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***A WEB BASED PEER REVIEWED PUBLICATION FOR MENTAL HEALTH
PRACTITIONERS, CONSUMERS & APPLIED RESEARCHERS***

This private *NON-PROFIT* professional publication and associated web-based, information archive service is dedicated to the enhancement of practice, program development, program evaluation and innovations in mental health and substance abuse treatment programs worldwide. Its goal is to provide a public forum for practitioners, consumers and researchers to address the multiple service needs of patients and families and help determine what works, for whom under a variety of circumstances.

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Methodological Approaches in Mental Health Services Research and Program Evaluation

Arthur J. Anderson
Consulting Clinical Psychologist - Honduras
Adjunct Faculty - Antioch University

Abstract: *This paper reviews the key concepts in mental health program assessment, efficacy studies and assessment methodologies. It reviews historical developments in program evaluation methodologies, recent studies, the Journal of Consulting and Clinical Psychology's special section on methodological developments, NIMH's National Plan to Improve Research in Mental Health Services, and NIMH guidelines for future mental health service research. A comparison of the major methodological approaches and detailed discussion of fourth generation evaluation research methodology is presented. Evaluation research methodology is found to be the most effective approach in the study of overall program efficacy.*

Methodological Approaches in Mental Health Services Research and Program Evaluation

Introduction: Mental health programs, along with other health and social welfare services, are coming under increased scrutiny and evaluation. With consistently smaller budget allocations for mental health, many federally funded programs are being radically changed, some severely curtailed, and the relationship between government and private sector providers is being realigned (Inouye, 1983; Klerman, 1974). In addition, state and local government agencies that were expected to reimburse mental health programs for federal shortfalls in funding, have not been universally successful in meeting this challenge (NIMH, 1991). Thus, new research into the efficacy of mental health services has been called for to meet these growing challenges. However, because traditional research methods have not been readily applicable to the study of applied health programs, a search for more appropriate methodologic approach is now underway (Newman, Howard, Windle, & Hohmann, 1994).

These developments are especially significant for mental health services, which have been more regulated and financially supported by government than any of the other service within the health sector in the past two hundred years (Rothman, 1972). Throughout this period there have been numerous cycles of mental health reform and innovation, followed by phases of criticism, dissension and retrenchment (Bockman, 1963; Caplan & Caplan, 1969; Deutsch, 1948, Grob, 1973). While the "reforms in mental health have coincided with periods of progressive social change in the larger American Society, phases of reactions, criticism and retrenchments have occurred with the aftermath of war and economic decline" (Klerman, 1974, p.783). The current economic slump of the nineties following the prosperity and massive federal spending of the eighties, continues the cyclic pattern of change in mental health services.

After a decade and a half of growth in mental health and substance abuse services, a number of criticisms have been leveled at the mental health sector. Chief among these criticisms is that of program effectiveness (NIMH, 1989). To date, there are very few applied or experimental research studies that address program efficacy (PsycScan, 1995). Without knowing what programs and/or treatment models effectively work for a variety of patient populations in a variety of settings, legislators and grant funding sources have no way of planning where and how their limited resources should be spent.

Inadequate research strategies and methodologies have been cited as the primary reason why such program efficacy research has not been studied (Newman et al., 1994). Mental health services research cuts across the disciplines of economics, sociology, epidemiology, political science and psychology. One of the prime purposes of mental health service research is to provide empirical evidence and support to guide policy decisions at all levels of government and non governmental organizations (NGOs). However, until recently, very few efficacy studies of mental health program or their associated models have been reported in the professional psychological literature (PsycScan, 1994).

Newman (1994) writes that until recently, clinical psychologists have tended to ignore and not pursue mental health services research. This has been a direct result of the limitations in methodological training that psychologists receive and a bias against such research in the publication standards of the professional and academic literature. According to Newman, studies that assess success rates and program effectiveness in mental health service programs have not been generally deemed worthy of publication. In addition, most clinical psychologists and clinical researchers are trained in experimental and quasi experimental techniques that make it very difficult to adequately evaluate the global, multifaceted, molar effects found in applied treatment programs (Guba & Lincoln, 1989).

The methodological deficits and bias toward the scientific method in professional publications have made it difficult for psychologists to develop and utilize research methodologies to fully assess the efficacy of mental health service programs and program models in both the public sector and NGOs (Clarke, 1995; Newman & Howard, 1991).

Researchers who investigate programs and clinical factors related to improving the quality and impact of mental health services are often handicapped by the perceived legitimacy of their applied research and the methodologic approaches they utilize (Newman et al., 1994). Historically, traditional research methods and journal/grant review criteria have not taken into account the global questions and systemic points of view necessary to fully understand the therapeutic delivery systems under evaluation. Thus, there has not been a coordinated, sustained effort to determine program efficacy for the majority of human service project initiatives (NIMH, 1989).

Many program and project research evaluations attempt to present the factors and/or 'facts' uncovered in their program evaluations, utilizing traditional experimental, quasi experimental, causal comparative, correlational and other approaches. Such evaluations attempt to identify the most salient factors for good program performance on a molecular level. In the process, many of the characteristics and practices that define a successful program may be ignored or dismissed as inappropriate or unimportant to the objectives of the research. For example, in an investigation of a psychotherapy program, investigators may choose to only examine the mean or median number of therapeutic hours received in an voluntary outpatient program. Though

this may or may not relate to overall patient satisfaction, motivation and progress, such process measures do not determine the overall performance or level of program effectiveness. Thus, almost no programmatic conclusions can be made on the basis of this information.

Despite significant clinical and basic research progress made in the diagnosis and treatment of mental disorders over the past two decades, many questions about how to provide high quality, effective treatment services still have not been answered. For people with severe, persistent, disabling mental disorders, this situation means that individual diagnoses may be inaccurate, treatment plans may be inadequate or ineffective, and essential services may not be available (Lalley et al., 1992; NIMH, 1991). As a consequence, such individuals are often forced to not only endure a lonely struggle against the despair and distress caused by their mental illness, but must also negotiate a confusing, fragmented maze of human services, created by a wide range of often well meaning public and private sector service providers.

Instead of concentrating on determining the individual facts and salient factors associated with successful treatment outcomes, human service researchers should be more concerned with one global question that allows for a more holistic examination of program worth: "What works, for whom, under what circumstances?" (NIMH, 1991, p.vii). The net effect of any treatment program or human service project is determined by the integrated use of multiple, interactive program components, delivered at a site conducive to recovery and/or rehabilitation to a population that will be receptive to such treatment (Breakey, 1987; Minkoff, 1991). Since successful treatment outcomes depend on the global interaction of all these factors, research methodologies used to investigate such programs must also mirror this global, molar intervention to accurately determine whether successful outcomes have indeed occurred.

This paper provides a systematic review of human service research methodologies and prevalent types of investigations. Its focus is on the central methodological issues in determining mental health program and program model efficacy. Though the research and methodologies noted throughout this paper do not cover the entire scope of mental health service research, they are presented as a cross section of the most prevalent types of program evaluation and exemplify the scope of methodological and conceptual issues in this area.

Critical Methodological Factors in Assessing Program Efficacy

Over the years there have been a number of review articles that have called attention to the need for an increased research effort into efficacy studies of mental health services (Inouye, 1983; Klerman, 1974; Newman et al., 1994). However, until recently, these articles only addressed the need to increase the research effort without recognizing the methodological developments that would be necessary to adequately assess program strengths.

Klerman (1974) gives the first comprehensive account of the state of mental health service research. In his descriptive article he not only identifies the major stakeholders that should be included in evaluation research, but outlines the major concerns voiced by each constituency. He notes that while the public at large, the courts, mental health professionals, and government agencies all have an active stake in the results of such research, each has a different focus and agenda for the outcomes of evaluation research studies, and requires varied types of data with which to formulate their concerns as to how, where and in what manner, mental health programs should operate. The identification and recognition of the needs of all major stakeholders in any

mental health service program is a critical step that is often overlooked in most evaluation studies (Guba and Lincoln, 1989).

The public at large has an active stake in new mental health services evaluations (Klerman, 1974). In some cases an adversarial climate has developed among mental health program critics in the general public and mental health professionals and administrators. Because many critics feel that mental health has expanded too much into areas that had previously been regarded as social deviance or legal misdemeanor, such as substance abuse and treatment for the homeless, the public at large mirrors professional uncertainty about treatment adequacy, clinical training for paraprofessionals, and about what is or is not effective treatment strategies for various patient populations. This reflects a lessening of public trust and confidence in mental health services that parallels the erosion of funding and governmental support (Klerman, 1972). In addition, community groups are now seeking a more active voice in the operation of mental health service programs within their neighborhoods and catchment areas. In general, these groups want to ensure that treatment programs maintain standards which will protect and enhance their community, and not place the public or patients at risk (NIMH, 1991).

Federal and State courts have become increasingly involved in mental health service programs over the past 20 years. Prison based substance abuse and mental health programs have markedly increased over the past decade and a half (NIMH, 1991). However, most of these programs have evolved due to court mandated levels of care and have mainly documented their measures of criminal recidivism as the sole measure of program efficacy (Robitscher, 1972). Since the courts have mandated this treatment and view success in treatment as key factor in rehabilitating both the involuntary hospital patient and the mentally ill legal offender, they have become more interested in mental health services evaluation as well. Thus, the court systems are active stakeholders in any efficacy evaluation of mental health services and seek information as to the type and level of services that will be delivered to disordered, disabled and incarcerated individuals.

The court system has also been a major contributor to the development of program models and standards of practice for both hospital and community based mental health service programs. Due to general concern for patients' civil rights and for the possible infringement of their personal liberties in cases of involuntary hospitalizations, a number of landmark court decisions mandated not only effective treatment but treatment at the least restrictive level (Klerman, 1972; Robitisher 1972). Moreover, there has been increased concern about the depersonalization and institutional dependence fostered by large public hospitals. Within the mental health professions, there is a general awareness that large hospital based programs become professionally and therapeutically bankrupt and ineffective. This sentiment fostered the creation of community mental health centers, which are felt to provide alternatives to the low levels of institutional care previously provided to the poor and disabled in large public hospitals (Weston, 1972).

Such mental health program interest by the court and legal systems has been the most significant reason for reforms in mental health services including the community mental health center programs (Klerman, 1972). By concentrating on the difficulties and dissatisfaction encountered with the large public mental hospitals, particularly the county, state, and Veterans Administration hospitals, the courts have mandated improvements in treatment and service programming that have led to significant reforms in mental health services. These reforms have

resulted in a decrease in program size, emphasis on community based treatment, and increased intensity of treatment in both community and hospital based programs. They have also been shown to increase the probability of more rapid discharges and reduced recidivism (Farkas & Anthony, 1991; Lamb, 1972; Ullman, 1964).

"At all levels of government federal, state and local evaluation efforts are frequently initiated by fiscal and budgetary agencies "(Klerman, 1972, p.784). Increasingly, political, fiscal and administrative decisions regarding mental health programs and their associated treatment models are being made on the basis of fiscal goals to deliver the most effective programs possible for the least amount of funding. In addition, state and local agencies charged with monitoring and promoting mental health service research and delivery have been increasing their efforts to determine what constitutes effective mental health programming for a variety of patient populations. Initiatives to reform mental health care have precipitated legislation to develop and expand state and local commissions to further investigate program utility and effectiveness (Scott & Ginsburg, 1994; Frank et al., 1994).

At the federal level, service research has become a high priority for agencies responsible for mental health funding and monitoring. In fact, research funding at this level has been increased from \$90 million in 1992 to a projected \$369 million budgeted for Fiscal Year 1997 (NIMH, 1991). With the reorganization of ADAMHA (Alcohol Drug Abuse and Mental Health Agency) in 1992, the National Institutes of Mental Health (NIMH), National Institute on Drug Abuse (NIDA), and the National Institute on Alcohol Abuse and Alcoholism (NIAAA) must devote no less than 15% of their total budget for health care services research, all coordinated by NIMH [ADAMHA Reorganization Act, 464R (f)(2)]. This increase in funding clearly demonstrates an increased level of commitment by the federal government to improving service research and overall program effectiveness for the mental health program consumer.

Mental health consumers and their families have a very active stake in the outcome of program research, but until recently, have had little influence in the methods or outcomes of research process. Families of the severely disturbed and the mentally ill themselves have to shoulder tremendous financial and emotional burdens. Each year, 65% of discharged psychiatric patients (Approximately 1.5 million), return home and live with their families (NIMH, 1991).

Due to the high cost of hospitalization, many of these patients return home earlier than they would have in the past, still disabled by psychiatric symptoms (NIMH 1992). State and local governments are also beginning to recognize the stake that patients and their families have in the mental health treatment by enacting legislation to give the consumer and his/her family a voice in the therapeutic process (NYSOHM, 1990).

The National Institute of Mental Health (1991) credits the National Alliance for the Mentally Ill (NAMI) with a successful lobbying effort for the inclusion of the mentally ill and their families into the evaluative research process. NAMI together with Family Alliance for the Mentally Ill (FAMI) were developed as grass roots organizations to serve as advocacy groups on behalf of mentally ill persons and their families. These organizations bring the problems and issues of the mentally ill and their families to the attention of local, state and federal governments. In evaluative research studies, NAMI has championed the cause of "research designed to identify ways to help patients readjust to the community within the least restrictive environment possible and to prevent relapse through early intervention" (NIMH, 1991, p.13). In "Clinical Services Research: Enhancing the Real World Applications of Clinical Science" (1991a), NIMH has

outlined the critical points that NAMI and FAMI advocate for service evaluation research studies.

Researchers must carefully assess the ramifications of family involvement in the care of a mentally ill member including the characteristics and conditions of caregiving families; the degree and varieties of family stress; the effectiveness of various coping and adaptation patterns; and timing and extent of caregiver burnout; and the impact of various kinds of respite care for family members.

