readily available methods on data obtained from 903 persons. The authors conclude that factor analysis increases the interpretability and reliability of results and the Comrey method which requires user participation is preferred.  
(31 references) AS-M 74-4073 132

**Ware, John E.; Snyder, Mary K.**

*Sixth Short Narrative Progress Report Development and Validation of  
Scales to Measure Key Health Concepts*

UNPUBLISHED, CARBONDALE, ILLINOIS:SOUTHERN ILLINOIS UNIVERSITY,  
1974

This report summarizes the goals, methodology and results of a field test of scales related to 4 projects designed to measure health concepts: patient satisfaction with health services; perceived health; perceived value of health and quality of care. 433 respondents, chosen by a mixed sampling design, participated in the study. The authors also briefly discuss some future plans.  
(21 references) CH-P 74-4074 133

**Ware, John E.; Snyder, Mary K.; Wright, W. Russell**

*Measuring Health Concepts Research Project: A Technical Report*

CARBONDALE, ILLINOIS:SOUTHERN ILLINOIS UNIVERSITY SCHOOL OF  
MEDICINE

This report focuses on the development and validation of scales to measure patient perceptions. This is one project within a larger research project being conducted by the same authors to measure a variety of concepts relating to health services. The method of developing the "Patient Satisfaction Scale" is presented along with a discussion of findings, validity and reliability and future plans.  
(18 references) CH-P 74-3058 134

**Ware, John E.; Young, Joanne; Snyder, Mary K.; Wright, W. Russell**

*The Measurement of Health as a Value: Preliminary Findings Regarding  
Scale Reliability, Validity and Administration Procedures*

UNPUBLISHED, CARBONDALE, ILLINOIS:SOUTHERN ILLINOIS UNIVER-  
SITY, SCHOOL OF MEDICINE, 1974

The investigators' first field test of measures of health values is summarized. The Rokeach Value Survey, modified to include health, was administered to 778 persons. The findings support the usefulness of value orientation for research in health services utilization and program outcome evaluation. The data indicates that a value ranking scale can be self administered in a reasonable time period. In view of the favorable results thus far, additional studies have been initiated. (26 references) AS-M 74-5240 135

## **Applications**

**Bjerve, Petter Jakob**

*Social Survey 1974: A Norwegian Companion to Social Indicators 1973*

PRESENTED AT THE ANNUAL MEETING OF THE AMERICAN STATISTICAL ASSOCIATION ST. LOUIS, MISSOURI, AUGUST 26-29, 1974

This paper compares Social Indicators 1973 with its Norwegian counterpart, Social Survey 1974 to provide a basis for evaluating the relative merits and limitations of the 2 publications. The comparison covers 3 areas: criteria for selection of statistics; content focusing on detail and emphasis of topics; and, methods of presentation. The Norwegian Central Bureau of Statistics poans to publish Social Survey at 2 year intervals; the author discusses improvements planned for future volumes.

(2 references) CH-P 74-4007 136

**Donabedian, Martin**

*Research and Development of a Relative Community Health Index*

UNPUBLISHED, LOS ANGELES, CALIFORNIA:LOS ANGELES COUNTY DEPARTMENT OF HEALTH SERVICES, 1973

A health index is computed for communities within Los Angeles County, California. This measure is based on eleven readily available indications of health. From these single measures a standard z score was computed by study area; the z score became, in effect, the health index. Deviation from the county mean ( $z=0$ ) indicates the level of community health.

(0 references) CH-P 74-4107 137

**Johnson, Ken**

*Measures of Health Status: for Counties and Regions in Iowa 1965-69*

DES MOINES, IOWA:OFFICE OF COMPREHENSIVE HEALTH PLANNING, 1970

A relative health status index which uses available data has been developed by the author. Twelve variables are summed for areas

within the state of Iowa for the purpose of between area comparisons and for achieving higher levels of health. Weights are assigned to each variable; however, the author does not explain how the weighting values are assigned. A preliminary attempt at relating the health status index to the population physician ratio is also presented. (12 references) CH-P 73-0233 138

**Miles, David L.**

*Health Care Evaluation Project*

UNPUBLISHED, MOULTON, ALABAMA: LAWRENCE COUNTY HEALTH CARE PROJECT

The health care project, an effort to expand and broaden the availability of health care to a rural population has developed and implemented promising methodology to evaluate the impact of the project on the health of the target population. This cross-sectional and longitudinal study of health measurement instruments and evaluation methodology will, in to providing health status data related to a specific delivery system, permit validation studies on, and comparison of, the indices proposed for health status measurement.

