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ABSTRACT

The paper presents the conceptual framework and research strategy of the psychiatric utilization review and evaluation (PURE) project at the Connecticut Mental Health Center. Review by structure, by outcome and by process are considered briefly. The Basic Utilization Review Program was developed to provide a more sophisticated and economical analysis of process. The author's conception of utilization review encompasses a review of: (1) which patients come to the center; (2) what priorities are assigned to patients; (3) what services are provided; and (4) outcome. Four stages in the research program are delineated: (1) the development of criteria for evaluating patient care; (2) testing the criteria for feasibility, reliability and validity; (3) implementing the above utilization review mechanism; and (4) exporting the system of evaluation and review to other mental health centers. The general model is examined. (TL)

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Utilization Review and Evaluation in a Community Mental Health Center

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## INTRODUCTION

The psychiatric utilization review and evaluation (PURE) project at the Connecticut Mental Health Center at Yale University was undertaken to develop techniques for utilization review and patient care evaluation in community mental health centers, and to apply these techniques as a major component of program evaluation in community mental health. The purpose of this paper is to present the conceptual framework employed and the research strategy of the project. Discussed will be several of the major techniques of medical care evaluation, the special problems of applying them to psychiatry, the manner in which the project strategy addresses these problems, and finally the integration of the project into a general model of program evaluation.

## TYPES OF REVIEW

Within the field of medical care one can, for heuristic purpose, separate three types of review, although in fact, they are interdependent. They are review by structure, by outcome and by process.

### Review of Structure

In review of structure, attention is directed to adequacy of facilities, services and manpower. In review of manpower, it is assumed that qualified experts in the delivery of care are necessary, or perhaps, necessary and sufficient to insure that quality care is given. One investigates the education and prior experience of the staff and uses this as an index of their professional competence. One could also describe and evaluate the sets of relationships within a program, professional time commitments, and organizational hierarchies including areas of conflict of interest, in order to determine whether there are structural blocks preventing accomplishments of program goals. Accreditation and licensure are among the methods for carrying out this assessment.

### Review of Outcome

A fundamentally different kind of approach to review is the evaluation of outcome. Some direct measure of end results is related to treatment given. Theoretically within this conceptual framework the qualifications of those rendering the care, the structure of their organization, and the extent to which they use acceptable methods can be disregarded in favor of appraising

whether or not that which is desired is achieved. For instance, have the drug addicts stopped using drugs after treatment? Are the schizophrenics out of the hospital and asymptomatic?

#### Review of Process

In appraisal of process one asks if the care rendered meets currently accepted standards. In simple conceptual form this represents a feedback loop to insure the program does what it claims. Within the broad field of the evaluation of the process, it is important to immediately distinguish two relatively different methodologies. One is the study of the characteristics of an aggregate of a large number of cases to isolate the specific patterns of care. For instance one reviews the treatments prescribed for various diseases, and diagnostic and laboratory tests needed to establish diagnosis and compares these with empirical or normative standards to get some appraisal in broad terms of whether the care rendered actually meets the standards of quality within the field. An alternative technique involves individual case review where a committee, usually of physicians, reviews the practice in any given case to see whether or not a given patient has received care representative of the standards of modern medicine. These standards may either be implicit criteria based upon their years of experience and general knowledge, or explicit criteria often specific for diagnosis. In this latter technique, it is often extremely valuable to have some method of pre-selecting cases which deviate from some norm. How is review of process accomplished? One variable frequently reviewed has been length of stay. Multiple regression analysis is a statistical technique which surveys cases according to the length of stay for a given diagnosis and permits review of those patients whose stay is either too long or too short. The implication is not automatically the treatment was improper, but rather that there is a higher probability of deviant care being present.

It is quite clear that these methods of appraisal overlap to a certain extent and also exist in a complementary relationship to each other. Complete program appraisal is rarely possible simply by end analysis but involves relating results to care given. Assessment of process may involve assessing progress of a patient to some intermediate end point, such as, symptomatic relief, before he leaves the hospital. A choice of which of these methods is most applicable depends largely upon the state of the art, such as the predictive value of the outcome of specific therapies.