Studies should be performed that are focused on family issues and produce results to assist families with mentally ill members in functioning more effectively and with less turmoil. Such studies would provide effective education in technique for dealing with mentally ill persons without succumbing to the overwhelming anxiety; motivating the patient to become more self sufficient; and understanding and communicating appropriate expectations. An essential need is for research on the long term effectiveness of such family education programs both in helping the patient and in reducing the family's burden.

For generations, families with mentally ill relatives have dealt with the problems of violence toward family members, exacerbated now as a result of a substance abuse by the seriously mentally ill. Investigators must focus on the predictable, frightening and violent behavior that patients may exhibit toward family members, with the goal of developing more efficient criteria for predicting such behavior and more objective ways to manage and prevent it. Such studies must place a high priority on meeting the needs of families for early education, prevention, and intervention. In this connection, attention should be given to identifying techniques of family adaptation and have proved effective.

Dealing with mental illness is expensive. Families become frustrated and angry as their savings dwindle, often with meager results. A guide on how to obtain the most effective services even with limited personal resources would be a welcome aid. Such a guide based on evaluative research, not an opinion could help families make informed decisions about more selective use of mental health services." (NIMH, 1991a, pp.12 13)

Together, these points highlight the very active stake that the mentally ill and their families have in evaluative research. Without taking these points into consideration, research investigations to determine therapeutic efficacy cannot be complete.

Mental health professional groups also have an active stake in the success of programs and on the outcomes of evaluation studies of program services (Isaac, 1971; Weiss, 1972). Concern for effective program planning and therapeutic results can be seen in the various calls for evaluation research by a number of professional groups. The American Psychiatric Association, The National Association for Mental Health, and American Psychological Association (APA) have, at various time, all called for increased research efforts in program effectiveness (Newman 1994, 1991; Lalley, 1992; Klerman, 1971). Though these calls for more research demonstrate an interest and active stake on the part of professional groups, little if any comprehensive evaluation research has been performed to date.

In response to the NIMH (1991) call for increased service research, the APA published a special section on Mental Health Services Research in the *Journal of Consulting and Clinical Psychology* (Newman, Howard, Windle, & Hohmann, 1994). In this special section, the authors

not only reviewed the U.S. "National Plan of Research to Improve Services", but presented a series of research articles that exemplified methodological developments in this area of psychological research. These studies were presented to demonstrate innovative methodological approaches in assessing program and service efficacy. However, each of the studies appear to be focused on a different aspect of overall program efficacy, and are consequently limited in their ability to demonstrate overall program effectiveness or meet the research goals set forth in the NIMH national agenda. As discussed below, each of these studies failed to demonstrate program or service efficacy due to the positivist reductionist approach utilized by the researchers.

McGrew, Bond, Dietzen and Salyers (1994) address a key issue in services research: How to measure the fidelity of a mental health service intervention. They assembled a panel of 20 experts to first develop and then rate 18 mental health programs that use the assertive community treatment model (Witheridge, 1991). This model stresses active psychosocial rehabilitation to improve overall functioning and promote independent community living for severely and persistently disturbed psychiatric patients. The experts assessed the program's staffing patterns, organization and service domains on the index and then compared the respective programs on the outcome measure of reduction in days of hospitalization.

Newman et al. (1994) claimed that this study not only identified key ingredients of the service model, but was also able to identify how each program might improve their provision of service. However, given the data provided by this study using a causal comparative methodological approach, it is not possible to make such claims of program efficacy. The only stakeholders viewpoint in this investigation was that of the 20 mental health professionals who comprised the panel of raters. The ratings of patients, families, funding agencies, associated courts, and other interested groups may have been very different from those of the raters. In addition, other program variables such as environment, patient population pool and catchment differences, as well as patient characteristics and discharge differences may have impacted and skewed the results of this study. Thus, no efficacy claims can be made from the data that was presented. The methodology of this study reduced the rich, total number of variables down to that which was believed to be related to program success. Thus, it tried to determine a cause and effect relationship among a few predetermined variables without justification. Though this study followed accepted standards for research and publication, it failed to describe the interrelated, molar effects of all program variables because it reduced the scope of the study to a molecular level of program assessment.

Studies by Vessey, Howard, Lueger, Kachele and Mergenthaler (1994) and Yeaton (1994) addressed the quantity of psychotherapeutic interventions in this special section on methodological approaches. These studies assessed the dose response rates of therapeutic intervention in individual psychotherapy and self help groups. Vessey et al. (1994) attempted to demonstrate a relationship between the amount of psychotherapeutic time and effective treatment outcomes and innovatively adopted a causal comparative study design. On the other hand, Yeaton's (1994) investigation used a correlational approach to compare the amount of actual attendance in self help groups to positive therapeutic outcomes. Though they utilized two different methodological approaches, both studies concluded that time and 'dosage' of therapeutic intervention had an impact on psychotherapy outcomes.

However, this conclusion cannot be validated solely on the basis of the data collected and reported on in the study. Additional programmatic, demographic, and clinical indicators could be responsible for the positive correlations and other statistical evidence that was reported in the results of these studies. Both study approaches contained the same conceptual deficit as the McGrew et al. (1994) study; they reduce the complex interaction of many service related variables to a simple set of predetermined factors. Thus, even the positive outcomes with the greatest effect sizes become suspect because we cannot determine whether these effects are solely due to these variables or if some other variables, outside the scope of the study are interacting and producing the observed phenomena. This problem is not restricted to these investigations but has been cited as potential weaknesses in both causal comparative and correlational study designs (Borg & Gall, 1989; Wood, 1974).

Uehara, Smukler and Newman (1994) attempted to resolve this problem of constricted variables in their study of allocation of service resources to various patient populations. They provide a field test of a procedure to match the social, psychological, and physical functional needs of patients to specific types and amounts of treatment and rehabilitation services. This study made extensive use of correlational data and advanced statistics to match patients to the appropriate type and level of service. Though this expands the list of variables under investigation to virtually all program and patient variables that may impact treatment outcomes, it still only takes the point of view of the clinician into account. Patient satisfaction, family involvement, cost effectiveness and overall program efficacy from the point of view of the public at large and the funding source still cannot be accounted for within a correlational study of this type. Thus, this methodology also falls short as a vehicle for determining overall program efficacy.

Though the methodological approaches used in each of these studies are generally accepted as innovative scientific investigations suitable for publication in the psychological literature, each study has difficulty accounting for the full range of interaction between not only the program variables but from the point of view of each of the main stake holders in mental health service programs. Thus, these studies have difficulty providing a comprehensive account of program effectiveness. Though these methodological approaches may be instrumental and valuable as part of an overall evaluation effort, they cannot be used as the sole basis for determining success in mental health service programs. A comparison contrast of the main methodologic approaches, presented in the following section demonstrates the advantages of departing from the reductionism inherent in traditional approaches, in favor of a more comprehensive evaluation methodology.

COMPARISON CONTRAST OF RESEARCH DESIGNS IN SERVICES RESEARCH

Correlational, causal comparative, and evaluative research methodologies are the most common research approaches used to evaluate naturally occurring service programs (Borg & Gall, 1989). Though they have much in common, they differ in their utility, comprehensiveness and ability to establish cause and effect relationships among study variables with a strong degree of certainty. As a consequence, they also differ in their ability to strongly predict future effects and causal patterns that can be attributed to the study variables. This difference is primarily due to the limitations of the methodologies to attribute the full range of possible causes to effects observed in natural or artificial/experimental settings. Though each method has situational and experimental advantages over the others in program research, each varies in its situational utility as well.

Correlational Designs

While the correlational method is well suited to establishing relationships between the variables, it cannot demonstrate cause and effect relationships by itself. The correlational method is restricted to quantifiable data in the data set and therefore limited in its utility. Though readily applicable to quasi experimental study situations, its often difficult to apply in natural settings where identification and measurement of the most important variables often becomes difficult. This problem is illustrated by the results obtain in the Yeaton (1994) study which investigated the relationship of patient attendance in self help group meetings to successful completion of an alcohol treatment program.

This study examined the relationship between rates of patient attendance and successful completion of programs. The relative rates of attendance in the service milieu of self help groups are compared to the rates of successful treatment outcomes as a measure of programmatic effectiveness in treating substance abuse. However, collateral treatments for substance abuse and/or other deficits were not discussed. In addition, the actual service components of the self help program were not discussed. As a consequence, any relationship between the study variables of attendance and outcome becomes inconclusive. The actual effects that were noted may be due to variables outside the scope of this investigation that were related to the study variables. Thus, from the actual cause and effect relationship demonstrated by this single correlational indicator, programmatic effectiveness cannot be inferred.

Correlational method research studies are best suited to discovering relationships solely among study variables. As illustrated by the Yeaton investigation, it is very difficult to apply this approach to mental health service studies. Correlating the number of variables that define program effectiveness, both within and between service programs, becomes almost impossible to measure with this approach. When compounded by the various interests and focus of each stakeholder associated with a treatment program, the correlational method becomes almost useless in defining what works, for whom, under what circumstances.

Causal Comparative Designs

The causal comparative method is described as well suited to demonstrating significant relationships, group norms and traits in natural settings (Borg & Gall, 1989). This method can be also be used in study situations where experimental manipulation is difficult or impossible, such as in mental health service studies. However, the causal comparative method can only demonstrate causality from the data presented within the narrow scope of the study variables and is therefore, also limited in its ability to suggest causality in either experimental or natural settings. Alternative interpretations are often possible when this method is employed (Borg & Gall, 1989; Wood 1974). Thus, this method is similarly limited in it utility and comprehensiveness to demonstrate a treatment program's level of efficacy.

This problem was demonstrated in study described by Uehara et al. (1994). This investigation attempted to answer the question of "Who needs what services and what degree of care?". It was actually a field test of a procedure to identify and link the psychological, social and physical functioning needs of individuals with severe and persistent mental illness to specific levels and types of treatment programs and rehabilitative services. Using the LONCA scale to assess patients level of functioning, the researchers attempted to match the level of patient need to the level of care in a clustering method. The LONCA scale is an instrument designed to measure

patients functional level across a wide range of psychosocial dimensions. It was speculated that the use of such a scale to place patients in programs that would specifically meet their needs would improve the treatment outcomes for this population. The degree of dysfunction would determine the level of appropriate care that should be provided.

Though 65 case managers carefully rated patient's level of need and the resulting data set was factor analyzed to cluster patients into groups that might benefit from different levels and types of care in community based settings, no actual outcome data was provided to substantiate the underlying assumption that there is a causal connection between level of dysfunction and the various outcomes that patients experience in a variety of treatment programs. In addition, critical variables in patient recovery and program operations were not taken into account. The effects of patient's level of motivation for treatment, demographic profiles, diagnostic groupings, level of patient satisfaction, program modeling, program milieu/environment, and other factors may also play an important role in determining whether a patient will respond to treatment within a given treatment program or not. Using their method, these variables could not be taken into account. Thus, the results of this study remain inconclusive.

The causal comparative method, like the correlational method and relational methods in general is limited in its ability to establish cause and effect relationships between study variables. As noted in the Yeaton and Uehara et al. studies, both methods can be criticized because they attempt to break down complex behavior into very simple components. Understanding the causal variable or set of variables that are related to the complex activities or traits of a mental health service program is beyond the scope of the research study when these methodologies are utilized. Generally, the phenomena and behaviors associated with a operational service program are so poorly understood that incomplete sets of study variables are chosen for study and analysis. This appears to have been the case with all the studies profiled in the Journal of Consulting and Clinical Psychology special section on mental health service program efficacy studies. In addition, analysis of multiple variables from one setting will not expose the complex interaction of variables across multiple settings or subject groups in other programs. These and other problems of measurement and analysis contaminate or weight inferences and result in erroneous or misleading conclusions. This limits the comprehensiveness and utility both methods in studies of natural events and phenomena, such as those that occur in mental health service programs.

Evaluative Designs

Of the principle research methodologies used to determine the effectiveness of mental health service programs, the evaluative method is the most suited to demonstrating descriptive relationships, not analytic ones. Thus, it is the most applicable to the study of mental health program efficacy.

Evaluation studies usually point out cause and effect relationships in natural settings. Without the constraints of the experimental study controls or sole use of quantifiable data sets, evaluative studies can identify the most salient relationships among all quantitative and qualitative variables in service programs. Because of this, the evaluative method is more comprehensive and has a higher degree of utility in natural settings than the other two methods. The evaluative method is an applied research method that focuses on determining the merits of educational, job training, health care and other institutional programs in health, education and welfare. This approach differs from correlation and the causal comparative methods in that it

not only looks at the relationship of a few, obvious variables to determine a cause, but examines all observed variables that may impact the goals of the program under study.

With evaluative methodology, the causes of the positive or negative program outcomes become the main focus of study. Using program goals and actual individual and group performance measures in meeting those goals, evaluation researchers attempt to locate factors related to the actual program outcomes. Traditionally, an evaluator will work directly with program leadership, staff, and consumers to determine the most salient factors that define program performance with regard to the goals of a program. In ideal evaluation study situations, mental health service program staff, directors, funding sources and all other groups that have a stake in the investigation are invited into the variable identification phase to identify the critical program variables to be used in the study, methods of data collection and subsequent data analysis techniques that will be used to determine program efficacy levels. Once determined and agreed upon by all the stakeholders, these factors and study procedures produce results that can be returned to the stakeholders of the program to implement program modifications and improvements. Thus, the results of an evaluation research study can be used to modify program operations to increase performance toward meeting those program goals more effectively.

Unlike other research methodologies, evaluation research is usually initiated by someone's need for a decision to be made about policy, program management, or strategic planning. By contrast, experimental methodologies initiate studies based on a hypothesis; the research is conducted to reach a conclusion about the relationship between the variables and whether to reject or accept the hypothesis. In evaluation research, where the focus is on making practical decisions that will impact the effectiveness of a program, the emphasis is on testing variables against program goals in a decision making process, rather than hypothesis testing.

