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A METHODOLOGY FOR THE EVALUATION OF COMMUNITY MENTAL HEALTH PROGRAMS AND ITS APPLICATION TO COMMUNITY MENTAL HEALTH SERVICES IN MICHIGAN

By

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A DISSERTATION

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ABSTRACT

A METHODOLOGY FOR THE EVALUATION OF COMMUNITY MENTAL HEALTH PROGRAMS AND ITS APPLICATION TO COMMUNITY MENTAL HEALTH SERVICES IN MICHIGAN

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Community mental health is a contemporary concept with a heritage that goes back to eighteenth century advocates of moral treatment of the menatlly ill, strengthened by crusades for public care of the "insane" which lead to the establishment of state asylums or institutions, and ultimately to the works of Sigmund Freud and the development of psychoanalysis. But, it was probably the advent of the psychotropic drugs in the mid-1950;s that produced the largest revolution.

Between the period of 1956 and 1971 residents in state institutions fell from over 550,000 to just over 300,000. During this same period admissions increased from 185,000 to over 414,000 per year and the employed staff of these 277 state institutions grew from 153,000 to 226,000. The result was improved treatment, shorter length of stay and a speedy release into the community.

With such a change in the service pattern for treatment of the mentally ill it was inevitable that growing pressures for treatment programs in the community would cause a national interest and

focus on community programming. President John F. Kennedy in his 1963 Congressional address on mental health called for a "bold new approach," a community mental health program where persons could receive care in their own communities diminishing the need for our overcrowded and antiquated state institutions.

Many states, including Michigan, had set about the simultaneous restructure of their mental health programs to be more in concert with the community mental health movement. Utilizing the Federal funds made available for such development along with new funding mechanisms for use of state and local funds, a nationwide movement to develop community mental health centers took hold. In Michigan, following a hundred years of state institution developemnt, Public Act 54 of 1963 made possible the funding and development of what is today over 40 such centers with a gross program budget of over $44 million.

As the programs and budgets of these community mental health programs began to grow, and with the continued reduction in numbers of residents in state institutions, the public (legislators, administrators, citizens, clients) began to seriously question both the continued development and the quality of program within centers. A cry for program evaluation was heard from the highest levels of government down to the local supporters at the city and county level.

Studies of the rates of admission to state hospitals, impact of community efforts on these rates, recidivism and readmissions, utilization rates and estimates of program need, length of treatment and treatment outcome, costs of services, and the newer consultative and preventative programs began to appear in the professional

literature. Although some of these were extensive and well-documented they still represented at most only one or two facets of a program and generally failed to answer the broader question, "Is the program any good?"

It became more and more evident, from the growing pressures for meaningful program assessment, that a methodology encompassing many of these previously studied facets but consolidating them into an overall performance measure was in demand. This study proposes such a methodology and applies it to the 43 community mental health programs in Michigan in 1972-73.

The methodology is, at first, deceptively simple, utilizing existing data in a formulation which weights certain facets over others consistent with the expressed goals and assumptions stated as underlying the principles of community mental health. A Performance Score is achieved by each program which is in reality a ratio of (1) the standardized cost of persons served in a specific program, reduced by the standardized cost of those released from treatment in the program, adjusted by a cost-efficiency factor, and (2) the number of persons served by the program, adjusted by a weighted service-load efficiency which includes an estimator of need and a penalty for state institution admissions. Once the Performance Score is derived through this formulation it can be compared to the scores of other programs or over a period of time to assess changes within the same program.

An application of this methodology on the extensive data available for the Michigan progam results in a rank-ordering of programs, an examination into the varied factors including in the methodology and their resultant effect on the final Performance Score. The methodology,

with only minor modification, can be utilized to examine the sub-types of programs (outpatient, inpatient, residential, day treatment) or sub-agencies within a comprehensive program. Such analysis is often revealing in discerning the portions of the program having the greatest effect in relation to the goals or objectives specified.

Although the methodology is proposed for implementation by state mental health authorities, serious concerns are expressed about the data collection systems, the quantity versus quality programmatic measures, the non-availability of assessment methods for consultative and prevention programs, and various other problems as yet unresolved within the field of mental health. Suggestions for additional studies, proposed revisions being considered for the methodology, and administrative considerations in the use of the Performance Score are also detailed.

ACKNOWLEDGMENTS

For their assitance, advice and mostly for their patience, my sincerest gratitude to my doctoral committee: Dr. Gregory Miller, Dr. Maryellen McSweeney, Dr. Richard Johnson, and Mr. Ed. Alchin.

To the members of my staff, their encouragement through the past few months has been deeply appreciated. A particular thanks to Dr. Thomas Schmitz, Mrs. Betty Tableman, and Mrs. Alice Wright, for their assitance with the manuscript.

Without the efforts of the Data Analysis Staff, under the leadership of Mr. Robert DeVoe, this project would never have been possible. Their work is too often unappreciated but perhaps, now, it may begin to be recognized.

Undoubtedly, the greatest professional encouragement has come from a man I hold in deepest esteem, Dr. E. Gordon Yudashkin. It is doubtful that I can ever repay his friendship, trust and confidence in me; however, I shall try to live up to this responsibility.

My family has probably endured the most and it is to them I owe the greatest debt. To Joni, my dear wife, your encouragement and help has been the key; to our children, Barry, Deborah, and Todd, the hope that this will serve as an incentive for you.

And to all those, far too numerous to mention, but who know that they have played a part, my heart-felt thanks.

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INTRODUCTION

Mental health is a nebulous concept at best. Community mental health is even more diverse in its meaning. They can only be defined through an historical perspective and a description of services and programs encompassed within the concepts of each. A multitude of theories, techniques and ideas are embodied within these concepts and it is little wonder, given the complexities and lack of common agreement regarding them, that little, if any, has been done toward the development of a system or methodology to evaluate services and programs across centers or facilities, statewide or nationwide.

The purpose of this study will be, therefore, to examine the development of mental health services from their beginning through to the current concepts of community mental health services, to review current and past efforts at program evaluation (generally as applied to individual programs), and then attempt to formulate a methodology which can be applied consistently and fairly across programs, both as a method of internally evaluating each and, more importantly, as a method of comparing programs to each other. Finally, this methodology will be applied to the community mental health programs in Michigan with recommendations for its use and implications for further development.

Inherent in any effort such as this, a vast number of assumptions must be made, some rather global and obvious, others not so.

Most obvious of these would be an acceptance of terminologies as being standard and consistent. One expects that the words "outpatient," "interview," "per diem cost" and many others will be relatively standard, no matter what the program or location. One must assume that, within certain limits, programs and services, professional activities and outcomes can be standardized and quantified for purposes of study. Not so obvious are certain assumptions which are made about incidence rates, expected costs and rates of success. These assumptions will be detailed within the section on methodology, but must be anticipated and accepted as a precursor to the results and their implications.

It should also be noted that this effort is but a progress report in time and that strategems and measurement techniques not available or not considered before are constantly being added to the armamentarium of the program evaluator. Add to this the crescendo of enthusiasm and accent on accountability now surfacing as the theme for public service programs. As such, it is imperative that community mental health programs intensify a critical inward look if they are to survive. George Bernard Shaw is quoted as saying,

> What made this brain of mine, do you think? Not the need to move my limbs; for a rat with half my brain moves as well as I. Not merely the need to do, but the need to know what I do, lest in my blind efforts to live I should be slaying myself.[1]

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[1]M. F. Shore and F. V. Mannino, ed., as quoted in Mental Health and the Community (New York: Behavioral Publications, 1969), p. iv.

CHAPTER I

AN HISTORICAL PERSPECTIVE OF MENTAL HEALTH

> The present is the past rolled up for action, and the past is the present unrolled for understanding.[1]

To understand where we are in mental health today, one must unroll the past and examine those events and their sequence to grasp the significance of the way in which they have impinged on today's society. Such a review of the field of mental health can be a lengthy albeit fascinating pursuit. Fortunately enough, such a pursuit has been accomplished by other authors and a brief review of their findings will suffice, for it is the perspective of movement toward the current concepts of community mental health that is of interest.

The Beginnings

Most contemporary authors (Deutsch, 1949; Bellak, 1964; Wolo-shin and Dennis, 1970) attribute the first phase, or first revolution, to a French physician named Phillippe Pinel. His advocacy of a "moral treatment" and his efforts to "strike off the chains" of the inmates at the Bicetre and at the Salpetriere near the end of the eighteenth

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[1]As quoted in Will Durant and Ariel Durant, The Lessons of History (New York: Simon and Schuster, 1968), p. 12.

century have become a popular symbol heralding this Age of Reason.[2] Pinel formulated his moral treatment into a system "so soundly conceived and dramatically presented that it caught the attention of the public."[3] By 1811, T. Romeyn Beck, a New York physician, could write convincingly about moral management of the mentally ill, which, he said, "consists of removing patients from their residence to some proper asylum and for this purpose a calm retreat in the country is desired for it is found that continuance at home aggrevates the disease as the improper association of ideas cannot be destroyed."[4] Central to the concepts of moral management was "human vigilance. . ." which "had to convince the lunatics that the position of the physician and keeper is absolute" and that "human attendants. . .shall act as servants to them (the patients), never threaten but. . .offer no indignities as they have a high sense of honor."[5]

The Second Revolution

Soon, within this country, a woman appeared on the scene who is considered by some to be second revolution (Woloshin and Dennis, 1970), viewed by others as being the American counterpart of the first phase

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[2]L. Bellak, "Community Psychiatry: the Third Psychiatric Revolution," Handbook of Community Psychiatry, ed. L. Bellak (New York: Grune & Stratton, 1964), p. 1.

[3]A. Deutsch, The Mentally Ill in America, 2nd ed. (New York: Columbia University Press, 1949), p. 6.

[4]As quoted in A. Woloshin and E. Dennis, "The Romance and Rodomontade of Comprehensive Community Mental Health," Mental Hygiene, Vol. 54, No. 2, April, 1970, p. 281.

[5]Deutsch, op. cit., p. 22-31.

(Deutsch, 1949) and omitted from the history by still others (Bellak, 1964). This woman, Dorothea Dix, was able to marshall a collective public guilt and pity for the "poor unfortunates" of the early nineteenth century. Like romantics of previous generations, Miss Dix used abhorrence of inhumane conditions and the rising tide of emotional indignation as the major tools in her crusade. She was able to exploit the general receptivity to the "There, but for the grace of God, go I" philosophy, widely held in the nineteenth century. Even so, those who developed and operated the moral treatment retreats and new asylums of the 1820's and 1830's had no intention of treating everyone deemed a "lunatic;" rather, they made a distinction between paupers and pay patients, a problem which Miss Dix pointed up in a subsequent crusade for the dependent insane.[6] This second crusade is said to have been the impetus behind the establishment of the state asylum for the insane, now called the state hospitals for the mentally ill. The selectivity of the new asylums of moral treatment meant that those rejected would be relegated to jails and when Miss Dix's second crusade decried this practice, the public insisted upon public asylums to offer this same moral treatment.

As a number of studies of psychiatric history indicate, the moral reform movement benefitted many. The records of many states indicate the thousands of persons admitted to their state institutions and the thousands treated and returned to their homes, but, as Bockoven has suggested, the professionals of the nineteenth century who had designed a moral treatment had not expected the flood of hungry,

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[6]Woloshin and Dennis, op. cit.

poverty-stricken immigrants who came from a different culture and spoke a foreign language. The system was eventually flooded with too many patients and much of moral treatment was doomed to failure. Thus, the envisaged small patient-staff ratio asylum gave way to overcrowded, distant state hospitals that offered "dehumanization rather than moral treatment."[7] By the 1930's and 1940's our state institutions had become massive, monolithic communities unto themselves.

Bellak, who omitted Dix from his review, attributes the second phase, or second revolution, to Sigmund Freud and the development of psychoanalysis. In that Freud was able "to provide a rational explanation for these unconscious forces". . .and elucidate "the relationship between the early mental functioning of the child and the later functioning of the adult,. . .the relationship between dreams and waking life, between normal and abnormal behavior. . .psychoanalysis gained recognition as the first rational treatment method for psychiatric disorders."[8] Again, due to its length and required one-to-one relationship, psychoanalysis became a treatment available only to the rich.

Whether viewed separately or as a part of a larger revolution, the next single event to effect the treatment of the mentally ill was the advent of the psychotropic drugs. In 1956 there were reported to be 559,342 patients living in 277 public mental hospitals. This year is considered to be the turning point in the history of mental health in that every year thereafter the figure has declined. By the end of

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[8]Bellak, op. cit., p. 2.

1959 this figure had dropped to 542,721--a decrease of nearly 17,000. "This reversal of a long-time upward trend began immediately following introduction of the tranquilizing drugs."[9] However, the reasons for viewing the drug therapy as only part of a bigger revolution are also rather evident. During this same period staff-patient ratios increased dramatically, increased appropriations from state legislatures provided new impetus and enthusiasm, and a new awareness on the part of the public caught hold and grew. Table 1 presents an analysis of admissions, discharges, staff expenditures in public mental hospitals during this changing period and to the present. It would be difficult to separate these one from the other in terms of their impact, but some authors have steadfastly maintained that the new drug treatments were the catalyst for what we see today as the community mental health movement.

Community Mental Health

Such a springboard, with all its bounce and newness, was to bring about what most authors again agree upon as the third revolution --community mental health (Bellak, 1964; Woloshin and Dennis, 1970). A massive study was authorized by the U. S. Congress under the Joint Commission on Mental Illness and Health and concluded with their report, Action For Mental Health. This report is generally seen as "a rallying-point around which the concerned professions and the interested citizenry can mobilize in a fresh drive to narrow the yawning gap between mental health needs and resources."[10]

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[9]Joint Commission on Mental Illness and Health, Action for Mental Health (New York: Basic Books, 1961), p. 7.

[10]As quoted from the cover-jacket of Action for Mental Health.

TABLE 1.--Patient Population in Public Mental Hospitals, 1956-1972.

	1956[a]	1959[a]	1963[b]	1968[c]	1971[d]
All admissions	185,597	223,225	285,244	365,455	414,926
First admissions	125,539	142,881	130,025	144,566	N. R.
Readmissions	60,058	80,344	155,219	220,889	N. R.
Discharges	133,208	175,727	247,228	351,461	501,123
Deaths in hospital	48,236	49,640	49,039	39,677	26,835
Resident patients at end of year	551,390	542,721	504,947	400,681	308,024
Personnel employed at end of year	153,715	174,721	194,516	217,128	226,247
Expenditures:					
Total (millions)	$ 663.3	$ 854.4	$1,084.7	$1,577.6	$2,036.4
Per Patient Year	$1,202	$1,574	$2,148	$3,937	$6,611
Staff-Patient Ratio	1:3.58	1:3.11	1:2.59	1:1.84	1:1.36

[a]Action for Mental Health, op. cit.

[b]U.S. Department of Health, Education, and Welfare, Mental Health Statistics Current Reports, Provisional Patient Movement and Administrative Data State and County Mental Hospitals United States, Series MHB-H-8, January, 1964.

[c]U.S. Department of Health, Education, and Welfare, Mental Health Statistics Current Facility Reports, Provisional Patient Movement and Administrative Data State and County Mental Hospitals United States, July 1, 1967 - June 30, 1968.

[d]U.S. Department of Health, Education, and Welfare, Statistical Note 60, Provisional Patient Movement and Administrative Data State and County Mental Hospital Inpatient Services July 1, 1970 - June 30, 1971, January, 1972.

This report, in addition to summarizing the current operating practices in the field, made a number of rather broad recommendations, including:

1. "A national mental health program should set as an objective one fully staffed, full-time mental health clinic available to each 50,000 of population."

2. ". . .state hospitals. . .should be converted as rapidly as possible into intensive treatment centers. . . . No further state hospitals of more than 1,000 beds should be built, and not one patient should be added to any existing mental hospital already housing 1,000 or more patients."

3. "Expenditures for public mental patient services should be doubled in the next five years--and tripled in the next ten." It further recommended that "Congress. . .should develop a Federal subsidy program that will encourage states and local governments."[11] Other recommendations were included concerning recruitment and training of manpower, psychiatric units in general hospitals, dissemination of public information, aftercare and rehabilitation, and revisions of state and federal laws.

Although the report goes into sometimes exhaustive detail in describing the lag in services, treatment concepts, community awareness (or better, the lack of), and strategems to "catch up," its lack of specificity in dealing with the problems of persons being placed in state institutions, how they got there and how to circumvent this gigantic debacle of human misery, is somewhat disconcerting. It is

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[11] Joint Commission, op. cit., pp. vii-xxiv.

interesting to note that the report was affirmed by 42 of the 45 members of the Commission with the other three abstaining. These three submitted papers of dissent on specific parts of the report and their papers are contained in Appendix VII (which was probably overlooked by most readers). Important in their dissent were two factors: (1) Lack of appropriate planning in regard to the existing state hospitals and their relationship to the proposed community services, and (2) funding of the proposed mental health services (specifically their comments on the tax structure.)[12]

"A Bold New Approach"

Many programs and states had begun undertaking changes even before the five-year study was completed. California had adopted the Short-Doyle Act in 1957 which began their leadership role in community mental health services, New York adopted an Act 54 of 1958 and began its programs of community services. State hospitals all over the country, already showing declines in populations, began trying new programs of open wards, sheltered workshops and vocational rehabilitation, community foster-care placement and outpatient screenings to avert admissions. As such, the scene was set and the act that was to follow was at the pinnacle of power. On February 5, 1963, President John F. Kennedy gave the first Presidential Address on Mental Health and Mental Retardation ever presented to the U. S. Congress. Portions of his Address bear repeating:

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[12]Joint Commission, op. cit., pp. 330-331.

> There are now about 800,000 such patients in this nation's institutions, 600,000 for mental illness and over 200,000 for mental retardation. Every year nearly 1,500,000 people receive treatment in institutions for the mentally ill and mentally retarded. Most of them are confined and compressed within an antiquated, vastly overcrowded chain of custodial state institutions. . . .
>
> The time has come for a bold new approach. New medical, scientific, and social tools and insights are now available. . . .
>
> I propose a National Mental Health program to assist in the inauguration of a wholly new emphasis and approach to care for the mentally ill. This approach relies primarily upon the new knowledge and new drugs acquired and developed in recent years which make it possible for most of the mentally ill to be successfully and quickly treated in their own cummunities and returned to a useful place in society. . . .
>
> Such a new mental health program is comprehensive community care. Merely pouring federal funds into a continuation of the outmoded type of institutional care which now prevails would make little difference. We need a new type of health facility, one which will return mental care to the mainstream of American medicine, and at the same time upgrade mental health services. . . .
>
> These centers will focus community resources and provide better community facilities for all aspects of mental health care. Prevention, as well as treatment, will be a major activity. Located in the patient's own environment and community, the center would make possible a better understanding of his needs, a more cordial atmosphere for his recovery, and a continuum of treatment. As his needs change, the patient could move without delay or difficulty to different services -- from diagnosis to cure to rehabilitation--without need to transfer to different institutions located in different communities.[13]

With swift and impressive resolve, the U. S. Congress enacted the Community Mental Health Centers Act of 1963. This Act provided for funds to finance, on a matching ratio, the construction of community mental health centers and required that a plan be drawn up by each of the states, identifying catchment areas of 75,000 to 200,000 persons which could be programmed for within each center. The

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[13] As quoted in A. Favazza, B. Favazza, and P. Margolis, Guide for Mental Health Workers (Ann Arbor: University of Michigan Press, 1970), pp. 41-42.

following year Congress enlarged its commitment by providing funds for staffing grants for the operation of these centers with funds matched on a declining ratio.

Regulations, issued by the National Institute of Mental Health, appearing in the May, 1964, Federal Register, specified the ten required services of a comprehensive community mental health center:

1. Inpatient services.
2. Outpatient services.
3. Partial hospitalization services "such as day care, night care, weekend care."
4. Emergency services available at all times.
5. Consultation and education services available to community agencies and professional personnel.
6. Diagnostic services.
7. Rehabilitative services, including vocational and educational programs.
8. Precare and aftercare services in the community, including foster home placement, home visiting, and halfway houses.
9. Training.
10. Research and evaluation.[14]

The first five of these were required of any applicant as a condition for receiving the grant, either for construction or staffing; the remaining five were included as deemed appropriate by the applicant to his specific needs. The research and evaluation element was only sporadically included, with very meager funds committed to such programming.

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[14]R. Glasscote, and J. Sussex, et al., The Community Mental Health Center, An Interim Appraisal (Washington, D. C.: American Psychiatric Association, 1969), p. 14.

A total of $135 million for construction was appropriated by Congress over the three-year period authorized by the law, starting in July, 1964. Operating or staffing monies, authorized also for a three-year period to begin in July, 1965, amounted to an initial appropriation of $19 million, $24 million for the second year, and $30 million projected for the third year. By June 30, 1966, the expiration date for the first year's funds, the Public Health Service had approved 93 construction grants, covering 91 projects and committing almost $42 million for construction. Fifty-four staffing applications were approved, totalling almost $16 million. These programs had been designed to serve close to twenty million people, or about ten percent of the total population. By June 30, 1967, 201 construction grants had been awarded to 258 centers, with centers operational in every state except South Dakota and Alaska.[15] Since that time the programs have continued to grow and by the end of 1972 there were "389 fully operational centers out of a total of 529 funded. The goal of, say, 1500 or 1600 centers (by 1980) which would be the amount that you would need to have to provide services to the whole country, is realistic based on our experiences of the past eight years."[16]

And so, President Kennedy's "bold new approach" became at least a partial reality. The recommendations of the Joint Commission's

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[15]Lucy D. Ozarin, "The Community Mental Health Center: Concept and Community," Mental Hygiene, Vol. 52, No. 1, January, 1968, pp. 76-77.

[16]Hearings before a SubCommittee of the Committee on Appropriations, House of Representatives, Departments of Labor and Health, Education and Welfare Appropriations for 1973 (Ninety-second Congress, Second Session, March 8, 1972), p. 147.

Action for Mental Health seem well along toward their implementation. Congress has infused literally hundreds of millions of dollars into the communities to provide both facilities and services. States have extended themselves with their own versions of California's Short-Doyle Act and New York's Act 54 and have extended community services far beyond that possible with the federal resources and state hospitals have continued to decline in population, become more intensive in their treatment regimes and have developed collaborative relationships with their new counterparts, the community mental health centers.

CHAPTER II

THE HISTORICAL DEVELOPMENTS IN MENTAL HEALTH SERVICES IN MICHIGAN

> Our states, being ourselves multiplied, are what we are; they write our natures in bolder type, and do our good and evil on an elephantine scale.[1]

Separated from the settled portion of the United States by a wide wilderness, Michigan did not at first attract immigrants. While Illinois, Indiana and Ohio were rapidly becoming settled and becoming states from 1810 to 1820, Michigan remained relatively unsettled. Under the second territorial governor, Lewis Cass, the opening of the Erie Canal and the extinction of the Indian land titles finally encouraged settlement. From 1830 on, the rate of immigration rose rapidly. By 1835 there were 85,000 people in Michigan, compared with less than 4,000 only thirty years before.[2]

Obviously, with such an increase in population and with most of these immigrants having come from the eastern United States, the attitudes and mores of the times came with them. In 1832 the Wayne County Pest House was established, and began a history which later saw it become the Wayne County General Hospital and include its own psychiatric

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[1] Durant, op. cit., p. 19.

[2] Michigan Department of Education, Michigan (Lansing: State Library Division, 1967), p. 6.

hospital, called Eloise. The beginnings of institutional programming preceded even statehood; Michigan became a state on January 27, 1837.

Establishment of State Institutions

As the cry for humane treatment for the derelict and outcast swept the country, following Dorothea Dix's second crusade, Michigan began the long history, even to present day, of establishing state institutions for the mentally ill and mentally retarded. A brief chronology of these institutions is as follows:

1859 Kalamazoo State Hospital (first called Michigan Asylum for the Insane)

1878 Pontiac State Hospital

1885 Traverse City State Hospital

Ionia State Hospital (for the criminally insane; later, in 1969 changed to a regional psychiatric hospital)

Newberry State Hospital

1895 Lapeer State Home and Training School (the first facility for the mentally retarded and initially called the Michigan Home for Feebleminded and Epileptics)

1906 State Psychopathic Hospital (later transferred to the University of Michigan as the U of M Neuropsychiatric Institute)

1914 Caro State Hospital (initially called the Michigan Farm Colony for Epileptics)

1915 Detroit Receiving Hospital Psychiatric Unit (later housed in the City's Herman Kiefer Hospital, and in 1972 converted into a state psychiatric hospital called Detroit Psychiatric Institute)

1927 Wayne County Training School for the Mentally Retarded (still operated by the County, now called Wayne County Child Development Center)

1931 Ypsilanti State Hospital

1935 Coldwater State Home and Training School

1937 Mt. Pleasant State Home and Training School

1952 Northville State Hospital

1955 Lafayette Clinic (established as a research and training facility for the state)

Children's Psychiatric Hospital at University of Michigan

1956 Hawthorn Center (a state psychiatric facility for children)

Fort Custer State Home and Training School (a "temporary" facility which was finally closed in 1972, and the only one of the entire list to have been closed down)

1960 Plymouth State Home and Training School

1961 Howell State Hospital (initially for profoundly retarded physically handicapped but, in 1972 reprogrammed as a regional facility for the mentally retarded)

1963 Gaylord State Home (also initially for profoundly retarded physically handicapped, but later, in 1972 reprogrammed as a regional facility for the mentally retarded

1969 Muskegon Regional Mental Retardation Center

1970 Mental Health Drug Abuse Center, Detroit (formerly the U. S. Public Health Marine Hospital at Windmill Pointe), developed mainly for an outpatient drug treatment facility but also having capacity for inpatient psychiatric treatment

1972 Detroit Psychiatric Institute (as noted above, formerly part of Detroit Receiving Hospital but now converted from 60 beds to 300 beds and made into a state operated facility)

Northville Training Center (formerly part of the now-reduced-in-size Northville State Hospital, and converted into a facility for the mentally retarded)

Thumb Treatment Assistance Center (a small psychiatric facility in the far-eastern Thumb area of Michigan, located on the grounds of Caro State Home and Training School)

Riverside Center (also a small psychiatric facility in the center of the state, located on the grounds of Ionia State Hospital)

1974 Now under construction, to be completed in 1975, the Macomb-Oakland Regional Center (for mentally retarded, size of approximately 500, being built largely as a replacement facility to decrease overcrowding and inadequate facilities in other institutions)

Now under construction, to be completed in 1976, the Southwestern Wayne Regional Center (for mentally retarded, also to house approximately 500, also a replacement facility)[3]

Such a chronology deserves comment. During the period of "humaneness" of treatment, and following Dix's crusades, came a period of building in Michigan so that, by 1960 and the "third revolution," Michigan boasted of 13 state institutions housing 30,558 residents and its newest showplace, Northville State Hospital (affectionately called "Brown's Country Club," in honor of its first superintendent, Dr. Philip Brown). By this time there had been added the newer type of specialized facilities, such as Lafayette Clinic and Hawthorn Center. State hospitals for the psychiatric patients stopped expansion (as had already been noted on the national scene), with no new state facilities until the early 1970's, when small regional centers developed, to be housed in pre-existing buildings no longer in use.

The development of state facilities for the mentally retarded has a somewhat different history, starting later and continuing on into the present with a new one still under construction. The banner year for the reversal in increased residents of state mental retardation

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[3]The above chronology has been derived from numerous documents with the help of the Office of Public Information, Michigan Department of Mental Health.

facilities was not until 1970 or 1971 in Michigan (and has still not reversed in many other states). New facilities continued to be added throughout the period with great emphasis in the 1960's and 1970's. Tables 2 and 3 illustrate the changing scene in the state mental health facilities.

The Development of Community Mental Health Services

The community mental health program had its first appearance in Michigan in 1916 with the establishment of a "traveling clinic." This clinic was operated by Kalamazoo State Hospital (which, interestingly, was also the first state hospital) and was commissioned to "help local authorities in the process of precare and aftercare of persons who had become flagrantly disturbed in their community setting."[4] It should be recalled that, once again, this was in the period of "humaneness" and prior to the fantastic overcrowding of facilities which crippled the program in the 1920's and 1930's. During this period of reasonable staff-patient ratios, estimates running as high as 20% of patients admitted were being returned to their communities.[5] The traveling clinic idea extended to other hospitals during this era with the efforts also being extended to include diagnostic services, prehospital treatment and toward a better utilization of

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[4]Philip Smith, "Benchmarks in Community Mental Health Services Programs in Michigan," address to Council of Local Community Mental Health Authorities, Michigan State University, March 6, 1968.

[5]Deutsch, op. cit., p. 167.

TABLE 2.--Patient Population in State Psychiatric Facilities, 1956-1972.

	1949-50	1959-60	1963-64	1969-70	1972-73
Admissions	3,741	4,504	5,020	11,806	14,568
Discharges	1,791	3,263	3,850	12,925	17,142
Resident Patients at end of year	15,731	19,059	17,843	10,934	7,355
Personnel employed at end of year*	4,080	5,703	5,941.3	7,307.8	7,516.2
Total expenditures (millions)	$ 17.7	$ 36.9	$ 42.4	$ 75.6	$ 105.5
Cost per patient year	$1,122	$1,937	$2,379	$6,915	$14,348
Staff-Patient ratio	1:3.85	1:3.34	1:3.00	1:1.49	1:0.97

*Full-time equated positions

Source: The above information was derived from numerous documents with the assistance of the Budget Office, Michigan Department of Mental Health.