## BASIC UTILIZATION REVIEW PROJECT

The Basic Utilization Review Program at Yale-New Haven Hospital was developed to provide a more sophisticated and economical analysis of process. The core of the program is a patient classification scheme based on unique combinations of diagnostic and demographic characteristics. Empirical norms are established for each patient class, and statistically deviant cases identified for further review (together with a probability sample of non-deviant cases for control purposes). Detailed clinical information is abstracted from the patient's chart by para-medical personnel and the abstract subjected to evaluation according to diagnostic specific pre-established criteria. The criteria, constructed by the medical staff of the institution, specify the conditions under which the patient should be admitted to the hospital, the procedures required by, consistent with, and contra-indicated by the diagnosis, and the requirements for discharge. The results of the evaluation are then used to determine the efficacy of the initial screening and the adequacy of the criteria used in the detailed review. This feedback from the committee will permit any indicated adjustments to be made to the criteria, so that cases which have a high probability of needing review will continue to be identified by the screening program. Most of the initial screening is now accomplished using electronic data processing equipment. Initially developed for retrospective review of care for discharged patients, the program is presently being extended to identify cases for concurrent review. This should permit a more dynamic review process, as well as satisfying the various requirements for extended duration of stay analysis under medicare and medicaid.

## PROBLEMS IN APPLYING REVIEW IN PSYCHIATRY

Several problems arise in applying BURP to a psychiatric setting, particularly a community mental health center. These problems reflect current areas of controversy in the field, such as questions about who is sick, what is good care, and what is recovery. Lets consider how the project addressed them. There is disagreement as to what is a psychiatric illness. The standard diagnostic classifications are still basically useful; however, problems which were formerly regarded as "social", such as prostitution, addiction and illegitimacy are now being called "psychiatric". Just what is a psychiatric illness and "who is sick"

are lively topics of debate. Furthermore it is difficult to develop criteria of quality care solely by diagnosis. While medical care varies as a function of diagnosis, in psychiatry other parameters such as age, social class and the nature of the presenting symptom may be crucial.

The assessment of the functioning of any given individual involves the assessment of at least three separate parameters; his symptomatology, his social relationships, and some more stable abiding characteristics within him that are not time or situation dependent which we tend to call character. The same outcome may be regarded differently in the eyes of different relevant people. The patient, his physician, his family and society all maintain different goals. This particular kind of problem is not simply the result of a lack of clarity, but is the result of the conflicts which lie at the core of psychiatric illness itself. As it is difficult to assess a patient at any given point within the treatment, it is also difficult to assess his state after the treatment, and to answer the question, "what is recovery?". The problems in psychiatry required some alterations in approach if we wished to develop a system of evaluation which utilized the BURP model but expanded it.

### EXPANDED CONCEPTION OF UTILIZATION REVIEW

The concept of Utilization Review could be narrowly conceived of as merely the study of the allocation of institutional resources to ensure their most economic and efficient use. But we expanded the concept to include patient care evaluation. We feel utilization review should encompass a review of the following areas:

- 1) A study of which patients come to the center and a comparison of this population to the total population served.
- 2) A study of what priorities are assigned to various patients once in the center. Do certain subgroups, for example, on the basis of socio-demographic factors receive differing types of treatment? What are the patterns of care?
- 3) A study of services actually being provided. Are services adequate? What is the quality of care?
- 4) A study of outcome of treatment being provided to see whether the services provided are effective.

## STAGES IN OUR PROGRAM

Our research program consists of four stages:

1) Stage one consists of the development of explicit criteria for evaluating patient care by peer group panels of mental health professionals. These panels are working in different areas: schizophrenia--a diagnosis; intake--an institutional process; suicide--a symptom; and adolescence--a developmental phase. Because of the differing areas being studied, alternate approaches to criteria development can be investigated. These areas were selected in order to assure maximal flexibility in our design. Ultimately such panels might also look at some other areas, such as field service activities, home visits, community organization, etc.

One of the heuristic advantages of explicit specification of criteria is that it also specifies what information is necessary and sufficient to accomplish review. Special attention is required to assure that the psychiatric records are sufficiently complete, and also retrievable.

A Data Group within the project has several tasks:

- a) To assist the Mental Health Center in the development of an adequate record system.
- b) To provide information to the clinical panels to facilitate the development and validation of criteria for case selection and review and to develop techniques for review of aggregate patterns. This has involved coding and analyzing the records of over 4000 patients in a two year period (1968-1969).
- c) To assist in the design and evaluation of special research studies.