This decision process examines the impact of a mental health treatment program's components and modes of service delivery in meeting the stated treatment and outcome goals of the program, then uses the evaluation data to redefine and modify the service program to more adequately meet the needs of the patients. In addition, the goals and objectives of the program and treatment components are reexamined to improve the relative worth of the program for all the stakeholders associated with it. These stakeholders include not only program leadership and staff, but consumers, community participants, funding sources, and other constituent groups that have a vested interest in the successful outcomes of the program as well.

DonGiovanni (1988) performed an evaluation research study of a program for mentally ill chemical abusers. As in the Yeaton study, patient participation rates in group therapy and other program components were compared with patient outcomes as measures of mental health program effectiveness. However, this study also included measures to determine the overall level of patient satisfaction in the program, attempted to measure recidivism, polled referring hospital staff as to their opinion of the program, and also surveyed community based mental health providers to obtain data on perceived program effectiveness.

These measures incorporated the opinions and views of all the major stakeholders associated with this program. Thus, the results of this study demonstrated not only the overall level of effectiveness and relative worth of the program, but punctuated the need for additional program modifications to coordinate all the services of the program in a more cohesive, comprehensive fashion.

The DonGiovanni study illustrates the distinctive characteristic of evaluation research studies. This type of study examines the relative worth and merit of a program or program components. Thus, judgements of programmatic merit and worth that are not emphasized in other research methods are not only appropriate, but necessary in the evaluation of a program's effectiveness in its natural setting. Causal factors or variables that impact program effectiveness are also judged as to their worth, merit and value in meeting program goals.

Evaluation research draws heavily from other methodologies. Qualitative as well as quantitative data collection and analytical techniques are often used. In the DonGiovanni evaluation, correlational data was used along with the qualitative data from surveys to determine the program's relative worth. Because of this, cause and effect determinations arise from a richer, more comprehensive data set than with sole use of quantitative data and advanced statistics. Thus, the use of evaluation research methods in this mental health service program allowed for more comprehensive determinations of what works, for whom, under what conditions.

The only major limitation of the evaluation research method in mental health service studies lies in their generalizability. Due to the applied nature of this method, programmatic and situational variables tend to be specific to the program under study. It is therefore often difficult to generalize the results to even similar program types. Since each program study is situated in different physical environments, with different staff, and other characteristics, the evaluation study becomes customized to that program's variables. Thus, generalizing the conclusions of one program evaluation to other programs may be difficult because many of the salient variables change from one program to another.

However, many of the 'lessons learned' from one program can be applied and tested in other, similar treatment settings and may serve as models to enhance program or program component effectiveness in those programs as well. When performed on a program by program, case by case basis, such evaluation research data may serve as valuable tools for program modification and improvements.

Finally, the evaluative method is not constrained to hypothesis testing, but seeks to functionally establish the most salient variables operating in the natural settings of mental health service programs. Evaluation studies attempt to determine the impact of complex variable interaction on the goals of the program. The primary advantage of using this method is to provide data to policy and decision makers that can be used to improve program performance to more successfully meet program goals. Thus, it is both comprehensive and readily applicable to studies in naturally occurring mental health program settings that require data for not only research purposes but for improvements in program or program component performance as well.

Fourth Generation Evaluation Research and The National Plan of Research to Improve Services

Guba and Lincoln (1989) have traced the development and expansion of evaluation research and have refined the methodological approach to not only reflect state of the art enhancements in health and mental health program assessment, but provide a potent vehicle for program improvement as well. They note that the first generation of evaluation concentrated on the systematic collection of data and measurement of phenomena, while the second generation dealt with description of patterns of strengths and weaknesses with respect to certain stated

objectives. The third generation of evaluation research focused on judgements of relative worth between programs and program components.

Though the various generations of evaluation built on the gains of preceding phases, each successive generation providing a foundation for more detailed and sophisticated assessments of programs and organizations, there remained significant limitations in evaluation methodologies. The main problems with the first three generations were a tendency toward managerialism, failure to accommodate value pluralism, and an overcommitment to an experimental paradigm of inquiry. A tendency toward managerialism means that the evaluator and the clinician/manager/administrator responsible for the program under study become either too close to remain objective and impartial or become adversarial. This may contaminate or shade the results of the study. This also occurs in traditional correlational and causal comparative studies. Failure to accommodate value pluralism refers to the inability of the investigator to incorporate the values and viewpoints of all those who have an active stake in the outcome of the study.

Finally, most first, second, and third generation evaluation research studies, as with other social scientific methodologies, tend to make sole use of the scientific method to determine the 'truth' or 'truths' underlying a phenomenon instead of focusing on the overall worth of the programs and services to the patients and the communities they serve. The recognition of these deficits in evaluation methodologies led to the development of what has been referred to as "Fourth Generation Evaluation Research" (Guba & Lincoln, 1989).

The fourth generation of evaluation research is responsive evaluation. It has been termed responsive because it seeks out different stakeholder views in determining the variables and instruments that will be used in the investigation and then responds to the needs of all those who have an active stake in the evaluation process and results.

Fourth generation, responsive evaluations have four main phases that may be reiterated or overlap. In the first phase stakeholders are identified and solicited for those claims and issues they want to bring into the research study. Guba and Lincoln have identified three main classes of stakeholders who would have an active interest in a program investigation and its outcomes: "The agents, those persons involved in producing, using or implementing the (study results); the beneficiaries, those persons who profit in some way from the use of the (study) outcomes; and the victims; those persons who are negatively affected by the (study)" (1989, p.40). In the second phase all stakeholders are introduced to the others to begin the negotiating process through comments, agreements and/or disputes to determine what issues and topics will be assessed by what instrumentation. The third phase involves further information collection as non resolved disputes are investigated and further negotiated. Finally in the fourth phase, negotiation among stakeholding groups, under the guidance of the evaluator, takes place to reach a consensus and the information is collected, analyzed and disseminated to all the stakeholders for comment and publication.

Using the process oriented, fourth generation summative worth evaluation methodology would improve the current state of mental health services research and fulfill many of the goals set forth in the U.S. national plan of research to improve services. Instead of researchers and program directors choosing critical program variables and using current correlational, causal comparative or quasi experimental methods to establish a 'scientific truth', program staff, patients, funding sources, governmental agencies, and other interested stakeholders could

collaboratively agree on the critical study variables and study methodologies that would be used to determine the relative value of the mental health service. The results could then be used not only to determine what works in one program or another for given patient populations, but could also be used as a tool to improve services in the study programs as well. As each new set of data within a program is analyzed, remedial action plans could be collaboratively agreed and a new evaluation data obtained and analyzed to ensure a process of continuous quality improvement. Thus, in using this responsive evaluation methodology, not only would overall levels of mental health program effectiveness be obtained, but a mechanism could be established to allow for continuous quality improvement in the program over time.

The DonGiovanni (1988) evaluation study identified all major stakeholders and included their participation in the study and in the program modification phase after the results were analyzed. Though these stakeholder did not have the degree of participation mandated by responsive evaluation methodologies at the onset of the investigation, they participated in the results and program modification phases after the initial level of effectiveness were obtained. In addition, it was noted that ongoing program evaluation involving all the major stakeholders would continue into subsequent evaluations of that program. This goes far beyond the simple collection of data that traditional evaluation and experimentally based studies reported on, to include a program monitoring and improvement mechanism for future program improvements. Thus, in this and other responsive evaluation studies, the participation of all associated vested interest groups becomes not only a research tool but a programmatic problem solving mechanism as well.

Seligman (1995) refined his responsive evaluation approach to include all stakeholders in every step of the evaluation process. In addition, he demonstrated how this approach can be applied not only at the local program level but at a macro, national evaluation level as well. In this impact evaluation of rural health and mental health services in Panama, almost all the criteria for evaluation were determined by the stakeholders at the local level. Though selected criteria were included by national and regional health planners, the bulk of the program impact indicators were determined, measured, analyzed and reported by local stakeholders as a group. This data was then aggregated at the regional level to assist in future health and mental health planning at the regional and national levels.

This study demonstrates the advantages in using a responsive evaluation approach to evaluate and monitor program effectiveness. Continuous quality improvement mechanisms are incorporated into the basic study design to not only provide data on program effectiveness but a mechanism for future programmatic changes and innovations to improve the quality of patient care. After the initial data collection phase of the study, baseline data was available for decision making at the local level. All stakeholders then participated in developing action plans to improve the quality of care at the program level and time tables were established to measure the impact of those action plans. Though the results of this second data collection phase have not yet been reported, it appears likely that quality of care will have improved due to the implementation of the action plans, primarily due to the continuous quality improvement mechanisms that were built into the study design.

This research design improved on that of DonGiovanni by incorporating greater stakeholder participation in the decision making process at the local level. This produced greater interest in programmatic problem solving activities at the local level and provided a mechanism for long term, continuous quality improvement through action plans based on program and patient data

indicators. In addition, the centralized data reporting approach provided regional and national health care planners with a rich source of quality of care and outcome data with which to plan future programs and allocate resources. NIMH (1991) has identified key areas and sub areas that could benefit from such mental health services evaluation research:

Table 1.

Target Program areas for Evaluation Studies

- Characteristics of Mentally Ill People
 - Epidemiology and Service Settings
 - Impairments in Physical and Psychosocial Functioning
 - Family Matters: Problems and Resources.
- Assessment Research
 - Diagnosis and Measuring Severity and Disability
 - Assessing Physical Health
 - Measuring the Quality of Life
- Understanding the Family's Burden
 - Determining Rehabilitation Status.
 - Independent Living Skills
- Extended Clinical Research
 - Types of Treatment
 - Treatment Settings
 - Integration, Continuity, and Quality of Care
 - Special Populations, Special Treatment Issues.
- Rehabilitation:
 - The Road Back
 - Social Skills Training
 - Vocational Rehabilitation
 - Independent Living
 - Minority and Cross Cultural Issues.
 - Consumer and Family Perspectives.
 - Habilitation Services.
- Outcome Research: The Effects of Caring In:
 - The clinical domain.
 - The rehabilitative domain.
 - The community domain.
 - The overall public welfare domain.

In each of the NIMH target research areas, responsive evaluation methodologies that incorporate a variety of methodologies to determine efficacy and program value to all stakeholders would provide more comprehensive results than more traditional methodologies, tied to the scientific method. In addition, use of this research approach would give a voice to all the stakeholders who have an interest in treatment efficacy and successful program outcomes in any given mental health program, without the disenfranchisement that often occurs in many traditional research investigations.

Discussion

In an era of shrinking budgets, ongoing deinstitutionalization and administrative reorganizations, evaluation research methodologies provide not only a framework to assess what works for which patients under what circumstances, but a mechanism for incorporating the views of all stakeholders in the process. Due to the fact that evaluative research methods are not constrained to the study of molecular events and relationships among only a handful of variables, a variety of qualitative and quantitative research techniques can be incorporated into

evaluation studies which produce molar, global outcomes that more accurately demonstrate efficacy than traditional approaches.

Of the most commonly used research methods, the evaluative approach is the most comprehensive and applicable method for understanding complex variable interactions and is well suited to not only determining cause and effect in natural settings, but determining the relative value of mental health programs as well. Without the constraints of experimental study controls and manipulations, evaluative research can identify the overall, global relationships among all important factors that operate in a mental health program's input, process, content and products. Though outcome studies of this type may be constrained by generalizability limitations, this method offers a more comprehensive approach to applied research problems than either causal comparative or correlational methodologies and is an extremely useful tool for many applied research projects that cannot be experimentally manipulated in a scientific paradigm. Thus, evaluation research is the most useful approach of the principle investigative approaches in determining the global programmatic determination of 'what works, for which patients, under what circumstances' in mental health treatment programs.

Finally, evaluation research methods can incorporate the views of allied professionals from a variety of disciplines, program administrators, directors, patients, families, and community action boards more readily than other methodological approaches. In addition, it can be more readily applied to the evaluation of a wider variety of mental service programs than traditional research approaches (Guba & Lincoln, 1981; Windle & Lalley, 1992). Since the intent of this research is to determine the value or worth of services in a particular program or program model, evaluation research studies can provide efficacy data that fits within the worldview of all interested stakeholders. This leads to greater public acceptance and better direction in mental health program planning, funding, and clinician training. Most importantly, evaluation research promotes more effective treatment programs to enrich the lives of those patients and families who must endure the financial, social, and personal costs of mental illness on a daily basis.

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Therapeutic Program Models for Mentally Ill Chemical Abusers

Arthur J. Anderson
Consulting Clinical Psychologist - Honduras
Adjunct Faculty - Antioch University

Abstract: *This paper reviews the central issues in treatment strategies and program development for mentally ill chemical abusers (MICA patients). Patient treatment needs, historical context for divisions of service/system, treatment philosophies, and program model components are discussed in the context of treatment efficacy, program funding and community based treatment policies with regard to comorbidity. An integrated services approach, utilizing symptom and deficit reduction, within a combined holistic and patient centered treatment philosophy is outlined. A comparison of patient outcomes between a traditional disease specific program and an integrated program is provided. The potential benefits of treating MICA patients in integrated treatment programs are discussed.*

Therapeutic Program Models for Mentally Ill Chemical Abusers

INTRODUCTION : Patients diagnosed with severe mental illness, who also suffer from substance abuse or addiction disorders present a variety of individual, social, fiscal and political challenges. Such patients stretch the ability of traditional community based treatment programs to deliver adequate services to effectively meet the multiple treatment needs of these individuals. These problems have led to the development of a variety of treatment models designed to treat the dually diagnosed. (Bachrach, 1984; Drake, 1991; Minkoff 1987). A review of such program models, their underlying theoretic and philosophic assumptions, historical development, and treatment efficacy sheds new light on the utility of each model to adequately meet the needs of this emerging patient population.

Deinstitutionalization and the corresponding increase in the number of homeless mentally ill has been associated with the emergence of a growing population of patients with concomitant mental illness and chemical abuse (MICA patients).