TABLE 3.--Patient Population in State Mental Retardation Facilities, 1956-1972.

	1949-50	1959-60	1963-64	1969-70	1972-73
Admissions	718	713	748	1,098	3,276
Discharges	261	242	250	1,566	3,587
Resident patients at end of year	7,957	11,499	11,413	11,618	8,594
Personnel employed at end of year*	2,153	3,878	4,480.7	6,562.3	6,255.8
Total expenditures (millions)	$ 9.2	$ 21.8	$ 28.3	$ 60.0	$ 77.4
Cost per patient year	$1,162	$1,901	$2,477	$5,165	$9,010
Staff-Patient ratio	1:3.69	1:2.97	1:2.54	1:1.77	1:1.37

*Full-time equated positions

Source: The above information was derived from numerous sources with the assistance of the Budget Office, Michigan Department of Mental Health.

local community resources. With the ever-increasing demands on staff time, caused by a rapidly expanding inpatient load, the traveling clinics began to wane and by the 1930's no longer existed. They had, however, touched the community and sparked a desire for services--services which these traveling clinics had been unable to meet specifically in their demand for consultative services for disturbed youngsters. The need for community mental health services for children had been highlighted.

Fourteen years after the establishment of the first traveling clinic, the first of the child guidance clinics was fostered in 1930 by the Children's Fund of Michigan, a private foundation. It was established as the Children's Center of Detroit and served as a model for those which were to follow later. In 1937 this same Children's Fund established a children's clinic in Traverse City, and the year following the Fund offered a grant to the state to establish another child guidance clinic in some community which would make a local contribution to the project. The Junior League of Lansing and the Lansing Area Community Chest provided such local funds and the pattern of partnership between state and local community for the establishment of state-local mental health clinics was set.[6]

Between 1938 and 1963, thirty mental health clinics, with an additional twelve branch clinic operations, were established. Three of these clinics began a new type of programming--day treatment programs for emotionally disturbed children. In each case, the Michigan

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[6]Smith, op. cit.

State Legislature provided state funds to foster this growth under the direction of the Michigan Department of Mental Health. The clinic system was a joint endeavor, a precursor of developments to come, between the community and state, with the state providing the professional staff and the local communities providing clerical staff, quarters, equipment, supplies, etc.

Very little of the services developed through these community projects was directed toward the adult population and almost none was directed toward the potential, or former, state hospital patient. By 1960, as has already been noted, the populations of state institutions for the mentally ill had begun to decline and the staff-patient ratios had been improved. Along with this came the era of the new psychotropic drugs and many patients were found to be capable of returning to their communities. Outposts of aftercare services began to be developed by the state hospital staffs to serve these patients returning to the communities and aid in their readjustment. The Department of Mental Health formalized this structure by developing a series of aftercare clinics, fully supported by state funds, and known as Regional Consultation Centers, beginning with one each in 1960 (Detroit), 1961 (Saginaw), and 1962 (Grand Rapids). Two were added in 1963 (Flint and Lansing). As these clinics became established, they found that they could deal successfully with pre-commitment screening, further reducing the demands on state hospitals for admissions.

The development of local inpatient treatment capacity has been more the result of the awareness of local hospitals to the need and the inclusion of psychiatric inpatient coverage in medical insurance plans.

In the mid-1940's there were only three psychiatric units in general hospitals: Detroit Receiving, Henry Ford Hospital in Detroit, and Hurley Hospital in Flint. Three were added between 1947 and 1955; and within the next ten years, another 15 inpatient psychiatric units had been added, accounting for more than 14,000 admissions per year. No one has ever kept a record of the history of the development of local, smaller free-standing psychiatric hospitals, but, in a 1955 survey, there were 16 such psychiatric hospitals operating in the state. A number of contingencies, including licensing laws, the growth of units in general hospitals, unfavorable consideration in medical insurance provisions and other factors had resulted in the number being reduced to 9 by 1965. Today there are 48 licensed psychiatric facilities in the state and together they admitted over 26,000 patients for psychiatric care in fiscal year 1972-73.

Impact of Federal Legislation

By 1963, with the current development of child guidance clinics, regional consultation centers, local inpatient treatment facilities, and smaller, decentralizing and reorganizing state hospitals, the climate in Michigan was very receptive to the "bold new approach" outlined by Kennedy and the Public Act 88-164, Comprehensive Community Mental Health Centers Act, which followed. Even before the Michigan Legislature took action on its own version of the "bold new approach" (Act 54 of 1963), three community mental health construction applications and two community mental health center staffing applications had been developed and were in the process of being reviewed

and funded by the federal government. The Grand Rapids Child Guidance Clinic was the first application for Federal construction funds to be approved in Michigan, with applications from Borgess Hospital, Kalamazoo and Port Huron General Hospital soon thereafter. Pontiac State Hospital (North Oakland Center) and Alpena General Hospital had staffing applications underway.

Concurrent with the development of services under the Community Mental Health Services Act (Act 54 of 1963) in Michigan, many cities and programs were also developing plans to avail themselves of the funding resources made available from the federal government. A summary of federal financing to community mental health centers in Michigan during the period of 1963 to 1972 appears in Table 4. From these totals, it is clearly reasonable to state that federal funds have had a decided impact upon the development and delivery of community mental health services in Michigan.

Our Own "Bold New Approach"

As early as 1959 a model for a community mental health services law had been proposed by the Committee of State Officials on Suggested State Legislation of the Council of State Governments. This model had been largely based on the Minnesota Community Mental Health Services Act of 1957, California's Short-Doyle Act of 1957, and New York's Act 54 of 1958. For the next three years, a frantic period, fraught with debate, new proposals, counter-proposals, analyses, correspondence, and study papers ensued, with the major issues centering around financing and authority, with little debate about the need for services or

TABLE 4.--Summary of Federal Funds to Michigan Community Mental Health Centers.

	Staffing Grants		Staffing Grants	
	No. of Grants*	Total Amount	No. of Grants	Total Amount
1965-66	3	$ 1,405,136		
1966-67	3	2,006,571	4	$ 360.071
1967-68	1	1,957,368	4	1,033,476
1968-69		958,524	6	1,001,171
1969-70		50,000	8	1,522,269
1970-71	1	295,500	9	1,997,001
1971-72	1	100,000	10	2,624,000
1972-73		317,915	12	3,436,300
TOTAL	9	$ 7,091,014	12	$11,974,288

*Each construction grant is for more than one year, they are listed only on the year of origin.

Source: Michigan Department of Mental Health, Bureau of Operational Planning.

the types of services to be offered. Finally, the Community Mental Health Services Law, Act 54 of 1963, was adopted and signed by the Governor.

The new Act was heralded by Dr. Robert A. Kimmich, Director of the Department of Mental Health in 1964, as "the beginning of a new era in the development and conduct of community mental health services in Michigan. . . . After several years of study, Michigan now had a new and additional mechanism for the development, coordination and operation of more and expanded community mental health service. . .on a partnership basis between the state and community."[7] The important provisions of this Act:

[7]Department of Mental Health, Community Mental Health Services Manual (Lansing: Department of Mental Health, 1964), p. iii.

1. Described the services to be offered as (a) collaborative and cooperative services with other health groups specifically centered around prevention; (b) informational and educational services; (c) consultative services; (d) diagnostic and treatment services; (e) rehabilitative services specifically for those who had previous inpatient services; and (f) in-patient services.

2. Determined that the legislative body of a county, group of counties, or a city of 500,000 could establish such a program.

3. Allowed for a special tax to be levied to support the program (a provision which as to date never been implemented by any county).

4. Established the mechanism by which a budget plan was to be submitted, approved by the state and funds allotted.

5. Provided initially for a 60/40 funding ratio with a $1 per capita ceiling (this was later amended to a 75/25 ratio and the ceiling was removed).

6. Defined the membership, manner of appointment, term, vacancies and responsibilities of the Community Mental Health Services Board, and,

7. Broadly defined the powers and duties of the Department of Mental Health in carrying out the program but specifically to (a) promulgate rules; (b) review and evaluate local programs; (c) provide consultative staff service to communities; and (d) emply a director of community mental health services.[8]

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[8]Department of Mental Health, Community Mental Health Services Manual, (Lansing: Department of Mental Health, 1964), p. 1-6.

Amendments over the years have modified parts of the Act but it is largely the same, the amendments having only added clarity or extensions of responsibility. One such extension of responsibility adds to the powers of the Department that of prescribing minimum standards for qualification of personnel and quality of professional service.[9]

It is now nearly ten years since Act 54 passed the Michigan Legislature. Like the experience noted as a result of the federal legislation, vast expansion of services has resulted from an initial expenditure of less than $130,000 of the $1.5 million appropriated in 1964 to an allocation of state dollars of over $27 million in 1972. An analysis of the growth of these programs appears on Table 5. Not only has the amount in expenditures grown but the percent of the population having access to community mental health services has expanded, and the numbers of persons actually availaing themselves of these services has greatly increased. It should be noted that these increases have been concomitant with the levels of service increase noted previously at the state institutions for the mentally ill and mentally retarded (Tables 2 and 3).

In reviewing the objectives set out in the report Action for Mental Health, it is interesting to compare Michigan's accomplishments against those objectives:

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[9]Legislative Service Bureau, Mental Health Statutes, 1972 (Lansing: Department of Mental Health, 1972), pp. 55-59.

TABLE 5.--Summary of Community Mental Health Development in Michigan, 1964-72.

Year	Number of Programs	Percent of Population	Appropriation (Millions)	State Expenditure	Gross Expenditure*	Persons Served
1964-65	5	42%	1.5	$ 126,891	$ 946,788	Not Reported
1965-66	16	68%	2.5	1,634,420	4,582,432	6,882
1966-67	24	84%	8.8	5,039,829	9,062,591	29,421
1967-68	29	86%	7.3	7,255,143	13,773,458	47,782
1968-69	29	86%	10.9	9,541,266	17,029,875	53,127
1969-70	31	88%	13.1	12,848,707	22,209,602	74,016
1970-71	33	91%	16.1	15,890,454	28,955,108	82,118
1971-72	35	92%	19.6	19,135,944	35,288,212	114,159
1972-73	43	96%	26.0	25,625,036	44,366,989	121,692

*includes federal, local and other non-state funds.

Sources: Department of Mental Health, Finance Section, Historical Analysis, Summary, P.A. 54 Boards, 1972.

Department of Mental Health, Bureau of Operational Planning, Community Mental Health Board Allocations, 1972-73, 1972.

National Objectives	Michigan's Accomplishments
1. One fully staffed, full-time mental health clinic available to each 50,000 of population.	1. During the year 1972-73, over 98% of the population had access to fully staffed, full-time mental health clinics, provided through 46 local community mental health boards.
2. State hospitals converted to intensive treatment facilities under 1000 beds and no new ones built of more than 1000 beds.	2. Although two facilities remain over 1000 as of this date, they are rapidly approaching this figure. Statewide the figure has dropped from 17,843 to 7,355. The three new state psychiatric facilities have 20,60 and 300 beds respectively.
3. Expenditures should double in five years and triple in ten, and Congress should provide subsidies to local programs.	3. Appropriations for 1963 for state institutions totaled $70.7 million. When combined, funds for state institutions and community mental health services reached $212 million in 1972, triple in nine years.

One might conclude from this that the goals are achieved, all is well, and we should rejoice. But it is not so clear as that. It is merely the time in which we assess what we do and then, perhaps, formulate new goals.

CHAPTER III

THE BIG PROBLEM AND THE LITTLE ANSWERS

> The "really big show" is really a lot of little shows. When the little shows are good, the big show is good. When some of them fall flat, the "really big show" does too. But the ratings for the whole thing are what counts; the rating puts it all together.[1]

Community mental health programs, in their present form, under the federal centers program and, in Michigan, under the state legislation, have reached the ripe age of ten, having struggled through their early formative years, and are now approaching (and many feel have already entered) the crucial decision years. Senator Walter F. Mondale, Chairman of a Senate Special Subcommittee on the Evaluation and Planning of Social Programs, has recently indicated that "to insure the effectiveness of the human services industry, a research and development program of unprecedented scale must be launched; guidance systems must be created that will optimize the human services."[2] This concern with evaluation of programs has been building to a "rapid crescendo" to the point where Congress, as typified by Senator Mondale, is giving

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[1]Public Broadcasting Service, "Media and the Times," April, 1971, a television interview by Ed Sullivan.

[2]Walter F. Mondale, "Social Accounting, Evaluation, and the Future of the Human Services," Evaluation, Fall, 1972, p. 29.

serious attention to the formulation of national social indicators for assessing the status of Great Society programs.[3]

The Cry for Evaluation

Everywhere, at every level, the outcry is for program evaluation. Ever since man created organizations to provide human services, he has energetically tried to make them more effective in meeting those human needs for which the organization was created. Program watchers, over the years, have viewed the application of a whole series of so-called panaceas, beginning with exhortation and moving on to multidisciplinary teams, indigenous staff, consumer participation, planning units, coordination schemes, and the most common of all, more federal dollars.[4] While each of these has contributed uniquely to the whole, those who are the recipients of human service will probably maintain that the delivery systems still have a good long way to go. The cry, now, is for evaluation--program evaluation. And with this the legislators, educators, professionals, lay citizens and consumer advocates expect change in the systems that are evaluated.

Spearheading this drive for program evaluation, in addition to Senator Mondale, have been several high-level, influential government leaders. Noteworthy among these is the former Secretary of Health, Education and Welfare and former Attorney General, Elliot L. Richardson. When asked, in an interview for the new journal,

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[3]H. Schulberg, A. Sheldon, and F. Baker, ed., Program Evaluation in the Health Fields (New York: Behavioral Publications, 1969), p. 3.

[4]Robert A. Walker, "The Ninth Panacea: Program Evaluation," Evaluation, Fall, 1972, p. 45.

Evaluation, why he felt so strongly about the need for program evaluation in the human services, he indicated that "far more money is being made available for human services than ever before--that in itself constitutes an important reason for trying to find out just what we're getting for the money." But he also added additional reasons beyond the over-riding financial aspect: "The demand for services of various kinds is so great that it's impossible to visualize an amount of money being made available. . .that could come anywhere near meeting the total demand" and, in these times of governmental disenchantment, "an unsuccessful program can contribute to disillusionment with governmentally-supported services, irrespective of the availability of funds."[5]

This governmental pressure is not only at the federal level but perhaps is even stronger at the state and local level. In their study of NIMH and the federal centers program, Ralph Nader's Center for Study of Responsive Law interviewed a number of state legislators about the program. They reported that "in some states, legislative leaders indicated that mental health programs have reached a plateau . . .and that further increases in appropriations would require clear demonstrations of effectiveness."[6] Within Michigan, at the recently completed budget hearings conducted by the Senate Appropriations Committee on the 1973-74 budget for community mental health programs,

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[5]Elliot L. Richardson, "Conversational Contact," interview by Susan Salasin, Evaluation, Fall, 1972, pp. 10-12.

[6]F. Chu, and S. Trotter, The Mental Health Complex, Part I: Community Mental Health Centers, Washington, D. C.: Center for Study of Responsive Law, 1972, p. II-47.

Senator Charles O. Zollar clearly indicated that the legislature was loathe to invest in any more new programs until there was clear evidence that the existing ones had proven themselves to be effective and making the expected impacts into the problem of mental illness and mental retardation.[7] As an even further indication of the state government's concern, Governor William Milliken recently issued his Program Plan Guidelines for fiscal year 1974-75 and identified two critical issues in the field of mental health, one being the impact of mandatory special education and community mental health programs upon, and as alternatives to, institutionalization of severely emotionally disturbed children, and the other being the need for standards and their implementation in the community mental health program--both clearly related to (if not, in fact, demanding) program evaluation.[8]

The mental health professionals, themselves, have also been seeking program evaluation of their programs albeit the pressure seems to be more at the state administrative levels than at the local service delivery level. In one of the earlier manuals on evaluation, published by the Illinois Department of Mental Health, the Director stated that "continuous evaluation is essential for constant improvement in the effectiveness of the Department's program." Such program evaluation was seen as a help "to identify the most successful strategies and techniques among the wide variety being employed."[9] That

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[7]Senate Appropriations Hearings, Michigan Senate (tape), April 5, 1973.

[8]Michigan, Program Policy Guidlines for Fiscal Year 1974-75, Executive Office of the Governor.

[9]Elizabeth J. Slotkin, Manual for Evaluation of Mental Health Programs, State of Illinois Department of Mental Health, May 1, 1966, p. 1.

concern continues to be expressed particularly by state department directors. Here in Michigan, E. Gordon Yudashkin, Director of the Michigan Department of Mental Health, has expressed, some seven years later, nearly the same need: "Evaluating the effectiveness of mental health programs is difficult and has been to a great extent ignored in the past as a management tool. . . . As more and more public money has been appropriated for mental health programs, pressure has mounted for development of a system of evaluation. Taxpayers and their legislative representatives understandably want an accounting. They want to know where the dollars are going and for what."[10]

The consumer advocates, too, have been expressing the need for evaluation. They are particularly concerned in that, it seems to them that the result of years of public speeches and the expenditure of ever-larger sums of public money has been the "growth of a mental health bureaucracy paralleling, not supplanting, the state hospital bureaucracy." They indicate that now should be the time for a "hard look" at the entire program, for failure to do so and with the current rate of expansion, the new centers will become as "entrenched and resistant to change as state hsopitals have been for over a centry."[11] The currently-popular and consumer-oriented magazine, Psychology Today, has taken up the gauntlet: "Mental health agencies servicing the same community cooperate extensively, however: they make mutual referrals, respecting various territorial claims, and one never openly questions another's effectiveness. . . . Mental health authorities

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[10]E. Gordon Yudashkin, Current Diagnosis, Link, Vol. II, No. 7, December 16, 1971.

[11]Chu & Trotter, op. cit., p. II-60.

across the country are so thoroughly preoccupied with preserving these alliances that their major commitments are to the politics of bureaucratic survival." It is asserted that mental health services continue to exist with limited scope, questionable effectiveness and prohibitive price. It is only the "rare clinical installation" that has a continuous and objective means for evaluating its effectiveness.[12] Graziano, a mental health professional himself, but speaking for the consumer, has said:

> When critics insist on evaluation, power-structure clinicians do not respond to the substance of the criticism; instead, they obscure the issue by attacking the critics for their lack of humanitarianism and sensitivity. Only when the criticism is politically threatening do the mental-health structures begin to react. Until we have planned constant and careful evaluation into every program, we will not progress beyond our current state, which is dominated by political concerns. The same rhetoric used to justify these demands (for more resources) also distracts public attention from the need to evaluate the real effectiveness of those programs and the wisdom of further investments.[13]

If there is so much pressure, at the federal, state and local levle, from legislators, administrators, professionals and consumer advocates alike, and since that pressure has now been on for some years, one would wonder what is being produced. In a review of federal level evaluation, Buchanan and Wholey concluded in 1969 that "the most impressive finding about the evaluation of social programs in the federal government is that substantial work in this field has been almost nonexistent."[14] Although they suggest that this is certainly

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[12] A. Graziano, "In the Mental-Health Industry, Illness is our Most Important Product," Psychology Today, January, 1972, p. 14.

[13] Ibid., p. 16.

[14] J. Wholey, et al., Federal Evaluation Policy (Washington, D. C.: The Urban Institute, 1969), p. 47.

not true today, they do indicate that evaluation information is only sporadic and inconsistent. More importantly, they are concerned that after the investment of significant resources and effort over the past few years, there has been little progress toward "a completely functional over-all evaluation system."[15]

Problems in Program Evaluation

One of the reasons, perhaps, for the confusion about whether program evaluation is being accomplished or still needs to be done has to do with the lack on consensus about what program evaluation really means. Although all the authors cited above seem to speak lucidly about program evaluation and write as if they knew precisely what they mean by the term, none of them have bothered to define it precisely and one has to assume they are all speaking about the same process or processes. Both Schulberg[16] and James[17] have felt that despite current ambiguity, the most common usage of the term "program evaluation" refers to the process of determining the value or amount of success in achieving a predetermined objective. This is very consistent with the American Public Health Association statement of definition: "(Program) evaluation is the process of determining the success, often in terms of a value or score, a program achieves in relation to its established objectives. It includes at least the following steps: Formulation

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[15] G. Buchanan and J. Wholey, "Federal Level Evaluation," Evaluation, Fall, 1972, p. 22.

[16] Schulberg, et al., op. cit., p. 6.

[17] G. James, "Evaluation in Public Health Practice," American Journal of Public Health 52 (1962): 1145.

of the objective, identification of the proper criteria to be used in measuring success, determination and explanation of the degree of success, recommendations for further program activity."[18] As such, program evaluation differs from research primarily in that it does not seek new knowledge, but attempts to mark progress toward a prestated objective. For the purposes of this study, the definition of the term "program evaluation" shall be that of the American Public Health Association.

Program evaluation has also only lately been imposed on programs, some of which were established and implemented without concern or, frankly, even interest in evaluation. When Dr. Saul Feldman, highest ranking NIMH official in charge of the centers program, was interviewed by the Nader staff, he declared that even if he had the opportunity to do it over again, he would not choose to set up a few experimental centers, evaluate them, and then go ahead with the rest of the program. "Evaluation takes too long," he explained, "and besides I am not convinced that the results of even ten years of experimentation would have been very helpful."[19] As a result, NIMH has tended to measure the success of the program on the numbers of centers established rather than by accomplishments or impacts made by the centers. Congress, until very recently, has been very obliging, even perhaps unquestioning, preferring to buy the concept rather than base their appropriations on firm objectives and assessed results.

Beyond an earlier lack of interest and confusion about what is meant by evaluation, there are some fairly valid reasons why

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[18] Schulberg, et al., op. cit., p. 6.

[19] Chu & Trotter, op. cit., p. I-9.

evaluation is in its primitive stage. It should be constantly kept in mind that mental care delivery systems have made considerable progress in moving from a primarily custodial to a primarily treatment and rehabilitation orientation over the past decade. The very highly visible and often overwhelming demand for services of a dynamic rather than static program has often been the cause for neglect of the evaluation process. To many administrators it has seemed difficult to justify curtailing direct services to fund a supporting activity like evaluation.[20] This "consumer-orientation" in terms of direct services has, however, turned out to be the subject of criticism by certain consumer advocates who have felt that the "ever-expanding clientele" and "growing catalogue of treatable symptoms" has been little more than "idealistic campaign rhetoric" to assure the mental health industry an annual slice of government and public funds. They even further state that this same "rhetoric" obscures the real issue of "questionable effectiveness" of treatment.[21] It is interesting to note that this "preoccupation" of legislators and mental health executives with expanded demands upon limited tax funds has been the oft-cited reason for justifying program evaluation appropriations.[22]

Funds have been one of the major problems in initiating efforts at program evaluation. The bitter truth is that most states spend less than one-half of one percent of their human service

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[20]J. Halpern and P. Binner, "A Model for an Output Value Analysis of Mental Health Programs," Administration in Mental Health, Winter 1972, p. 40.

[21]Graziano, op. cit., p. 12.

[22]Schulberg, et al., op. cit., p. 3.

expenditures to design and measure the services that they support. The federal program gave impetus to its program evaluation efforts by specifically earmarking up to one percent of the appropriations to be used for evaluation of the programs authorized, but even this did not start until 1969.[23] It is, however, very interesting to note that these same funding sources that until recently have minimized evaluation, when making grants have steadily become more and more insistent on hard evidence to support budget requests.[24]

Interest levels, allocation of funds and definition problems are fairly easily dealt with and resolved. More insidious and of far greater concern is the inherent difficulty in evaluating any type of broad social program. To date all that has been done is to accumulate repertoires of numbers: numbers of centers, numbers of patients, numbers of staff, etc. Numbers alone, however, are notoriously poor indicators of success. This is particularly true with a community mental health program whose broad social goals do not lend themselves to simple numerical tabulation.[25] The pluralistic nature of our society,[26] the variety of structure in delivery systems,[27] and the nebulousness of the service mandate have all but made impossible a serious effort at program evaluation. There is additionally a problem of sequencing--

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[23]Mondale, op. cit., p. 32.

[24]Halpern & Binner, op. cit., p. 40.

[25]Chu & Trotter, op. cit., p. II-1.

[26]Harvey M. Freed, "Promoting Accountability in Mental Health Services," American Journal of Orthopsychiatry, October, 1972, p. 761-2.

[27]Slotkin, op. cit., p. ii.

there is no accumulated body of experience in the evaluation of community mental health programs from which governing or guiding principles can be drawn.[28] Attempts at defining what constitute principles in the evaluation of community mental health programs must depend heavily on knowledge gained from other areas, often only tangentially related. Once a body of experience is gained within the field, evaluation effort seeding one from the other will improve. Closely related, but also a serious deficit, is the lack of generally agreed upon standards for which an agency must aim.[29] Attempts to develop such standards, acceptable to a broad range of professionals in the field, have generally met with abysmal failure. The standards generally available tend to deal only with physical facilities, qualification of staff and administrative procedures. Any relationship to measurable results or objectifiable data has been most remote. Concurrent with the need for evaluation has risen the cry for standards[30] but until such standards are developed, any evaluation effort must state for itself the standards it wishes to apply and the assumptions underlying these standards. Under such conditions, replication of evaluation studies are almost never possible.

The major problems, then, seem to be that:

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[28]Brain MacMahon, et. al., "Principles in the Evaluation of Community Mental Health Programs," American Journal of Public Health 51 (1961): 963-968.

[29]Jack Zusman, "Evaluating the Quality of Mental Health Services: Criteria for Rapid Informal Judgement," Mental Hygiene, October, 1971, p. 478.

[30]Michigan Department of Mental Health, "Community Services on the Couch," Link, January 25, 1973, p. 1.

1. Program evaluation assumes that each program has a purpose and a set of objectives that are commonly agreed upon--mental health professionals have generally made no such assumption!

2. Program evaluation assumes that objectives can be stated in quantifiable, measurable terms. Objectives in the mental health field have until recently been expressed in general terms, such as "to lessen the extent of emotional disturbance" or "to improve ability to cope with the exigencies of life." These are neither quantifiable nor measurable!

3. Program evaluation assumes a reasonably strong centralized authority or at least the acceptability of developing one. Mental health professionals have long been disinclined to accept a strong central authority, and, indeed, their historical development has generally mitigated against this development. Equally important, the central mental health decision-makers have often been reluctant to exert an authoritarian manner, copping the plea that "each program should be allowed to do its own thing," "with the state of flux, who knows for sure what works best?" etc. But someone should clearly state what should be done, what outcomes are expected, and how one will be assessed!

4. Program evaluation assumes that the criteria of effectiveness will be oriented to outcome or productivity. That has not been the case in mental health services until recently and, indeed, most mental health evaluation to date has been in quest of an ever-elusive and highly questionable professionalism of staff performance, never

looking to the outputs or impacts of that performance. Some mental health professionals have smugly doubted that outcome measures would ever be possible![31]

In his statement on evaluation of human services, Senator Walter F. Mondale summed up by saying, "If we are truly to 'bridge the gap' between people and their government, if we are to restore pride of belonging and responsibility as a quality of increasingly enlightened, vocal citizenry, we need some new mechanisms."[32] Most reviewers or commenters on the current scene in program evaluation would agree.

Criteria to be Evaluated

In spite of the problems outlined above, and surprising as it may seem, there does appear to be a degree of consensus about the criteria by which programs should be evaluated. Those calling for program evaluation are demanding that cirtical questions like "Does the program accomplish what it was designed to accomplish?" "How well does it do this?" "Could it be done better?" and "Does the outcome justify the investment in manpower and resources?" be answered if continued funding is to be requested.[33] In order to answer these questions, and more importantly, in order to know best how to deploy scarce resources, program administrators must know how many people need mental health care, the social circumstances under which these people

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[31]J. Alexander and J. Messal, "The Planning-Programming-Budgeting System in the Mental Health Field," Hospital & Community Psychiatry, December, 1972, pp. 358-9.

[32]Mondale, op. cit., p. 33.

[33]Richardson, op. cit., p. 9.

live, the kinds, costs and availability of the needed personnel to provide the services, and, if possible, some information about the effects that various treatment maneuvers which we call management and treatment have on the individual patient, the hospital ward, and the community.[34]

In calling for a "systematic, comprehensive approach," Deniston and associates designed an evaluation "based on the assumption that all programs in (mental) health can be viewed as consisting of a combination of resources, activities, and objectives of several kinds."[35] They maintain that each program is characterized by one or more program "objectives," each objective implies one or more "sub-objectives," "activities" are performed to achieve each sub-objective, and "resources" are expended to support the performance of activities. Each program plan (whether that be outpatient, consultative, day treatment, or any other) would, therefore, make three kinds of assumptions:

1. The expenditure of resources as planned will result in the performance of planned activity.

2. Each activity, if properly performed, will result in the attainment of the sub-objective with which it is linked.

3. Each sub-objective must necessarily be accomplished before the next one can be achieved and, if all sub-objectives are attained, the program objective will be attained.

This scheme provides a "yes-no" evaluation of each sub-objective, and ultimately a "yes" or "no" to the question of total program

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[34]Jerome A. Collins, "Evaluative Research in Community Psychiatry," Hospital & Community Psychiatry, April, 1968, p. 21.

[35]O. L. Deniston, et al., "Evaluation of Program Effectiveness," Public Health Report 83 (1968): 323-335.

effectiveness. This fails to answer questions about how well the program achieves its objectives, only that it does so. It does not indicate what areas should be improved to increase effectiveness and does nothing about the question of efficiency. A whole new set of data needs to be analyzed to get at these kinds of questions. The Nader report, previously cited, outlines types of criteria that should be considered in evaluating a program. They list, among others to be considered, the following as essential:

1. Admission, readmission and discharge rates to and from state hospitals.

2. The percentage of area residents admitted to the state hospital after receiving local treatment, and the percent discharged by the state hospital who are picked up for aftercare.