2) The second stage of the program involves the clinical panels testing their criteria for feasibility, reliability and validity by case review and selected prospective, follow-up studies.

3) The third stage involves the implementation of a utilization review mechanism at the CMHC on the basis of integrating the various components developed above. This stage would also involve an assessment of the actual evaluation process.

4) The fourth and final stage of the program involves the export of such a system of evaluation and review to other mental health centers to evaluate the effectiveness of the components in different settings and to provide the institutions with the basic tools for program evaluation.

### THE "THRU-PUT MODEL"

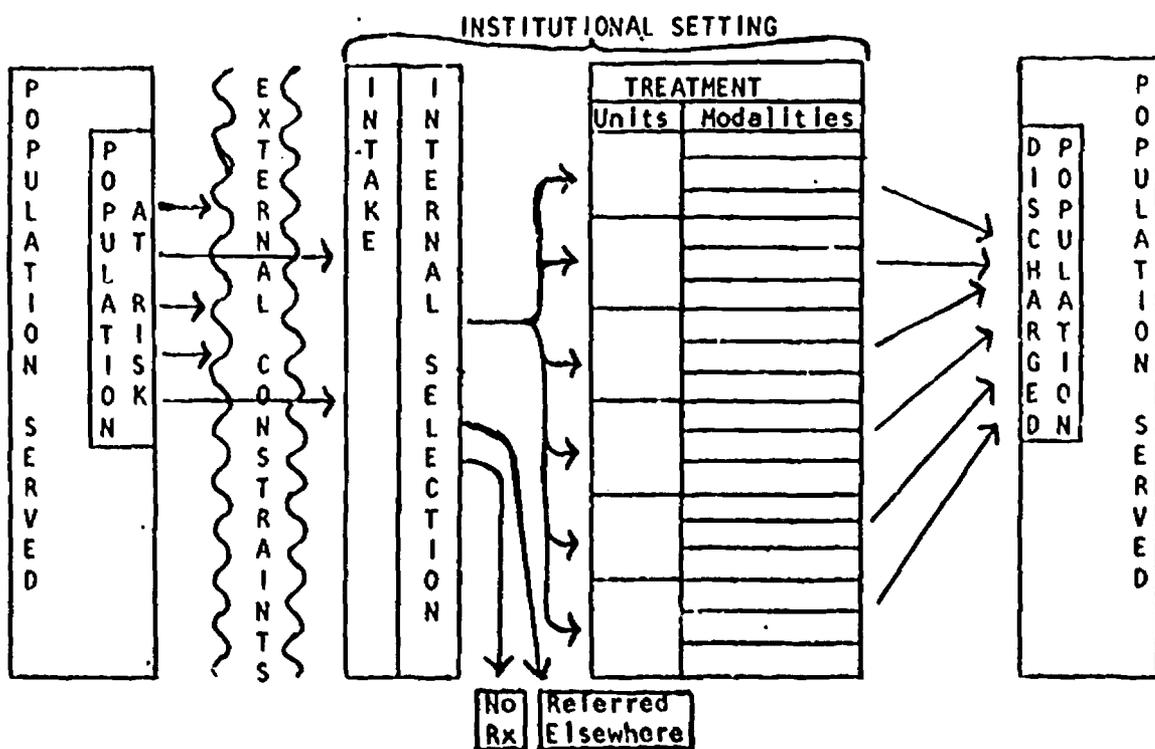
The PURE project is funded to accomplish the first two stages and some of stage three of the program which we have devised. These three main parts to the study in its first year, the clinical panels, the data group, the field studies may be visualized as part of a "Thru-Put" Model. (See Figure 1) That is, the Mental Health Center may be seen as a box which processes input (a portion of the population in the community referred as sick) and discharges this input in some altered form (increased "health") back into the community. The intake panel as one part of its task is looking at the selective constraints which are operating so that only certain patients come to the center, e.g. such variables as distance from the center, community disorganization, types of diagnosis, etc.

This panel is also looking at the adequacy of the intake process, from a clinical point of view and developing criteria of what constitutes an adequate intake.