Numerous studies have demonstrated a rate of substance abuse and or dependency among the mentally ill at between 32 and 85 percent (Schwartz and Goldfinger, 1981; Safer 1987; Drake, Osher and Wallach, 1989). MICA patients are the most frequently cited population of dually diagnosed patients in the professional literature (Psycinfo, 1993). They have been reported to utilize increased rates of acute hospitalization, have histories of more housing instability, homelessness, criminality and homicidal/suicidal behavior than either the mentally ill or chemical abusers alone (Caron, 1981; Drake 1989; Osher & Kofoed, 1989; Safer, 1987). Poor medication compliance and response to treatment and services has also been linked to this dual disorder (LaPorte, 1989; McLellan, 1986).

MICA patients have not only created significant treatment challenges for traditional treatment programs, but for the entire mental health and addiction treatment care systems (Minkoff, 1991). Bachrach (1986 87) has referred to MICA patients as "system misfits" who do not measure up to the typical 'patient profile' within either the mental health or addiction systems of care. Traditional mental health programs are often poorly equipped to address dependency and ongoing intensive recovery needs

of MICA patients, while addiction programs generally have difficulty treating MICA patients with psychotic symptoms or who require medication and psychotherapy to resolve a variety of various mental health issues.

Historically, treatment modalities for all dual diagnosis populations have been developed to deal specifically with symptom reduction and long term rehabilitation for each particular population. However, these programs have met with limited degrees of success in treating the dually diagnosed (McLellan, 1986; Schuckit, 1985). MICA patients have complex treatment needs and interactive symptomatology, requiring a more integrated approach than is generally employed (Breakey, 1987). Depression, delusions, and hallucinations, for example, are often related to, caused by, or intensified by substance abuse and addiction.

A variety of hybrid program models have been proposed and developed to meet the multiple clinical needs of MICA patients (Evans and Sullivan, 1990; Osher and Kofoed, 1989, Minkoff 1989).

These models generally fall into one of three categories.

1. Disease specific models with modifications: These traditional substance abuse or mental health programs attempt to treat the multiple symptoms of MICA patients by incorporating techniques of mental health or addiction counseling into their spectrum of services. Despite these enhanced techniques, the primary clinical focus in such program generally remains on the principal diagnosis of mental illness or substance abuse.
2. Linkage programs: Though similar to disease specific models in that they maintain a traditional approach to treating either mental illness or substance abuse, these programs generally deal with additional MICA treatment needs by referring patients to other clinics to treat the concomitant mental illness or addiction issues. Because of this, linkage treatment programs are more of a treatment strategy than an independent model and can be considered hybrids of existing disease specific program models.
3. Integrated programs: Incorporate the clinical resources and systems necessary to not only meet the multiple clinical needs of MICA patients within a single program, but to do so in an individualized manner; customizing treatment planning and services to meet the needs of individual MICA patients.

Most disease specific treatment models for MICA patients emphasize sequential program modeling, in which patients attend collateral treatment after they have met their current treatment goals in substance abuse or mental health (Minkoff, 1991). Linkage program models generally emphasize a parallel treatment model that requires patients to attend collateral treatment in another program for the mental health or substance abuse treatment they cannot receive in their current program. This parallel service system, used in linkage models, attempts to deal with both addiction and mental illness simultaneously, while disease specific, sequential models, first treat the mental illness or substance abuse, then send the patient to another program to work on the remaining symptomatology.

However, in both disease specific and linkage program, generally only one treatment philosophy is stressed for MICA patients; and it is typically substance abuse treatment (Minkoff, 1991). In such programs, mental illness and underlying pathology are often treated as secondary to the substance abuse, and the primary treatment phases and components generally mirror that of traditional substance abuse treatment programs (Osher & Kofoed, 1989).

Effective treatment for either the addiction or mental illness symptomatology, first requires clinician understanding of the interaction between all presenting symptoms. Thus, the first step in meeting the

treatment needs for MICA patients is a complete assessment of all presenting symptoms. However, in many traditional disease specific and linkage program models, initial assessment and instrumentation are often selected to measure only the aspects of the patients' symptom constellation that can be treated at that facility. As a consequence, other deficits, such as medical illness, history of trauma, skill deficits or inadequate/antisocial support systems, perceptual disturbances, and deficits in cognition are neglected (Koegel & Burnam, 1988; Wright and Weber, 1987). On the other hand, integrated programs are generally designed to take into account the full range of patient symptoms and distress and customize treatment to meet these patient needs.

The use of an integrated model has clear advantages over disease specific models of care for MICA patients. A detailed review of the historical development, theoretical/philosophical assumptions, model components and efficacy punctuates its advantages as a model for effective treatment.

HISTORICAL CONTEXT AND PHILOSOPHIC ASSUMPTIONS

Over time, established research and treatment programs for population specific diagnostic categories have produced barriers to patient care. This is due to over specialization of treatment programming and tends to limit access or reduce services for the dually diagnosed. Clinician, program, institution and funding bias have contributed to the development of programs that are focused on treatment within disease specific categories, such as mental illness or substance abuse. This bias is generally in the direction of treatment of primarily single diagnosis symptomatology. It has resulted in the development of treatment programs and associated techniques that concentrate on one aspect of patient pathology while excluding others, such as psychotic spectrum and mood disorder symptomatology. The traditional, 12 Step Method of Alcoholic's Anonymous and Narcotics Anonymous are examples of such treatment strategies (Cummings, 1993). These treatment programs generally discourage the use of all foreign substances, even medication to treat mental illness. In many of these programs, all aspects of care that appear to be in conflict with the 12 step model are discarded as potentially harmful to the substance abuse treatment.

In general, this bias within systems of care, or paradigmatic bias, is due to evolution of separate administrative divisions and funding pools which foster effective political and administrative organization at the expense of creative and innovative clinical care. Artificial and arbitrary divisions at the federal, state and local government levels continue to promote this process and consequently prevent programs from developing joint projects or crossing service boundaries to more effectively treat and manage patients with multiple diagnoses (Drake et al, 1991; Ridgley et al, 1990). Often otherwise eligible patients who seek treatment at single diagnosis facilities and who happen to have co existing disorders are refused admissions to or are prematurely discharged from such treatment programs solely on the basis of their category of pathology (Galanter et al, 1988). This situation has caused many population specific treatment programs to be over utilized and restrict entry due to space limitations, while other, less restrictive community mental health programs remain under utilized.

Prior to deinstitutionalization, almost all types of dually diagnosed patients received care from an integrated state hospital system. However, with the reduction of long term, state and federal institutional beds came a corresponding rise (albeit slow) in various streams of funding for community mental health centers and more recently for substance abuse programs. In addition, separate funding streams were also developed for the long term community based treatment of mental retardation and child/adolescent disorders. Each of these funding streams produced a corresponding division in both clinical research and service delivery.

The philosophies of treatment tended to vary as new funding streams and divisions of services developed. Mental health center models tended to adopt a medical/biochemical deficit philosophy, while substance abuse programs developed treatment programs that were based on an internal character deficit philosophy (Valliant, 1983). Other funding streams for MRDD and adolescent disorders produced programs based on combined medical and social environmental/ecological deficit philosophies (Humphreys & Rappaport, 1993).

Brower (1989) identified five distinct treatment philosophies that have emerged in disease specific treatment program models. He writes that many programs typically employ moral deficit, learning/behavioral, disease, self medication, or social deficit philosophies of treatment. Though each of these treatment philosophies have advantages when applied to a target population, each are compromised by their rigid adherence to that particular philosophy and are therefore limited in their efficacy.

The moral deficit philosophy is historically the oldest model for both substance abuse and mental health treatment. In this model, illness results from a moral weakness and lack of willpower. The goal of rehabilitation is to increase the patients willpower to resist their evil cravings for substance or resist the irrational urges of mental illness and become good. Though the moral deficit philosophy has the advantages of holding patients accountable and responsible for the consequences of their actions, the major disadvantage of this treatment philosophy is that it places the treating clinician in an antagonistic relationship with the patient. In such programs, clinicians must adopt a judgemental stance that is blaming and punitive. The moral deficit philosophy is often embraced by patients themselves who feel guilty for their past actions and who readily assess themselves as bad and weak willed. And though this treatment philosophy may help some chemical abusers, it could be disastrous for the MICA patient who has no control over the biochemical imbalances that caused the mental illness and/or the substance abuser who may be hypersensitive to criticism or blame.

Disease specific programs utilizing a learning/behavioral philosophy assume that substance abuse and other deficit behaviors are caused by the learning of maladaptive habits (Marlett, 1985). In this case, the patient is viewed as someone who has learned 'bad' habits through no particular fault of their own. The goal of treatment is to teach new behaviors and cognitions that are more adaptive. The main advantages of utilizing this model are that clinicians are neither punitive or judgemental in their service delivery and the learning of new, more adaptive habits is the primary focus of treatment. Unfortunately, such models shift the focus of 'control' to the patient. Thus, fueling the patient's denial of either mental illness or substance abuse. Since they may deny that they are out of control, they may deny that any problem exists. For MICA patients who may resolve their chemical abuse or mental illness problem, this could have serious consequences because the remaining clinical deficits will not be resolved.

The disease/deficit philosophy is perhaps the dominant model used among disease specific program providers today (Brower, 1989). In programs that adopt this philosophy, substance abusers are seen as individuals who are ill and unhealthy, not because of an underlying mental illness, but due to the disease of chemical dependency itself. Because there is no known cure for this 'disease', the patient is considered always and forever ill. The treatment in this case is complete abstinence. Chemical abusers are expected to "change from using to not using, from ill to healthy, and from unrecovered to recovering" (Brower, 1983, p.150). Although guilt is relieved because patients are not held responsible for developing chemical dependency, and treatment is neither punitive or judgemental, this treatment philosophy cannot account for people who return to normal asymptomatic drinking. When applied to mental health, this model cannot account for spontaneous remission either. Since these 'diseases' are

considered incurable and only manageable, no spontaneous recoveries or remissions are possible. And for MICA patients with interacting symptomatology, what portion of their multiple problems can be considered part of a disease and what part is not even considered under this set of assumptions?

Programs that adopt a self medication philosophy assume that chemical dependency occurs either as a symptom of mental illness or as a coping mechanism for underlying psychopathology. The patient is viewed as someone who uses chemicals to alleviate the symptoms of a mental disorder such as depression. The goals of treatment for these programs emphasizes improvement in mental functioning. Chemical abusers and the mentally ill are expected to change from mentally ill to psychologically healthy. The major advantage with these programs is that psychiatric problems are diagnosed and treated along with the substance abuse symptoms. However, this is also the model's main disadvantage as well. Assuming mental illness as the etiology for chemical abuse negates the possibility that chemical abuse causes the psychopathology. Because the focus of treatment is on the resolution of underlying mental illness, the chemical abuse problems that may be the true clinical etiology may not be resolved for MICA patients. Social deficit philosophies of treatment tend to view chemical dependency and mental illness as a result of environmental, cultural, social, peer or family influences (Beigel & Ghertner, 1977). Substance abusers and the mentally ill are viewed as products of external forces such as poverty, drug availability, peer pressure, and family dysfunction (Brower, 1989). The goal of treatment in these programs is to improve social functioning by altering their environment or their coping responses to perceived stressors. This may involve group therapy, attending self help groups, residential treatment, and interpersonal therapy; all with the goal of improving social skills. An advantage in assuming a social deficit philosophy is that the role of the social environment is brought into clinical focus and treatment is geared toward reintegrating patients into their social milieu. The main disadvantage in adopting this treatment philosophy for the treatment of MICA patients lies in its exclusive treatment of social factors for problems that are often multifactorial. This again implies the need for the adoption of additional treatment strategies that are based on often competing philosophies.

By accepting any of these underlying assumptions alone, and relying solely on one philosophic stance, researchers and practitioners perpetuate the status quo by remaining uncritical about the problems inherent in their models. This process has, as a consequence, produced service barriers that have discouraged or excluded large numbers of dually diagnosed patients from seeking, being admitted to, or successfully completing appropriate professional treatment programs (Bachrach, 1987; Humphreys & Rappaport, 1993). Instead of creating additional subpopulation and philosophic barriers, the critical question for both MICA treatment providers and researchers should be how we can best match MICA patients during their courses of treatment to the various programs and models in order to maximize outcomes in biopsychosocial and multivariate treatment programs. (Glaser, 1980, Marlatt, 1988).

PROGRAM COMPONENTS

An integrated system of care for MICA patients incorporates more comprehensive treatment philosophies and strategies than traditional disease specific models. Integrated approaches allow for the use of the most appropriate level and type of treatment technologies available to rehabilitate patients at his or her particular level of need. Thus, integrative treatment plans can be customized to meet both the mental health and addiction needs of the patient.

Traditional disease specific and linkage programs tend to be more generic in nature, requiring patients to conform to the expectations of the program, as opposed to the program conforming to the needs of the patient. Many substance abuse models emphasize group and individual counseling in a highly structured, substance free, restrictive environment. These programs generally enforce abstinence from

all substances, including psychotropic medication. Long term aftercare treatment focuses solely on sobriety issues. On the other hand, disease specific models in mental health concentrate on functional adaptation and rehabilitation in a less restrictive milieu, but minimize the problems of addiction. It is assumed in each of these program models that patients will be motivated to participate in treatment to alleviate their distress. Those who do not conform to the mandates of these programs are considered treatment resistant or treatment refractory and are encouraged to seek help elsewhere or discharged from the program.