3. The social situation of the client at the time they cease being a client, and the reason for the discontinuance.

4. Utilization rates as compared with other centers.

5. Comparative costs per length of stay or unit of service.

6. Travel time client must spend to secure treatment and its effect on utilization, and staff travel time in relation to any change in this utilization.

7. Any long-term impacts or trends over at least one or two years, preferably longer.[36]

Although this listing closely parallels the listings generally requested by the federal agencies, it deletes certain of the "vital nongoal acitivites," such as maintenance, administrative tasks,

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[36]Chu & Trotter, op. cit., p. III-5.

recruitment, etc., which are also time and cost consuming,[37] but even more importantly, there is no direct consideration for the extensive outreach, consultative and educational activities of a community mental health center other than the possible long-term impacts on social problems, or trend data.

It would appear, then, that in addition to the rather extensive array of items to be included in an evaluation, there must also be several different levels of evaluation. James had categorized these levels as:

1. Evaluation of effort: How do the practices of the program compare with local or national standards? Yardsticks such as patient-staff ratios provide a sample for limited assessment of the program's functioning at this level.

2. Evaluation of performance: What outcomes have the program's effort produced? This approach assumes that services were provided correctly to those individuals helped.

3. Adequacy of performance: To what extent has the community's total problem been solved by the program? Services directed to a minority of individuals are less adequate than those focused upon the total population.

4. Evaluation of efficiency: Can the same end result be achieved at a lower cost? Screening programs in public health frequently are evaluated in this manner by considering the number of false positives and falso negatives produced by them.[38]

Evaluations of effort have become fairly common in mental health programs and the criteria specified previously are mainly

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[37]Amitai Etzioni, "Two Approaches to Organizational Analysis: A Critique and a Suggestion," Admin. Sci. Quart. 5 (1960): 257-278.

[38]George James, "Evaluation in Public Health Practice," American Journal of Public Health 52 (1962): 1145-1154.

concerned with this level. Evaluations of efficiency are becoming more and more common, particularly with the present concerns about cost per unit of service. However, an evaluation of total performance or adequacy of performance is far more difficult and in many respects seems to be a combination of levels. It would seem reasonable that a combination of effort, efficiency and adequacy would present an evaluation of performance. It is curious, then, that James, in his categorization, chose to order them in the manner presented.

It is remarkable that even though criteria have been specified in some cases for many years, levels of evaluations have been identified for sometime, and critics have been pushing for evaluation since the beginning of the program, the still ever-present need is for program evaluation. Why is it that the need for evaluation seems to be more apparent in the literature than any results of evaluation efforts? To answer such a quation, one needs to review current literature and reports of various community mental health programs and examine their results. To do so might at first seem to be a formidable task, but it is not so, for there have been few significant evaluation efforts in the community mental health field. That, in itself, provides a partial answer to the question. Of probably more significance, however, is the fact that, with very few exceptions, evaluation efforts to date have concerned themselves with only one criterion or dimension and have found no way to combine effectively different measures to provide a total evaluation. Therein is probably another portion of the answer. But the rest of the answer must come from the review of current and recent efforts in themselves.

Summary of Current and Recent Evaluation Efforts

Any review of a field so broad as community mental health must have a procedural starting point. In a field so young, an historical accounting of research and evaluation efforts would be nonproductive, in that all the efforts have been within the past ten years. Similarly, regions of the country, or schools of thought, do not serve well, in that professionals in this field seem to be particularly mobile and one finds researchers and writers employed in an amazing number of locations in an amazingly short time period. It therefore seems better to categorize the efforts (even though this must be done somewhat artificially sometimes) into common subject areas, sub-program or sub-objectives of the total concern. As such, the previously reported criteria to be evaluated serve a most useful means.

Impact on State Hospitals.--"The original goal of the centers program was to supplant state mental hospitals," or at least say the consumer advocate groups.[39] Yet, between 1966, when the first centers started operating, and 1971, the number of state supported mental hospitals in the United States increased from 307 to 321, the total number of patients treated in these hospitals rose from 802,216 to 836,326 as admissions rose from 285,244 to 414,926 and the maintenance expenditures for these hospitals soared from $1,300,380,295 to over two billion dollars.[40] In Michigan, a similar trend has taken

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[39] Chu & Trotter, op. cit., p. i.

[40] Ibid.

place. There were 15 state mental hospitals in the state in 1963 (when Act 54 programs were authorized) and there are 25 today. Gross expenditures in these facilities amounted to $42 million in 1963-64 and the current 1972-73 budget for these facilities amounts to $105 million. Admissions have risen from 5,768 in 1963-64 to 17,744 in 1972-73.

Although the above data seem to indicate otherwise, there has been very little debate regarding the philosophy and intent that community programs would impact at least, if not "supplant," the state mental hospitals. The community care ideology developed from the growing realization that the mental hospital as it existed did much to isolate the patient from his community, to retard his skills and, in general, to induce a level of disability above and beyond that resulting from the patient's condition.[41] The idea is neither original nor new. During World War II in France, many "state hospitals" had to close their doors due to food shortages. Their patients were sent home, where many improved considerably, thus "dramatically demonstrating the therapeutic potential of the community." After the war, rather than rebuild their state hospitals, French health officials began a program of "sector psychiatry," developing mental health treatment clinics and ancillary services in each sector.[42] This was fifteen years before the catchment area and community mental health center era began in this country.

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[41]David Mechanic, Mental Health and Social Policy (Englewood Cliffs, New Jersey: Prentice-Hall, 1969), p. 63.

[42]Michael A. Woodbury and Margarita M. Woodbury, "Community-Centered Psychiatric Intervention: A Pilot Project in the 13th Arrondissement, Paris," American Journal of Psychiatry, November, 1969, p. 619.

Even though the country has been "sectored" or "catchmented" and community mental health programs have been vastly expanded in the past ten years, even though admission rates have increased as costs spiraled in even more state hospitals than there had been previously, Dr. Stanley Yolles, Director of NIMH, still was able to claim "impact" on state hospitals as early as 1969. "This program has really gone across with the people of the United States and its results are impressive. . .largely because of the impetus of community mental health centers we have seen a startling reduction of patients in mental hospitals."[43] This "startling reduction" refers not to the admission rates, obviously, but to the in-house population which, during this same period from 1963 to 1971, was reduced from 504,947 to 308,024. That the community mental health centers have been responsible for this reduction in debatable, as has been previously noted, but NIMH officials seem to have made such a claim in support of the centers program. Others have been far less than enthusiastic about the impact being made by community programs. In the same year Dr. Yolles claimed impact, 1969, Dr. Henry Davidson (Superintendent of Overbrook Hospital, New Jersey) claimed that "community mental health centers offer us no help, no matter how ambitious their plans."[44] He reasoned that a certain portion of the population would always be in need of involuntary admission and that community programs were neither interested in, nor equipped to handle, this segment of the population.

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[43]U.S., House, Hearings on Community Mental Health Centers Act Extension before the Subcommittee on Public Health and Welfare of the Committee on Interstate and Foreign Commerce, 91st Congress, 1st session, November 18-20, 1969, p. 38.

[44]Henry A. Davidson, "The Double Life of a Psychiatric Hospital," Mental Hygiene, January, 1969, p. 19.

The claim of "impact" made by NIMH becomes even more dubious when one tries to examine where the ex-patients of state hospitals have gone when they returned to the community. Although there is no comprehensive documentation on where former state hospital residents have gone, existing evidence suggests that fairly sizable numbers are being transferred "en bloc to nursing or so-called foster homes, where conditions are frequently worse than those in state hospitals."[45]

Since the impact attributed to reduction in size of state hospitals is far more obscure than some would claim, the more critical factor in assessing impact is the admission rate from the community to the state hospital. Rates of admission have varied from less than 1 per 1,000 population to over 4 per 1,000, both nationwide and between counties within any given state. It becomes necessary to look at how a patient becomes an admission to a state hospital and whether he really needs to be admitted for his problem. Such studies are very scarce and most scant in their results. Psychiatric screening and civil commitment proceedings for mental patients were studied in one midwestern state and revealed several disturbing findings. Shah reported that psychiatric interviews on the screening examinations ranged in length from 5 to 17 minutes with a mean time of 10.2 minutes. Court hearings were conducted "perfunctorily and with lightning rapidity" with the mean time observed in one court only 1.6 minutes. The investigator concluded that the decisions (of both the psychiatrists and the court) were based largely upon "presumption of illness" in the

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[45]Chu & Trotter, op. cit., p. II-35.

patients.[46] In a detailed analysis of decisions concerning psychiatric hospitalization in California, Mendell and Rapport discovered that 84 percent of patients hospitalized would not have required it if more adequate family and community resources had been available.[47] This is consistent with the remarks of George Albee, former President of the American Psychological Association, who argued that as few as 10 percent of present first admissions need to be hospitalized in a protective environment. He reasoned, "Elderly senile people, alcoholics, and others lumped together as persons with personality disorders or psychoneurosis, who constitute nearly three-quarters of all first admissions to mental hospitals, simple don't belong there! The remaining quarter is really the smaller pool from which might be drawn the limited number of persons society must lock up. . . . If you will agree that not more than half (of these) are dangerous, we are down to close to 10% of present first admissions. And, if you agree that many of these people would not be dangerous, if properly controlled by intensive care programs, we arrive at a point at which we have practically eliminated the need for the state hospital for first admissions altogether."[48]

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[46]Saleem A. Shan, "Crime and Mental Illness: Some Problems in Defining and Labeling Deviant Behavior," Mental Hygiene, January, 1969, p. 27.

[47]W. Mendell and S. Rapport, "Determinants of the Decision for Psychiatric Hospitalization," Archives of General Psychiatry 20 (1969): 321-328.

[48]George Albee, "Models, Myths, and Manpower," Mental Hygiene 52, 2 (April, 1968): 176.

Certainly these authors would not advocate preventing anyone from receiving needed treatment but they do seriously question whether the great majority of those who are committed to state hospitals really "need the 'treatment' they receive."[49] Even though it is true that state hospitals using newer methods of psychotherapy and treatment with more intensive care than was the case in the mid-1950's produce far more active treatment and greater economic efficiency,[50] the question as to whether this constitutes what the patient needs is still open. Penn and his research staff in Wisconsin have even concluded that, on the basis of "a number of systemic, carefully done studies, using relatively objective measurements and independent criteria of funtioning, (demonstrating) the negative effects of institutionalization. . . commitment to a mental hospital often produces more psychologic harm than good for many people."[51] What these authors do seem to be advocating is to prevent state institutionalization by treatment in comprehensive programs within the community, the same philosophy espoused by the Joint Committee in Action for Mental Health (1961) and President Kennedy in his Address to Congress (1963).

To consider only first admissions, or initial commitment, is, however, only a part of the total picture. With the progress made in treatment of the mentally ill in recent years, an increasing

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[49]N. Penn, et al., "The Dilemma of Involuntary Commitment: Suggestions for a Measurable Alternative," Mental Hygiene 53, 1 (January 1969): 5.

[50]Kenneth M. McCaffree, "The Cost of Mental Health Care under Changing Treatment Methods," American Journal of Public Health 56 (1966): 1019.

[51]Penn, et al., op. cit.

percentage of those admitted are soon able to return to their communities. When this occurs, aftercare services become critical as an "impact" on recidivism rates. Many studies have been done regarding the number of persons who return to state hospitals after their release, the length of time between admissions, and the causes and prevention of recidivism. Collins, in reporting on a study in England in 1968, reported that 43 percent of released patients were readmitted within the first year and that an additional 13 percent of the rest (those that still remained in the community) were "deteriorated markedly, although. . .not readmitted."[52] Studies of recidivism rates are so numerous, however, that they have been summarized by author, location, and time period on Table 6. Anthony and associates, in their review of the literature on various aspects of psychiatric rehabilitation, concluded that "though the studies differ in years sampled, geographic location, and type of institution, their results are remarkably similar, and suggest a recidivism rate for a one-year period of approximately 40%-50%." They did, however, conclude that "ex-patients who attend aftercare clinics have a lower rate of recidivism than non-attenders." Perhaps even more surprising is that their results indicated that "it does not seem to matter whether hospitalized psychiatric patients receive eclectically oriented group therapy; psychoanalytically oriented individual or group therapy; or drugs, shock, individual or group therapy. Regardless of the type of traditional therapy patients receive, their recidivism and employment

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[52]Jerome A. Collins, "Evaluative Research in Community Psychiatry," Hospital & Community Psychiatry 19, 4 (1968): 22.

TABLE 6.--Summary of Studies on Recidivism Rates for Psychiatric Patients.

Researchers	Location	Year	Time Span				
			3 Mo.	6 Mo.	1 Yr.	3 Yr.	5 Yr.
Miller (1967)[a]	California	1956			40%		70%
		1963			40%		75%
		1965			48%		
Savino & Schlamp (1968)[b]	California	1966			53%		
Orlinsky & D'Elia (1964)[c]	Chicago	1963	15%	30%	46%		
Friedman, von Mering & Hinko (1966)[d]	Cleveland	1964		33%	50%		67%
Freeman & Simmons (1963)[e]	Massachusetts	1962			38%		
Bloom & Lang (1970)[f]					42%		
Lorei (1967)[g]					39%		
Wilder, Levin & Zwerling (1966)[h]					45%		
Fairweather, et. al. (1960)[i]	Four States	1959		40%			
Olshansky (1968)[j]	Boston	1966				65%	

[a]D. Miller, "Retrospective Analysis of Post-hospital Mental Patients' Worlds," Journal of Health & Social Behavior 8, 2 (1967): 136-140.

[b]M. Savino and F. Schlamp, "The Use of Non-professional Rehabilitation Aides in Decreasing Re-hospitalization" Journal of Rehabilitation 34, 3 (1968): 28-31.

[c]N. Orlinsky and E. D'Elia, "Rehospitalization of the Schizophrenic Patient," Archives of General Psychiatry 10 (1964): 46-54.

[d]I. Friedman, O. von Mering, and E. Hinko, "Intermittent Patienthood: The Hospital Career of Today's Mental Patient," Archives of General Psychiatry 14 (1966): 386-392.

[e]H. Freeman and O. Simmons, The Menal Patient Comes Homo (New York: Wiley & Co., 1963).

[f]L. Bloom and M. Lang, "Factors Associated with Accuracy of Prediction of Posthospitalization Adjustment," Journal of Abnormal Psychology 76 (1970): 243-249.

[g]T. Lorei, "Prediction of Community Stay and Employment for Released Psychiatric Patients," Journal of Consulting Psychology 31 (1967): 349-357.

[h]J. Wilder, G. Levin, and L. Zwerling, "A Two-year Follow-up Evaluation of Acute Psychotic Patients Treated in a Day Hospital," American Journal of Psychiatry 122 (1966): 1095-1101.

[i]G. Fairweather, et al., "Relative Effectiveness of Psychotherapeutic Programs," Psychological Monographs 74 (1960).

[j]S. Olshansky, "The Vocational Rehabilitation of Ex-Psychiatric Patients," Mental Hygiene 52 (1968): 556-561.

rates are not differentially affected."[53] It would appear that no matter what the treatment modality, type of institution, diagnosis or condition, a substantial portion of patients leaving the hospital eventually have to be readmitted, and even then, many of the ex-patients who remain in the community are unable to perform the roles that are normally expected of them.[54]

In their Manual for the Comprehensive Community Mental Health Clinic, Knight and Davis underscroe the importance of aftercare programming with the following conclusions:

1. Unless an extensive aftercare program is established, one-third to one-half of discharged mental patients will relapse.

2. The problem of readmissions is clouding the excellent record that mental hospitals are making today (referring to the reduced census and shortened time stays).

3. Readmissions are a drain on the economy, causing capital expenditures and budget increases.

4. Aftercare is one logical solution to the problem of admissions. Aftercare can prevent relapses, cut readmissions in half and eventually make it possible for hospitals to operate at less than capacity.[55]

Therefore, it is important to consider not only first admissions to state institutions but also the readmission rates for those who have been released if one is to study the impact of a community mental health program on state institutions. Levy and associates have

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[53]William Anthony, et. al., "Efficacy of Psychiatric Rehabilitation," Psychological Bulletin 78, 6 (1972): 448.

[54]T. Northcutt, et. al., "Rehabilitation of Former Mental Patients: An Evaluation of a Coordinated Community Aftercare Program," American Journal of Public Health 55 (1965): 570-577.

[55]J. Knight and W. Davis, Manual for the Comprehensive Community Mental Health Clinic (Springfield, Ill.: Charles C. Thomas, 1964), pp. 40-41.

chosen to term this as the "rate of extrusion" and classified it as one of the general indices that should be routinely examined. The rate of extrusion is a "basic index that tells how many people are being disengaged from the normal community process and evacuated to noncommunity resources." It is based on the assumption that mentally ill and mentally retarded should be, for the most part, cared for in their own communities, and, "any mental health program that purports to be serving the community's needs should have an impact on the rates of extrusion into these various (state) facilities."[56]

There is, however, another factor which has been found to have a dramatic relationship to rates of admission, and one which is beyond the control of either the admitting hospitals or the community mental health program. In an extensive study of mental hospitalization in New York State from 1841 to 1967, Brenner found that admissions to mental hospitals bear a striking inverse relationship to economic change.[57] In other words, mental hospitalization increases during economic downturns and decreases during economic upswings. Brenner concluded that employment opportunities, adequate housing, and the widespread provision of social services (in which he included out-patient psychiatric services) were a far more rational way of coping with mental health problems than large-scale hospitalization (in which he included not just state hospitals but also psychiatric wards of general hospitals and private inpatient facilities).

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[56] L. Levy, A. Herzog, and E. Slotkin, "The Evaluation of State-wide Mental Health Programs: A Systems Approach," Community Mental Health Journal 4 (1968): 340-349.

[57] H. Brenner, Mental Illness and the Economy, unpublished manuscript, expected to be published by Harvard University Press, 1973.

But, whatever the cause of admission or readmission, whatever the rates of extrusion, there seems to be consensus that community mental health programs should at least have "impact" if not fully "supplant" the state hospitals. Since this is a clearly stateable objective, and easily measurable in terms of gross data, it has been, and will probably always be, one of the major criteria upon which to evaluate a community mental health program as to its effort, efficiency, and performance. Out of a variety of products that a mental health program might produce, perhaps the most important single "product" is the patient who is returned to function in the community.[58] In addition to this humanitarian aspect, the economic aspect is also alluring. Richardson, former Secretary of Health, Education and Welfare, feels that "the dollars we invest in making mental health services available on an out-patient basis, easily accessible within the community, will return savings in the cost of not hospitalizing people, which can often result in a longer period of treatment than if the patient remained in the community."[59]

Estimates of Need and Utilization Rates.--Need is to be assessed, according to the federal regulations, on the basis of prevalence of mental illness and emotional disorders, both in terms of rate and absolute number of persons affected.[60] Epidemiologists have

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[58] J. Halpern and P. Binner, op. cit., p. 41.

[59] Richarson, op. cit., p. 16.

[60] H. Schulberg and H. Wechsler, "The Uses and Misuses of Data in Assessing Mental Health Needs," Community Mental Health Journal 3, 4, (Winter, 1967): 391.

repeatedly encountered difficulty in measuring the extent of actual disorder in a population because of the absence of clear-cut definitions and because of the broad range of available methods for obtaining a count, all of them resulting in widely varying rates. Earlier studies tend to base their data on reported neurotic and psychosomatic symptom patterns resulting in a gross understating of the problem, whereas the more recent population survey methods have brought in enormous frequency rates, far in excess of that commonly thought to be the extent of need. This disparity brings up the old issue of "What is a case?"[61] When does a case become a case? What determines when a case should be counted and when not? This problem is still unsolved, although it has been clarified considerably through the attempts to measure functional impairment rather than diagnostic categorizations.

On a nationwide basis, in March 1972, NIMH Director Bertram Brown told a House Subcommittee on Appropriations that "maybe forty million Americans need psychiatric care."[62] As a gross measure of need, forty million out of a population of some 210 million Americans would calculate to an across-the-board 19.1 percent in need of psychiatric care. Note also that Dr. Brown included only "psychiatric care" and did not include those in need of services due to problems of mental retardation, another three to six percent, depending upon

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[61]Paul Lemkau, "contributions of Psychiatric Epidemiology," American Journal of Psychiatry 126, 11 (May, 1970): 1643.

[62]U.S., Department of Health, Education and Welfare Appropriations for 1973, Hearings before a Subcommittee of the Committee on Appropriations, House of Representatives, 92nd Congress, 2nd Session, March 8, 1972, p. 97.

degree of retardation and estimation methodology. With some estimates running as high as 23 percent,[63] and others indicating "as high as 47 percent in the lowest socioeconomic group and at least 13 percent in the advantaged groups,"[64] the service populations become so large as to boggle the mind of the mental health service planner. In Mazer's recently reported study of cross-matched multi-problem households, he found a much more realistic 6 per 100 (or 6 percent) within the total population with psychiatric disorders, but, more importantly, he found that only 2 percent had ever been treated for that disorder.[65] Therefore, the contrast between the percentage of population potentially in need, the percentage actually in need, and the percentage receiving services in relation to their need, is vastly different.

A variety of reported utilization rates appear in the literature, varying from less than one per hundred to nearly three per hundred. A summary of gross estimates and reported utilization rates appears in Table 7. Two serious problems result in using reported utilization rates as an expected or standard for purposes of estimating caseload:

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[63]L. Srole, et. al., Mental Health in the Metropolis: The Midtown Manhattan Study (New York: McGraw-Hill, 1962), p. 167.

[64]Simon Auster, "Insurance Coverage for 'Mental and Nervous Conditions': Developments and Problems," American Journal of Psychiatry 126, 5 (November, 1969): 698.

[65]Milton Mazer, "Characteristics of Multi-Problem Households: A Study in Psychosocial Epidemiology," American Journal of Orthopsychiatry 42, 5 (October, 1972): 794.

TABLE 7.--Summary of Gross Estimates and Reported Utilization Rates for Psychiatric Services.

Researchers	Location	Year	Estimated Need	Reported Utilization
Srole et. al. (1962)[a]	Manhattan	1960	23%	
Auster (1969)[b]	New York	1966	47% Poor 13% Rich	
Mazer (1972)[c]	Martha's Vineyard, Mass.	1971	6%	2%
Brown (1972)[d]	Nationwide	1972	19.1%	
Gardner (1967)[e]	Rochester, N.Y.	1960		.85%
		1961		1.33%
		1962		1.44%
		1963		1.50%
		1964		1.60%
		1967		1.86%
Woodbury (1969)[f]	Paris, France	1967		1.5%
Glasser & Duggan (1969)[g]	Detroit	1966		.64%
		1967		1.04%
Goldensohn et. al. (1969)[h]	New York	1965-1968		1.1%
Avnet (1969)[i]	Los Angeles	1965		5.0%
Green (1969)[j]	California	1968		2.36%
Tischler et. al. (1972)[k]	Connecticut	1970		1.27% Poor .99% Rich

[a]L. Srole, et. al., Mental Health in the Metropolis: The Midtown Manhattan Study (New York: McGraw-Hill, 1962), p. 167.

[b]Simon Auster, "Insurance Coverage for 'Mental and Nervous Conditions': Developments and Problems," American Journal of Psychiatry 125, 5 (1969): 698.

[c]Milton Mazer, "Characteristics of Multi-Problem Households," American Journal of Orthopsychiatry 42, 5 (1972): 794.

[d]U. S., Department of Health, Education, and Welfare Appropriations for 1973, op. cit.

[e]Elmer A. Gardner, "The Use of a Psychiatric Case Register in the Planning and Evaluation of a Mental Health Program," Program Evaluation in the Health Fields, ed., Herbert Schulberg, Alan Sheldon, Frank Baker (New York: Behavioral Publications, 1969), pp. 543-544.

[f]Woodbury & Woodbury, op. cit., p. 620.

[g]M. Glasser and T. Duggan, "Prepaid Psychiatric Care Experience with UAW Members," American Journal of Psychiatry 125, 5 (1969): 676.

[h]S. Goldensohn, et. al. "Referral, Utilization, and Staffing Patterns of a Mental Health Service in a Prepaid Group Practice Program in New York," American Journal of Psychiatry 125, 5 (1969): 689.

[i]Helen Avnet, "Psychiatric Insurance - Ten Years Later," American Journal of Psychiatry 126, 5 (November, 1969): 671.

[j]Edward L. Green, "Psychiatric Services in a California Group Health Plan," American Journal of Psychiatry 126, 5 (1969): 686.

[k]G. Tischler, et. al., "The Impact of Catchmenting," Administration in Mental Health, Winter 1972, p. 29.

1. In most instances, the utilization rate applies to the service entity conducting the study, with their caseload, and does not include those persons in the community seeking psychiatric care from private practice, going outside the community for services, including those served by the state hospital.

2. Rarely are utilization rates studied over a period of years to provide a comparison between times when services were not readily accessible as contrasted with a time when there is easy accessibility. There is no known study in which saturation has been reached to provide an index as to how many would actually avail themselves of services were they to be offered. In one study, however, in Rochester, New York, between 1958 and 1968, caseloads increased by 49.2 percent with the availability of new services, while the total population increased by only 22.1 percent during the same period.[66] This seems to indicate, as have other studies, that utilization rates increase as services become more available and known to the population.

The serious question, also as yet unresolved, is whether the service delivery system will ever be able to meet the increasing demands. As has been noted above, increasing availability and amounts of service have only tended to increase the demand for service. Toffler, in Future Shock, postulates that the rate of change in our time is so rapid that, unless man quickly learns to control the rate of change in his personal affairs as well as in society at large, we are doomed to massive adaptational breaks.[67] Mental health

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[66] A. Satloff and C. Worby, "The Psychiatric Emergency Service: Mirror of Change," American Journal of Psychiatry 126, 11 (May, 1970): 1630.

[67] A. Toffler, Future Shock (New York: Random House, 1970), p. 87.

professionals, beset by increasing demands for service, both in quality and quantity, have responded in a number of different ways: by providing indirect service to larger client populations through consultation and community education, by swelling their ranks with paraprofessionals, and by experimentation with a variety of focused, brief therapeutic techniques.[68] It is, therefore, virtually impossible to view the expected outpatient caseload without also looking at those being served by other than direct service. Even so, it seems reasonable that some reasonable percentage should be expected to be in direct service, as an active case, at any one given time and given minor variations for economic differences, accessibility and availability, that given percentage could partially serve as a standard against which to measure clinic productivity.

Length of Treatment and Treatment Outcome.--With the ever-increasing pressures for more and better service, the long-term, one-to-one psychoanalytic model is rarely found in a community mental health program. The various insurance programs referred to in the previous section averaged between 7.8 treatment visits in the UAW study to 14.2 visits in the New York prepaid group program. A recent study of 35 agencies in Michigan revealed an average of 7.2 contacts per case, with a range of from only one contact up to 26 contacts. A surprising 35 percent had only one or two contacts, and over 50 percent

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[68]Naomi Rae-Grant, "Longevity, Mobility, and Spare Parts: The Future Imperfect and Human Service Delivery," American Journal of Orthopsychiatry 42, 5 (October, 1972): 835.

had four or fewer contacts. Twenty-three percent of the clients were seen more than ten times.[69] These data are quite consistent with those reported by other studies and in other states. Such information has led to two quite opposing views on the subject of length of treatment:

1. In one study in New York, very similar to that above, Ginzberg was quite critical that over half the patients were seen only once or twice. He indicated that his suspicion was that a client "doesn't go anywhere in clinics. . .they are not 'cured' or effectively diagnosed, they just don't come back." He criticized the data and felt that a person should not be counted as a client until his third visit.[70]

2. The opposing view is that there is very little difference in terms of ultimate outcome between long-term and short-term therapy.[71] Others have indicated that a short-term, goal-oriented structured behavior change program was better in the long run in that it counteracted long-term dependency.[72] Taylor, in examining the relationship between success and length of therapy, found a "failure zone" between the twelfth and twenty-first interviews. He concluded that a short-term contract with a client for less than twelve interviews was the most desirable but when treatment could not be concluded in this

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[69]Michigan Department of Mental Health, "Number of Contacts per Case," Management Information Report #128, December, 1972.

[70]Eli Ginzberg, "Practical Considerations in Financing Mental Health Care," American Journal of Psychiatry 126, 5 (November, 1969): 766.

[71]G. Pascal and M. Zax, "Psychotherapeutics, Success or Failure?" Journal of Consulting Psychology 20 (1956): 325-331.

[72]E. Phillips and D. Wiener, Short-term Psychotherapy and Structured Behavior Change (New York: McGraw-Hill, 1966), p. 19.

limited time, a much longer period would be necessary to counteract dependency and "deep-seated problems."[73]

Since the controversy still rages, and has for the past fifteen years at least, it is quite impossible to assess a program solely on the average number of contacts per client. Far more study is needed in this area but in the meantime, it would seem that one could assess the operating procedures of a given clinic by comparing deviations of a standard curve of closures charted by number of contacts.