The other clinical panels are primarily involved with issues involving the scope and quality of care rendered to the patient once he is accepted to the Center. These panels are working with the data group to describe what patterns of care should be and what in fact they are. They should also be able to delineate what characteristics of the patient, such as race or social class, are influencing the treatment given.

The last step in the thru-put conception of the function of a mental health center involves return to the community. The two field studies, schizophrenia and outpatient field study, address the question of the effectiveness of treatment by looking at the patient after discharge living in his community.

Figure 1 - "Thru-put" Model



## GENERAL MODEL OF PROGRAM EVALUATION

How does such a research design fit into an overall program evaluation. Let us look at a general model of program evaluation. (See Figure 1)

Any given program usually comes into existence with the perception of some need. Goals are then promulgated by the agency which wishes these goals achieved. Management is hired and develops a program. Some group is then hired by the funding agency, management, or an outside group hired specifically for the task of determining whether the goals are being met. This reviewing body may be part of the funding agency, management, or an outside group hired specifically for the task of evaluation and review.

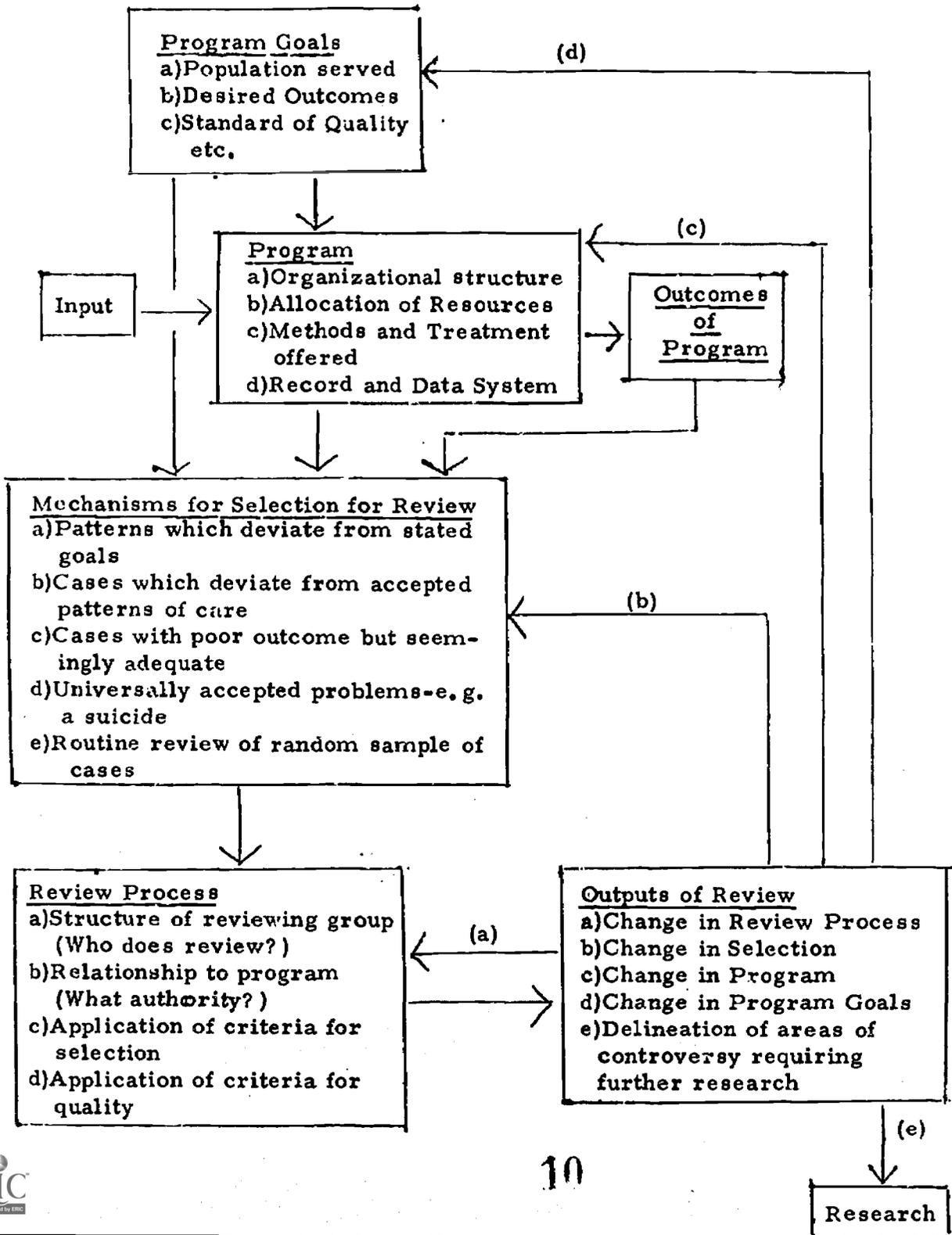
Ideally the program could be evaluated on the basis of a successful outcome, e. g. the prevalence of drug addiction decrease in a community after a drug treatment center is opened. Most typically, however, the full impact of a program is visible only after considerable time has elapsed, and often in areas distant from the interactional field of the program or direct and easy observation. Hence much review focuses on intermediate results (i. e. detoxification of an addict) the process itself (i. e. psychotherapy for the addict) and short term outcome (i. e. at discharge, addict is not on drugs). These items are felt to lead ultimately to program goals. If there is a strong congruence between method of treatment and final outcome, this is sufficient. Where the congruence is limited, it is necessary to do special studies to look at whether the program is meeting its stated goals.