Developing a comprehensive and more effective system of care requires the use of a wide array of services delivered under a conceptual framework that merges both addiction recovery and psychiatric rehabilitation. Minkoff (1989) has identified an integrated conceptual framework for treatment of MICA patients and the key concepts for developing such programs. The critical elements for developing such a system are as follows:

- "1. Chronic psychotic disorders and substance dependency are both viewed as examples of chronic mental illness, with many common characteristics (biological etiology, heritability, chronicity, incurability, treatability, potential for relapse and deterioration, denial and guilt), despite distinctive differences in symptomatology.
2. Each illness can fit into a disease and recovery model for assessment and treatment, where the goal of treatment is to stabilize acute symptoms and then engage the person who has the disease to participate in a long term program of maintenance, rehabilitation and recovery,
3. Regardless of the order of onset, each illness is considered primary. Further, although each illness can exacerbate the symptoms of and interfere with the treatment of the other, the severity and level of disability associated with each illness is regarded as essentially independent of the severity and level of disability associated with the other.
4. Both illnesses can be regarded as having parallel phases of treatment and recovery. Those phases include acute stabilization, engagement in treatment, prolonged stabilization/maintenance and rehabilitation/recovery. Osher and Kofoed (1989) have further subdivided the engagement phase into engagement, persuasion, and active treatment; prolonged stabilization is the intended outcome of active treatment.
5. Although, in dual diagnosis patients, progress in recovery for each diagnosis is affected by progress in recovery for the other, the recovery processes commonly proceed independently. In particular, progress in recovery may depend on patient motivation, and patient motivation for treatment of each illness may vary. Thus, patients may be engaged in active treatment to maintain stabilization of psychosis, while still refusing treatment for stabilization of substance abuse." (Minkoff, 1991, p.18)

Such a conceptual framework has a number of implications for program model design. Each system of care, within the integrated model, must include programs elements that meet the needs of the patient in every phase of recovery and rehabilitation. In addition, the program must address levels of severity and disability within each phase of rehabilitation. For example, programs must provide for acute detoxification services for both psychotic and/or non psychotic patients; deliver services for the stabilization of psychosis, whether the patient is in active substance withdrawal or not; and provide individual and group therapy services that are designed for various degrees of dysfunction in both substance abuse or mental illness.

To operate this under this combined conceptual framework, integrated models must be staffed with sufficient numbers and types of clinicians to provide the customized, comprehensive treatment inherent in such a model. The following abbreviated list and description of service elements exemplifies the range of services that may be incorporated into integrated program model (Finney & Moos, 1984; Hellerstein, 1987; Hendrickson 1989; Kofoed, 1986; NYSOMH, 1990; Ridgely, 1987):

- Activity therapy designed to assist a patient in developing functional skills and obtaining social and environmental supports needed for independent community based living.
- Continuous assessment and evaluation a clinical process of identifying an individual's diagnosis, strengths and weaknesses, problems and service needs.
- Case management services the process of providing continuity of care by linking the individual to the service system and coordinating the provision of services.
- Primary therapy the provision of intensive, individualized treatment planning and therapy with emphasis on goal oriented problem solving, assessment of treatment strategies and provision of practical skills for assisting the patient in management of his or her illness.
- Crisis intervention services medication and verbal therapy designed to reduce acute distress and associated behaviors when the individual's behaviors or condition requires immediate attention.
- Medication therapy prescribing and/or administering medication, reviewing the appropriateness of the patient's existing medication regimen through review of records and consultation with the patient and/or family or care giver, and monitoring the effects of medication on the patient's mental and physical health.
- Medication education providing patients with information concerning the nature of his or her mental illness and the effects, benefits, risks and possible side effects of a proposed course of medication.
- Addiction counseling direct verbal therapy designed to reduce cravings and maintain the patient in a clean and sober condition.
- Behavioral interventions token economies, level systems, positive and negative reinforcement schedules delivered programmatically, in group therapy and individual therapy to modify behavior toward more functional and socially acceptable levels.
- Psychiatric rehabilitative treatment interventions designed to increase the functioning of a patient with psychiatric disabilities with the aim of increasing patient success in a community environment.
- Symptom management delivery of appropriate techniques to intervene and/or reduce symptom severity by providing patient education that allows the patient to recognize the onset of psychiatric symptoms and engage in activities designed to prevent, manage, or reduce such symptoms.
- Group Therapy providing goal oriented group psychotherapy, behavior therapy, double trouble groups, addiction counseling, family therapy and other face to face contacts between staff and other patients designed to address specific patient deficits.
- Psychoeducation programmed modules to increase patient understanding regarding the causes, symptoms and self management of their dual diagnosis symptomatology.
- Therapeutic Environment providing a physical milieu and variably structured environment that will be conducive to treatment and will increase retention of the patients throughout their course of treatment in the program.

In addition to the comprehensive provision of the 'mix' of services, an integrated program should provide for acute stabilization, continuity of care, and ongoing stabilization and rehabilitation for both addiction and mental illness symptomatology. Relapse occurs often in both mental illness and substance abuse. Programs must possess or link with adequate facilities to stabilize patients during acute episodes and relapses. In addition, maintaining a vast array of services under one program umbrella, provides for continuity of care by short circuiting the "ping pong treatment" of bouncing back and forth between various programs (Ridgely, Goldman and Willenbring, 1990) . This usually occurs in linkage programs and creates a discontinuity of services for the patient and confusion in treatment planning for clinicians.

Finally, ongoing stabilization and long term rehabilitation must be designed into the phases of treatment to enable patients to build on the gains made within the integrated program. This may take the form of case management or ongoing day treatment. These program components reduce the incidence of relapse

for both mental illness and addiction and promotes patient re integration into the community (Harris and Bergman, 1987).

The characteristics and program elements listed above generally describe common characteristics for integrated programs in residential and hospital settings. A review of the literature on integrated MICA programs also identifies five common characteristics for outpatient programs as well.

"1. Abstinence is a goal, not a requirement.

2. Patients with substance abuse and substance dependence are treated together.

3. Group models, with either staff or peer leaders, are fundamental.

4. Patients progress from (a) low level education or "persuasion" groups, in which patients have high denial and low motivation, to (b) "active treatment" groups, in which they are more motivated to consider abstinence and are willing to accept more confrontation, to (c) abstinence and support groups, in which they have mostly committed to abstinence and help each other to learn new skills to attain or maintain sobriety.

5. Involvement of available family members is recommended." (Minkoff, 1991, p.23)

By incorporating this vast array of services under an integrated conceptual framework, MICA patients, who typically fail in traditional treatment due to low levels of motivation or programmatic/system bias against either substance abuse or mental health issues, can be treated at their individual level and scope of dysfunction. The development of an integrated program model builds on the most effective treatment technologies available in addiction and mental health, while overcoming the differences that separate the systems and treatment programs. This comprehensive integration, serves not only the MICA patients who receive treatment in the programs, but strengthen both mental health and addiction care systems as well.

A COMPARISON OF INTEGRATED AND DISEASE SPECIFIC MODELS

Anderson (1993) evaluated the treatment outcomes of two transitional living communities in Bellevue Hospital Center, New York City. This study illustrates the differential efficacy for a traditional, disease specific treatment model and an integrated program approach. The Transitional Living Community Program (TLC) was described as a hospital operated, residential rehabilitation facility for mentally ill, homeless men that utilized an integrated approach to treatment. This unit had been in operation since January, 1987. In this study, patient treatment outcomes of the TLC are compared with those of the Mentally Ill, Chemical Abusers Transitional Living Community (MICA TLC). The MICA TLC began operations to specifically treat patients diagnosed with both mental illness and substance abuse in May, 1991. This unit utilized a more traditional disease specific approach to substance abuse treatment.

Both units accepted MICA patients, have identical staffing patterns and patient mix, operated in the same location on the Bellevue Hospital campus, and had the goal of rehabilitating patients over a six month period for eventual long term placement in the community. They only differed in their respective models of service delivery.

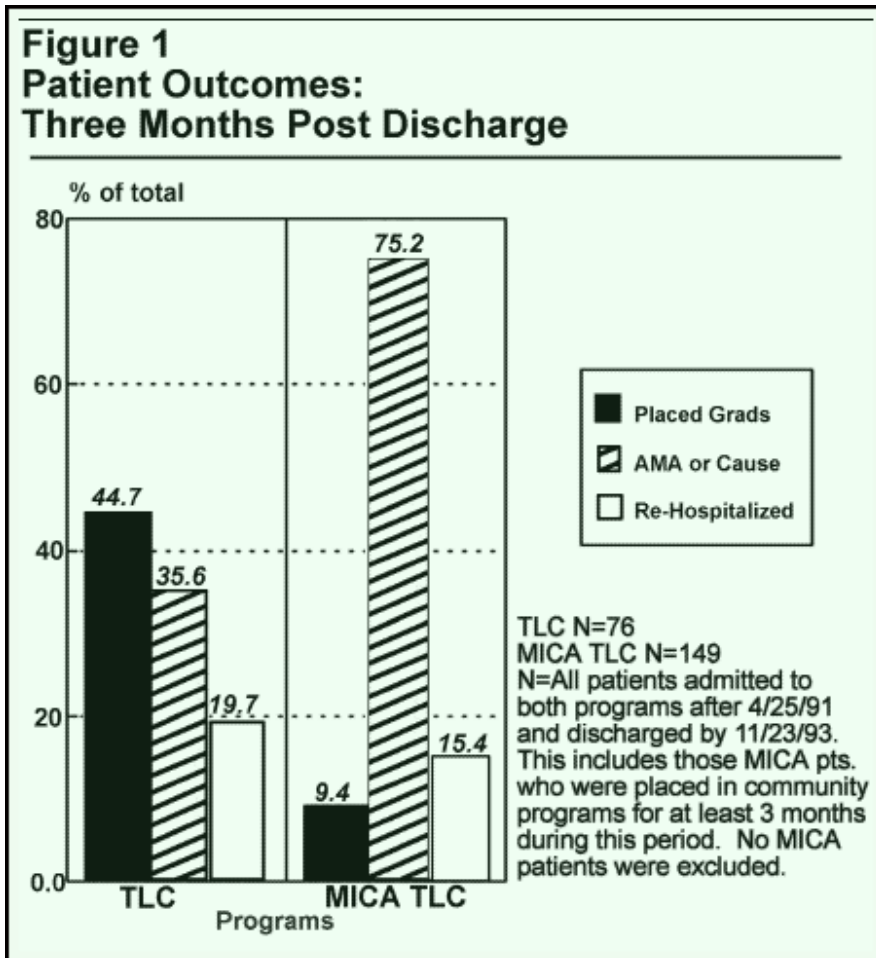
The TLC Program was a voluntary unit that engaged each patient in a contractual agreement for all therapeutic services delivered within an integrated treatment environment. This unit accepted dually diagnosed patients of all types, provided they were homeless, had an Axis I diagnosis of Mental Illness,

and were ambulatory. As patients entered the program, the patient and the treatment team consulted and contracted for the amount and type of services the patient would receive. Patients who were not scheduled for group or individual therapy could leave the unit at will. Abstinence from intoxicating substances on this unit was encouraged but not mandated. Psychiatric rehabilitation was the main focus of all individual and group therapy sessions. This program customized the array of services delivered to each patients in a integrative model.

The MICA TLC operated within a modified therapeutic community (TC), disease specific program model. This program accepted all patients who were homeless, had Axis I and concomitant substance abuse diagnosis, and who were ambulatory. Within this model, all patients were required to remain on the unit and participate in all available services, including group therapy, activity therapy, and substance abuse counseling. Though the overall goal of this unit was identical to that of the TLC Program in terms of rehabilitation and placement into community based settings within a six month period, this program emphasized traditional 12 Step and substance abuse treatment and only minimally addressed psychiatric rehabilitation issues in one group therapy session per week. In addition, as in other traditional substance abuse treatment programs, all patients on this unit received the same level and type of treatment. In both programs patients only graduated and were placed into community based housing programs when they were functionally able to live independently. This required a global level of functioning of at least 75.

TLC and MICA TLC patient dispositions for a 30 month period are demonstrated in Figure 1. Within the context of this investigation, Graduates were defined as those patients who had completed the therapeutic program, had reached and maintained a Global Level of Function of at least 85, and had remained in community based placement for at least three months. AMA patients are defined as those who left the program against medical advise or who were requested to leave the program for violence or threatening behaviors on the unit.

With no significant differences found in patient age, SES, race, or hospitalization history, and including only the 110 MICA patients of the TLC unit, the TLC Program more than doubled the rate of the positive therapeutic outcomes of the MICA TLC Program. This was in spite of the fact that the MICA TLC had delivered 35% more service hours per patient than the TLC program during the same period.



The TLC program had delivered an average of 22.3 hours of group and individual treatment to patients weekly, while the MICA TLC program had delivered an average of 30.1 hours per week.

The results of this study suggest that the level of structure and/or the lack of individualized treatment of the traditional, disease specific therapeutic community model did not meet the needs of the patients diagnosed with psychotic spectrum disorder, chemical abusers on this unit. On the other hand, the TLC Program's individualized, integrative approach more effectively served the needs of most patients on the unit and did not have a differential impact on any sub population of MICA patients.

DISCUSSION

This review of the historical development, theoretical/philosophical assumptions, model components and efficacy of MICA treatment models clearly demonstrates the advantages of using integrated treatment models to treat the dually diagnosed. The advantages of the model use were not only demonstrated on theoretical level but in clinical use as well. The efficacy rates of the two transitional living communities suggest that the use of an integrated approach which emphasizes the individualized 'mix' of treatment options produces greater patient satisfaction, and yields higher levels of efficacy than traditional, disease specific programs currently provide. In addition, integrating services within a single program reduces costs and duplication of effort because patients are treated within the same facility. Adoption of a integrated program model allows for the customization of program services to meet the

needs of individual MICA patients, instead of matching patients to rigidly structured, generic programs that may or may not meet their treatment needs. (Jolivet, 1993).

Though the integrated model presented in this paper is not a magic bullet and cannot resolve all the problems that emerge in treatment for the dually diagnosed, full and comprehensive treatment can occur simultaneously for the dually diagnosed patients of many categories, provided sufficient levels of staffing/staff training and program organization exist. Additional programmatic measures to discourage substance abuse, linkages with specialized medical facilities to treat compromising medical disorders, and adoption of level systems and/or other programmatic enhancements and technologies provides greater therapeutic treatment value for a variety of dual diagnosis categories, than current disease specific models provide in community based residential settings. (Polcin, 1992).