Very closely related, as was noted above, is the outcome of treatment no matter what the number of contacts. This, too, has proven to be a subject of great controversy. A most definitive study of outcomes of treatment, now over thirty years old, set the stage for many similar type studies, all tending to have very similar results. In this original article, Knight studied outcomes of 592 cases at the Berlin Institute form 1920-30; 74 cases at the London Clinic of Psychoanalysis from 1932 to 1937; 100 cases at Menninger Clinic, Topeka, Kansas, from 1932 to 1941; and 60 cases from private psychiatrists from 1936 to 1938.[74] After a lengthy analysis, Knight concluded that 56 percent were greatly improved or cured and only 10 percent showed no change or were worse.

In 1952, the eminent Professor Eysenck of the London Institute of Psychiatry, severely criticized Knight's landmark study and indicated that his "figures fail to support the hypothesis that psychotherapy

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[73]J. W. Taylor, "Relationship of Success and Length in Psychotherapy," Journal of Consulting Psychology 20 (1956): 332.

[74]Robert P. Knight, "Evaluation of the Results of Psychoanalytic Therapy," American Journal of Psychiatry 98 (1941): 434.

facilitates recovery."[75] A long and heated debate has ensued ever since and there is no resolution in sight. In 1964, following suit, Strupp took the liberty of severely criticizing Eysenck for the invalidities in his data and returned to Knight's criterias of assessment, arguing that the therapists were the better judges of success than their patients.[76] Eysenck issued forth a return volley and summed up that both he and Strupp were right, each other's research has been "incompetent, irrelevant, and immaterial;" as a matter of fact "all the research done (on outcome of treatment) is completely worthless" and, as such, his conclusion that the "figures fail to support the hypothesis that psychotherapy facilitates recovery. . .would be most triumphantly vindicated."[77] Research has continued in spite of these philosophical differences with a study published in 1967, with very similar results to that reported originally by Knight but with vastly better methodology. This study, reported by Kaegler and Brill, claimed 60 percent as improved, 37 percent as unchanged, and only 3 percent as worse. These claims were made on the basis of the therapist's opinion of outcome, and when the patient himself was queried as to outcome, their opinions were generally more positive than the therapist's. It is interesting to note that this research also affirmed the previous research that under twelve interviews is best, and the most successful

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[75]H. J. Eysenck, "The Effects of Psychotherapy: An Evaluation," Journal of Consulting Psychology 16 (1952): 319-321.

[76]Hans Strupp, "The Outcome Problem in Psychotherapy Revisited," Psychotherapy 1, 1 (1963): 1-13.

[77]H. J. Eysenck, "The Outcome Problem in Psychotherapy: A Reply," Psychotherapy 1, 3 (1964): 97-100

of the group studied had had under ten contacts.[78] Many reviewers of research on outcomes of therapy have concluded that with the currently high attrition rates of patients who drop out in the course of their treatment and the prevailing differences between therapist and patient evaluations of outcomes, it is doubtful whether satisfactory evaluation of outcome is possible.[79]

It would appear, then, in their present state of dispute, the field is unable to make successful use of the criteria of length of treatment and outcome of treatment as program evaluation techniques. This is truly unfortunate and holds back successful program development. An evaluation of any program must ultimately answer questions like, "Did the program produce the desired outcome?" When an assessment of that outcome is clouded by total disagreement, both as to methodology and to interpretation of results, it becomes clear that the "state of the art" is not sufficiently advanced to permit evaluation. Just as it may be necessary for the field to establish norms for treatment lengths, it may also be necessary for the field to establish norms for treatment outcomes. Then, when it was observed that a certain clinical team or staff veered significantly from this norm, further study could be undertaken to discern the reasons for the deviation. At the present time no such norms or standards exist and it is distinctly possible that any effort to establish such might meet with the same utter disagreement within the field, but, if program is ever to be totally accomplished, some resolution must come

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[78] R. Kaegler and N. Brill, Treatment of Psychiatric Outpatients, (New York: Apoleton-Century-Crofts, 1967), p. 102.

[79] Phillips & Weiner, op. cit., pp. 32-35.

within the areas of appropriate length of treatment and assessment of outcome.

Although the above discussion has concerned itself solely with outpatient treatment, the situation in inpatient care, partial hospitalization and day treatment, or residential and foster home care, is even more abysmal. There are virtually no existing studies in the literature which address themselves to either length of treatment or treatment outcome in any of these other treatment modialities. Additionally, all studies to date, besides being concerned only with outpatients, have also made the assumption that recovery was possible as an outcome, thereby completely neglecting the severely chronically ill for whom a lesser but still acceptable treatment outcome is merely mantenance in the community at minimum distress level.[80] It may ultimately be easier to establish treatment outcome assessment techniques in some of these alternate modalities, from which might spring insights into techniques with which to assess total treatment outcome.

Consultative and Preventative Programs.--More than fifty years ago, Adolf Meyer wrote: "Communities have to learn what they produce in the way of mental problems and waste of human opportunities and with such knowledge they will rise from mere charity and mere mending, or hasty propaganda, to well-balanced, early care, prevention, and general gain of health."[81] Forty years ago, Harry Stack Sullivan

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[80] R. T. Rada, et. al., "An Outpatient Setting for Treating Chronically Ill Psychiatric Patients," American Journal of Psychiatry 126, 6 (December, 1969): 789.

[81] Task Force on Community Mental Health, Division 27, American Psychological Association, Issues in Community Psychology and Preventive Mental Health (New York: Behavioral Publications, 1971), p. 1.

expressed a similar point of view: "Either you believe that mental disorders are acts of God, predestined, inexorably fixed, arising from a constitutional or some other irremediable substratum, the victims of which are to be helped through an innocuous life to be a more or less euthanasic exit. . .or you believe that mental disorder is largely preventable and somewhat remediable by control of psycho-sociological factors."[82] Thus, the early calling for professionals to look not just to the disease entities and psychological disturbances which were confronting them but to look to the society and community which produced the problems was well echoed by many of the leaders. The press of clinical duties and ever-expanding caseloads mitigated against any organized preventative, or even consultative, programming until many years later when the community mental health centers were called upon to provide such a required service.

More basic than the question of whether preventative and consultative services are being implemented, however, is the question of whether prevention can be accomplished and whether the results of consultation can ever be assessed. In seeking to define the parameters of prevention, it seems best to look at the subject from the public-health-epidemiologic model which focuses on "target conditions" and "high risk populations" rather than on individuals, and embodies the idea that changing the environment to prevent "disease" from occuring in the first place is more effective than diagnosis or treatment.[83]

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[82] Ibid., p. 2.

[83] Chu & Trotter, op. cit., p. II-17.

Thus, in the terms of Gerald Caplan, one of the early leaders of the community mental health movement, the concerns of a community mental health center are supposed to include "primary" as well as "secondary" and "tertiary" prevention. Caplan has defined these terms in the following way:

> Primary prevention is the reduction of the incidence of mental disorders of all types in a community. Secondary prevention is reduction of the duration of a significant number of those disorders that do occur. Tertiary prevention is the reduction of the impairment which may result from these disorders.[84]

Such a definition of prevention may well be helpful in expressing levels and types of services, but it does little to clarify the problems related to program evaluation. If one were to use this definition, it would be necessary to assume that the goal of all services was "prevention" and then assess them in terms of precisely what was prevented. It therefore is preferable to assess the secondary and tertiary levels by more behaviorally-oriented goals having to rely on more indirect methods of assessment only in the primary prevention phase. Consultation and education are generally the methodologies used which would require indirect assessment but they are also, probably inherently, the least practiced and most poorly understood.

A variety of authors dealing with the subject of consultation have attempted to deal with the objective of such services. Summing these up they might be expressed as:

1. The influencing of large segments of the population about mental health and their environment.

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[84] G. Caplan, "Types of Mental Health Consultation," American Journal of Orthopsychiatry 33 (1963): 470-481.

2. Extending mental health principles to other groups.

3. Developing mental health potential in other groups.

4. As a help in relation to a critical manpower shortage.

5. Fulfilling the expressed need for expert advice.[85]

As can readily be seen from the above, objectives such as these are difficult to translate into measurable criteria and are, therefore, very difficult to assess. Assessment becomes even more obscure with the current trend in the field where the professionals are beginning to say that "if we continue to serve only those who come for psychiatric help, we will be helping only a very select population. . .and not directly helping our primary client--the community."[86] Some have indicated that the reason for providing consultative services did not stem necessarily from an "altruistic feeling that we should share our knowledge, or even an intellectual awareness that the size of the problem required broader participation, but out of a desperate concern to increase the skills and efficiency of other agencies so that they become better able to be of real help to us."[87] Others, more philosophically based, feel that "a potentially more effective mental health model for the future is that of promotion of competence rather

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[85]U. S., Department of Health, Education, and Welfare, Consultation Research, Public Health Monograph #79, 1971, p. 1.

[86]S. Nagler and S. Cooper, "Influencing Social Change in Community Mental Health," Canada's Mental Health 17 (September-October, 1969): 12.

[87]Jules Kluger, "The Uninsulated Caseload in a Neighborhood Mental Health Clinic," Development of an Urban Mental Health Center, H. G. Whittington, ed. (Springfield, Illinois: Charles C. Thomas, 1971), p. 95.

than cure. . .the basic model should be educational rather than therapeutic."[88]

In view of all of these difficulties with conceptualizing, defining and implementing consultation, it is not surprising that there is very little substantive research in this program area. Also, it is not surprising to find that most of the research done to date has dealt mostly with the process of consultation, who does it, who receives it, and so on, with almost no research having been reported on the results of consultative efforts. A summary of those research efforts dealing with outcome of consultation appears on Table 8. Although in these outcome studies much of what passes under the label of consultation is not spelled out or differs widely from one situation to the next, still the evidence as presented appears to indicate that consultation does have a positive effect. Unfortunately, there are no reported studies of the effect over various time intervals. It would also appear that all studies thus far have concerned themselves with the outcome effects on the consultee or the client specific to the consultation. No studies have been located in the mental health field which deal with the results of consultation on the system at large. Such studies are not readily apparent from any field, but two studies in closely allied fields shed some light into the problems and results of such studies. In one study, in the dietary field, Foster and Hartman provided a consultative service to dieticians in general hospitals and were able to observe positive effects on the total hospital system

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[88]Rae-Grant, op. cit., p. 840.

TABLE 8.--Summary of Consultation Outcome Studies in Mental Health Services.

Researchers	Date	Control Group	Positive Effect: Consultee	System	Client
Eisenberg[a]	1958	Yes	...	...	Yes
Mariner et. al.[b]	1961	No	Yes	...	...
Cutler and McNeil[c]	1964	Yes	Yes	...	Yes
Dorsey, Matsunaga and Bauman[d]	1964	No	Yes	...	...
Chapman[e]	1966	No	...	...	Yes
Pierce-Jones, Iscoe and Cunningham[f]	1968	Yes	No	...	...
Townes et. al.[g]	1968	No	Yes	...	Yes
Hunter and Radcliffe[h]	1968	Comparison Group	...	...	Yes
Bolman et. al.[i]	1969	Yes	...	...	No

[a]L. Eisenberg, "An Evaluation of Psychiatric Consultation Service for a Public Agency," American Journal of Public Health 48 (1958): 742-749.

[b]A. S. Mariner, et. al., "Group Psychiatric Consultation with Public School Personnel: A Two Year Study," Personnel Guidance Journal 40 (1961): 254-258.

[c]R. L. Cutler and E. B. McNeil, Mental Health Consultation in Schools: A Research Analysis (Ann Arbor: University of Michigan Department of Psychology, 1966).

[d]J. Dorsey, G. Matsunaga, and G. Bauman, "Training Public Health Nurses in Mental Health," Archives of General Psychiatry 11 (1964): 214-222.

[e]R. F. Chapman, "Group Mental Health Consultation--Report of a Military Field Program," Military Medicine 131 (1966): 30-35.

[f]J. Pierce-Jones, I. Iscoe, and G. Cunningham, Child Behavior Consultation in Elementary Schools: A Demonstration and Research Program (Austin, Texas: University of Texas, 1968).

[g]B. D. Townes, et. al., "The Diagnostic Consultation and Rural Community Mental Health Programs," Community Mental Health Journal 4 (1968): 157-163.

[h]W. Hunter and A. Ratcliffe, "The Range Mental Health Center: Evaluation of a Community-oriented Mental Health Consultation Program in Northern Minnesota," Community Mental Health Journal 4 (1968): 260-267.

[i]W. M. Bolman et. al., "An Unintended Side Effect in a Community Psychiatry Program," Archives of General Psychiatry 20 (1969): 508-513.

following their consultation program.[89] These effects were in terms of improved patient satisfaction, increased interdepartmental cooperation, reduced employee dissatisfaction, etc. In another study, in the education field, it was found that providing consultative services to elementary school teachers (on curriculum and group processes) failed to show positive outcome effect on class standing, as measured by standardized tests of pupils.[90] These must, however, be considered as studies on a mini-system when compared to the goals of mental health as studies on a mini-system when compared to the goals of mental health consultation, to affect a large segment of the population through indirect services.

Since research efforts in consultation outcome have been so meager to the present time, despite extensive literature on philosophy and techniques, one is left having to rely upon subjectively-based assumptions in regard to assessing a comprehensive community mental health program in terms of its consultative-preventative program. The evidence suggests that consultation does produce a positive outcome to both the consultee and the clients he serves and, on that basis alone, one is safe in assuming that such services should be a part of a community mental health program and that in evaluating such a program (in total) such services should be included within the evaluation. But, since so much of the community mental health philosophy is based upon changing the systems through indirect services, and until

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[89] J. Foster, and J. Hartman, " A Project in Voluntary Consultation for Hospitals," Public Health Report 74 (1959): 607-614.

[90] R. A. Schmuck, "Helping Teachers Improve Classroom Group Processes," Journal of Applied Behavioral Science 4 (1968): 401-435.

there is evidence to the contrary, the assumption must continue to be made that consultative services also produce positive effects on the system or community at large. Rae-Grant, in a very recent article, has made such an assumption: "It is becoming increasingly and painfully apparent that the price of non-intervention (into the social system) is later social and emotional disorder, that problems identified early in childhood will not be miraculously outgrown, and that, as with organic handicaps, behavioral and emotional problems that begin early in childhood do not necessarily disappear."[91]

Having made both assumptions, that consultative services produce outcomes on both the individual client (or the consultee) and the population at large, and knowing that, as yet, there has been no methodology offered that can adequately assess the outcomes of such consultation, it is difficult to include within the total program evaluation criteria any assessment of the impact of consultation. One is left with the only technique being a count of consultations, the time devoted to such efforts, or a percent of effort being directed in this area. We do not, however, have the basis for "a blueprint to determine the precise balance of priorities which should be attained" among mental health direct services and indirect services.[92] The Director of Psychiatric Services over Denver's community mental health programs has indicated that "the typical team initially devotes 10

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[91]Rae-Grant, op. cit., p. 836.

[92]Richard Williams, "Trends in Community Psychiatry: Indirect Services and the Problem of Balance in Mental Health Programs," L. Bellak, ed., Handbook of Community Psychiatry (New York: Grune & Stratton, 1964), p. 355.

percent of total time to consultation, gradually increasing consultive services to 25 percent team time. It is anticiapted that the clinical caseload of generic teams will decrease and consultation will occupy up to half of the total team time."[93] That fifty percent of total staff time should be devoted to an area of concern that has neither been adequately researched nor has any established performance standards only further bespeaks of the difficulty in attempting to assess community mental health services.

A study, released in 1969 by the Joint Information Service of the American Psychiatric Association and the National Association for Mental Health, indicated that 57 percent of professional staff activity time was spent in "activities directly related to patient care" while only 5 percent was spent in consultation (the remaining 38 percent split among administration, staff meeting, teaching, travel, etc.).[94] The consumer advocates cited these results in their criticism of professional mental health workers and concluded that "the more highly trained a staff member, the less time he spends treating patients and the more time he spends in the bureaucratic maintenance of the center."[95] It would seem that a far more cogent criticism could have been made about the very minimal 5 percent time in consultation that was reported. And so a controversy ensues, with some feeling that more and more time should be devoted to direct patient care, and some

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[93] H. G. Whittington, "The Generic Mental Health Team," ed: H. Whittington, Development of an Urban Mental Health Center (Springfield, Illinois: Charles C. Thomas, 1971), p. 65.

[94] R. Glasscote and J. Gudeman, The Staff of the Mental Health Center--A Field Study, Washington, D. C.: Joint Information Service, American Psychiatric Association and National Association for Mental Health, 1969, pp. 18-19.

[95] Chu & Trotter, op. cit., p. II-14.

feeling that more and more time should be devoted to consultation (indirect services). With such a controversy, philosophically based, and the absence of any clear standards on which to measure outcomes, it would appear that the only manner available to include consultation services within a program assessment would be through gross, number-counting methods, and, just as was indicated in the previous section on Problems in Program Evaluation, "numbers alone, however, are notoriously poor indicators of success."[96]

Cost Per Unit of Service.--The cost per unit of service (whether that be in terms of cost per interview, cost per inpatient day, cost per client served, or some other unit cost) has been even more lightly considered in the literature with even less done in substantive research. It is quite safe to state that it has been only recently that cost of services received any attention and then only a result of two separate pressures, neither of which was concerned directly with program evaluation but more concerned with an appropriate, billable, cost per unit of service. The third-party-payee insurance carriers were the first to study this criterion at the time the group insurance plans and union contracts first began to include mental health services within their program. In the first year of the outpatient services provision of the UAW program, those availaing themselves of the services "received an average of 8.5 services and (were) paid claims averaging $135.50 per patient. For those who received inpatient care, in 1965 they were hospitalized an average of 12.3 days for a cost of

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[96]See page 40.

$466; in 1967 they were hospitalized for 12.6 days at a cost of $603."[97] Citing very similar cost per patient and utilization rates, the sponsors of the Prepaid Health Insurance Plan of Greater New York estimated that the total cost came to about 90¢ per month per enrollee, or a per capita yearly cost of about $10 per year."[98] Costs have risen dramatically in the past five to six years since these figures were reported, with current estimates averaging to about $250 per client served and a per capita yearly cost of approximately $15 per year.[99]

To ascertain the cost per client served and per capita total cost many serve a useful purpose for the insurance carriers, but the second group of persons interested in this criterion--the mental health administrators--has been far more interested in a unit of cost per service (interview, treatment, hour). Their Association has even undertaken the development and publication of a highly sophisticated and complex manual on cost finding and rate setting.[100] Their impetus for doing so has nothing to do with evaluation of their centers but the hard fact that to qualify for third-party reimbursements and the new federal entitlements they must establish such procedures to become eligible for reimbursement for the clients they serve; and with

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[97] Glasser, op. cit., p. 679.

[98] Goldensohn, op. cit., p. 696.

[99] J. Sorensen and D. Phipps, "Cost Finding: A Tool for Managing Your Community Mental Health Center," Administration in Mental Health, Winter, 1972, pp. 68-73.

[100] J. Sorensen and D. Phipps, Cost-Finding and Rate-Setting for Community Mental Health Centers (Lansing, Michigan: Association of Mental Health Administrators, 1972).

the aforementioned decline in federal dollars and limited state and local resources, their programs are virtually dependent upon gaining these third-party payments. Again, it should be pointed out that these efforts have not been in relation to program evaluation but directed toward financing.

Some of these administrators have even indicated that their efforts could not be used in program evaluation efforts and have built impressive rationales for their positions. Freeman and Sherwood have argued that "in terms of all programs, the efficient one is that which yields the greatest per unit change, not the one that can be run at the least cost per recipient. What costs the most, takes the longest, and involves the greatest manpower in gross terms may have the greatest net efficiency."[101] Unfortunately, they offer no further clues on how to measure the "greatest per unit change." Sorensen and Phipps, in making a similar disclaimer, have indicated that their cost-finding techniques cannot be used to compare one community mental health center to another; "treatment modalities vary widely from center to center. Some centers favor the use of high-cost intensive therapy with a high patient turnover. Others use a longer term approach with lower cost per patient for a given time period and a much lower patient load. Such differences make comparison of cost per patient meaningless."[102]

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[101] H. Freeman and C. Sherwood, "Research in Large-Scale Intervention Programs," ed. H. Schulberg, et. al., Program Evaluation in the Health Fields (New York: Behavioral Publications, 1969), p. 86.

[102] Sorensen & Phipps, op. cit., p. 70.

Others, however, are not so ready to dismiss costs as a portion of their evaluation efforts. Although the efforts of some have been to measure the impact of social costs by reduced income and subjective losses,[103] it has become more recently accepted that some methodology for including cost data into a program evaluation is essential. Halpern and Binner have recently published a "model" for an output value analysis which includes two basic measures: "(1) An estimate of the value of what the program has produced, and (2) an estimate of the costs involved in achieving that product."[104] The legislators, consumer advocates, state mental health administrators, and local program administrators are all echoing the same refrain; costs must be a part of any program evaluation, even though there are philosophical differences between types of treatment in different centers, even though a full-range of services may not be available to all clients, and even though the public expects certain services to be available no matter what the cost. The dilemma remains; the unsolved problem of how to use cost data in a total program evaluation effort.

The Problem Restated

That the community mental health program has never been evaluated as to either its efficacy and effectiveness or efficiency and economy, as many of its critics have implied, is only a partial truth. As this review of literature has demonstrated, segments of the program have been sometimes exhaustively evaluated, other segments seem to

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[103] R. Fein, Economics in Mental Health (New York: Basic Books, 1958).

[104] Halpern & Binner, op. cit., p. 44.

have been overlooked by the evaluators, and in still other segments the data is too nebulous or too circumspect to draw any conclusions. Still, the criticism seems valid. To have evaluated segments of the total community mental health program is insufficient, even to have evaluated all segments of the program individually would still be insufficient. The public, the legislators, the administrators, and the client are all looking for the answer to a deceptively simple question, "Is the community mental health center any good?" They want a simple answer like "yes" or "no," not an answer that indicates that the admission rate to the state hospital has declined (or risen), or an answer that indicates that more outpatients are in treatment now than before, or even a more confusing answer that implies that consultation and education have diminished expected referrals. They somehow want all of these separately identifiable segments or sub-programs (or objectives, or criteria) amalgamated into one response. Such a response should take the direction of being comparative across programs ("This center seems to be doing very well, that one not so good, the other one even better, etc.") but also be able to discern why any given center would appear to be doing worse or better. The problem, then, is to decide upon the legitimate areas in which to evaluate a community mental health program, apply a measure to each of these identified areas and then devise a system for putting each of these pieces of information into a consolidated rating with the goal being to assess each program as to its overall effectiveness as compared to the like-programs in the rest of the state, region, county or other group. The remainder of this study will address itself to this

problem; the development of a methodology to take a multiplicity of criteria (each having its own data), apply appropriate weightings to each criterion, and result in an overall measure of program effectiveness. This methodology will then be applied to the community mental health programs in Michigan and the results reported and analyzed.

CHAPTER IV

A METHODOLOGY TO ASSESS OVER-ALL EFFECTIVENESS

> To evaluate a human service enterprise is, in simple terms, to examine and then assign a value to the program.[1]

In their 1969 "Interim Appraisal" of two community mental health centers, (eight were originally included in the study but only two were included in the report because the other six were experiencing "organizational and developmental problems"), Glasscote and associates indicate that social programs can be measured in three stages: (a) the establishment of facilities; (b) the delivery of units of service; and (c) effectiveness. As was noted in the previous chapter mental health services almost never go beyond the first two of these stages. As such, quite a lot is known about the numbers and kinds of facilities, and most agencies have systems to report the units of service that are delivered in the course of a year; but, as yet (and it is just as true today as when it was written in 1969), "almost nothing is known about effectiveness, and this sad observation applies even to the longest-established facilities."[2]

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[1] Walter F. Mondale, "Social Accounting, Evaluation, and the Future of the Human Services," Evaluation, Fall, 1972, p. 29.

[2] R. Glasscote, et. al., The Community Mental Health Center, An Interim Appraisal (Washington, D. C.: Joint Information Service of the American Psychiatric Association and the National Association for Mental Health, 1969), p. 31.

Discussions of methodology in this field are all too often confined to a consideration of only data-gathering techniques. Insufficient attention has been given to the more fundamental questions of the choice of variables or criteria to be considered, the impact or inter-relatedness of one activity on another, the viability of various units of observation, and the analytic designs to be used and their relation to the over-all program.[3] That the field has not progressed beyond data-gathering and into a better conceptualization of the total process is not really surprising. Even one of the foremost proponents of program evaluation, former Secretary of Health, Education, and Welfare, Elliot Richardson has repeatedly asserted that "evaluation is still at a relatively early stage in its own development as an effective technique."[4]

The Evaluation Process

It would seem, therefore, that with the relative newness of the concepts of evaluation to the field of community mental health, it is incumbent to examine the evaluation process in general as a precursor to any statement of specific methodology. Schulberg and his associates at the Harvard Medical School described the evaluation process in the health fields as a circular one, stemming from and returning to our value system.[5] Graphically this is portrayed as follows:

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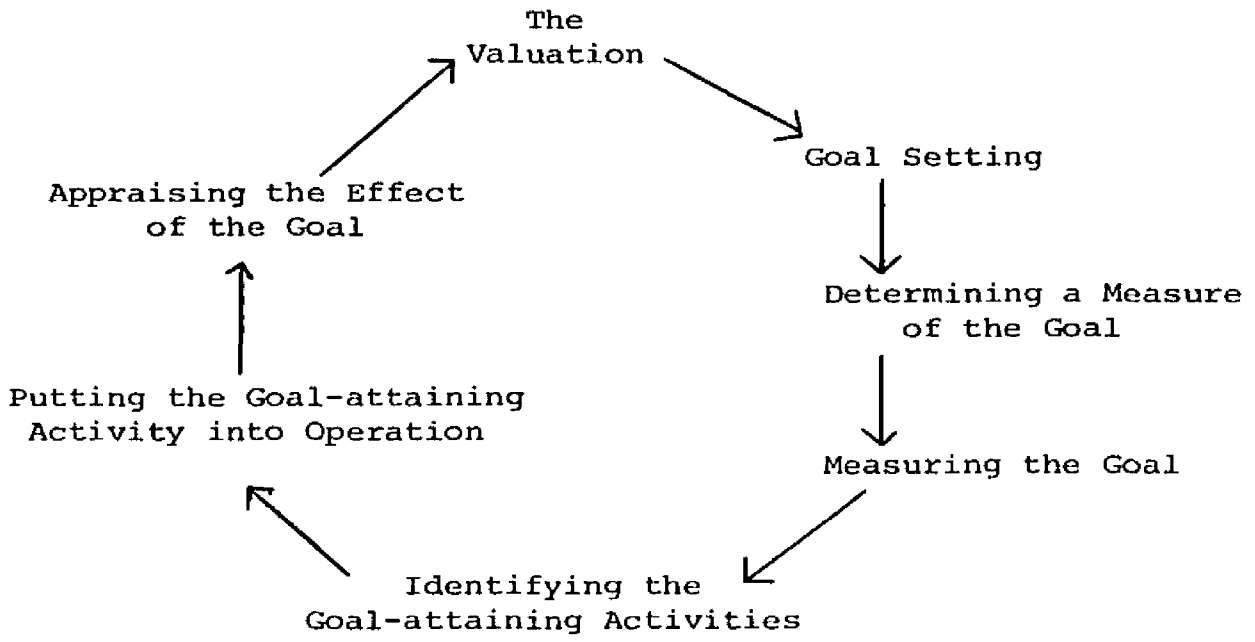
[3]Herbert Menzel, "Scientific Communication: Five Themes from Social Science Research," American Psychologist, 21 (1966): 999-1004.

[4]Elliot L. Richardson, "Conversational Contact," interview by Susan Salasin, Evaluation, Fall, 1972, p. 15.

[5]H. Schulberg, A. Sheldon, and F. Baker, ed., Program Evaluation in the Health Fields, (New York: Behavioral Publications, 1969), p. 30.



It would follow, then, that most of the previous efforts at evaluation, in addition to mostly being merely data-gathering efforts, have largely been without influence of some specific value-oriented goals, leading to certain goal-attaining activities which are then assessed in relation to the value-oriented goal. A measure of effectiveness would then establish the degree to which an organization realizes its goals under a given set of conditions.[6]

That this process can be accomplished in the community mental health field has been doubted by many. Even Schulberg and his associates, who detailed the evaluation process and drew together many evaluation projects in the health fields, wonder whether program evaluation was "so complex that assessment attempts only produce overly simplistic

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[6]Amatai Etzioni, "Two Approaches to Organizational Analysis: A Critique and a Suggestion," Admin. Sci. Quart. 5 (1960): 257-278.

formulations" since it is "impossible to develop a practical design for this type of study."[7] Professor Ernest Gruenberg of Columbia University, and a prolific writer in community mental health, told the Task Force of the Center for Study of Responsive Law in 1972, that "the objective(s) must be stated in such a way that objective data can indicate whether or not the desired state of affairs is present;" but he then continued to state that "present methodologies are in a primitive state of development" and as such, "a scientifically valid evaluation of the community mental health centers program is unfeasible at the present time."[8]

Problems of Methodology

There are then at least three major methodological problems which have led to the pessimism noted above but also which must be dealt with in any study:

1. Complexity: There can be little doubt of the complexity of any organization which deals with human behavior through varied modalities and attempts impact on society in general. Historically, the organizational form constructed to promote accountability has been the pyramid. Pyramidal structures were designed for the implementation of policies and programs initiated by those at the apex. Some have suggested that to promote responsiveness of those workers closer to the base, the pyramidal form should be flattened, allowing for more feedback and initiative at all levels. A more viable concept is to

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[7] Schulberg, et. al., op. cit., p. 4.