The reviewing group has to develop mechanisms for selecting from the abundance of data on goals, the program, and the outcome of the program those aspects which it feels will yield information useful for review and for feedback into the system. This decision is heavily dependent on the type and character of data which can be obtained in analyses.

In the final step of our model the reviewing process yields information which can be fed back to any of the previous stages to

Figure 2

GENERAL MODEL OF PROGRAM EVALUATION



modify the system. These program goals, the program itself, the selection process, or the review process itself might be modified. It is clear that to change any of these areas will have wide ramification in changing all areas.

As an example pertinent to community mental health, let's look at the problem of out-patient services. Suppose the reviewing group find few patients being treated in an outpatient department and long waiting lists. Further they find patients returning with greater frequency than they do in comparable institutions. This information would have implications for organizational structure, allocation of resources, examination of methods of treatment, and changes in the data system to provide better records for examination. Also outcome studies would be devised to look for change. All of these changes would make the group again look at its methods for selection for review. This would help decide whether information is most usefully obtained by examining patterns of care of aggregates of patients or by single case review of those patients whose individual care seems to deviate from the norm.

Having now described our overall project (panels, data group, field studies), how does this structure fit into our conceptual model of evaluation? By and large the panels are covering the area of examining those aspects of the program which relate to patient care. They are developing criteria of good care, selection mechanisms, and are testing the utility, validity and reliability by a series of research projects. The field studies are looking at program outcome. The intake panel is examining the nature of program input.

The Psychiatric Utilization and Review Project has been involved with the top portion of our model. Within the next few months, in conjunction with the administrative staff of the Connecticut Mental Health Center, a reviewing process will be started which will provide the last step in our model - a step necessary for a system of feedbacks to all levels, both in the project and in the Center. We will examine the impact of this on the Center.

It is important to point out that this entire system focuses on those program goals related to patient care. It does not attempt to do evaluation of those aspects of the program such as the success of community participation on making policy.

Patient care evaluation encompasses utilization review and patient care evaluation is a basic step in program evaluation. The focus on patient care evaluation is especially pertinent since a fundamental mandate of the community mental health center has been the provision of services, especially for those who previously received no care or inadequate care.

We realize the review process cannot by fiat impose a set of standards on an institution where practices for ideologic or experimental reasons may differ from norms. Rather it is the function of review in such instances to ascertain whether the care given corresponds to the manifest goals of a given service and to delineate more clearly areas where differing practices make comparisons fruitful. As the reviewing mechanism becomes sufficiently sensitive to detect not only cases which deviate from desired norms, but also cases where desired treatment norms have been met but whose outcome is unsatisfactory, areas for further investigation will be brought into view. It becomes clear that in psychiatry, review and research are potentially synonomous in certain areas. In a field which is known for its dearth of effective outcome studies, and which has difficult methodology associated with measures of outcome, it is not surprising or unexpected that the initial stages of a review project should be found confronting the issues which have been plaguing other kinds of research in the fields for many decades. With proper attention to the breadth of material to review, and to the many levels of feedback necessary, a review program will result both in increased quality of care and clarification of issues now conceptually unclear.