For integrated programs to effectively deal with a wide range of therapeutic issues, professional level training must include integrative treatment technologies and strategies for multiple, interacting symptoms. Mental health education programs generally include some form of training in various psychotherapeutic paradigms. This may include cognitive behavioral, client centered, interpersonal, psychoanalytic, family, systems, and other paradigmatically based treatment modalities and technologies. Additional professional training in the eclectic and/or integrative use of these therapeutic technologies with a variety of dually diagnosed patients can empower clinicians to more accurately assess and treat multiple categories of dual diagnosis within the same community mental health center.

Careful integration of program services will also allow for the normalization and destigmatization of many coexisting disorders. In traditional dually diagnosed and single diagnosis program models, many patients tend to view and identify themselves as part of the community within those programs. Upon completion of the program, they also tend to add the prefix *ex* to this identification (i.e., *ex alcoholic*, *ex schizophrenic*). In traditional, disease specific aftercare and community programs they often tend to identify themselves by their diagnosis as well (i.e., identification of self as an alcoholic in Alcoholics Anonymous)(Jolivet, 1993). Additional research may show that integrating a variety of MICA and single diagnosis patients within the same community based program may reduce this stigmatization. An integrative program approach may also encourage patients to assist in helping their "fellow community members" toward reaching their treatment goals and eventually maintain themselves more successfully in the community.

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Comparative Impact Evaluation of Two Therapeutic Programs for Mentally Ill Chemical Abusers

Arthur J. Anderson
Consulting Clinical Psychologist - Honduras
Adjunct Faculty - Antioch University

Abstract: *This study investigated the relative impact of a traditional, disease specific program model and an integrated program model on the basis of treatment outcomes for homeless, mentally ill chemical abusers (MICA) patients. Patient outcomes in these two hospital based, residential programs that treat MICA patients and that varied only in their treatment models were compared across seven indicators: successful community placement, treatment failures, service hours, subpopulation outcomes, recidivism, patient satisfaction, and cost efficiency. It was found that the integrated program model tended to produce greater gains with a low functioning, homeless MICA population, while the disease specific, therapeutic community model may be more suited to higher functioning MICA patients. A recommendation is made to expand the scope of efficacy and outcome research with different program models.*

A Comparative Impact Evaluation of Two Therapeutic Programs for Mentally Ill Chemical Abusers

Introduction: Patients diagnosed with severe mental illness who also suffer from other psychiatric and medical disorders present a variety of individual, social, fiscal and political challenges not only for program funding, but for planning and implementing effective rehabilitative treatment programs as well. Severe mental illness coupled with severe personality, behavioral, addictive, cognitive or physical disease, stretches the ability of traditional community based treatment programs to effectively treat these patients. This has led to the development of a wide variety of treatment models designed to serve the multiple needs of these patients (Bachrach, 1984; Drake, 1991; Minkoff 1987). An evaluation of the clinical effectiveness of these models would not only lead to more cost effective use of limited treatment resources, but more importantly, improve clinical treatment options for the dually diagnosed patient.

Focusing a program impact evaluation on current treatment models for the most commonly reported dually diagnosed population, mentally ill chemical abusers (MICA), may demonstrate the differential rates of effectiveness for the most commonly used program models (PsycInfo, 1993). Such results would be useful to policy planners, administrators, legislators and program developers who must design and implement the most effective treatment programs possible with limited resources. More importantly, this information can be used to not only determine what treatments and programmatic approaches are effective, but to improve the quality of care for severely dysfunctional MICA patients.

Treatment programs for the dually diagnosed primarily fall into two main categories: disease specific and integrated program models (Minkoff,1991). Disease specific program models tend to focus treatment on what they consider to be the primary area of distress and minimize the importance or urgency of other areas of dysfunction. Many substance abuse treatment programs and traditional hospital based mental health programs typically model their treatment programs in this manner. Integrated program models, found in both hospital and community based settings, are designed to provide individualized treatment planning and services that focus attention on all areas of patient dysfunction within a single program.

The development of these models has not been based so much on the clinical efficacy, but more on availability of funding and political interest in treating specific patient populations (Humphreys & Rappaport, 1993). This fragmentation of program models has been perpetuated through the development of artificial and arbitrary administrative divisions at the federal, state and local levels without regard to clinical measures of success for the various program models. Consequently, it is possible that many public sector and grant funded programs continue to be financed through a variety of funding streams with little or no demonstrable clinical success. This siphons critical funds from those programs that use more clinically viable models.

Dually diagnosed patients in general and specifically MICA patients have complex treatment needs and interactive symptomatology that require a more integrated approach than is generally employed (Breakey, 1987). It therefore seems more likely that integrated treatment models would be clinically more effective in treating the dually diagnosed MICA patient than disease specific models. However, given the severe therapeutic challenges that substance abuse and dependency present, a more restrictive, traditional substance abuse model may actually provide increased efficacy for the MICA patient as well. Evaluating the various treatment outcomes produced by each program model, treating a similar patient population, should demonstrate the relative clinical effectiveness and cost efficiency of each program model to treat MICA patients.

This exploratory study investigates the clinical impact of each program model on MICA patients. Specific outcome indicators and study variables were selected to demonstrate each model's effectiveness in meeting the programs' stated therapeutic goals for MICA patients, and to rule out outcomes that may be due to differences between the programs, such as population differences, number of services delivered, and level of patient participation. These indicators compare relative degrees of outcome efficacy between the two programs and are not process oriented. As such, they directly relate to the goals of the two programs. Since the location, staffing pattern, outplacement resources, and goals of the programs are identical, and the study population similar in terms of diagnostic and demographic composition, the results should illustrate the relative impact of disease specific and integrated program models in the treatment of homeless, MICA patients.

Method Design and Program Characteristics

This investigation evaluated patient outcomes for two treatment programs at Bellevue Hospital Center, NYC, NY, that treat homeless, male mentally ill chemical abusers. Clinical outcomes in the MICA Transitional Living Community Program (MICA TLC), a disease specific substance abuse treatment program, are compared with outcome data from the Transitional Living Community (TLC), an integrated, MICA residential mental health program. Both residential programs have program goals of rehabilitating MICA patients over a six month period and placing graduating patients in community based housing. A comparison of patient outcomes for the same efficacy indicators was performed to

determine the relative value of integrated and disease specific treatment models in treating MICA patients.

Program Descriptions

TLC Integrated Program Model: This 30 bed voluntary residential rehabilitation program is located at the 30th Street Facility of the Bellevue Hospital Campus on the 6th floor. This program for homeless males with severe and persistent mental illness is administered by the Director of Community Support Services and is staffed by one psychiatrist, three social workers, one psychologists, two nurses, five nurse aides, three rehabilitation/activity therapists, and two clinical case managers. Individual therapy, group therapy, rehabilitative group sessions, case management support, substance abuse counseling, double trouble (addiction and mental illness) groups, and pharmacotherapy were customized within individualized treatment plans to meet the needs and desires of the patient.

In this program, a voluntary treatment contract is negotiated with each patient and he is free to leave the program during the day, provided he has fulfilled his contractual treatment schedule for that day. Patients are typically scheduled for 3 to 5 hours of treatment daily. This program focuses on the whole spectrum of mental illness and substance abuse issues in an open, non threatening environment, normalizing substance abuse issues as just one more treatment challenge that the patient has the responsibility for overcoming.

MICA TLC Disease Specific Program Model: This is also a 30 bed residential rehabilitation program, located at the 30th Street Facility of the Bellevue Hospital Campus on the 6th floor. This program, also designed to treat homeless males with severe and persistent mental illness and substance abuse, is also administered by the Director of Community Support Services and is staffed by one psychiatrist, four social workers or psychologists, two nurses, five nurse aides, three rehabilitation/activity therapists, and two clinical case managers. This program adopted a traditional generic self help, therapeutic community treatment approach where traditional substance abuse groups and individual therapy are combined with pharmacotherapy to reduce dependency needs and facilitate social re integration. Confrontational approaches and a highly structured 'house' hierarchy maintain an almost military atmosphere that structures the lives of all the patients in the program.

Like other disease specific MICA programs, patients agree to remain on the unit and are supervised for all off program activities. Unlike the TLC program, treatment plans are generally identical for all patients and stress abstinence and social responsibility. Services include Double Trouble Groups, Substance Abuse Rap Groups, AA, Resocialization Groups, Individual Psychotherapy and Community reentry groups focused on maintenance of sobriety in the community. This program maintains a highly structured, substance free, restrictive environment focused on delivering a similar level and type of treatment to all admitted patients.

Data Collection and Subject Inclusion:

All male, mentally ill chemical abusing patients who entered the programs after 4/25/91 and who were discharged by 11/25/93 were included in the investigation. The admission criteria of homelessness and a major Axis I diagnosis in addition to a substance abuse diagnosis are the same for both programs. In addition, all patient referrals to the programs come from the same Bellevue inpatient psychiatric units and New York City homeless shelter programs. Thus, the patient 'pool' for these two programs are assumed to be identical for the purposes of this study (See Subject Selection). This was confirmed by an analysis of variance and comparison of demographic characteristics between the groups on the

dimensions of age, diagnosis, substance abuse severity (in years and type of abuse), prison history, suicide history, medication, and number of previous hospitalizations. Since this subject pool was thus determined to be grossly equivalent, the relative success of each treatment model could be compared and a comparative rate determined across indicators (Tables 1 & 2).

Within the context of this study, successful rehabilitation of patients and program graduation required a Global Assessment of Functioning (GAF) level of at least 80. The functional level was recorded on New York City Department of Mental Health functional assessment forms. The addiction severity index is a survey instrument to record the type of substance abused, duration of substance abuse and housing, prison and work history. The determination of functional level at the time of program graduation and the degree of addiction severity were made by clinical case managers within the programs. These levels and scores were subsequently confirmed by clinical case managers from an affiliated case management program. The administration of the addiction severity index required no additional training since it is a self report questionnaire that could be independently completed by patients. The case manager raters from the affiliated case management program were responsible for long term patient follow up of those patients who graduated and were placed in community based housing. Three month post graduation outcome information on patients who were placed in community based, residential programs and apartments was performed by these same Clinical Case Managers who recorded their findings on New York State Office of Mental Health Form 143a, Parts 1 & 2. This data provides the basis for post graduation placement and recidivism data.

Subject Selection

Outcome measures on 76 male patient from the TLC and 149 patients from the MICA TLC were included in this investigation. The patients for both programs under study were selected on the basis of their meeting the diagnostic and homeless admission criteria for the programs. Patients who were homeless for at least 3 months, who were ambulatory and no longer in need of acute care, and who were diagnosed with a major Axis I disorder of Schizophrenia, Major Depression, or Bipolar Disorder and an additional substance abuse diagnosis were admitted to both treatment programs directly from the same inpatient acute care units of the hospital and NYC Shelter Programs, on a space available basis. No other conditions for admissions were imposed.

Though the TLC program also admitted patients without the additional substance diagnosis, only the MICA patients were included in this study. In the MICA TLC all admitted patients were included in this study. No MICA patients were excluded from this study in either program.

Equivalency of Subject Characteristics: In terms of the programs' goals of rehabilitation and placement of mentally ill chemical abusers within a specified time frame, the subjects selected from both programs are considered identical; they are both comprised of only MICA patients. In addition, both groups meet the target diagnostic and functional criteria for treatment in the programs and from the programs' point of view were expected to functionally improve over a six month period to the point of community readiness. Since this study compares patient outcomes against the program goals, they are considered identical only in this respect. Both groups are comprised of male, homeless, MICA patients with similar backgrounds from the same geographic location, receiving treatment in the same hospital facility.

Measures and Analysis

The two programs were evaluated by the following outcome criteria:

Indicator 1: Successful Treatment Outcomes The primary program goal for each program is to rehabilitate patients over a three to six month period to the point where they are functionally able to live independently in the community and maintain psychiatric stability and abstinence from psychoactive substances for a period of six months after placement in their community setting. Patients who were rated as functionally ready for independent living, GAF level (APA, 1994) of least 80, at the time of program graduation and three months after community placement were considered functionally capable of community based living and considered successful in fulfilling the programs' rehabilitation goals. The relative percentages of patients who met and maintained this functional level were included as a measures of the models' success.

Indicator 2: AMA Discharge Within the context of this evaluation, the percentage of patients who did not complete treatment and who left the programs against medical advice (AMA) were compared across programs as a measure of the treatment program's inability to meet the needs of the target population. Since both program models had clinical failures of this type, the percentage of patients who left each program against medical advice or for violent threats or actions (cause) were included as AMA Discharge measures of negative clinical outcomes.

Patients who were discharged before program graduation for substance abuse relapse were also included in this measure. However, there were few of these outcomes due to the following reasons:

The MICA TLC is a voluntary lock down program with 2 scheduled urine analyses (UA) weekly and one random UA.

In the TLC program, drug/ETOH was strongly discouraged, Uas done on suspect abusers, ETOH breath analysis done on a regular basis, and progressive levels of loss of privileges and other disincentives used to discourage drug and alcohol use. In the TLC program every effort was made to rehabilitate patients across all psychosocial areas, including substance abuse. When this failed, the patients generally left AMA on their own when they could not tolerate the loss of privileges or other negative sanctions that curtailed their activities.

If patients decompensated to an acute stage they were rehospitalized and this is counted in the recidivism data.

Once in community placements, they were generally given UAs in most cases but this data was unavailable because it occurred in Private Non Profit programs not connected to the hospital. In almost all cases the patients were placed in community residences that discouraged use and monitored patients for abuse. Though few were actually 'kicked out' of these residences, many left not due to psychiatric reasons but due to a return to substance abuse. In either case their functional level can be assumed to have dropped because they were no longer able to live independently.