[8] F. Chu and S. Trotter, The Mental Health Complex, Part I: Community Mental Health Centers (Washington, D. C.: Center for Study of Responsive Law, 1972), p. III-2.

describe the organizational form as an arena, tending to highlight the negotiations and exchanges among various groups in the community mental health setting. Such an image is clearly more realistic than the pyramid in that it takes into account the interrelationships of outside groups (other service agencies, professional organizations, private practitioners) with the community mental health program. The deficiencies of such an organizational concept are most obviously its complexity and the apparent absence of any directional thrust. Since there is not a "top" to the command structure, the arena relies on "negotiations" among the various parties for the determination of any action.[9]

2. Goal Setting: Traditionally service has been viewed, and in some rather vague ways measured, in terms of that which is offered, such as counseling, psychotherapy, group therapy, even advice, and so on. Good service was viewed as that being offered in a professional manner, by a qualified person who is, in turn, supervised by a qualified supervisor. Service has generally been viewed in terms of process but to be evaluated in terms of goal-setting, service must begin to be viewed in terms of impact. Success must be viewed in terms of outcome rather than in terms of the supposed quality of the procedures used.[10] Professionals in the community mental health field have not readily accepted such a non-traditional approach but with the pressures for evaluation, projected shortages of funding and expansions of

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[9]Harvey M. Freed, "Promoting Accountability in Mental Health Services," American Journal of Orthopsychiatry, October, 1972, p. 763.

[10]H. E. Freeman and C. C. Sherwood, "Research in Large-Scale Intervention Programs," Journal of Social Issues 21, 1 (1965): 11-28.

technology, these professionals are becoming more acclimated to the notion.

3. Adequate Controls: Probably the greatest difficulty in the assessment of any social program is to create truly adequate controls that can tell what the program has accomplished as distinguished from the impact of other forces on the situation.[11] Since such controls are not generally possible, it often becomes necessary to make assumptions regarding the relationship of certain activities and results and the pre-established goals or objectives. For example, empirical research has not clearly demonstrated (at least to the satisfaction of most) that providing psychotherapy, however loosely defined, to a person in acute emotional distress is the best course of action to achieve the objective of a person without acute emotional distress. We must assume the validity of such activities without full research proof.[12] Closely related, but of even further difficulty, is the notion of establishing control groups in the truly experimental model type evaluation. Often we are dealing with total reported population and we must compare with other populations, compare the same populations over periods of time and other such quasi-experimental type designs.

It would seem, then, that the best type of controls that could be established would be in terms of standards for the delivery of service and then compare each program against these standards. But,

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[11] Richardson, op. cit., p. 9.

[12] Schulberg, et. al., op. cit., p. 33.

standards for community mental health programs have not yet been determined, particularly in terms of objective measurement even though the Michigan Department of Mental Health has established a task force to develop such standards.[13] It is understood, however, that a standare is a practical objective, and once established serves as a measure of progress.[14] In the absence of clear-cut, professionally-accepted standards, any evaluation methodology must state some reasonably well accepted goals, translate these into measurable activities, still assuming for the most part the relationship between the activity or occurrence and the desired outcome or impact.

With the complexity of the program, the number of program goals that might be possible, and virtually unlimited number of standards or controls that might be applied, it becomes necessary to determine which specific activities or occurrences have more import than others. A number of different researchers have come up with systems of weighting to portray the different values ascribed to each of these factors. Walker, in a recently reported study on the effectiveness of a manpower program dealing with the hard-core unemployed, used a system of value points for each of three major goals, interrelating the length of employment, hourly wage received and program costs into a "composite score representative of overall program success."[15]

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[13]Michigan Department of Mental Health, "Community Services on the Couch," Link, January 25, 1973, p. 1.

[14]Schulberg, et. al., loc. cit., p. 34.

[15]Robert A. Walker, "The Ninth Panacea: Program Evaluation," Evaluation, Fall, 1972, p. 47.

Donabedian, clearly pointing out that the assignment of weights is completely arbitrary, has applied a weighting scheme to a number of evaluation projects in medical practice.[16] Rice and associates, by combining pieces of data related to deaths, patients transferred, releases via escape or against medical advice with those who were released after maximum benefit, were able to achieve a score, or effectiveness rating, fairly measuring the "social restoration performance of public psychiatric hospitals."[17] In a very similar fashion they assembled an effectiveness score in regard to the success of those patients released from the hospital. In another study, Georgopoulos and Tannenbaum constructed three indexes, each measuring one basic element of a delivery system in a study of organizational effectiveness. When combined, their total score of effectiveness was "significantly correlated with the expert ratings given to the thirty-two delivery stations."[18] Quite recently, within the past few months, a "model" for a value output analysis has been developed to be applied to mental health programs. The "model" makes extensive use of weightings within the formulations with the following rationale: "The translation of program activities and results into economic weight permits the aggegation of different facts about input, process, and output into a unitary measuring system; it focuses analysis on the value rather than the volume of activity or output. Even this small step should

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[16]Avedis Donabedian, "Evaluating the Quality of Medical Care," Milbank Memorial Fund Quarterly 44 (1966): 166-203.

[17]C. E. Rice, et. al., "Measuring Social Restoration Performance of Public Psychiatric Hospitals," Public Health Report 76 (1961): 437-446.

[18]B. Georgopoulos and A. Tannenbaum, "A Study of Organizational Effectiveness," American Sociological Review 22 (1957): 534-540.

be an important improvement over simply counting the numbers of patients admitted, attended, or discharged, and relating these to the amount of money spent."[19] Therefore, along with any standards which may be used to measure the effectiveness of programs must come a system of weighting so that each piece of data relating to each goal can be afforded its proper weight in respect to the other peices of data to be considered.

Objectives-Standards to be Considered

There is an almost endless number of objectives of a community mental health program that could be considered in any study. Similarly, there is probably an infinite number of standards that could be established in support of these objectives. Any study must delimit itself to those objectives and standards that are deemed to be most important and which can be quantified in a manner which lends itself to analysis. Discussions of objectives not considered within the confines of this study will appear in the conclusions with recommendations for additional research and data collection devices which will make possible the inclusion of additional objectives and data and a modification of the proposed framework which is not possible currently in the present state of program and technological development.

In delimiting this study, the following major objectives of community mental health programs will be considered:

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[19]J. Halpern and P. Binner, "A Model for an Output Value Analysis of Mental Health Programs," Administration in Mental Health, Winter, 1972, pp. 40-51.

1. A community mental health program should decrease the admission rate to the state institutions by providing services locally, within the community, and, for those who have been in need of state institutionalization, the community mental health program should assist their return and retention within the community without need of being returned to the state institution.

2. There is, depending upon the estimating mechanism employed, a certain percentage of the population in need of mental health services at any given time and the degree to which the staff of a community mental health program meets that need is measurable in terms of active caseloads and reportable indirect services provided to that community.

3. There will be a reasonable turnover in the caseload with a percent of the population having improved sufficiently within a given time frame that they will no longer be in need of mental health services.

4. Indirect services (consultation and educational services) should be provided both as a means of assisting the clientele receiving the direct services and also as an adjunct to the community sociological processes aimed at providing a better environment in which to live, thereby improving the mental health of the community as a whole.

5. The cost per unit of service or per client served will be within some reasonable and acceptable standard in comparison with like services in other programs.

Underlying each of these objectives are a number of assumptions, some which seem to be substantiated by the empirical research previously reported but some, most obviously remain purely assumptions

since neither a methodology nor a means of data collection has yet been developed to substantiate their validity. The major assumptions made for purposes of this study are:

1. That it is better for a person to receive community mental health services in resolution of his problem than to admit him to the state institution for care and treatment,

2. That the treatment or program that the client receives does, in fact, aid him in the resolution of his mental health problem to the extent that in reasonable time he can be discontinued from costly and specialized services as improved and no longer in need of such services,

3. That indirect services, such as consultation and education, are of worth and should be provided to the community, other social agencies and individuals for the betterment of the mental health of the community, and

4. That costs for services are reasonably standard across agencies and that deviations from a reasonably standard cost are more a factor of administrative influence and efficiency than of actual differential in the services provided.

A Framework for Measurement of Program Performance

The development of a framework which will combine each of the stated objectives into one composite estimate is an intricate and complex task. The formulation which follows is still, of necessity, in the developmental phase and is being reported at this time for the

purposes of portraying the current level of development and as an aid for further work and refinement. It is the intent to refine and modify the formulation as more information becomes available, as more research is completed to substantiate or refute the assumptions, and as better assessment techniques are developed.

It would seem, however, that if performance is to be estimated or measured on the basis of output data related to each of the stated objectives of community mental health it will be necessary to give greater weight to certain of the objectives than to others. For instance, from both the humanitarian and economic point of view, it would seem that local, community treatment of persons in emotional distress rather than admitting them to a state institution is a much higher and more worthy objective than providing community educational programming on mental health concepts (although this is a debatable issue). But if such is assumed to be true, and for purposes of this study it is so assumed, then a system of weighting the data regarding admissions to state institutions must be incorporated within the formulation.

An analysis which would include such factors as a cost-effectiveness of those clients currently being treated in a community agency versus some specified standard incorporating whatever weightings were deemed appropriate could result in a ratio useful in comparing the performance of agencies or programs. Keeping in mind the previously stated objectives of a community mental health program and their underlying assumptions, the following format is proposed as a framework

to achieve a performance measure for individual programs and as a comparison across programs:

$$PS = \frac{\left[N_s(C_i) - N_r(C_r)\right]\left[\frac{A_i}{C_i}\right]}{\left[100\ N_s\right]\left[\frac{N_s}{P_e + N_w}\right]}, \text{ where}$$

PS - Performance Score,

N_s = Number of individuals served within the time period; or, Active Cases at the beginning of the period plus cases activated during the period,

C_i = The Standard (or Average) Cost per Individual, either as a statewide established and accepted standard or, in the absence of such, the average cost per individual served in all programs,

N_r = Number of individuals released during the time period; or, the number of cases closed during the period,

C_r = The Standard (or Average) Cost per Individual Released or terminated from programs established on the basis of statewide program experience,

A_i = The actual cost per individual for the given program to be evaluated,

P_c = The population estimated to be in need of mental health services at any given time, based on some given percent of the population, and

N_w = The weighted number of admissions to the state institution during the time period.

The numerator of the format is, therefore, a cost index of those persons currently receiving services adjusted by the program's cost-efficiency ratio; and the denominator is the number of persons served adjusted by a service-efficiency ratio. If all factors are working to their maximum (the cost per individual is equal to or less than the standard, the number of individuals served is equal or greater than that

estimated to be in need, and there are zero admissions to the state institution), the resultant performance score (PS) will equal or near 0. Any other score is in a negative (Example: -.69) and expresses a poorer performance the farther it moves from 0. A discussion of each of the factors, how they are derived and how they affect the total performance score, follows.

Number of Individuals Served (N_S).--This factor is a composite score of the number of persons admitted to the active caseload during the time period plus those already active on the caseload at the beginning of the time period PLUS the number of consultations performed by the staff during the time period. The number of consultations is included in this factor for a number of reasons:

1. Consultations are provided to individuals who must be counted as the recipients of service even though there is no active case for the individual; it is an indirect service (Example: A consultation with a school teacher regarding one of her students for whom there is not an active mental health case).

2. By adding the number of those served through consultation (indirect) to those who are served by direct programs, we have still only achieved the minimum number who were served in that it is entirely possible and anticipated that consultations may serve more than one individual but with the unavailability of data to better discern actual numbers being served, the consultation is only counted as serving one.

3. With the debate still raging regarding the proportion of time that should be devoted to indirect services as contrasted to

direct services, and until there is research evidence to support either those percents of time or a percent of population that should be in receipt of consultative services (similar to the percent factor in need of mental health services), it seems now only wise, but fitting, that these data items should be added to produce a composite score.

Example - Sample County

Reported Number of Persons Treated in Outpatient Services	3,495
Reported Number of Persons in Day Treatment Services	393
Reported Number of Persons in Community Inpatient Services	139
Reported Number of Consultative Contacts Made	2,633
Total Number of Individuals Served, (N_s)	6,660

The effect of this factor on the total performance score is directly in relation to the total number served in proportion to the total population of the service area; the greater the proportion of individuals served the better the score, the lesser number served the poorer the score.

Standard Cost Per Individual (C_i).--In several of the previously reported prepaid group plans it was determined that a standard cost per individual covered, and a cost per individual served was not too different from the per capita allocations of state funds that are being spent in state community mental health programs. It would therefore seem possible for a standard cost per individual served to be ascribed to a program. Most assuredly, should a national health insurance covering mental health services come into being, a standard cost per individual served would have to be developed. Most states have been loathe to establish such a standard, particularly in the

face of vastly and rapidly developing programs which have yet to reach maximum capacity and in view of the steadily rising costs for services year after year. Instead, most studies have used as a "standard" the average cost over a range of programs and then assessed each as being above or below the average. Use of an average as a standard, however, tends to flatten somewhat the end result; that is, a standard is generally applied that can be achieved by some but most fall below the standard, both for purposes of analysis and for motivational purposes. However, since there are other factors which more drastically affect the final performance score than the standard cost per individual (C_i), it has been determined that the average cost of all programs will suffice for the standard for purposes of this study. The average cost per individual (in this case interchangeable with the standard cost per individual) is calculated by the average cost per unit of service delivery (per interview, day of treatment, or contact) and multiplying that sum by the average number of contacts per individual, as per the following example:

Example - Demonstration State

Total number of reported contact items per time period	1,680,391
Reported expenditures for services during time period	$35,288,212
Average cost per unit of service	$ 21
Total number of individuals served during time period	350,081
Average number of contacts per individual	4.8
Average (Standard) cost per individual served (4.8 x $21), ($C_i$)	$ 100

Since the Standard Cost per Individual applies to all programs and the same figure is used in all calculations, it has the effect of being a

stabilizer in the formula. Within any one given time period, whether the figure is large or small is quite immaterial. However, if the formulation is to be used in successive years or time periods to evaluate performance of programs over a series of time periods, it becomes critical that the same methodology is used for calculating the standard each time. When done so, the smaller the standard cost in each successive year the better the final score will be. To receive a score equal to that of a previous year (in view of steadily rising costs), it is necessary for the program to be increasingly efficient economically or the score will be poorer in the successive years purely as a factor of inflation.

The average cost per unit of service ($21 in the above example) or the average cost per individual served ($100) is a liability against the total funds available for the year. Each of the 350,081 persons served in the above example used $100 worth of service. To reflect this as a liability against the whole, the standard cost per individual is expressed as a negative, or a -21 (or -100) in the formulation.

Number of Individuals Released (N_r).--Movement through the program measured by a count of those persons who were formerly on an active caseload but who, during the time period, have been discontinued as no longer in receiving services. Such a count carries an implication of therapeutic "success" and until better measures are developed to better reflect individual client outcome, a gross measure such as those released from the program suffices for this factor. Obviously the closer this number to the number of individuals treated, the more positive the effect and the better the score. Consideration might be

given, at some later date, to weighting this score as on offset against the consultative contacts being an additive in number of persons served (N_s) if there could be drawn a relationship between the consultative program, to better the environment within the community, and those released from active treatment, to function within that community in which the consultation is made available. No such relationship can be drawn and, as such, the number of persons served (N_s) will always be larger than the number of persons released (N_r) by whatever portion the program is encumbered in indirect services (and the number of cases not able to be closed or released from treatment during the period).

This may appear to be, in some respects, a penalty weighting in favor of direct services, since clients can be released only from direct services. Such a factor, however, prevents a program from becoming imbalanced and devoting a disproportionate amount of its resources into indirect services to the detriment of those in need of direct services. Since it has not been demonstrated that indirect services do, in fact, lessen the demand for direct services, such a factor and its effects are felt justified.

Example - Sample County

Reported Number of Persons Released from Outpatient Services	2,731
Reported Number of Persons Released from Day Treatment	301
Reported Number of Persons Released from Inpatient Services	107
Total Number of Individuals Released (N_r)	3,139

Standard Cost per Individual Released (C_r).--Just as described in developing the Standard Cost per Individual (C_i), it is possible to

discern from the data the number of contacts or units of service received by those persons released from the program. For the purposes here, it will also be possible to use the average cost per individual released as the "standard." Since it has already been determined in the previous example that the cost per unit of service is $21, once the average number of contacts or units of service received by released cases is known it is possible to establish the Standard Cost per Individual Released:

Example - Demonstration State

Total number of reported contact items per time period	1,680,391
Reported Expenditures for Services during time period	$35,288,212
Average cost per unit of service	$ 21
Total number of individuals released during time period	92,614
Total number of reported contacts for released individuals	388,975
Average number of contacts per individual released	4.2
Average (Standard) cost per individual released (4.2 x $21), ($C_r$)	$ 88

As previously indicated the number of persons released will always be substantially less than the number of persons served. Similarly, the number of contacts per individual released will always be less than the average contacts per individual served since the latter contains consultative contacts made in the context of comprehensive programming and not traceable to an individual client. Since the cost per individual released is a part of the total cost of the program, it, too, is considered as a liability against the total cost and is, therefore, also expressed as a negative (-21, or -88 in the formulation).

The resulting sum $\left[N_s\ (C_i) - N_r\ (C_r)\right]$ is the cost liability for those individuals actively receiving service including the indirect or consultative services performed within a given program. This sum, however, has been standardized across programs by using C_i and C_r as constants. Each program receives the same initial liability for each client reduced by the same liability for each released client. The remaining portion of the numerator $\left[\frac{A_i}{C_i}\right]$ adjusts the standardized cost liability by the cost - efficiency ratio of the specific program.

Actual Cost Per Individual (A_i).-- In the same manner in which the average cost per individual was calculated for the statewide program, the actual cost per individual is calculated for each program:

Example - Sample County

Total number of reported contact items per time period	36,721
Reported expenditures for services during time period	$1,033,774
Average cost per unit of service	$ 28
Total number of individuals served during time period	6,660
Average number of contacts per individual	5.5
Actual cost per individual served (5.5 x $28), ($A_i$)	$ 155

The effects of this factor are quite obvious. If the actual cost per individual served is less than the average (standard) cost per individual served the better the effect on the total performance score; but if the cost should exceed that of the average (standard) cost per individual the program is penalized by this factor and the resultant effect is that of a poorer score. Just as C_i and C_r are considered to be liabilities against the statewide total funds available,

similarly the actual cost per individual served in this sample county is a liability against the total funds available for the county. In this example each indivdual served represents $155 liability against the total funds available, $1,033,774. As a result, it is also expressed as a negative (-155) in the formulation.

Population Estimated to Be in Need (P_e).--Earlier, in Table 7 the estimated population in need of services ranged from 6 to 47 percent depending upon the population surveyed and the survey methodology. The reported utilization, however, had a much narrower range, from .64% to 2.36% with only one study exceeding that range (and that one only to a 5% figure). In a preliminary study, as a part of the development of this methodology, data were collected from all known possible sources as to the actual number of clients being seen for mental health services as of a given time. These sources included the public mental health services, public state institutions, veterans facilities, licensed private psychiatric facilities, major third party insurance carriers, prepaid group insurance plans, and private practitioners. Result of this survey indicated that in Michigan some 6% of the population were receiving services.[20] However, in the public community mental health programs, with no apparent waiting list, there were 3.2% of the population being served. Since this study purports to assess only those public community mental health services and since there were no waiting lists for service, the number of persons currently

[20]Michigan Department of Mental Health, "Estimate of MR Population in State," March, 1972, Special Report #107.

receiving services is accepted as the number to be in need of services. It should be pointed out that this percent is used only because of the previously pointed out problem in arriving at an acceptable estimate of those in need of services, and, as was also previously pointed out, it is not felt that a saturation point for mental health services has been achieved in any location so that the absolute maximum percent of population to be expected on a caseload is as yet unknown.

Example - Sample County

County population as reported on the 1970 Census	163,560
Estimated statewide population in need of service	3.2%
Estimated County population in need (P_e)	5,294

Since the 3.2% factor is applied to the population for all programs, this, too, tends to serve as a stabilizer, or constant within the formula. As programs grow and develop, it is entirely possible that the 3.2% estimator will be too small and a re-assessment of the need or a different methodology will need to be employed to arrive at this program standard. It has been suggested that, in the absence of a standard and since it is possible that individual programs may already exceed the 3.2% estimate, an alternate would be to accept the highest percent of population seen in any given program as the "standard for the year" and use such a percent in place of the 3.2% factor. This would tend to penalize all programs with exception of the one which established the standard and for purposes of this study such an application is deemed too harsh; therefore, the 3.2% estimator will be used across programs.

Weighted Admissions to State Hospitals (N_w).--As was noted in the earlier discussions on the impact community mental health programs were making on rates of admission to state institutions, the rates of admission have varied from less than one per thousand to over four per thousand population. If, as has been assumed, one of the prime goals of community mental health programs has been to reduce the admission demands for state hospitals, the individual programs or centers should be evaluated as to their achievement in this area. A simple modifier within the formula to account for the rate, change in rate, or increase in rate does not seem, at this time, to give sufficient import to this prime goal. Although the specific rates may vary, a far greater factor than this variance is the cost; not only the cost in terms of the individual hospitalized, to his family, and to the economy at large,[21] but also the differential in cost between the cost to the state for each person hospitalized in a state institution versus the cost of treating that same person in the community without relying upon the costlier admission to the institution.

By placing a "weighting" factor, (w), within the formula the economic differential is given extensive impact upon the final performance score (PS). In a study done by the Michigan Department of Mental Health,[22] it was determined that the average cost to the state per admission to the state institution was $5,969 and that the average cost per person treated on an outpatient basis through the community

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[21]Halpern & Binner, op. cit., p. 46.

[22]Michigan Department of Mental Health Special Report No. 126, "Summary Performance Measures for MI Hospitals - FY 1971-72," November, 1972.

mental health programs was $185. As such, the treatment within the state institution costs 32.3 times as much as that in the community programs. By weighting each admission by a factor of 32.3, the penalty for increased admissions, or for admissions above the state average, is in terms of the differential cost of the different modalities. The closer any specific program's admission rate comes to 0, the less the impact of this penalty weighting and the more accomplished the program in terms of the prime goal of reducing or preventing admissions to the state hospital. As admissions increase, demonstrating less impact on state institutions, and less accomplishment toward the prime goal, the penalty becomes more dramatic in its effect on the performance score.

Example - Sample County

Number of Admissions to State Institution (within the year)	164
Weighting factor	x 32.3
Weighted admissions to state institutions (N_w)	5,297.2

Over the past few years there has been a dramatic increase in the cost per person treated in a state institution (a combined effect of inflation and increased staff-patient ratios). The weight applied to these admissions can be adjusted as this factor varies. Similarly, it has been assumed that as community programs begin to treat the more severely impaired (who normally require state institution admission), the cost per person treated in the community may rise. This may offset the rising cost in state institutions to some degree or even reduce the weight applied, but this may also be adjusted with experience.

Performance Score (PS).--The performance score is the ratio of the standardized cost liability of those being served in the program $\left[N_s\ (C_i) - N_r\ (C_r) \right]$ adjusted by the cost - efficiency of the program $\left[\frac{A_i}{C_i} \right]$, and the number being served in the program [100 (N_s)] adjusted by the service - efficiency of the program $\left[\frac{N_s}{P_e + N_w} \right]$. (Note: The 100 is added to the denominator as a constant to bring the resulting sum closer to the perfect score of 0. In the example this results in a -1.44 rather than a -144.0.) When all the factors described above are put into the context of the formula,

$$PS = \frac{\left[N_s\ (C_i) - N_r\ (C_r) \right] \left[\frac{A_i}{C_i} \right]}{\left[100\ (N_s) \right] \left[\frac{N_s}{P_e + N_w} \right]}$$

the result will indicate the difference from a perfect score of 0 the program has achieved. The final performance score (PS) results in a negative score (-1.67, -2.93, etc). In carrying through the above example, the performance score would be:

Example - Sample County

$$PS = \frac{\left[6660\ (-\$100) - 3139\ (-\$88) \right] \left[\frac{-\$155}{-\$100} \right]}{\left[100\ (6660) \right] \left[\frac{6660}{5294 + 5297.2} \right]} = -1.44$$

Several factors are notable in the above example. Note first that the cost per individual served within the county (A_i), $155, is higher than the standard cost per individual served (C_i), $100. Had the actual cost per individual served been closer to the standard cost, or even perhaps lower than the standard cost, the result in the Performance Score (PS) would have been closer to the perfect score of 0. If, for instance, the actual cost per individual served would have been $85 rather than $155, the result would have been a performance score of -.79, substantially different than the -1.44 resulting from the higher than standard cost per person served. Similarly, had the admission rate to the state institution been reduced there would have also been a dramatic result in the performance score. If, for instance, the number of admissions to state institutions had been 92 rather than 164, the performance score would have been -.84 rather than -1.44, once again nearer 0, the perfect score. Taking both of the above modifications, a lower actual cost per person served and a lower admission rate to state institutions, an even better performance score (nearer to 0) would have been achieved, in this case a score of -.46 rather than the score of -1.44) which was the initial result. Therefore, as one moves nearer the goals for community mental health programs, the score on the performance, as assessed by this formulation, comes nearer and nearer to a 0 score, showing less distance between actual performance and expected performance.

An index score or performance score, such as those cited above -1.44, -.79, or -.46 has very little meaning, however, unless compared with scores for similar agencies, or unless they are compared

over a period of years from the same agency. Such is the intent of this study; initially to compare performance score among the various community mental health programs in Michigan and to examine why differences within those scores occur, but also as a baseline against which each program can measure its effectiveness over a period of years. Since the formulation lends itself easily to computerization, the massive data for statewide programming in a state as large as Michigan can be easily handled.

CHAPTER V

EXAMINATION OF DATA AND RESULTS

> To use evaluation results for policy-making, we need to know what goes into the formulation of an evaluation study, what its limitations are, and what its findings really mean.[1]

The reporting of data and the presentation of evidence is always the most difficult in any evaluation effort. All too often the manner and format in which the findings are presented will determine the degree of acceptance or non-acceptance granted the work by clinicians and administrators.[2] This work is no exception and in an effort to forestall inevitable criticisms, particularly of the performance score formulation itself, each integral part of the formulation will be individually reported prior to being included in the calculation of an overall performance score.

As indicated previously in Table 5, during the 1972-73 fiscal year, there were 43 community mental health programs in Michigan with geographic areas of responsibility in which 96% of the state population resides. These programs reported service to over 120,000 persons requiring the utilization of over $44 million of public funds. The

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[1] Selma J. Mushkin, "Evaluations: Use With Caution," Evaluation, 1, 2 (1973): 35.

[2] Edward A. Suchman, Evaluative Research (New York: The Russell Sage Foundation, 1967), p. 163.

Michigan Department of Mental Health, in June, 1973, implemented a new data reporting system which required extensive demographic reporting of every client served (excluding name and other personally identifying data as prohibited by law and which could potentially result in violation of client confidentiality), the types of services provided each client and the number of times each client availed himself of such services, and a report of outcome of services upon the completion of services to the client.[3] Obviously, such a system results in an immense data base with literally millions of transactions posted annually. During the first year of implementation of this massive system there were, quite understandably, reporting problems, processing problems, programming problems, and naturally, analysis problems. To apply an evaluation methodology as has been suggested in Chapter IV to the data resulting from a new data system experiencing implementation problems might be considered by some to be foolhardy at best, but to fail to do so seems even more ludicrous in view of the massive effort of thousands of professionals who diligently applied themselves to the accurate reporting of data with the full expectation that such data would be used to evaluate program performance both to justify their continued existence and budget but, more importantly, as an effort to better understand and hopefully improve their service delivery to a clientele too long neglected and poorly understood.

The data used in this study are, therefore, the first year data base of a new data reporting system. Many of the problems inherent in the implementation of such a system have long since been resolved but

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[3]Michigan Department of Mental Health, Community Mental Health Services Data System (Lansing, June, 1973).

some were not resolved until some months into the year. It is with great anticipation that the second year data are awaited to repeat or modify these procedures. For the most part, however, the data which follow are consistent with those reported in previous studies and are presented as a base for understand and evaluation, subject to re-evaluation and refinement in the light of knowledges and experiences of future years.

Number of Individuals Served (N_s), and Need Estimate, (P_e)

The number of individuals served in the various programs of each community mental health service board (county or multi-county area) is reported in Table 9. Since the populations of these geographic area vastly differ it is necessary to calculate a ratio per population for comparison purposes. The methodology for this study does not require the calculation of such a ratio since the population estimated to be in need (P_e) is based on the actual service area population. The ratio is, however, reported in Table 9 to illustrate the range, from .99 per 1,000 (in Lapeer County) to 40.41 per 1,000 (in Mason county), and as an aid to understanding the implications such a difference can make when contrasted with a standard 3.2% of the population or 32.00 persons served per 1,000. It should be noted that only 2 of the 43 areas exceed this standard, Mason county (40.41) and Kalamazoo county (33.75). It would be necessary to serve 2.3 times as many persons statewide to achieve this standard.

TABLE 9.--Number of Individuals Served (N_s), Community Mental Health, 1972-73.