(35 references) AA-M 74-3040 139

**Tennessee Department of Health**

*An Index of Health (Revised)*

OFFICE OF COMPREHENSIVE HEALTH PLANNING AND THE TENNESSEE DEPARTMENT OF HEALTH

This study uses available data, median family income, birth rate and death rate for example, to locate areas of the population with relatively poor health. Analysis consists of ranking geographic areas on each variable and then averaging the ranks to form an index.

(0 references) CH-P 73-0288 140

## **Policy Review**

**Bice, Thomas W.**

*Comments on Health Indicators: Methodological Perspectives*

UNPUBLISHED, BALTIMORE, MARYLAND: JOHNS HOPKINS UNIVERSITY 1973

This paper examines the critical conceptual and methodological problems in the construction of health indicators in five sections: what should social indicators indicate?; the current status of health indicators; "positive" vs "negative" health status indicators; index of health status; and, other health indicators. Discussion focuses on the development of practical approaches to health measures including the ability to relate input and output.

(25 references) CH-P 73-0264 141

**Fienberg, Stephen E.; Goodman, Leo A.**

*Social Indicators 1973: Statistical Considerations*

PRESENTED AT THE ANNUAL MEETING OF THE AMERICAN STATISTICAL ASSOCIATION ST. LOUIS, MISSOURI, AUGUST 26-29, 1974

In this review of *Social Indicators 1973* the authors have focused on the need for: 1) care in reporting data in graphical form; 2) detailed discussion of the error structure associated with each of the indicators reported; 3) careful statistical analyses of the data presented in the volume and of related data obtained from other sources; and 4) statistical interpretation of the information reported. The authors believe that many of these comments are also applicable to social indicator reports produced by other countries.

(11 references) AS-M 74-4027 142

**Gellman, D. D.**

*Statistics: What Does the Health Planner Want?*

PRESENTED AT THE ANNUAL MEETING OF THE CANADIAN PUBLIC HEALTH ASSOCIATION ST. JOHN'S, NEWFOUNDLAND, JUNE 20, 1974

This paper communicates health planners' data needs to statisticians. The author discusses the need for reliability and validity and the importance of order of presentation. The types of statistics the Canadian planner has and needs are reviewed; the benefits of a health status survey which could provide a continuing measure of health or sickness of the population are discussed.

(0 references) CH-P 74-4028 143

**Gellman, D. D.**

*Cost and Quality in Health Care*

PRESENTED AT THE ANNUAL MEETING OF THE ONTARIO MEDICAL ASSOCIATION TORONTO, ONTARIO, MAY 18, 1973

The purpose of this paper is to encourage evaluation of health care services in terms of outcome rather than process. The author recognizes the limitations of currently available measures of positive health; however, he urges the measurement of true costs and improved health so that cost effectiveness curves can be used for planning purposes. Two examples, based on theoretical data, are given, one applies to individuals, the other, to communities.

(11 references) CH-P 74-4029 144

**Nocks, Barry**

*Health Status Indicators: A Review of the Literature*

UNPUBLISHED PAPER, 1973

This paper is an attempt to critically review the health index literature to focus directions for further investigation. The author divides the discussion of current literature into 4 areas: vital statistics/morbidity data manipulation; functional capacity measures; health program evaluation measures; and, economic measures of health.

(61 references) CH-P 73-0280 145

**Terleckyj, Nestor E.**

*A Goals Accounting System*

PRESENTED AT THE ANNUAL MEETING OF THE AMERICAN STATISTICAL ASSOCIATION ST. LOUIS, MISSOURI, AUGUST 26-29, 1974

This paper summarizes results to be published by the National Planning Association, "Estimating the for Improvements in the Quality of Life in the United States 1973-1983." The author discusses some conceptual issues which bear on the design of the Goals Accounting System and the estimates provided by it. Included in this system as areas of concern are health and safety. At the current stage of development these are represented by single measures.

(21 references) CH-P 74-4070 146

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