Indicator 3: Correlation of Service Hours delivered. Bivariate correlations between actual number of service hours delivered and successful treatment outcomes by program was performed to evaluate whether variable amounts of treatment affected overall program outcomes and success. Total service hours delivered to each patient in a program were correlated with the relative percentage of successful outcomes and AMA discharges in each program. This evaluated the relationship between amount of services delivered and successful treatment outcomes.

Data collection methods: These hours were collected in the accounting data used for medicaid reimbursement. This listed the type of service given, to what patients for how long, by each clinician. Each week, all clinicians would fill out their patient summary sheets that include all patient contact

hours for that week. Each of these hours is considered a service unit. These service units were summed for all patients and then compared with patient functional level or overall outcome in the program in bivariate correlations.

Indicator 4: Subpopulation Outcomes Differential success rates between diagnostic subpopulations (i.e., schizophrenic, substance abusers versus mood disordered, substance abusers), was also compared to determine whether the models are best suited to one sub population or another. This measure was also applied to the criteria indicators listed above.

Indicator 5: Relative Rates of Recidivism Percentage rates of patient recidivism for program graduates was also determined as a measure of the program's relative inability to effectively rehabilitate their target MICA population. Recidivism within the context of this study is defined as any patient who returns to the hospital or another treatment program during or after his placement in community based housing. This may be due to either decompensation to an acute psychiatric phase, or a return to substance abuse to a degree that requires rehospitalization or additional rehabilitative treatment in a residential treatment facility. **Indicator 6:** Patient Satisfaction Patients in both groups completed a standard New York State Office of Mental Health patient satisfaction survey (NYSOMH, 1990) within a month of their graduation from their respective treatment program. This provided a measure of the patients' qualitative level of satisfaction within each program model.

Indicator 7: Cost Efficiency Rate Relative cost per service unit was determined for patients who successfully met the goals of the program (See Indicator 1). This measure was included to illustrate differential program costs for those patients who met program goals and is considered a gross measure of program efficiency within the context of this study. The cost figures were determined by dividing the total annual operating costs (personnel, medication and supply costs) by the sum of the service hours for patients who met the 'successful outcome' criteria. Program development costs, capital improvements, and other non operating costs were excluded from this analysis. Cost benefit and cost effectiveness analysis were not performed, since the necessary variables for such analysis were beyond the scope of this investigation.

Results

Comparisons of Patient Characteristics: Tables 1 and 2 detail the results of MANOVA and comparison of means by independent samples t tests. Significant between group differences were only found in five of the 33 characteristics selected for comparison. On average, MICA TLC patients tended to be 6 years younger, comprised of 23% more Afro Americans, 15.2% less alcohol dependent, stay 26 less days in the program, and receive \$143.48 less welfare than those in the TLC. However, these differences appear to be more directly related to programmatic factors, than sample differences in the population. Patients who were being considered for admission to the programs had the option of rejecting admission, even when accepted to the programs. Thus, the entire referral pool of patients more accurately represents this population of MICA patients because those who deselect themselves from the programs are included and can be compared between the programs. When the entire pool of patient referrals to each program was compared to the pool of admitted patients, the significant differences in age and ethnicity disappeared. It is likely that older, alcohol abusing patients (2X more likely to be Caucasian) would find the environment of the MICA TLC too restrictive and seek entry to the TLC Program or refuse admission to either program. One hundred thirty five patients who were referred to the programs refused admission; 74% of these were referrals to the MICA TLC. Length of stay differences were due to the high rate of MICA TLC 'dropouts' (Figure 1) and welfare benefit differences

were due to a reluctance on the part of the MICA TLC staff to supply substance abusers with cash benefits that were felt to be potential sources for 'drug money'.

Though these characteristic variances are statistically significant, the variation between the study groups is insufficiently large to account for the various patient and program outcomes displayed in Figure 1 and 3. For example, the effect size differences between the patient outcomes of the two programs cannot be accounted for by the significant between group differences in diagnosis. The 12.9% difference in crack/cocaine dependency in the MICA TLC Program represents a total of 19 patients, while alcohol dependency differences of 15.2% in the TLC program only represents 12 patients. Using a worst case scenario, excluding these differential patients from each program's differences in successful community placement, the TLC program still produced more than twice the number of placed graduates. Thus, the effects of the diagnostic and other differences probably contributed to the differences in outcomes, but cannot account for the full effect size differences displayed in Figure 1.

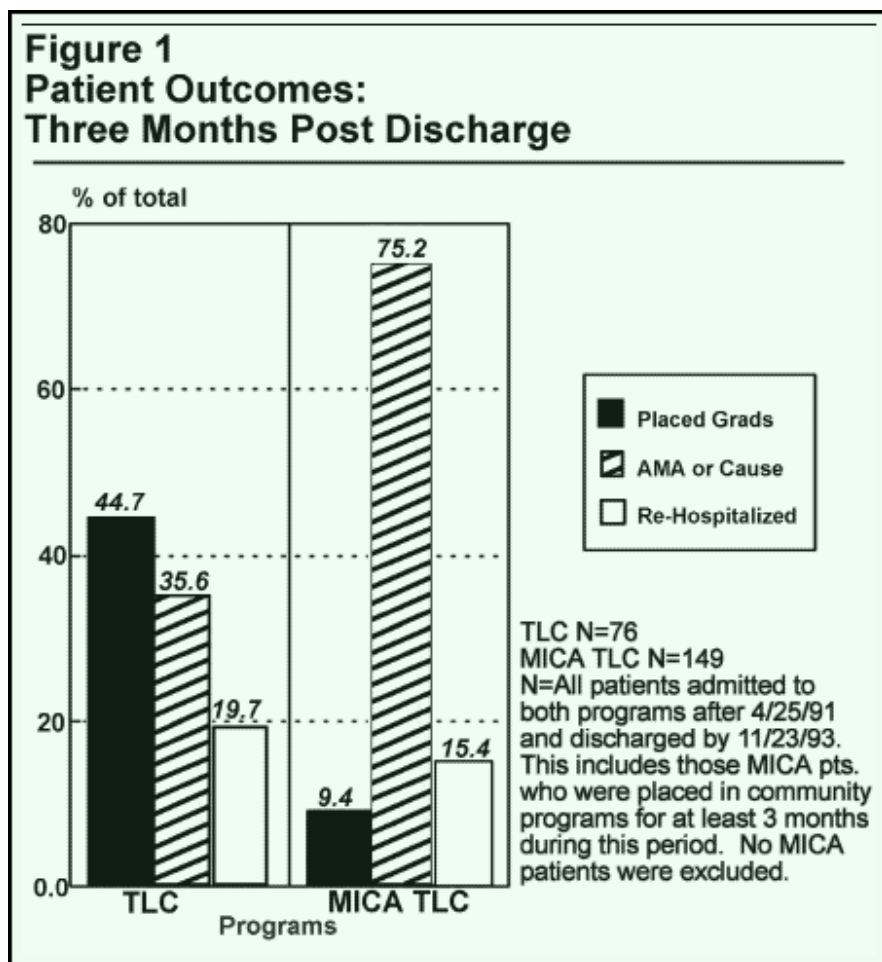


Table 1
Patient Characteristics

	TLC N=76	MICA N=149	All Refs N=360
	%	%	%
Diagnosis - Primary Axis I			
Psychotic Spectrum	76.3	68.5	68.4
Mood Spectrum	23.7	30.1	25.1
other	0.0	1.4	6.5
Diagnosis - Secondary Axis 1			
None	1.3	3.4	2.5
Polysubstance Abuse	57.9	53.0	50.0
Crack/Cocaine	11.9 *	24.8	22.9
Dependency			
Alcohol Dependency	26.6	11.4 *	20.9
Other	2.3	7.4	3.7
Diagnosis - Axis II			
Personality Disorders	3.9	3.3	8.0
Medications			
Neuroleptic	76.3	68.4	66.0
Antidepressive	15.8	17.5	18.1
Anxiolytic	1.3	0.7	2.0
Lithium	6.6	6.0	5.0
Anticonvulsive	0.0	2.0	0.0
None	0.0	5.4	8.9
Ethnicity			
AfroAmerican	48.7 *	71.1 *	62.3
Caucasian	34.2 *	15.5	19.3
Hispanic	13.2	13.4	15.0
Other	3.9	0.0	3.4
Marital Status			
Single	94.8	85.9	81.6
Married	2.6	2.7	7.3
Sep./Divorced	2.6	10.7	8.0
Widowed	0.0	0.7	3.1
Prison History	72.4	75.2	63.0
Military History	9.2	16.8	12.8

Note: The All Refs (All Referrals) Column represents the patient characteristics of all MICA patients referred to the two programs from the hospital and shelter systems. This not only includes those patients who entered the programs, but those who refused admissions to the programs as well. * = p<.05 two tailed, for significant differences in between group comparisons of percentages.

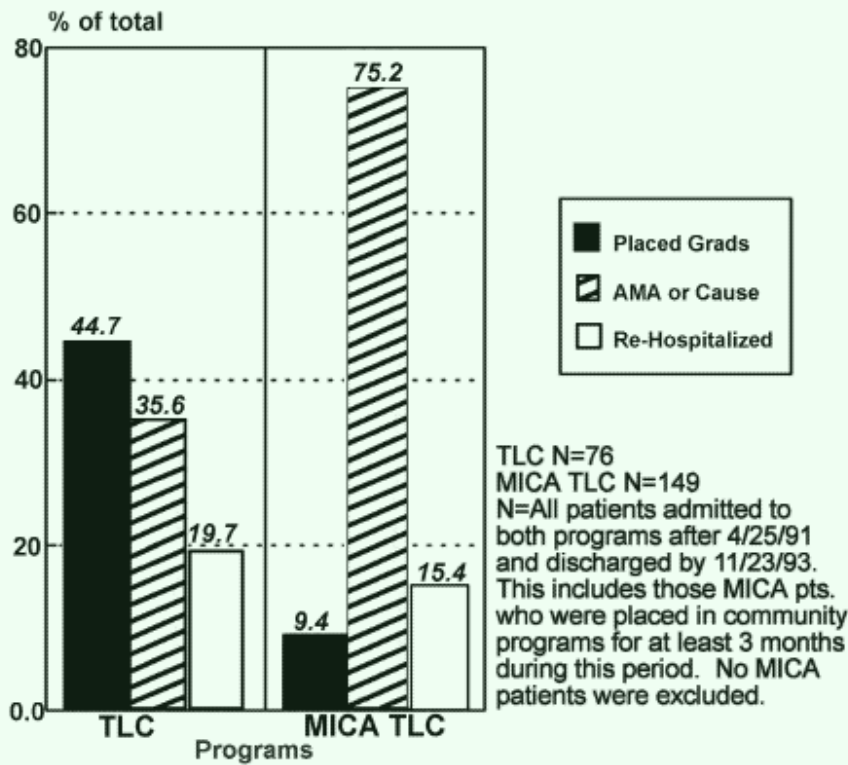
Table 2
Comparison of Equality of Patient Characteristics
By Means of Patients t Scores

	TLC N=76		MICA TLC N=149		t-value	F
	mean	s.d.	mean	s.d.		
Age	40.80	10.259	34.91	7.706	4.84	8.357 a
Education	11.01	1.963	10.87	2.410	0.46	0.550
Previous Hospitalizations	2.54	1.879	3.75	2.224	-4.07	0.454
Suicide Attempts	0.49	1.390	1.17	2.132	-2.52	3.915 b
Length of Stay in Program	137.89	108.289	111.37	79.395	2.09	15.869 a
Months of Homelessness	30.62	34.691	43.00	42.667	-2.19	3.014
Treatment Hours (Daily)	3.26	0.854	5.43	0.940	-16.91	1.802 b
Welfare Benefit Amount	433.79	153.425	290.31	258.504	4.45	59.190 a

Note: F= Levene's Test for Equality of Variances. Within each row comparison, significant differences ($p < .05$, two tailed) are indicated by an 'a' at the end of the row. A 'b' at the end of a row indicates only a marginal effect ($p < .10$, two tailed)

Indicators 1 and 2 - Results for these indicators are demonstrated in Figure 1 and Table 3. Though rehospitalization rates were found to be almost equal for both programs, the TLC program had almost 5 times more successful placements than the MICA TLC (by percentage) with only half the AMA rate of the MICA TLC. Total Placements and AMA rates varied significantly between the two groups ($p < .01$).

**Figure 1
 Patient Outcomes:
 Three Months Post Discharge**



**Table 3
 Patient Outcome Summary**

	AMA	%	Placed	%	Hosp.	%
TLC PROGRAM						
At Discharge from Program	18	23.68 **	51	67.11 *	7	9.21
Three Months Post-Discharge (in community based housing)	9	11.84 *	34	44.74 **	8	10.53
TLC TOTAL FINAL OUTCOMES	27	35.53 **	34	44.70 **	15	19.74
MICA-TLC Program						
At Discharge from Program	93	62.42 **	43	28.86 *	13	8.72
Three Months Post-Discharge (in community based housing)	19	12.75 *	14	9.39 **	10	6.71
MICA-TLC FINAL OUTCOMES	112	75.17 **	14	9.39 **	23	15.44

*p < .05. **p < .01

Indicators 3 and 4 - Results of multiple bivariate correlations of service hours to outcome and sub populations differential outcome analysis are summarized in Table 4 and Figure 2. Significant correlations were found between successful placements and number of clinical contact hours that patients received in the program. This correlation for the MICA TLC was particularly high; exceeding that of the TLC program by $r=.2219$. In addition length of program stay was also correlated to positive treatment outcomes at almost the same level. These results suggest that positive treatment outcomes are directly related to the amount of treatment these patients received in both programs. It also suggests that both treatment models can effect positive rehabilitative change, provided the patient is motivated to remain in treatment and actively participate in the programs.