Geographic Area[a]	Number Served, (N_s)	Area Population[b]	Served Per 1,000	Estimated Population In Need, (P_e)[c]
Alger-Delta-Marquette	2,534	109,589	23.12	3,507
Cooper Country	542	54,965	9.86	1,759
Dickinson-Iron	666	36,799	18.10	1,178
Menominee	381	24,207	15.74	775
REGION NO. 1 SUB-TOTAL	(4,441)	(225,560)	(19.69)	(7,219)
Northeast	1,662	99,428	16.72	3,182
Northern	501	63,672	7.87	2,038
North Central	406	44,076	9.21	1,410
Manistee	122	20,119	6.06	644
REGION NO. 2 SUB-TOTAL	(2,829)	(227,295)	(12.45)	(7,274)
Allegan	1,237	68,230	18.13	2,183
Kent	6,945	418,374	16.60	13,388
Lake	15	5,675	2.64	182
Mason	909	22,495	40.41	720
Muskegon	4,267	157,707	27.06	5,047
Newaygo	166	28,570	5.81	914
Oceana	154	18,159	8.48	581
Ottawa	1,899	133,684	14.21	4,278
REGION NO. 3 SUB-TOTAL	(15,592)	(852,894)	(18.29)	(27,293)
Ionia	774	46,274	16.73	1,481
Montcalm	548	40,303	13.60	1,290
REGION NO. 4 SUB-TOTAL	(1,322)	(86,577)	(15.27)	(2,771)

TABLE 9.--Continued.

Geographic Area[a]	Number Served, (N_s)	Area Population[b]	Served Per 1,000	Estimated Population In Need, (P_e)[c]
Bay-Arenac	1,663	103,035	12.79	4,161
Gratiot	1,144	39,476	28.98	1,263
Midland-Gladwin	1,480	79,844	18.54	2,555
REGION NO. 5 SUB-TOTAL	(4,521)	(249,355)	(18.13)	(7,979)
Clinton-Eaton-Ingham	10,825	389,857	27.77	12,475
REGION NO. 6 SUB-TOTAL	(10,825)	(389,857)	(27.77)	(12,475)
Huron	91	33,681	2.70	1,078
Saginaw	3,835	224,573	17.08	7,186
Sanilac	324	35,206	9.20	1,127
REGION NO. 7 SUB-TOTAL	(4,250)	(293,460)	(14.48)	(9,391)
Genesee	5,218	456,827	11.42	14,618
Lapeer	54	54,373	.99	1,740
Shiawassee	1,852	64,874	28.55	2,076
REGION NO. 8 SUB-TOTAL	(7,124)	(576,074)	(12.35)	(18,434)
Berrien	3,344	166,132	20.13	5,316
Calhoun-Branch	1,942	180,203	10.78	5,766
Cass	470	44,703	10.51	1,430
Kalamazoo	6,997	207,328	33.75	6,634
St. Joseph	854	48,346	17.66	1,547
Van Buren	1,356	57,579	23.55	1,843
REGION NO. 9 SUB-TOTAL	(14,963	(704,291)	(21.25)	(22,536)

TABLE 9.--Continued.

Geographic Area[a]	Number Served, (N_s)	Area Population[b]	Served Per 1,000	Estimated Population In Need, (P_e)[c]
Jackson-Hillsdale	1,535	182,506	8.41	5,840
Lenawee	542	82,459	6.57	2,639
REGION NO. 10 SUB-TOTAL	(2,077)	(264,965)	(7.84)	(8,479)
Livingston	847	63,072	13.43	2,018
Monroe	663	121,335	5.46	3,883
Washtenaw	2,925	240,699	12.15	7,702
REGION NO. 11 SUB-TOTAL	(4,435)	(425,106)	(10.43)	(13,603)
Macomb	6,198	664,810	9.32	21,274
Oakland	7,929	946,544	8.38	30,389
St. Clair	2,748	122,307	22.47	3,914
REGION NO. 12 SUB-TOTAL	(16,875)	(1,733,661)	(9.73)	(55,477)
Detroit-Wayne	32,438	2,660,683	12.19	85,142
REGION NO. 13 SUB-TOTAL	(32,438)	(2,660,683)	(12.19)	(85,142)
STATE TOTAL ALL REGIONS	121,692	8,689,778[d]	14.00	278,073

[a]The geographic areas are portrayed on the map, Appendix I.

[b]Michigan, Executive Office of the Governor, Bureau of Program & Budget, Research Division, Michigan Population Data Notes, Vol. 1, No. 4, December 26, 1972.

[c]Estimated Population in Need calculated as 3.2% of area population as per Chapter IV, page 103-104.

[d]State Total population contains only those areas served by community mental health programs. Gross total population for 1972 including areas not served by community mental health programs estimated to be 9,040,751.[b]

Standard Cost Per Individual Served (C_i)

Calculation of standard (or average) cost per individual served for the 1972-73 fiscal year makes use of all the service units reported for individual clients, reported by client case number, on the Staff Activity and Client Attendance reports of the new data system, (Table 10).

TABLE 10.--Standard (Average) Cost per Individual Served, 1972-73.

Program Costs (Gross)	Individuals Served, (N_s)	Cost Per Individual, (C_i)	Average Contacts Per Individual	Cost Per Contact
$41,448,563[a]	121,692[b]	$340.60[c]	11.14[d]	$30.57[e]

[a]Total expenditures amounted to $44,366,989. Board administrative costs, not program related totalled $2,918,426 and were deducted from gross program costs. Source: Michigan Department of Mental Health, Bureau of General Services, Finance Section.

[b]From Table 9.

[c]Program Costs/N_s = C_i

[d]Source: Michigan Department of Mental Health, Bureau of General Services, Data Analysis Section.

[e]C_i/Average Contacts Per Individual = Cost Per Contact

It should be noted that the Standard (or Average) Cost Per Individual (C_i), at $340.60, is mid-range of costs per individual previously reported in Chapter III. Those costs ranged from a low of $135.50 to a high of $603.[4] Although the average number of contacts per individual

[4]M. Glasser and T. Duggan, "Prepaid Psychiatric Care Experience with UAW Members," American Journal of Psychiatry 126, 5 (1969): 679.

and average cost per contact are not essential for completion of this portion of the formulation, the average cost per contact will be used later in calculating the Standard (or Average) Cost Per Individual Released (C_r). At first impression, the average cost per contact, $30.57, might seem disproportionately high, however, it should be borne in mind that this is a composite average cost which combines the average cost of an outpatient interview, the average cost of a day of partial hospitalization, the average cost of a day of in-patient treatment and the average cost of a day of residential care.

Number of Individuals Released (N_r) and Cost (C_r)

Upon termination of services a closure report is submitted for each client served indicating the condition of termination; (1) Improved, (2) Further Treatment Not Recommended, (3) Self-Determined Discontinuance, (4) Discontinued, No Improvement, (5) Referred Elsewhere, (6) Recovered, and (7) Other. The Department of Mental Health, interested particularly in assessing reported outcomes of service prepared a series of reports by agency and by geographic area which detailed the average number of contacts clients had received by each condition of termination listed above.[5] Using these base data reports, the average number of contacts per individual released (or terminated) has been calculated and is reported in Table 11 along with the standardized cost per individual released (C_r). As an example of the procedure

[5]Michigan Department of Mental Health, "Contacts Per Condition of Termination," Reports No. 190-223, August, 1973.

for such calculation, the Clinton-Eaton-Ingham outpatient services terminations and average contacts are as follows:

Condition of Termination	Number Reported	Average Contacts
1. Improved	1,011	8.4
2. Further Treatment Not Recommended	158	4.4
3. Self-Terminated	1,395	4.4
4. No Improvement	317	5.8
5. Referred Elsewhere	165	5.4
6. Recovered	46	10.3
7. Other	193	6.1
Total	3,280	
Area Average		6.7

The Average Contacts Per Released Client ranges from 5.2 in Mason county to 7.5 in St. Clair county; the Standardized Cost Per Individual Released, therefore, ranges from $158.96 (in Mason) to $229.27 (in St. Clair) in contrast to the previously calculated Standard Cost Per Individual Served at $340.60 (Table 10). As was previously noted, in Chapter IV, the number of contacts per individual released will always be less than the average contacts per individual since the latter contains consultative contacts not traceable to the individual client. As a result, the Standardized Cost Per Individual Released will always be less than the Standard Cost Per Individual Served.

The ratio or percent of clients released of the total clients served, although not used in the proposed formulation, is an interesting index and illustrates movement through the program. As can be noted in Table 11, this ratio ranges from 0 in Manistee county to .74 in Mason county (coincidentally contiguous counties in the northwestern

TABLE 11.--Number of Individuals Released (N_r), Community Mental Health, 1972-73.

Geographic Area[a]	Number Released (N_r)	Average Contacts Per Released Client	Standardized Cost Per Individual Released (C_r)[b]	Ratio: Released/ Served[c]
Alger-Delta-Marquette	939	6.5	$ 198.70	.37
Copper Country	201	6.7	204.81	.37
Dickinson-Iron	144	6.6	201.76	.21
Menominee	130	6.8	207.87	.34
REGION NO. 1 SUB-TOTAL	(1,414)	(6.6)	(201.76)	(.31)
Northeast	616	6.3	192.59	.37
Northern	168	7.3	223.16	.33
North Central	174	7.0	213.99	.42
Manistee	0	0	0	0
REGION NO. 2 SUB-TOTAL	(958)	(6.7)	(204.81)	(.33)
Allegan	167	7.2	220.10	.13
Kent	3,720	6.7	204.81	.53
Lake	7	5.4	165.07	.46
Mason	673	5.2	158.96	.74
Muskegon	2,027	6.5	198.70	.47
Newaygo	27	5.8	177.30	.16
Oceana	72	6.8	207.87	.46
Ottawa	821	6.4	195.64	.43
REGION NO. 3 SUB-TOTAL	(7,514)	(6.4)	(195.64)	(.48)
Ionia	309	6.3	192.59	.39
Montcalm	127	6.3	192.59	.23
REGION NO. 4 SUB-TOTAL	(436)	(6.3)	(192.59)	(.32)

TABLE 11.--Continued

Geographic Area[a]	Number Released (N_r)	Average Contacts Per Released Client	Standardized Cost Per Individual Released (C_r)[b]	Ratio: Released/ Served[c]
Bay-Arenac	367	7.0	$ 213.99	.22
Gratiot	512	7.1	217.04	.44
Midland-Gladwin	744	7.1	217.04	.50
REGION NO. 5 SUB-TOTAL	(1,623)	(7.1)	(217.04)	(.35)
Clinton-Eaton-Ingham	4,954	6.7	204.81	.45
REGION NO. 6 SUB-TOTAL	(4,954)	(6.7)	(204.81)	(.45)
Huron	20	7.0	213.99	.21
Saginaw	2,237	7.0	213.99	.58
Sanilac	129	6.6	201.76	.39
REGION NO. 7 SUB-TOTAL	(2,386)	(6.9)	(210.93)	(.56)
Genesee	805	6.1	186.47	.15
Lapeer	6	6.0	183.42	.11
Shiawassee	1,011	6.6	201.76	.54
REGION NO. 8 SUB-TOTAL	(1,822)	(6.5)	(198.70)	(.25)
Berrien	1,337	6.8	207.87	.39
Calhoun-Branch	680	6.5	198.70	.35
Cass	36	6.9	210.93	.07
Kalamazoo	2,466	7.0	213.99	.35
St. Joseph	413	6.7	204.81	.48
Van Buren	409	6.6	201.76	.30
REGION NO. 9 SUB-TOTAL	(5,341)	(6.8)	(207.87)	(.35)

TABLE 11.--Continued

Geographic Area[a]	Number Released (N_r)	Average Contacts Per Released Client	Standardized Cost Per Individual Released (C_r)[b]	Ratio: Released/ Served[c]
Jackson-Hillsdale	962	6.5	$ 198.70	.62
Lenawee	198	6.6	201.76	.36
REGION NO. 10 SUB-TOTAL	(1,160)	(6.5)	(198.70)	(.55)
Livingston	337	6.5	198.70	.39
Monroe	321	7.1	217.04	.48
Washtenaw	1,179	6.9	210.93	.40
REGION NO. 11 SUB-TOTAL	(1,837)	(6.9)	(210.93)	(.41)
Macomb	2,290	7.0	213.99	.36
Oakland	2,822	6.6	201.76	.36
St. Clair	936	7.5	229.27	.34
REGION NO. 12 SUB-TOTAL	(6,048)	(6.9)	(210.93)	(.35)
Detroit-Wayne	11,680	6.6	201.76	.36
REGION NO. 13 SUB-TOTAL	(11,680)	(6.6)	(201.76)	(.36)
STATE TOTAL ALL REGIONS	47,173	6.7	204.81	.38

[a]The geographic areas are portrayed on the map, Appendix I.

[b]Standardized Cost Per Individual Released (C_r) calculated as Average Contacts Per Released Client X Cost Per Contact ($30.57) from Table 10.

[c]Ratio: Released/Served calculated by Number Released divided by Number Served, from Table 9 or N_r/N_s.

section of the state). As is evident, Manistee released no-one from the program during the year with no movement through the program while Mason released from service 74% of those served during the year.

Actual Cost Per Individual Served (A_i)

Just as it was possible to calculate the state-wide average, or Standard Cost Per Individual Served (C_i) in Table 10, it is possible to calculate the geographic area average, or Actual Cost Per Individual Served (A_i). Again, board administrative costs have not been included in calculating the cost per individual served at the county or geographic area level. These costs are not service directed and have been deducted from the program expenditures reported for the 1972-73 fiscal year. The 1972-73 Gross Program Expenditures (excluding board administrative costs), the Actual Cost Per Individual Served (A_i), Actual Number of Contacts Per Client, Average Cost Per Contact, and Cost-Efficiency Ratio (A_i/C_i) are reported in Table 12.

The range of actual cost per individual served in the various programs is from $69.37 in Mason county to $1,145.26 in Huron County. The cost-efficiency ratio (A_i/C_i) would, as a result, show a range of .204 to 3.362 in these respective counties. Average number of contacts per client has a range of from 3.64 in Manistee county to 26.02 in Huron county. Similarly, the cost per contact ranges from $12.75 in Mason county to $115.68 in Monroe county. Note that the STATE TOTAL, ALL REGIONS Average Contacts Per Client (11.14) and the Average Cost Per Contact ($30.57) have been previously reported in Table 10.

TABLE 12.--Actual Cost per Individual Served (A_i), Community Mental Health, 1972-73.

Geographic Area	Program Costs (Gross)	Actual Cost Per Individual (A_i)	Average Contacts Per Client	Average Cost Per Contact	Cost-Eff. Ratio (A_i/C_i)
Alger-Delta-Marquette	$ 713,167	$ 281.48	11.25	$ 25.00	.826
Cooper Country	127,759	235.71	6.86	34.33	.692
Dickinson-Iron	171,696	257.80	7.85	32.81	.757
Menominee	138,650	363.91	12.67	28.70	1.068
REGION NO. 1 SUB-TOTAL	(1,151,272)	(259.23)	(9.53)	(27.18)	(.761)
Northeast	500,888	301.91	12.10	24.90	.884
Northern	99,835	199.27	12.58	15.83	.585
North Central	153,609	378.34	8.24	45.91	1.111
Manistee	34,135	279.80	3.64	76.76	.821
REGION NO. 2 SUB-TOTAL	(788,467)	(278.70)	(10.67)	(26.11)	(.818)
Allegan	448,230	362.35	4.72	76.76	1.064
Kent	3,383,318	487.15	7.44	65.44	1.430
Lake	5,419	361.26	11.66	30.97	1.060
Mason	63,062	69,37	5.44	12.75	.204
Muskegon	1,501,567	351.90	15.47	22.74	1.033
Newaygo	38,374	231.16	10.61	21.78	.679
Oceana	37,876	245.94	10.53	23.34	.722
Ottawa	545,669	287.34	12.42	23.13	.844
REGION NO. 3 SUB-TOTAL	(6,023,515	(386.32)	(10.01)	(38.59)	(1.134)
Ionia	122,426	158.17	7.92	19.96	.464
Montcalm	122,621	223.76	3.45	64.74	.657
REGION NO. 4 SUB-TOTAL	(245,047)	(185.36)	(6.07)	(30.53)	(.544)

TABLE 12.--Continued.

Geographic Area	Program Costs (Gross)	Actual Cost Per Individual (A_i)	Average Contacts Per Client	Average Cost Per Contact	Cost-Eff. Ratio (A_i/C_i)
Bay-Arenac	$ 695,279	$ 418.08	10.22	$ 40.88	1.227
Gratiot	220,873	193.07	7.35	26.24	.567
Midland-Gladwin	355,676	240.32	15.37	15.63	.706
REGION NO. 5 SUB-TOTAL	(1,271,828)	(281.31)	(10.65)	(26.40)	(.826)
Clinton-Eaton-Ingham	3,069,806	283.58	14.14	20.05	.833
REGION NO. 6 SUB-TOTAL	(3,069,806)	(283.58)	(14.14)	(20.05)	(.833)
Huron	104,219	1,145.26	26.02	44.01	3.362
Saginaw	1,051,391	274.15	13.39	20.46	.805
Sanilac	70,703	218.21	7.12	30.62	.641
REGION NO. 7 SUB-TOTAL	(1,226,313)	(288.54)	(13.19)	(21.87)	(.847)
Genesee	2,097,858	402.04	14.44	27.83	1.180
Lapeer	27,989	518.31	18.92	27.39	1.522
Shiawassee	274,346	148.13	6.77	21.87	.435
REGION NO. 8 SUB-TOTAL	(2,400,193)	(336.91)	(12.59)	(26.76)	(.989)
Berrien	1,041,211	311.36	17.93	17.36	.914
Calhoun-Branch	568,184	292.57	12.92	22.64	.859
Cass	120,222	255.79	8.79	29.07	.751
Kalamazoo	1,628,168	232.69	10.78	21.58	.683
St. Joseph	127,190	148.93	8.49	17.54	.437
Van Buren	231,956	171.05	6.10	28.01	.502
REGION NO. 9 SUB-TOTAL	(3,716,931)	(248.40)	(12.04)	(20.63)	(.729)

TABLE 12.--Continued

Geographic Area	Program Costs (Gross)	Actual Cost Per Individual (A_i)	Average Contacts Per Client	Average Cost Per Contact	Cost-Eff. Ratio (A_i/C_i)
Jackson-Hillsdale	$ 441,667	$ 287.73	19.20	$ 14.98	.845
Lenawee	86,474	159.54	9.27	17.20	.468
REGION NO. 10 SUB-TOTAL	(528,141)	(254.28)	(16.61)	(15.30)	(.747)
Livingston	231,777	273.64	15.08	18.14	.803
Monroe	367,153	553.77	4.78	115.68	1.626
Washtenaw	1,529,404	522.87	18.47	28.30	1.535
REGION NO. 11 SUB-TOTAL	(2,128,334)	(479.89)	(15.78)	(30.41)	(1.409)
Macomb	1,903,462	307.10	11.11	27.62	.902
Oakland	2,882,216	363.50	14.65	24.81	1.067
St. Clair	597,888	217.57	10.69	20.35	.639
REGION NO. 12 SUB-TOTAL	(5,383,566)	(319.02)	(12.70)	(25.10)	(.937)
Detroit-Wayne	13,685,615	421.90	8.45	49.88	1.239
REGION NO. 13 SUB-TOTAL	(13,685,615)	(421.90)	(8.45)	(49.88)	(1.239)
STATE TOTAL ALL REGIONS	41,448,563	340.60 = C_i	11.14	30.57	1.000

Number of Admissions to State Institutions, Weighted (N_w)

Great emphasis has consistently been placed on the desirability of community mental health programs having an impact on the rate of admissions to state institutions. The Michigan Department of Mental Health has clearly indicated that one of the prime goals of community mental health programs shall be the reduction in utilization of state institutions for treating the acute and chronic mentally ill and emotionally disturbed. As one of the prime goals it is entirely appropriate that the rate of admissions to state institutions be weighted within the formulation so as to act as a "punishment" to those programs which fail to reduce the rate and to "reward" those which have had impact.

Weights are purely arbitrary in nature and are administratively determined. They can be varied depending upon the emphasis desired and may be changed as warranted. Such is the case with the weighting in this study. In Chapter IV it was reported that the average cost to the state per admission to the state institution was $5,969 and that the average cost per person treated in a community mental health program was $185, or 32.3 times as costly to be treated in the state institution in 1971-72.[6] Recent data indicate a significant change in this relationship. As has already been reported, the average cost per individual served in a community mental health program has risen from $185 in 1971-72 to $340.60 ($C_i$) in 1972-73. Concomitantly, the average number of contacts per individual served has increased from 4.8 to

[6]Michigan Department of Mental Health Special Report No. 126, "Summary Performance Measures for MI Hospitals - FY 1971-72," November, 1972.

to 11.14 which would seem to indicate that more severely handicapped persons are being treated requiring more contacts per individual over a longer period of time. This, in itself, would change the differential to 17.5 times as costly in state institutions. However, a similar change has taken place in relation to state institutions. Although the number of persons admitted for treatment has steadily risen over the past few years, and 1972-73 continued in this same trend, the length of stay of persons admitted has been steadily decreasing. As a result, the cost per individual admitted declines as the number admitted increases. The data for 1972-73 indicate that 23,520 persons were treated at state psychiatric institutions at a cost of over $84 million. The average cost per person treated at a state institution in 1972-73 is now reported to be $3,572, or 10.5 times as costly as the average cost per individual served in a community mental health program.[7] For purposes of this study, and to be consistent with the Department of Mental Health goals, the factor of 10.5 will be applied to each admission in calculating the Weighted Number of Admissions to State Institutions. The number of admissions and the weighted factor are reported in Table 13. Also reported in Table 13 is the combined factor of the Population estimated to be in Need (P_e) from Table 9 and the Weighted Number of Admissions (N_w) or, ($P_e + N_w$).

The Service Efficienty Ratio, or $\frac{N_s}{P_e + N_w}$, assesses the degree to which the specific program is serving the number of persons (weighted) that should be served. To achieve a ratio of 1.0 it would be necessary

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[7]Michigan Department of Mental Health Special Report, "Summary Performance Measures for MI Hospitals - FY 1972-73," Unpublished to date.

TABLE 13.--Weighted Number of Admissions to State Institutions (N_w), 1972-73.

Geographic Area	Number of Admissions	Weighted No. of Admissions (N_w)	Weighted Admissions plus Estimated Need ($N_w + P_e$)	Service Eff. Ratio: ($N_s/N_w + P_e$)
Alger-Delta-Marquette	50	525	4,032	.628
Copper Country	22	231	1,990	.272
Dickinson-Iron	27	284	1,462	.456
Menominee	12	126	901	.423
REGION NO. 1 SUB-TOTAL	(111)	(1,166)	(8,385)	(.530)
Northeast	57	599	3,781	.440
Northern	95	998	3,036	.165
North Central	82	861	2,271	.179
Manistee	61	641	1,285	.095
REGION NO. 2 SUB-TOTAL	(295)	(3,099)	(10,373)	(.273)
Allegan	104	1,092	3,275	.378
Kent	155	1,628	15,016	.463
Lake	19	200	382	.039
Mason	29	305	1,025	.887
Muskegon	64	672	5,719	.746
Newaygo	24	252	1,166	.142
Oceana	13	137	718	.214
Ottawa	82	861	5,139	.370
REGION NO. 3 SUB-TOTAL	(490)	(5,147)	(32,440)	(.481)
Ionia	92	966	2,447	.316
Montcalm	42	441	1,731	.317
REGION NO. 4 SUB-TOTAL	(134)	(1,407)	(4,178)	(.316)

TABLE 13.--Continued.

Geographic Area	Number of Admissions	Weighted No. of Admissions (N_w)	Weighted Admissions plus Estimated Need ($N_w + P_e$)	Service Eff. Ratio: ($N_s/N_w + P_e$)
Bay-Arenac	58	609	4,770	.349
Gratiot	25	263	1,526	.750
Midland-Gladwin	51	536	3,091	.479
REGION NO. 5 SUB-TOTAL	(134)	(1,408)	(9,387)	(.482)
Clinton-Eaton-Ingham	224	2,352	14,827	.730
REGION NO. 6 SUB-TOTAL	(224)	(2,352)	(14,827)	(.730)
Huron	17	179	1,257	.072
Saginaw	38	399	7,585	.506
Sanilac	13	137	1,264	.256
REGION NO. 7 SUB-TOTAL	(68)	(715)	(10,106)	(.421)
Genesee	116	1,218	15,836	.330
Lapeer	47	494	2,234	.024
Shiawassee	38	399	2,475	.748
REGION NO. 8 SUB-TOTAL	(201)	(2,111)	(20,545)	(.347)
Berrien	94	987	6,303	.531
Calhoun-Branch	218	2,289	8,055	.241
Cass	24	252	1,682	.279
Kalamazoo	325	3,413	10,047	.696
St. Joseph	38	399	1,946	.439
Van Buren	80	840	2,683	.505
REGION NO. 9 SUB-TOTAL	(779)	(8,180)	(30,716)	(.487)

TABLE 13.--Continued.

Geographic Area	Number of Admissions	Weighted No. of Admissions (N_w)	Weighted Admissions plus Estimated Need ($N_w + P_e$)	Service Eff. Ratio: ($N_s/N_w + P_e$)
Jackson-Hillsdale	199	2,090	7,930	.194
Lenawee	46	483	3,122	.174
REGION NO. 10 SUB-TOTAL	(245)	(2,573)	(11,052)	(.188)
Livingston	36	378	2,396	.354
Monroe	103	1,082	4,965	.134
Washtenaw	248	2,604	10,306	.284
REGION NO. 11 SUB-TOTAL	(387)	(4,064)	(17,667)	(.251)
Macomb	490	5,145	26,419	.235
Oakland	1,413	14,836	45,125	.176
St. Clair	57	599	4,513	.609
REGION NO. 12 SUB-TOTAL	(1,960	(20,580)	(76,057)	(.222)
Detroit-Wayne	6,321	66,371	151,513	.214
REGION NO. 13 SUB-TOTAL	(6,321)	(66,371)	(151,513	(.214)
STATE TOTALS ALL REGIONS	11,349[a]	119,173	397,246	.306

[a]Does not include admissions from counties not included in the community mental health program.

to be serving at least 3.2% of the population and have eliminated admissions to the state institution. The ratio could also be achieved by treating 10.5 times as many persons as there were admissions to the state institution in addition to the 3.2% necessary population base. This ratio is also reported in Table 13.

The Service Efficiency Ratio ranges from a low of .024 in Lapeer county where the new community mental health program has just been initiated to a high of .887 in Mason county. It should be noted that the program in Mason county served 4% of the population (higher than the 3.2% standard) but experienced 29 admissions to state institutions. To completely offset such an admission rate it would have been necessary to serve an additional 116 persons or a total of 1,025, 4.6% of the population. Other counties also achieved rather high ratios such as Gratiot (.750), Shiawassee (.748), and Muskegon (.746). In each case they had served a caseload which approached or exceeded the 3.2% standard and have dramatically reduced admissions rates as compared to other counties. An even more desirable effect would have been achieved in Mason county had the admission rate been reduced to 18 instead of 29. This reduction would have resulted in a 1.000 Service Efficiency Ratio in view of their increased service population.

The 1972-73 Performance Scores (PS) for Community Mental Health Programs

The performance Score is an indication of how community mental health programs compare among themselves and a single performance score by itself is meaningless. In order to make more evident this

comparison the Performance Scores are rank-ordered from those scoring closest to 0 on to those having the larger negative values. A summary of key factors (the standardized cost liability of each program, the cost effectiveness ratio, the service effectiveness ratio), the Performance Score, and the Rank-Order are presented in Table 14. The programs of specific geographic areas are ranked from one to forty-three; regional sub-totals separately ranked from one to thirteen. Following is an example of the calculation.

The combination of variables produces a range in Performance Scores from -.51 in Mason county to -203.07 in Lapeer county. This is a rather extensive range but with the majority of programs clustering within a ten point range (30 programs scoring between -2.40 and -11.15). With such a distribution it seems reasonable to assume that there may be extreme values at either end of the distribution significantly influencing the mean. A number of the variables along with the final Performance Score were subjected to analysis, a test for outliers,[8] to see if any of the critical variables or the final Performance Score did, indeed, include such extremes.

By observing the values at either end of each distribution selected for examination it can be noted that the higher values appear to be influencing the mean of each distribution causing what can be described as a "medium effect." Such an effect would result in a decision rule at the .10 critical value level with samples of over 25. These critical values are cited in Table 15.

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[8] W. J. Dixon and F. J. Massey, Introduction to Statistical Analysis (New York: McGraw-Hill Book Company, Inc., 1957), p. 275.

TABLE 14.--Performance Score and Rank-Order, 1972-73.

Geographic Area	Program Cost Liability	Cost Eff. Ratio	Service Eff. Ratio	Performance Score[a]	Rank-Order
Alger-Delta-Marquette	- 676,501.10	.826	.628	- 3.51	12
Cooper County	- 143,438.39	.692	.272	- 6.73	21
Dickinson-Iron	- 197,786.16	.757	.456	- 4.93	15
Menominee	- 102,745.50	1.068	.423	- 6.80	22
REGION NO. 1 SUB-TOTAL	(-1,227,315.96)	(.761)	(.530)	(- 3.96)	(2)
Northeast	- 447,441.75	.884	.440	- 5.40	16
Northern	- 133,149.72	.585	.165	- 9.42	29
North Central	- 101,049.34	1.111	.179	- 15.44	36
Manistee	- 41,533.20	.821	.095	- 29.42	40
REGION NO. 2 SUB-TOTAL	(- 767,349.42	(.658)	(.273)	(- 6.53)	(8)
Allegan	- 384,565.50	1.064	.378	- 8.75	27
Kent	-1,603,573.80	1.430	.463	- 7.13	23
Lake	- 3,953.51	1.060	.039	- 71.63	41
Mason	- 202,625.32	.204	.887	- .51	1
Muskegon	-1,050,575.30	1.033	.746	- 3.40	9
Newaygo	- 51,752.50	.679	.142	- 14.90	35
Oceana	- 37,485.76	.722	.214	- 8.21	25
Ottawa	- 486,178.96	.844	.370	- 5.83	17
REGION NO. 3 SUB-TOTAL	(-3,840,596.24)	(1.134)	(.481)	(- 5.80)	(7)
Ionia	- 204,114.09	.464	.316	- 3.87	13
Montcalm	- 162,189.87	.657	.317	- 6.13	19
REGION NO. 4 SUB-TOTAL	(- 366,303.96)	(.544)	(.316)	(- 4.77)	(4)
Bay-Arenac	- 487,883.47	1.227	.349	- 10.31	32
Gratiot	- 278,521.92	.567	.750	- 1.84	3

TABLE 14.--Continued.

Geographic Area	Program Cost Liability	Cost Eff. Ratio	Service Eff. Ratio	Performance Score[a]	Rank-Order
Midland-Gladwin	- 342,610.24	.706	.479	- 3.41	10
REGION NO. 5 SUB-TOTAL	(-1,187,596.68)	(.826)	(.482)	(- 4.50)	(5)
Clinton-Eaton-Ingham	-2,672,366.26	.833	.730	- 2.81	8
REGION NO. 6 SUB-TOTAL	(-2,672,366.68)	(.833)	(.730)	(- 2.81)	(1)
Huron	- 26,714.80	3.362	.072	- 135.01	42
Saginaw	- 827,505.37	.805	.506	- 3.43	11
Sanilac	- 84,327.36	.641	.256	- 6.51	20
REGION NO. 7 SUB-TOTAL	(- 944,271.02)	(.847)	(.421)	(- 4.47)	(4)
Genesee	-1,627,142.45	1.180	.330	- 11.15	33
Lapeer	- 17,291.88	1.522	.024	- 203.07	43
Shiawassee	- 426,871.84	.435	.748	- 1.34	2
REGION NO. 8 SUB-TOTAL	(-2,064,403.00)	(.989)	(.347)	(- 8.25)	(9)
Berrion	- 861,044.21	.914	.531	- 4.43	14
Calhoun-Branch	- 526,329.20	.859	.241	- 9.66	30
Cass	- 152,488.52	.751	.279	- 8.73	26
Kalamazoo	-1,855,479.86	.683	.676	- 2.67	5
St. Joseph	- 206,285.87	.437	.439	- 2.40	4
Van Buren	- 379,333.76	.502	.505	- 2.78	7
REGION NO.9 SUB-TOTAL	(-3,986,164.13)	(.729)	(.487)	(- 3.98)	(3)
Jackson-Hillsdale	- 331,671.60	.845	.194	- 9.41	28
Lenawee	- 144,656.72	.468	.174	- 7.17	24
REGION NO. 10 SUB-TOTAL	(- 476,328.32)	(.747)	(.188)	(- 9.11)	(10)

TABLE 14.--Continued.

Geographic Area	Program Cost Liability	Cost Eff. Ratio	Service Eff. Ratio	Performance Score[a]	Rank-Order
Livingston	- 221,526.30	.803	.354	- 5.93	18
Monroe	- 156,147.96	1.626	.134	- 28.57	39
Washtenaw	- 747,568.53	1.535	.284	- 13.81	34
REGION NO. 11 SUB-TOTAL	(-1,123,082.59)	(1.409)	(.251)	(- 14.21)	(12)
Macomb	-1,621,001.70	.902	.235	- 10.03	31
Oakland	-2,131,250.68	1.067	.176	- 16.29	38
St. Clair	- 721,372.08	.639	.609	- 2.75	6
REGION NO. 12 SUB-TOTAL	(-4,471 920.36)	(.937)	(.222)	(- 11.18)	(11)
Detroit-Wayne	-8,691,826.00	1.239	.214	- 15.51	37
REGION NO. 13 SUB-TOTAL	(-8,691,826.00)	(1.239)	(.214)	(- 15.51)	(13)
STATE TOTALS ALL REGIONS	-31,786,793.07	1.000	.306	- 8.53	25.5

[a]Example of calculation of Performance Score (PS):

$$PS = \frac{\left[N_s(C_i) - N_r(C_r)\right]\left[\frac{A_i}{C_i}\right]}{\left[100\ N_s\right]\left[\frac{N_s}{P_e + N_w}\right]} =$$

$$\frac{\left[2534(-340.60) - 939(-198.70)\right]\left[\frac{-281.43}{-340.60}\right]}{\left[100\ (2534)\right]\left[\frac{2534}{3507 + 525}\right]} = -3.51$$

The variables of (1) the number of persons served per 1,000 population, (2) the ratio of those released to those served, and (3) the service-efficiency ratio were found not to include extreme values, far removed from the main body of the data. These factors all relate to the population being served and/or in need of being served and it is, therefore, safe to assume that all the programs are serving a percent of their populations and that percent is distributed over a single distribution.

The cost of these programs, however, does contain some extreme values as reported on Table 15. The highest value of each, (1) the actual cost per individual served, (2) the average cost per contact, and (3) the cost-efficiency ratio, are significantly different from the other cost-values of the distribution and do represent extreme values. The second highest value of each was not found to be significant and is not considered to be extreme. Two programs produced these three extreme cost indexes; Huron counties with a cost per individual served of $1,145.26 and the resultant cost-efficiency ratio of 3.362, and Monroe county with an average cost per contact of $115.68. None of the lower values of either the population data or the cost data were found to be extreme and were within the normal distribution.

The combination of variables resulting in the overall Performance Score, when subjected to analysis for extremes, contains a number of significant values at the high end of the range. Specifically, the Performance Scores for the following programs are extreme values: Lapeer county (-203.07), Huron county (-135.01), Lake county (-71.63), Manistee county (-29.42), and Monroe county (-28.57).

TABLE 15.--Analysis of Data for Extreme Values.

Variable	Highest Value	2nd Highest Value	3rd Highest Value	3rd Lowest Value	2nd Lowest Value	Lowest Value	Significance[a]
Number Served per 1,000	40.41	33.75	28.98	2.70	2.64	.99	No
Ratio: Released/ Served	.74	.62	.58	.11	.07	0	No
Actual Cost Per Individual	$1,145.26*	$553.77	$522.87	$148.93	$148.13	$69.37	Yes - *
Average Cost Per Individual	$ 115.68*	$ 76.76	$ 76.76	$ 15.63	$ 14.98	$12.75	Yes - *
Cost-Efficiency Ratio	3.362*	1.626	1.522	.437	.435	.204	Yes - *
Service-Efficiency Ratio	.887	.750	.748	.072	.039	.024	No
Performance Score	-203.07*	-135.01*	-71.63*	-1.84	-1.34	-.51	Yes - *
4th value			-29.42*	-2.40			
5th value			-28.57*	-2.67			
6th value			-16.29	-2.75			

[a] $(r_{25+})_{.90}$ = .360, 1st value; .367, 2nd value; etc. per Table 8e, Dixon and Massey, p. 412.

In view of the cost data already being considered extreme for Lapeer and Monroe counties, it is not surprising that the Performance Score is also considered an extreme value. The combination of effects of high cost data (although not extreme) and low service population (also not extreme) results in Performance Scores for Huron, Lake and Manistee counties which are high enough to be considered extreme, sufficiently far enough removed from the remainder of the data.

Although these values may have been found to be extreme, they have not been removed from the data base. The purpose of any evaluation of ongoing programs is to discern information which may be extreme and warrant further study. Discussion of factors which may have contributed to producing these extremes will be included in Chapter VI.

Other Data Comparisons

It is interesting to compare the Program Cost Liability on Table 14 with the Gross Programs Costs on Table 12. The Program Cost Liability is the projected standardized cost of continuing in service those clients who were not released and without adding any new clients in the forthcoming period. Quite reasonably, if the Ratio: Released/Served in Table 11 is high, then the Program Cost Liability is low in that there are fewer clients continued over into the forthcoming year as a liability to the program. Since the Program Cost Liability is standardized, those programs that have a higher Cost Efficiency Ratio (from Table 12) will have a reduced Program Cost Liability to such an extent that they could not continue their present service delivery pattern if this amount were projected as the budgeted amount for services.

Both the Cost Effectiveness Ratio and the Service Efficiency Ratio are reported on Table 14. As the Cost Efficiency Ratio is reduced to the lesser values, and the Service Efficiency Ratio increases toward 1.000, the Performance Score improves (comes closer to 0). In other words, a program's performance is considered improved when more clients are being served at lesser cost. Quality of service at lesser cost is, of course, problematic, however, as a general principle in public programs, the quantity/cost factor is an important one. Program quality will be discussed further in Chapter VI.

The Performance Score (PS) for Sub-Programs

The total program of most community mental health services is sub-divided into four sub-programs: outpatient, inpatient, partial hospitalization, and residential. Not all the geographic areas in Michigan have all four sub-programs in operation, however, they all have in operation the basic outpatient services. Through some minor modification of the Performance Score formulation, it is possible to individually assess each of these four sub-programs. Since not all four sub-programs are in operation throughout the state, only the outpatient services will be reviewed in this study.

The modification necessary to apply the formula to outpatient services only is in the portion dealing with the Estimated Population in Need. There is no clear evidence to indicate what portion of a population in need should be served in each of these sub-programs or in what proportions. In the absence of such evidence (which could be used as standards), and assuming that each of the four types of service

are needed to some as yet unspecified degree, it is proposed that the statewide percent of persons receiving service in each sub-program be accepted as the standard. For these purposes, counting the 121,692 persons served in 1972-73, 76,343 were served by outpatient programs, or 62.73%. This percentage could be applied to either the Population Estimated to be in Need (P_e) or to the combined factor of the (P_e) and the Weighted Number of Admissions, ($P_e + N_w$). The latter has been chosen for purposes of this study, and the results when utilizing this methodology on reported outpatient data and expenditures for fiscal 1972-73 is summarized in Table 16. It should be noted that the standard (or Average) Cost per Individual Served (C_i) for Outpatient Services is $335.96; or $23.17 per contact with an average of 14.5 contacts per individual.

Since 62.73% of all persons served by programs are outpatient, it was not anticipated that there would be major differences between the overall and outpatient rankings, however, it was expected that some shifting of ranks would occur. For instance, Mason county ranks first on both, Shiawassee second on both, but Van Buren has moved up to third on the outpatient rank-order while only 7th in the overall score. St. Joseph, although third in the overall scores, dropped to sixth on the outpatient ranks. At the other end of the scale, Lapeer county was 43rd on both, Huron 42 on both, Lake 41 on both, but Detroit-Wayne dropped to fortieth on the outpatient rank-order from a position of 37th on the overall rankings. There are, in addition, many other interesting shifts, reported in Table 17.

TABLE 16.--Performance Score and Rank-Order for Outpatient Programs, 1972-73.

Geographic Area	Number Served (N_s)	Number Terminated (N_r)	Cost Per Individual Released (C_r)	Actual Cost Per Individual (A_i)	Population Estimate ($P_e + N_w \times 62.73$)	Cost Eff. Ratio	Serv. Eff. Ratio	Perf. Score	Rank-Order
Alger-Delta-Marquette	2,108	730	$ 150.60	$ 176.02	2,361	.524	.893	- 1.67	4
Cooper Country	472	197	155.24	224.99	1,248	.670	.378	- 4.81	15
Dickinson-Iron	504	140	152.92	253.98	917	.756	.550	- 4.03	11
Menominee	263	124	157.56	380.04	565	1.131	.465	- 6.37	23
REGION NO. 1	(3,347)	(1,191)	(150.60)	(211.02)	(5,091)	(.628)	(.657)	(- 2.69)	(2)
Northeast	983	493	145.97	316.99	2,372	.943	.414	- 5.99	22
Northern	497	164	169.14	168.98	1,904	.503	.261	- 5.40	19
North Central	364	174	162.19	345.85	1,425	1.029	.255	-10.43	36
Manistee	122	0	0	206.99	806	.616	.151	-13.71	38
REGION NO. 2	(1,966)	(831)	(155.24)	(214.00)	(6,507)	(.637)	(.302)	(- 5.70)	(7)
Kent	3,044	1,308	155.24	459.02	9,413	1.366	.323	-11.39	37
Lake	15	7	125.12	360.98	240	1.074	.063	-47.33	41
Mason	905	673	120.48	69.00	643	.205	1.407	- .36	1
Muskegon	3,205	1,233	150.60	232.04	3,581	.690	.895	- 2.14	7
Newaygo	166	27	134.39	229.02	731	.682	.227	- 9.44	32
Oceana	154	72	157.56	246.00	450	.732	.342	- 5.61	20

TABLE 16.--Continued

Geographic Area	Number Served (N_s)	Number Terminated (N_r)	Cost Per Individual Released (C_r)	Actual Cost Per Individual (A_i)	Population Estimate ($P_e + N_w \times 62.73$)	Cost Eff. Ratio	Serv. Eff Ratio	Perf. Score	Rank-Order
Ottawa	1,275	486	$ 148.29	$ 304.98	3,217	.908	.396	- 6.41	24
Allegan	575	167	166.82	303.01	2,048	.902	.281	- 9.23	31
REGION NO. 3	(9,339)	(3,973)	(148.29)	(304.98)	(20,323)	(.908)	(.460)	(- 5.39)	(6)
Ionia	424	229	145.97	186.99	1,535	.557	.276	- 5.19	17
Montcalm	368	103	145.97	198.00	1,086	.589	.339	- 5.13	16
REGION NO. 4	(792)	(332)	(145.97)	(191.98)	(2,621)	(.571)	(.302)	(- 5.20)	(5)
Bay-Arenac	1,282	351	162.19	369.05	2,986	1.098	.429	- 7.46	26
Gratiot	670	312	164.50	232.03	957	.690	.700	- 2.56	9
Midland-Gladwin	1,368	728	164.50	191.96	1,939	.571	.706	- 2.01	5
REGION NO. 5	(3,320)	(1,391)	(164.50)	(267.95)	(5,882)	(.798)	(.564)	(- 3.78)	(3)
Clinton-Eaton-Ingham	7,127	3,280	155.24	232.05	8,952	.690	.796	- 2.29	8
REGION NO. 6	(7,127)	(3,280)	(155.24)	(232.05)	(8,952)	(.690)	(.796)	(- 2.29)	(1)
Huron	87	20	162.19	1,013.93	789	3.018	.110	-81.95	42
Saginaw	2,044	733	162.19	335.02	4,758	.997	.430	- 6.44	25
Sanilac	324	129	152.92	215.02	773	.640	.419	- 4.20	13

TABLE 16.--Continued.

Geographical Area	Number Served (N_s)	Number Terminated (N_r)	Cost Per Individual Released (C_r)	Actual Cost Per Individual (A_i)	Population Estimate ($P_e + N_w$ x 62.73)	Cost Eff. Ratio	Serv. Eff. Ratio	Perf. Score	Rank-Order
REGION NO. 7	(2,455)	(882)	$(159.87)	$(343.98)	(6,320)	(1.024)	(.388)	(- 7.35)	(9)
Genesee	3,092	413	141.34	337.94	9,927	1.006	.311	-10.26	34
Lapeer	54	6	139.02	348.99	1,401	1.039	.039	-85.40	43
Shiawassee	1,602	881	152.92	134.97	1,553	.402	1.032	- .98	2
REGION NO. 8	(4,748)	(1,300)	(150.60)	(269.99)	(12,881)	(.804)	(.369)	(- 6.42)	(8)
Berrien	2,250	599	157.56	338.96	3,948	1.009	.570	- 5.21	18
Calhoun-Branch	1,557	549	150.60	302.01	5,047	.899	.309	- 8.23	29
Cass	434	30	159.87	191.02	1,055	.568	.411	- 4.49	14
Kalamazoo	4,754	1,497	162.19	243.98	6,282	.726	.757	- 2.73	10
St. Joseph	694	359	155.24	151.03	1,221	.449	.568	- 2.02	6
Van Buren	1,002	387	152.92	90.02	1,697	.268	.590	- 1.26	3
REGION NO. 9	(10,691)	(3,421)	(157.56)	(250.06)	(19,230)	(.744)	(.556)	(- 3.82)	(4)
Jackson-Hillsdale	1,335	870	150.60	304.97	4,968	.908	.269	- 8.03	27
Lenawee	376	144	152.92	191.04	1,958	.568	.192	- 8.20	28
REGION NO. 10	(1,711)	(1,014)	(150.60)	(280.02)	(6,926)	(.833)	(.247)	(- 8.32)	(10)

TABLE 16.--Continued.

Geographical Area	Number Served (N_s)	Number Terminated (N_r)	Cost Per Individual Released (C_r)	Actual Cost Per Individual (A_i)	Population Estimate ($P_e + N_w \times 62.73$)	Cost Eff. Ratio	Serv. Eff. Ratio	Perf. Score	Rank-Order
Livingston	843	333	$ 150.60	$ 275.00	1,503	.818	.561	- 4.03	11
Monroe	663	321	164.50	457.00	3,108	1.360	.213	-16.37	39
Washtenaw	2,431	1,100	159.87	490.07	6,452	1.458	.377	-10.20	33
REGION NO. 11	(3,937)	(1,754)	(159.87)	(438.05)	(11,063)	(1.304)	(.356)	(- 9.70)	(12)
Macomb	4,635	1,701	162.19	310.97	16,546	.926	.280	- 9.14	30
Oakland	6,576	2,197	152.92	285.03	28,229	.848	.233	-10.37	35
St. Clair	1,322	600	173.78	350.06	2,824	1.042	.468	- 5.72	21
REGION NO. 12	(12,533)	(4,498)	(159.87)	(300.98)	(47,599)	(.896)	(.263)	(- 9.49)	(11)
Detroit-Wayne	14,377	3,943	152.92	568.01	84,301	1.690	.171	-29.06	40
REGION NO. 13	(14,377)	(3,943)	(152.92)	(568.01)	(84,301)	(1.690)	(.171)	(-29.06)	(13)
STATE TOTAL ALL REGIONS	76,343	27,810	155.24	335.96	237,696	1.000	.321	- 8.71	29.5

TABLE 17.--Comparison of Performance Scores and Ranks.

Geographic Area	Overall Performance: Score	Overall Performance: Rank	Outpatient Performance: Score	Outpatient Performance: Rank
Alger-Delta-Marquette	- 3.51	12	- 1.67	4
Cooper Country	- 6.73	21	- 4.81	15
Dickinson-Iron	- 4.93	15	- 4.03	11
Monominee	- 6.80	22	- 6.37	23
REGION NO. 1	(- 3.96)	(2)	(- 2.69)	(2)
Northeast	- 5.40	16	- 5.99	22
Northern	- 9.42	29	- 5.40	19
North Central	-15.44	36	-10.43	36
Manistee	-29.42	40	-13.71	38
REGION NO. 2	(- 6.53)	(8)	(- 5.70)	(7)
Allegan	- 8.75	27	- 9.23	31
Kent	- 7.13	23	-11.39	37
Lake	-71.63	41	-47.33	41
Mason	- .51	1	- .36	1
Muskegon	- 3.40	9	- 2.14	7
Newaygo	-14.90	35	- 9.44	32
Oceana	- 8.21	25	- 5.61	20
Ottawa	- 5.83	17	- 6.41	24
REGION No. 3	(- 5.80)	(7)	(- 5.39)	(6)
Ionia	- 3.87	13	- 5.19	17
Montcalm	- 6.13	19	- 5.13	16
REGION NO. 4	(- 4.77)	(4)	(- 5.20)	(5)
Bay-Arenac	-10.31	32	- 7.46	26
Gratiot	- 1.84	3	- 2.56	9
Midland-Gladwin	- 3.41	10	- 2.01	5
REGION NO. 5	(- 4.50)	(5)	(- 3.78)	(3)
Clinton-Eaton-Ingham	- 2.81	8	- 2.29	8

TABLE 17.--Continued.

Geographic Area	Overall Performance: Score	Overall Performance: Rank	Outpatient Performance: Score	Outpatient Performance: Rank
REGION NO. 6	(- 2.81)	(1)	(- 2.29)	(1)
Huron	-135.01	42	-81.95	42
Saginaw	- 3.43	11	- 6.44	25
Sanilac	- 6.51	20	- 4.20	13
REGION NO. 7	(- 4.47)	(4)	(- 7.35)	(9)
Genesee	- 11.15	33	-10.26	34
Lapeer	-203.07	43	-85.40	43
Shiawassee	- 1.34	2	- .98	2
REGION NO. 8	(- 8.25)	(9)	(- 6.42)	(8)
Berrien	- 4.43	14	- 5.21	18
Calhoun-Branch	- 9.66	30	- 8.23	29
Cass	- 8.73	26	- 4.49	14
Kalamazoo	- 2.67	5	- 2.73	10
St. Joseph	- 2.40	4	- 2.02	6
Van Buren	- 2.78	7	- 1.26	3
REGION NO. 9	(- 3.98)	(3)	(- 3.82)	(4)
Jackson-Hillsdale	- 9.41	28	- 8.03	27
Lenawee	- 7.17	24	- 8.20	28
REGION NO. 10	(- 9.11)	(10)	(- 8.32)	(10)
Livingston	- 5.93	18	- 4.03	11
Monroe	- 28.57	39	-16.37	39
Washtenaw	- 13.81	34	-10.20	33
REGION NO. 11	(- 14.21)	(12)	(- 9.70)	(12)
Macomb	- 10.03	31	- 9.14	30
Oakland	- 16.29	38	-10.37	35
St. Clair	- 2.75	6	- 5.72	21
REGION No. 12	(- 11.18)	(11)	(- 9.49)	(11)

TABLE 17.--Continued

Geographic Area	Overall Performance: Score	Overall Performance: Rank	Outpatient Performance: Score	Outpatient Performance: Rank
Detroit-Wayne	-15.51	37	-29.06	40
REGION NO. 13	(-15.51)	(13)	(-29.06)	(13)
STATE TOTALS ALL REGIONS	- 8.53	25.5	- 8.71	29.5

In the above it is particularly interesting to look at dramatic shifts such as that of St. Clair county, in 6th rank with a -2.75 score for the overall performance but dropping to 21st with a score of -5.72 for outpatient services. Examination of the data indicates that their average cost per outpatient was substantially higher ($350.06) than the average cost per individual served program-wide ($217.57). Persons must be receiving services in one of the other program types (inpatient, partial hospitalization, or residential) at a cost sufficiently low to reduce the program-wide average to that stated. This differential is further illustrated by the cost-efficiency ratios: .639 for the overall program-wide performance, but 1.042 for the outpatient performance. In terms of population served, the service efficiency ratio is less for the outpatient program (.468) than for the overall program (.609). This would tend to indicate that more persons are being seen proportionately in the other program types than is expected on the basis of the state-wide averages. As a result of these effects, the Outpatient Performance Score is lower than the overall Performance Score. One would expect one of the other program types performance score to be

better than the overall score (and in fact such is true: the Performance Score for inpatient services in St. Clair county is -.27 with a rank order of 2nd. Note: State-wide data for the other program types are not presented as a part of this study but are in the process of being developed by the Department of Mental Health.)

In contrast, Livingston county scored better on Outpatient services (-4.03, rank 11th) than for the overall Performance Score (-5.93, rank 18th). In examining the data from Livingston county, the cost per individual served is very nearly the same; $273.64 in the overall performance and $275 in the Outpatient performance. The major difference was in the population served. The Service Efficiency Ratios are .354 in the overall, and .561 in the outpatient. It should be noted that the number of persons served in the overall is 847 and in outpatient 843; apparently only 4 persons were served in other than outpatient services. In this case the standard of 62.75% of the need estimator has worked in favor of the Livingston outpatient program but illustrates the desirability of a well-rounded program utilizing all program types if the overall program-wide Performance Score is to achieve at a higher level.

Summary of Data and Results

Data have been presented in regard to both the service population and the costs for each of the community mental health programs in Michigan. The data have then been subjected to the methodology presented in Chapter IV resulting in a Performance Score (PS) for each program. The Tables presented in the text provide illustration of the actual data but also the procedure for using the methodology. The

Performance Scores are then rank-ordered to discern those programs which are achieving at a higher level than others based on the methodology as presented. Further, sub-sets of the data by type of program may be utilized for out-patient services to the exclusion of the other program types has been demonstrated. The results of the Out-patient Performance Scores are then compared with the overall Performance Scores to examine factors that may be contributing to shifts in ranks. The methodology, therefore, provides a vehicle with which one can look at programs across the state in some standardized and size-equated manner to make judgments about the rankings of programs in relation to the Department of Mental Health, and, for that matter, the nation-wide goals for community mental health.

CHAPTER VI

IMPLICATIONS OF PERFORMANCES EVALUATION FOR PROGRAM ADMINISTRATION

> A major paradox of the twentieth century is this: while organizations are becoming every more important as a way of meeting human needs, they are also becoming less manageable.[1]

To examine the implications of the performance evaluation methodology presented is, in itself, a major undertaking and could, no doubt, be the subject of a series of studies in their own right. An attempt will be made to highlight the major issues centering around the methodology previously presented, the areas of concern not yet adequately covered by the methodology and some recommendations, both as to further refinement of the formulations and to its uses and implementation in the state program.

In recalling the original motivation for the development of the performance evaluation methodology, the legislator, the citizen advocate, the client, and the mental health staff themselves, all seem to be asking "Is the program any good?", "How do you know if it's any good or not?", "What are we getting for all the money?", and other closely related questions. The degree to which the methodology presented here answers those questions is probably debatable but at least there are

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[1] Bertram M. Gross, Organizationa And Their Managing (New York: The Free Press, 1964), p. vii.

some answers suggested, although they may still have to be hedged in the terms of our present knowledge which is admittedly meager but growing. We can now, for instance, say "yes, that program looks like it is doing a good job (in relation to our goals, the other programs, and on the basis of this methodology)"; or we can say "This program looks good/not-so-good because the cost per contact and number of persons served is good/not-so-good (in relation to the other programs)"; and we can quite clearly say, "All that money goes to provide "X" kinds of services to "X" number of persons at "X" cost each, with "X" results." Even the latter kind of statement is a vast improvement over the previous kind of justification which usually came out something like "All that money goes to buy the kind of program that, in our professionsl judgment, is the kind of program the people need." There are, however, a great many problems still unresolved and our answers to such deceptively simple questions are tentative at best. It is in the interest of those still unresolved problems that this last chapter is addressed. To merely cite problems, however, is counter-productive; attempts will be made, therefore, to offer suggestions or at least approaches toward their resolution.

The Data Problem

The data problem is really a two-fold dilemma; a problem first of getting accurate reporting and second of processing and retrieving the information. Careful examination of the reporting of at least two of the programs considered in Chapter V, clearly demonstrates a

reporting problem. Both Huron and Monroe county have had community mental health programs prior to the 1972-73 reporting period. Monroe county reported 663 clients served in 1972-73 (Table 9) but previous statistical data from fiscal 1971-72[2] indicates that they served 1,127 (or almost double that reported in 72-3) and reported 12,114 client contacts (as contrasted 3,180) or an average of 10.7 contacts per client (contrasted with 4.8), and with the same number of professionals on the staff. The resultant costs, instead of an average of $21 per contact in 1971-72, are now over $115 per contact (over 5 times more costly). One of two possible conclusions are suggested; (1) the Monroe county staff put in as many hours of employment but accomplished far less in reportable services, or (2) the Monroe county failed to report a large portion of their reportable services so that the year-end print-outs of their data do not accurately reflect their true work-load of delivered services. The latter has been determined to be true by Department of Mantal Health staff and corrective action has been initiated to assure correct data reporting in fiscal year 1973-74. The situation in Huron county is very similar, with vast amounts of work effort never being reported on the Community Mental Health Services Data System, resulting in a serious deficit in the data being used to calculate their Performance Score (PS).

As the results of the Performance Score, and other Department of Mental Health data analyses, become available it would seem that the staffs of these and other programs would recognize the necessity of accurate data reporting and make efforts to comply with the Department

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[2]Michigan Department of Mental Health, "Statitical Report, Part 2, Community Services, Final Year End, June 30, 1972," Systems and Data Processing Division, July 31, 1972.

of Mental Health requirements. It is for this reason that the Huron and Monroe county data, even though known to be inaccurate, were not deleted from the data base and the methodology was applied. To draw an analogy with the old farmer who hit his mule between the eyes with a board before saying "Gidde-up," and explained, "You have to get their attention first!" If nothing else, their extremely poor Performance Scores should get their attention.

The data from three other programs produced Performance Scores which were considered to be extreme (as reported in Table 15), Lapeer, Lake and Manistee counties. Each of these three programs were completely new in fiscal year 1972-73 with the problems of beginning services, recruiting staff, finding office space, and making known the availability of their services. As a result they were unable to operate for the full fiscal year. It would have been preferable to have pro-rated their services over the full year as an estimate rather than to have used the part-year data as if it were full-year; insufficient information was available to accurately project a full-year estimate. Their poor Performance Scores must be considered in light of this knowledge, and any decisions or corrective actions contemplated by either the program staff or the Department of Mental Health on the basis of this performance evaluation would be best deferred until the methodology can be repeated for a later time period (fiscal 1973-74, or at least the six month period of July - December 1973, which data are now available). It would seem important, as other new programs develop, that adequate information be collected as the program phases in so as to accurately project their data to full-year.

The other dimension of the data problem, once the reporting has achieved an acceptable level, has to do with the processing and retrieving of the reported data. Although the new data system of the Department of Mental Health has accumulated millions of entries in over 18 months of operations there is still a paucity of statistical reports available of the virtual myriad possible. It would seem that equally important in a balanced data system would be accuracy and promptness of reporting in both directions -- data coming in from the agencies and statistical reports flowing back. Discussions of the factors included in the performance evaluation methodology between the Department staff and the program staff should do much to highlight and resolve this problem.