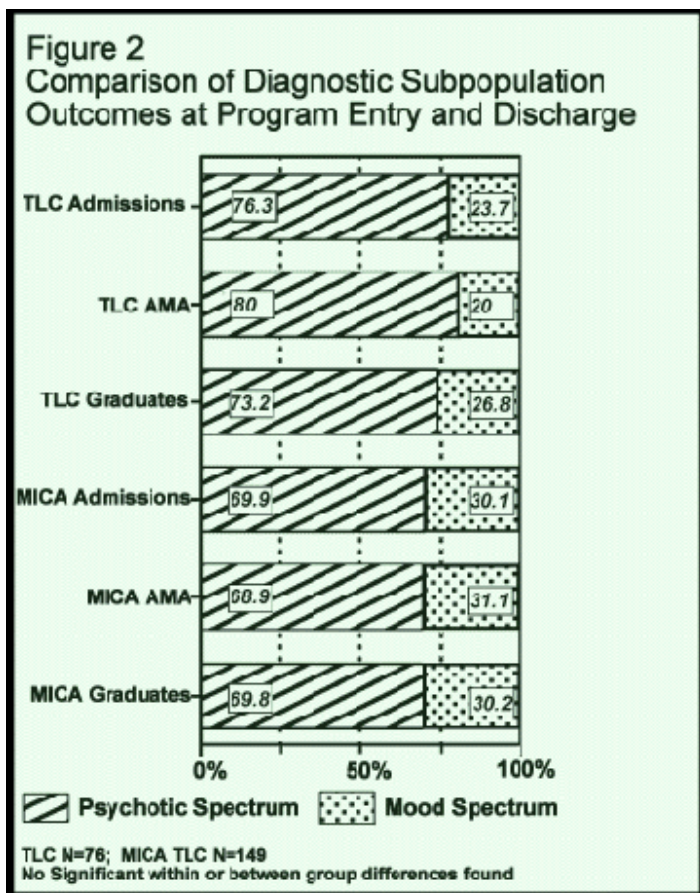
No significant differences were found for diagnostic subpopulations for either positive or negative treatment outcomes. However, significant correlations were found between those patients who were placed and the number of previous hospitalizations. In addition, months of homelessness negatively correlated with positive treatment outcomes. These results suggest that patients with more previous hospitalizations may benefit from the TLC more than the MICA TLC. The negative correlation between previous hospitalizations and length of stay in the MICA TLC lends additional support for this conclusion.

Months of homelessness and length of stay in the MICA TLC Program also significantly correlated with years of education. MICA TLC patients with more education tended to have spent less time in a homeless situation. However the most interesting statistic here is the relationship between length of stay and education. This result suggests that those who stay longer in the program are also those with the highest level of education. This is not the case in the TLC program, where no significant correlations were obtained. In view of the demanding nature of the highly structured MICA TLC program this result is understandable. For patients to successfully negotiate the program and remain until graduation, they would need higher levels of cognitive skills than in the TLC, where treatment plans are individually geared to the level of the patient.

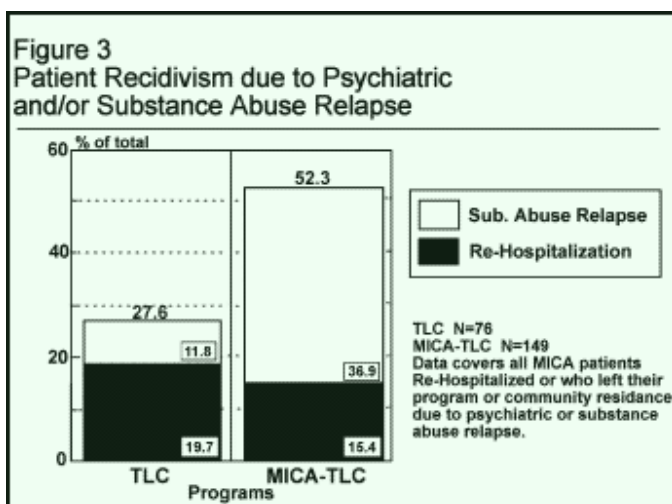
Table 4
Correlations of Significant Subpopulation Characteristics
At the Time of Discharge from Program

	Discharge Type Placed	Previous Hosp. Episodes	Education Years
Services hours (daily)			
TLC	.3798 **		
MICA TLC	.6017 **		
No. Prev. Hospitalizations			
TLC	.3069 *		
MICA TLC	-.1425 *		
Months Homeless (Lifetime)			
TLC	.3372 **	.4904 **	
MICA TLC		.1348 *	-.2442 **
Length of Stay in Program			
TLC	.3782 **		
MICA TLC	.6134 **	-.1439 *	.2029 *

Note: ** p < .001; * p < .005, one tailed, bivariate correlations of patient characteristics



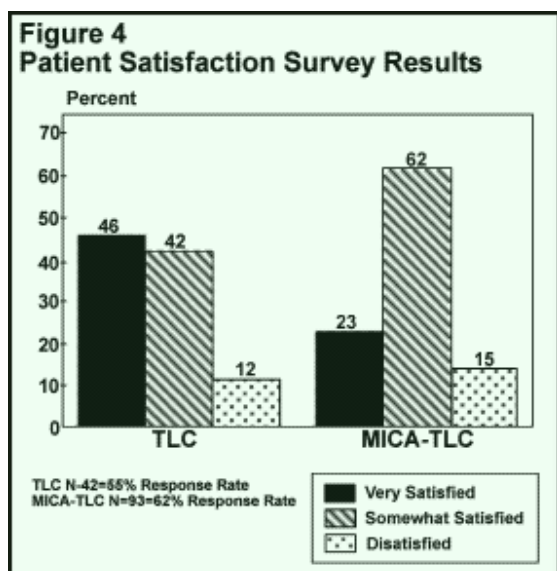
Indicator 5- A comparison of recidivism rates between the programs is presented in Figure 3. While rehospitalization for psychiatric relapse remained grossly equivalent between the programs, recidivism due to substance abuse relapse was significantly higher in the MICA TLC (36.9% to 11.8%, $p < .05$, two tailed). The MICA TLC had almost three times more substance abuse relapses that resulted in a return to homelessness or a residential drug treatment than the TLC program.



Indicator 6- Patient Satisfaction Survey results are displayed in Figure 4. This survey was only administered to a sample of the subjects in this study due to time constraints, data collection problems

and patient refusal to participate. This standard NYSOMH survey consists of 20 fill in the blank questions about various aspects of the program. Patients who responded positively on six questions or less were considered not satisfied with the program; those who reported six to 12 positive responses were rated as somewhat satisfied; and those who responded with 12 or more positive responses were considered very satisfied with the program.

Of the 55% who responded in the TLC program and 62% who responded in the MICA TLC, almost twice as many patients reported that there were very satisfied with the program in the TLC program than the MICA TLC. In addition, while the percentage who were very satisfied was roughly equal to those who reported to be somewhat satisfied in the TLC, this was not the case in the MICA TLC. In the MICA TLC almost three times as many patients reported to being only somewhat satisfied, compared to those who reported being very satisfied.



Indicator 7-Based on an operating budget of \$606,000 for the TLC and \$732,000 for the MICA TLC, the rate of cost efficiency for successful outcomes in the TLC was computed at \$19.04 per service unit, while that of the MICA TLC was found to be \$40.69. This difference is due to the low number of successful outcomes in the MICA TLC. Based solely on this, it could be concluded that the TLC Program is twice as cost efficient in successfully treating MICA patient than the MICA TLC.

Discussion

This study investigated the relative impact of a traditional, disease specific program model and an integrated program model on the treatment outcomes for homeless, MICA patients. Based on the National Institute of Mental Health (1991) guidelines for mental health service research, this study began with the question of what works, for which MICA patients, in two programs that use different therapeutic approaches to address both mental illness and substance abuse. The patient outcome results demonstrate clear differences between the programs and their therapeutic models.

From the therapeutic success and failure rates, the differences in rates of recidivism, patient satisfaction survey results, and level of cost efficiency, the integrated TLC Program model appears to have distinct advantages over the MICA TLC in the treatment of severe MICA patients with low levels of education and high numbers of past hospitalization. However, from the results of the subpopulation and

characteristics correlations, the disease specific, therapeutic community model of the MICA TLC seems to work well with patients who are more highly educated and have fewer previous hospitalizations. The high degree of MICA TLC clinical failures and recidivism and lower levels of patient satisfaction appear to be due to the inability of a traditional substance abuse model to treat low functioning MICA patients. Since the MICA TLC admitted primarily low functioning patients, the clinical failure rate is understandable. The TLC Integrated model appears to be more suited to treating such patients. Higher functioning MICA patients with less distress may fare better in the highly structured traditional environment where the locus of control is external, than in a treatment milieu that customizes services to meet the needs of patient, requiring an internal locus of control.

Finally, as an exploratory study, this investigation examined program indicators for only two programs. Expanding the scope of this study to compare outcomes of many programs that are matched for clinical population, size, staffing patterns, geographic location and service goals may demonstrate other advantages to using the respective models and refine our answers to the question of "what works, for whom under what circumstances" (NIMH, 1991, p.vii).

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Problems with Caring for People with Severe Mental Disorders: A National Plan of Research to Improve Services (A Progress Report)

Arthur J. Anderson
Consulting Clinical Psychologist - Honduras
Adjunct Faculty - Antioch University

Abstract: *This brief report critiques NIMH's progress in achieving the goals set forth in the NIMH and NAMHC report entitled "Caring for People with Severe Mental Disorders: A National Plan of Research to Improve Services". The national plan is briefly discussed and problematic areas of grant funding and approval processes explored. Recommendations are made as to the selection of investigators and research methodologies to fully achieve the goals set forth in the plan.*

Problems with Caring for People with Severe Mental Disorders: A National Plan of Research to Improve Services (A Progress Report)

Though mental health program and service research has become a high priority for federal agencies, advances in study methodologies and grant funding mechanisms have lagged far behind and threaten the underlying goals of the mental health reform legislation. Since 1992, research funding has increased from \$90 million to \$369 million budgeted for the current fiscal year. With the reorganization of ADAMHA (Alcohol Drug Abuse and Mental Health Agency) in 1992, the National Institutes of Mental Health (NIMH), National Institute on Drug Abuse (NIDA), and the National Institute on Alcohol Abuse and Alcoholism (NIAAA) have been congressionally mandated to devote no less than 15% of their total budget for health care services research, all coordinated by NIMH [ADAMHA Reorganization Act, 464R (f)(2)]. Though this increase in funding clearly demonstrates an increased level of commitment by the federal government to improving service research and overall program effectiveness, no provision was made to address how this research process would proceed or how improved service delivery would actually occur.

The NIMH publication entitled *Caring for People with Severe Mental Disorders* (NIMH, 1991) set forth clear goals for improving mental health services and gaining a better understanding of causes and consequences of mental illness for afflicted individuals, their families, and communities. This document serves as a blueprint for mental health reform by establishing research priorities in the areas of assessment research, characteristics of mentally ill people, treatment modalities and settings, rehabilitation, and outcome research.

The problem with this initiative lies not with the goals or strategies set forth in the plan, but in the implementation by NIMH and associated federal agencies. The research section of this plan noted demonstration research projects, controlled service trials, modeling studies of service systems, and

uncharted approaches as viable approaches to gaining a better understanding as to what works for whom under what circumstances. In reality, only the demonstration projects and controlled studies have been applied in a very traditional public health approach to impact evaluation. These approaches typically follow a molecular approach in the investigation of therapeutic effectiveness and cannot produce valid information with which to model future program changes and initiatives in mental health (Anderson, 1997).

Traditional research approaches tend to focus on controlled "SCIENTIFIC" studies. Using correlational, causal comparative and other experimental and quasi-experimental approaches, NIMH sponsored program services studies negate the global effects that treatment programs have on individuals, their families, sponsors and political backers, the so called 'stakeholders' of programs. Studies that do not follow the traditional "SCIENTIFIC" approach are simply not funded by NIMH or associated agencies. Many 'real world' programs and services may not fit into the scientific methodologic mold. Thus, programs that may have tremendous value to their consumers and communities may not be recognized, simply because the methods to study and report on their success are not yet considered 'Good Science'.

In a recent correspondence with NIMH, it was specifically noted that studies that involve politics in mental health programs and studies that are not experimentally (scientifically) valid would not be considered for grant review. This was in spite of the fact that NIMH is now concentrating on studies that involve politically sensitive groups, such as the research for mentally ill women, investigated by women (Hohmann, 1996). Bias in investigators or study subjects can hardly be considered unbiased and nonpolitical. Yet, since this research policy only mandates a funding stream for proposed investigations, it stands as a valid research agenda, while other (not so politically correct) studies remain unfunded. Such funding bias undermines the goals set forth in the national plan.

Another problem with the NIMH application of "Caring for People" lies in the grant application process itself. Encumbered by a resilient bureaucracy within the National Institutes of Health, the grant application process is almost beyond all but professional grant writers. This includes university grant writers and professors who may have never set foot in a mental health program, but who feel free to submit lengthy research proposals that are generally accepted because they follow the format that NIMH likes to see.

To improve the quality of mental health service delivery we should be reaching out to program administrators, clinicians, families, non profit organizations and their funding sources who have actual experience with mental health service delivery to gain information as to what works, for whom, under what circumstances. We should not rely almost solely on the wisdom of the fiscally, politically or academically correct who have little or no actual experience in mental health service delivery. The current grant process is extremely encumbered and geared toward university researchers and is thus bound to fail when real world applications and research strategies are required.

To gain a true and full understanding of what works in services research, patients, families, clinicians, program directors, administrators, and their hospital and/or community sponsors must have an active voice in the research process. Program evaluations that focus on modeling and uncharted approaches should be encouraged into the research funding process. Reforms in the grant approval process should be initiated to ensure that all voices are heard in determining the future of services research. And finally, for this initiative to succeed, innovative applied research approaches that focus on the therapeutic outcomes of treatment programs should be explored by those who work with severely

disturbed patients and who have the expertise to actually tell what works and what does not for all patient populations, without regard to their group affiliations or political correctness .

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