One particularly pessimistic administrator has even reported that, "A great part of the information obtained. . .is contradictory, a still greater part is false and by far the greatest part if doubtful, . . .(it is) fortunate if these reports in contradicting each other produce a sort of balance and themselves arouse criticism."[3] Utilization of methodologies such as that proposed along with other reporting feed-back mechanisms should go a long way toward stemming such utter pessimism as that expressed above.

The Quality-Quantity Problem

Age-old, this problem rears its emotionally-laden head in almost any data-based evaluation effort. Even the ancient Roman philosopher Seneca declared that "it is quality rather than quantity that

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[3]M. J. Moroney, Fact From Figures (London: Penguin Publishers, 1956), p. 3.

matters." The other extreme was expressed by Lord Kelvin, early twentieth-century British physicist; "when you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind." Summing up this historical controversy, Loontief points out that "the dialectical juxtaposition of quality and quantity, of uniqueness and repetition, of abstract theory and concrete description, has from far back been the 'leitmotif' of the running methodological controversy in social science."[4]

No attempt will be made here to resolve this controversy. But, to have ignored its existence would have been folly. This study, this methodology, as has been the case with so many others, will be subject to criticism for its failure to relate to the quality of client services rather than the quantity of client services. Responses which relate to a cost factor and an outcome factor will do little to appease the insistant detractor. It is, therefore, deemed far better to admit the fault and suggest avenues for further study with, hopefully, revision of the methodology to follow.

Services, in contrast to goods, once produced, immediately vanish. They are more "ephemeral than the shortlived butterfly."[5] A service, even though it may be given over a long period of time, ceases to exist the minute it is over, except as it is recorded or in terms of an impact it has made. To assess quality of service then, rather than quantity or time, requires far more complex mechanism at two

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[4]Wassily Leontief, "The Problem of Quantity and Quality Economics," ed., Danial Lerner, Quality and Quantity (New York: The Free Press, 1961), p. 117.

[5]Gross, op. cit., p. 392.

possible junctures. Fortunately, it is felt, both can be measured and instrumentation is in pilot process to attempt both.

A community mental health program in Hennepin county, Minnesota, (Minneapolis), began work in 1968 on a particular assessment methodology called "Goal Attainment Scaling,"[6] an intricate arrangement whereby different clinicians with the client, set goals for treatment and then assess the degree to which these goals are attained. In a pilot project, currently funded by a grant from the Michigan Department of Mental Health, drawing from this previous body of knowledge, the Shiawassee county community mental health staff are attempting to standardize the multi-dimensional goal-setting process, quantify the results and computerize the processing of data.[7] Should their efforts prove successful, the next logical step would be to introduce into the Performance Score methodology either a new variable within the population served portion of the formulation, or preferably a weighting of those served by the degree to which the goals established were being attained, assessed at periodic intervals. This would introduce a spark of quality - assessment of services which could dramatically influence the population served and cost-efficiency (numerator) of the formula, thereby influencing the quantity assessment with a quality factor. Should the efforts of Shiawassee county prove to no avail, the Department should continue its effort toward the development of such an

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[6] Z. Stelmachers, et. al., "Hennepin County Crisis Intervention Center: Evaluation of Its Effectiveness," Evaluation, Fall, 1972.

[7] Shiawassee County, Community Mental Health Services Board, Model For Evaluating Community Mental Health Services, Department of Mental Health Project Grant No. 6-74 (March 21, 1973).

assessment technique to assess quality of professional services over some measurable indices.

The Performance Score formulation already contains the beginning of an index on which to assess outcomes of services but unfortunately the data systems design prevents full utilization of the data to accomplish this end. As was earlier discussed (in Chapter V), the condition on termination is currently reported when services are terminated for every client. The seven possible conditions: (1) improved, (2) further treatment not recommended, (3) self-terminated, (4) no improvement, (5) referred elsewhere, (6) recovered, and (7) other, are overlapping and not mutually exclusive. It is quite reasonably possible for a client to have terminated with "further treatment not recommended" because he has "improved" or "recovered," and these two conditions alone seem to be a redundancy. It is even possible for services to have been terminated with "further treatment not recommended" within the agency, because "no improvement" has been seen and the client is, therefore, "referred elsewhere." A revision of this portion of the termination report should be made, with care given to make certain that categories are exclusive and not overlapping. When such is done weighting along a quality-of-outcome criteria can be made of the number of persons released. This factor would also influence the number served--cost efficiency ratio, thereby effecting the total performance score.

The Consultation--
Preventative Services
Problem

That the methodology described in Chapter IV and reported in Chapter V fails to take into account extensive consultative and

preventative services offered by various community mental health programs will be a cogent argument for those wishing to employ it. In the earlier discussion of consultation (in Chapter III), the scarcity of substantive research in this program area was reported. Even more disheartening than its scarcity is the apparent waning of interest into research in this area as evidenced by the lesser frequency with which this research appears in the current literature (in contrast to the mid-1960's). A renewed interest is desparately needed particularly to study the effects (or lack thereof) of mental health consultation on the human services system.

Mental health professionals reported upwards of 25% of their time as being spent in activities related to consultation with other agencies and educational programs and other community contacts concerning "mental health" (emphasis on the "health"), with none of these contacts in relation to a specific, identifiable client. Philosophically, this time commitment, probably accounting for millions of dollars in cost, is not in question. The question is, how long can a program commitment of this magnitude be justified on purely a philosophical basis rather than a performance-output basis? Not one viable methodology for the assessment of impact from consultative or preventative programs has been noted, and, dismally, one does not even seem emergent on the horizon.

It would seem that the air has become too cluttered with notions and commentaries about consultation and prevention and little has been done to define either the goals, in precise measurable terms, or the procedures, in clear-cut step intervals. Again, with some

appreciation for the problem the Michigan Department of Mental Health has proposed and is in the process of conducting a far-reaching study of current mental health delivery practices to result in a "Standards Manual" for all community mental health programs included consultation and prevention.[8] It would be hoped that the Advisory Committees and staff of this project would sufficiently address themselves to the definition problem so as to stimulate some research which might result in a methodology to assess these seemingly important but non-measurable program elements. Until such time we must accept, but not be content with, the knowledge that such services do exist but with an impact that is generally only reported in the subjective.

Notable exceptions are evident such as the Pre-School Program for Detecting Learning and/or Emotional Difficulties as implemented in Mason county.[9] This program includes as assessment and follow-up of every child entering school, in Mason county. The objective of this program is to detect potential and existing problems before they become critical and plan a strategy with the school and parents to remediate so as to prevent a future referral to the clinic staff for treatment of a full-blown mental health problem. The follow-up over a period of years will hopefully demonstrate a reduction in incidence of mental health symptomatology in the population served. Such is a laudable goal, but is hardly a sufficient methodology to assess the

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[8] Michigan Department of Mental Health, Standards for Community Mental Health. Project Grant No. 6-74 (Aguust 16, 1973).

[9] Michigan Department of Mental Health, Development of Pre-School Program for Detecting Learning and/or Emotional Difficulties, Replication Series No. 1, Lansing, Michigan, December, 1972.

impact for there is no way to control for extraneous variables; movement in and out of the county by both families and teachers, events subsequent to the screening not noted or recorded, other treatment or remediation events, etc. It does, however, suggest an avenue which might be traveled toward some assessment methodology. If the consultations or preventative efforts in any one given geographic area can be sufficiently narrowed to one goal-directed activity for a period of time, and data collected related to this specific goal, it seems possible that a measure of impact could be developed. As an example, a population that repeatedly appears in sizeable proportions are children who are experiencing the crisis of parental separation and divorce. A wide-sweeping consultative-preventative program that would work with lawyers, courts, and educators who might first come in contact with any member of such a family, giving attention to ways of meeting the needs of children in such crisis, might be expected to result in some inpact on the number of clinic referrals for such children. Even this more narrowly conceived population may be too complex for adequate impact assessment, but, somewhere hopefully the research will begin and a methodology for assessment of consultation and prevention developed.

Other Problems for Consideration

At the risk of thoroughly and completely negating any positive results that might be achieved by implementing and utilizing the performance assessment methodology set forth in this thesis, there still remain a number of problems which should have at least fleeting reference, and, even so, the following list is not exhaustive:

Recidivism Rates.--The present methodology makes no distinction between a first admission and subsequent readmissions to state institutions. Consideration might be given to differential weights for these admissions.

Client Satisfaction.--Most service deliverers fail to ask the most important source, the client, about the success of program or the quality of services. A client reporting mechanism might be developed which would also have the possibility of providing weights to those served or released.

Administrative Costs.--These costs are excluding in the present methodology for purely convenience reasons. Using generally accepted accounting principles, a step-down method of assignment of administrative cost could be used.[10] Such an accounting process is in implementation stages for the community programs and future applications of this methodology will benefit from this more precise cost data.

Differential Goals for Mentally Retarded Clients.--The performance assessment methodology and, in fact, the orientation of this and most other evaluation methodologies is directed toward the mentally ill or emotionally disturbed. The notions of treatment success, movement through the program, releases rates is far more related to psychiatric clientele than mentally retarded. This is not to say that these factors are irrelevant, just that they are probably not as relevant as some others, like adjustment to handicap, achievement to maximum

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[10] J. Sorensen and D. Phipps, Cost-Finding and Rate-Setting for Community Mental Health Centers (Lansing, Michigan: Association of Mental Health Administrators, 1972), p. 38.

capacity and many others. It may be necessary to develop a completely separate and different assessment methodology for mentally retarded but at least for the present they are included in the overall program evaluation. The service and cost data does permit a separation and it might prove fruitful to separately consider these distinctly different populations in future applications.

Administrative Considerations in the Use of the Performance Score

The major problem, other than internal or methodological problems, that any program evaluation effort must face is its acceptance and utilization by the program administration itself. This is particularly true of an operational evlauation such as the one described in this study. "Operational programs are often highly entrenched activities based upon a large collection of inadequately tested assumptions and defended by staff and field personnel with strong vested interests in the continuation of the program as it is."[11] Nowhere could this be more true than in the field of community mental health--our assumptions are largely untested and there is decidedly a highly entrenched set of activities defended by a sizeable group of professionals with a vested interest in maintaining their jobs. A program evaluation that runs the possibility of saying that they are doing a bad job, or that they are missing the objective, or even that they need to change their delivery pattern is not always welcome.

It is, however, inevitable. The demand for such evaluation will not go unheeded. Studies such as this, and probably many more to

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[11] Edward A. Suchman, Evaluative Research (New York: The Russell Sage Foundation, 1967), p. 142.

come, are beginning to be noticed in the literature as evidenced by a whole new journal entitled Evaluation whose inaugural issue is as late as Fall, 1972. It would seem, therefore, that the program administrator should accustom himself to the certainty of program evaluation and make the best of what is to come.

Prior to citing the ways a study such as this might be used by the administrator for positive development of his program, it seems relevant to review the usual forms of evaluation abuse, candidly described by Suchman:

"Eye-wash"--or picking out just a peice of the program which appears to be successful and neglecting the weak parts. St. Clair county for instance might herald its inpatient program as the "best in the State," but fail to mention that its outpatient program ranked 21st.

"White-wash"--a diversion tactic in which praise is heeped on a program by another group in an effort to counteract the outcome of an evaluation effort. Provincial pride is often at stake when county programs are compared and local politicians or prominent citizens sometimes offer glowing "testimonials" for questionable program efforts.

"Submarine"--an attempt to "torpedo" a program, no matter what good it might be producing by citing only its weak points. New programs, such as those in Lake, Lapeer or Manistee counties, whose performance scores were extreme (but who were unfairly penalized by the inability of the assessment methodology to pro-rate their data), might be unfairly maligned by local persons who had opposed the development of the program in the first place.

"Grandizement"--over-emphasis of the "scientific" or "professional" nature of the evaluation to impress the public but neglect the recommendations that might have come forth from the evaluation.

"Fact-finding"--waiting for the "storm to blow over" so the report can be forgotten while hiding under the shelter of committees and sub-studies to look into the recommendations.[12]

Although these are described as "abuses," a little of each is good; administrators should discern where their bright spots are, they should develop local pride in their efforts where warranted, they should expect criticism when results are disappointing, they should be "scientific" and "professional," and they should study the recommendations. But the point is, they should do all of these things, not one to the neglect of the others.

There are, of course, some fairly specific uses of this performance measure at different levels of program administration:

1. The program staff, in reviewing the evaluation and comparison with other programs, have the opportunity of broadening their professional expertise by some in-depth study of those programs that seemed to produce better results. Professional growth is an ongoing process and an across-program evaluation, such as this, can assist a professional staff in seeking out programs worthy of further study.

2. The program administrator, or director, can probably put an evaluation effort such as this to its best use. Charged with the responsibility of achieving a program of the most public good at a

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[12]Suchman, op. cit., p. 143.

price the public can afford, a program administrator can ferret out those parts of his program which are either non-productive or too-costly and initiate steps to bring about change. He can lead his staff in their study of other program techniques and in innovating new programs to improve performance. He must also be sensitive to the possibility that long-espoused ideas or programs might have to be altered, reduced, or even abandoned. His attitude about the performance evaluation and the resulting recommendations will set the climate for that of his staff. The utilization of this kind of evaluation report can have its biggest impact at this level.

3. The community mental health board is the policy-setter and public employer. Properly utilized, the performance evaluation scoring and ranking can help them to assess if they have established a reasonable direction for their program through their policies, and if their staff (mainly, their director) are implementing and directing their policies to a satisfactory degree. It is known, for instance, that the policy of Monroe County Community Mental Health Board has been and continues to be full compliance with the data reporting requirements of Michigan Department of Mental Health. The failure of the previous program director to comply with this (among other) Board policy ultimately lead to his replacement.[13] Although one of the dangers of such a report is the possible over-reaction of such a board, it nevertheless is sometimes the first objective evidence of poor

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[13]Personal interview with Rev. Douglas Lowery, Chairman, Monroe County Community Mental Health Services Board, November, 1972.

administration. "Any such rating system, however, must be handled with kid gloves. . .the magic number resulting from precise quantification will mislead many people into seeing in such rating systems a significance far greater than would be attributed to them even by their proud inventors."[14]

4. The Department of Mental Health, particularly the regional executives, are charged with providing consultation on the development and administration of local programs, review and approval of budget, and recommendations about budget improvements or decreases. It would be virtually impossible for these regional administrators to know the inner-most intricacies of the many programs under their purview. Through utilization of the Performance Score and its ultimate rank-order, the regional administrator can assist a faltering program to get back in stream and help keep a good one from falling aside. He is particularly helpful when cross-fertilizing programs by bringing in ideas that have worked elsewhere and that might help in a different setting. His other major function, that of budget influences, can be significantly aided by knowledge that, in one instance, the outpatient program of a specific area exhibits an excessive cost per contact and a limited number of client contacts, but is requesting expansion of outpatient staff in their forthcoming budget request. Misdirected programs, consultative programs with no treatment capacity and vice-versa, outpatient programs with no inpatient capacity and high state hospital admissions, and so on, can be redirected when objective evidence is made available

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[14]Gross, op. cit., p. 385.

to assist those responsible for direction. Such a process is well within the public charge of the administrators of the Department of Mental Health.

5. The legislators and county commissioners, who appropriate the funds for support of these public programs, can best utilize a program evaluation to make certain that their public policies and legislative intent is carried out. They must, however, resist the temptation to become the program administrators. By weilding the mighty power of the purse, they can, with the stroke of a pen, cripple or abolish a program; they must be particularly sensitive to possible premature judgments. But, when presented with repeated evidence of program failure and the lack of sure administration and public support, they must boldly protect their public charge and reduce or eliminate funding. Too often, the pressures on them are in only this direction, to cut funding. It would be hoped that a performance evaluation effort such as this, sustained over a period of time, would also convince them of responsible leadership, productivity of staff, positive direction toward realistic goals, and provide them with encouragement to expand deserving programs by their legislative support.

6. The public, the citizen on the street, is, after all, the 'raison d'être'; he has the right to know that the services available to him meet some acceptable standard of performance. Although he will probably never see an evaluation report of the agency that serves him, he must be afforded the opportunity to review such a document should he, his consumer advocate, elected representative, or legal counsel choose to do so. This aspect is probably the most frightening to the

unenlightened professional person, that his client might become aware of his own or his agency's inadequacies. But such is the stimulus for professional growth in the 'true professional' and no better purpose can be deemed possible for an evaluation effort like this.

Summary and Recommendations

This study has traced the development of community mental health from a history of mistreatment and misguidance into a period of humanistic and perhaps even altruistic programming. Along with such development has come the cry for program evaluation. Although segments of programs, certain techniques, and demographic studies have been in the literature for years, organized, comprehensive evaluative efforts have only begun to surface. This study is an effort in that direction.

Through a fairly complex formulation, a methodology has been devised which will produce a goal-weighted Performance Score allowing for both a rank-ordering of programs to discern those of greater merit but also allowing for an inside assessment of portions of programs, critical variables, and program expectations. The methodology makes use of various kinds of common data and adds dimensions from data newly available only with new collection and processing armamentarium. By arranging such a collage of information in a methodical, goal-oriented procedure, a Performance Score can be assigned in relation to peer programs at the local, state, or even national level.

The community mental health programs in Michigan, in varied states of development, have been subjected to this methodology and emerged in an almost anticipated spectrum from excellence to neglect.

The intent has been to assist in the ever-difficult upward struggle toward excellence knowing that to achieve such shall not often happen. But it does appear that some programs have such merit that further study is warranted. It is the sincere hope that this effort will be a constructive step in the development of community mental health programs of which we can all be proud and which the public richly deserves.

The recommendations, therefore, are quite simple:

1. Further study should be initiated to resolve those problems of data collection and methodology and the formulation presented here should continue to be refined as knowledges increase.

2. Efforts to develop assessment techniques of consultation and prevention programs deserves special emphasis by the Department of Mental Health and stimulation, funding and support of programs of this nature should receive priority.

3. The current methodology should be fully implemented, computerized and produced by the Department of Mental Health on at least an annual basis but probably more effectively on a semi-annual basis. The advantage of this would be to provide programs an opportunity of correcting their data if such were found to be a problem on the six month period report. The annual report would then have increased validity and usefulness.

4. A course of orientation to the Performance Score, its development, methodology and implications should be developed by Department of Mental Health staff to provide a wide discussion base and

clear understanding of the performance assessment methodology to the field staff and program staff of the various programs.

5. A rigidification of the current methodology would serve as a deterrent to its on-going usefulness. To guard against such, the Department of Mental Health should make use of an advisory committee, made up of Department staff members, local program directors and board members and other selected knowledgeable individuals who would provide recommendations regarding change of the scale when appropriate and reject changes deemed inappropriate.

6. Caution must be exercised in over complicating the currently reasonably unencumbered methodology. As more and more becomes known about specific program types it might be in the best interest of the programs to separate out various types and have special and different criteria for each case. Such has already been suggested for the special programming for the mentally retarded. It may prove to be necessary for special handling of consultative and preventative programs rather than the incorporation of such data as new items or weights on existing items.

7. As reports are prepared from the basic data and the resulting Performance Score and ranking, individualized area reports should be prepared detailing both the important ramifications of the evaluation for the specific programs involved but also detailing, where possible, the Department recommendations for improvement or resolution of noted problems. Such narrative must be prepared as a joint effort between the data analysis staff (in view of the extensive knowledge

of the data) and the regional programs staff (in view of their knowledge of the specific programs).

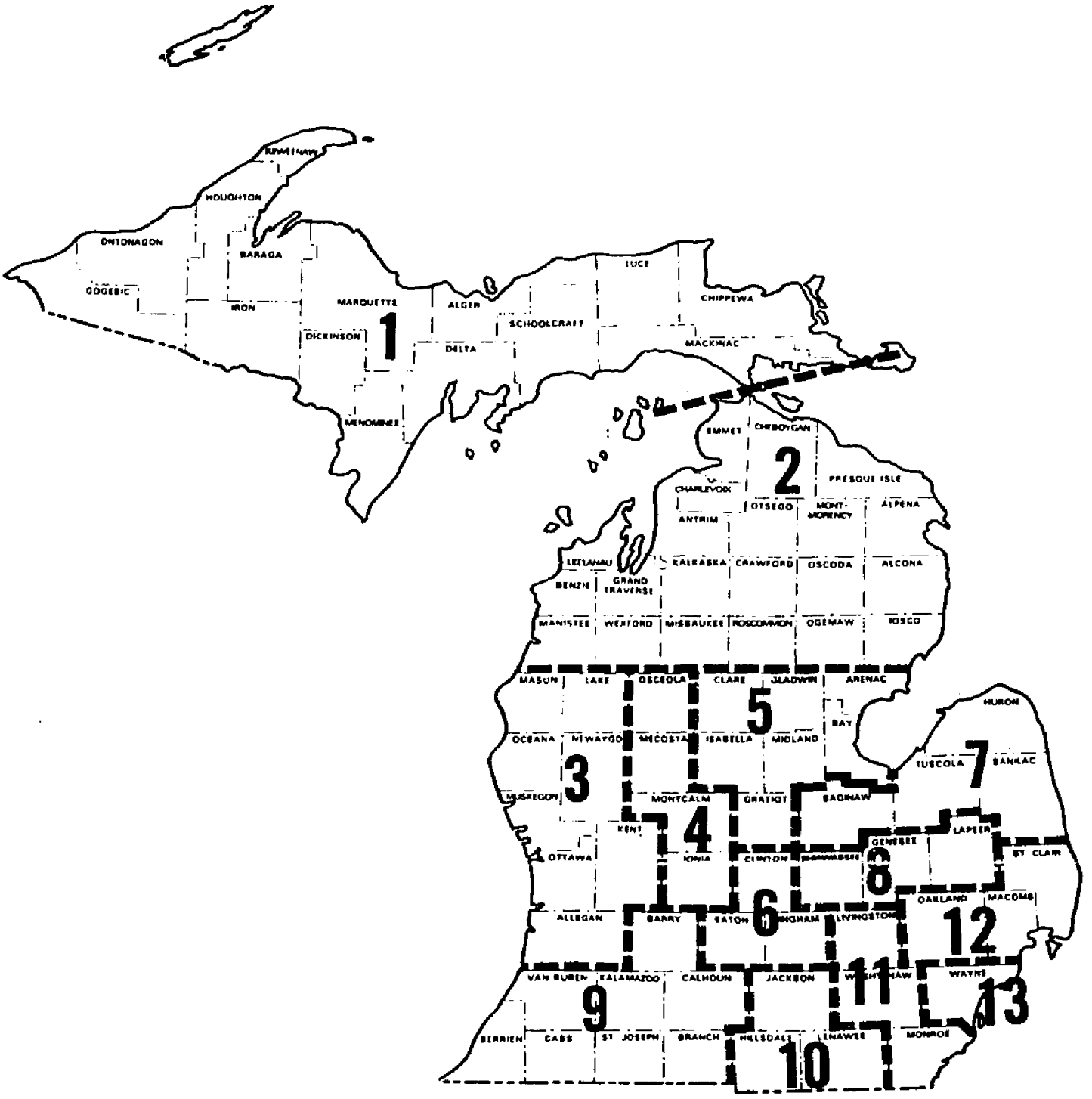
8. Upon receipt of such reports, the program director and his Board should be charged with the responsibility of studying the report and recommendations, and within proper time, responding to the recommendations formally with the indications of corrective steps taken where appropriate.

9. When so indicated, programs repeatedly demonstrating poor performance should be closed, and clients referred to agencies demonstrating higher levels of performance. Such drastic action should be taken only after concerted study, possible administrative re-direction, and extensive staff counseling. Should these fail, the public charge of the officials responsible will have been violated if they fail to take action.

10. Willingness to completely discard this methodology when better techniques are developed is tantamount to the evaluative process itself. The techniques and assumptions in this study should be subjected to the same scrutiny than any endeavor utilizing public funds might experience. As other methodologies develop, simultaneous evaluations might take place and a comparison of results made. This, too, is the essence of professional growth.

APPENDIX

Map of Community Mental Health Region in Michigan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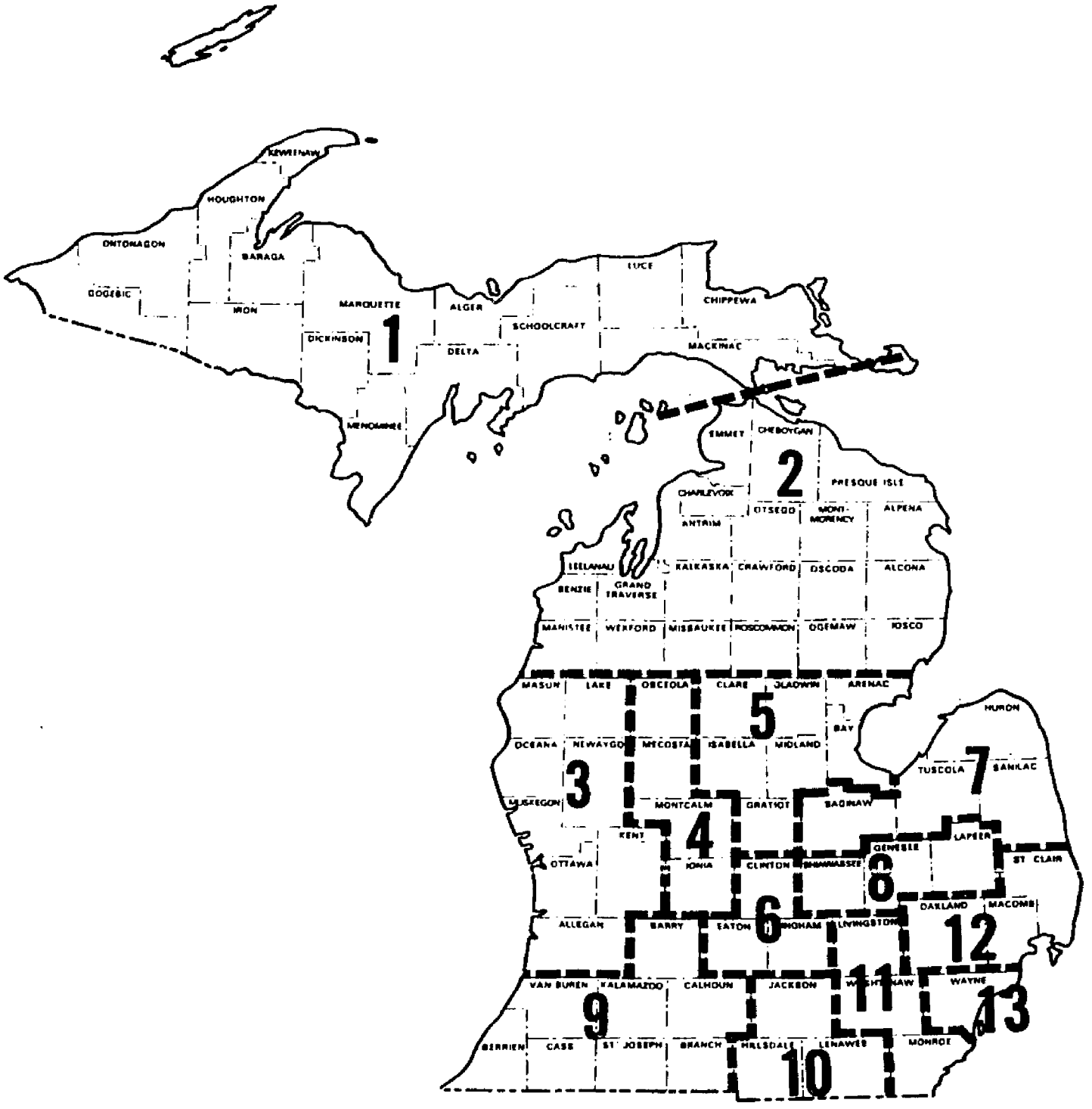
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MAPLE SAP PRODUCTION ECONOMICS IN MICHIGAN

By

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A DISSERTATION

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ABSTRACT

MAPLE SAP PRODUCTION ECONOMICS IN MICHIGAN

By

John E. Gunter

Five aspects of the maple syrup industry in Michigan were studied: (1) the characteristics of Michigan's maple syrup producers, (2) the relative cost advantages and profitability of the two basic types of sap collection system (buckets and vacuum pumped plastic tubing networks), (3) the type, amount, cost, and utilization of equipment required for various sizes of operations, (4) the utilization of labor, time and duration of peak labor periods, and labor input for specific tasks involved in maple sap collection operations, and (5) the size of operation that is most profitable.

Data were gathered by mailing a questionnaire in 1972 to all maple syrup producers in the State of Michigan for which a mailing address could be obtained, and by selectively recruiting cooperators over the 500 to 3,000-taphole range, to keep time and cost records for their maple sap production operations for the 1972 and 1973 seasons.

Analytical techniques employed
linear correlation analysis, m
analysis of covariance, break-
analysis.

The survey findings in
(56 percent) of the Michigan m
some kind of agricultural ende
occupation. A significant numb
producers were retired, and a
of an advanced age. The major
producers had operations of le
1972. The average producer ha
same location for 23 years.

Ten and 7 percent of th
primarily those with the large
syrup from other producers in
producers who planned to incre
and syrup between 1972 and 197

Although a minority (4
tried plastic tubing before 19
believed its advantages outweig
one-fourth of the producers rep
tubing and less buckets.

While most syrup is sol
majority (51 percent) of Michig
part of their syrup on the whol