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Alcoholism Treatment Service Systems: A Health Services Research Perspective

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Synopsis

This article examines the role of health services research in alcoholism treatment. Alcoholism services research has only recently emerged as a self-defined discipline. Alcoholism services research can be grouped into five classifications: a*) descriptive studies of resources for alcoholism treatment and of the use or cost of these services,* b*) estimates of the need or demand for alcohol services in the population or in particular subpopulations,* c*) studies of the costs or cost-effectiveness of alcoholism treatment or of alternative treatments,* d*) studies of the possible "cost-offsets" of treating alcoholism, and* e*) studies that examine strategies for financing and reimbursement for alcoholism treatment. Research is needed to determine how alcoholism treatment services are now delivered, who uses these services, how treatment setting and organization affect service delivery, who pays for alcoholism treatment, and how reimbursement policies affect the delivery of alcoholism services. Research on large-scale social issues is also needed, such as the effects of warning labels appearing on alcoholic beverage containers or estimates of the overall cost to society of alcohol abuse.*

RECENTLY, AN ADVISORY BOARD created by Congress to assess national needs for alcohol, drug abuse, and mental health services recommended that research on treatment services should be declared a priority area (*1*). At the present time, research on alcohol service systems receives a relatively low priority within the Federal Government and in the alcoholism field generally.

A number of important health services research studies have been conducted in the alcoholism treatment area (*2*), many supported by the National Institute on Alcohol Abuse and Alcoholism (NIAAA). Even so, the field lacks a well-defined sense of goals and methods. This article examines the concept of health services research as it has been used in other health areas and relates it to alcoholism treatment issues. Included are some possible directions for future research.

History and Definition

The importance of health services research was formally recognized by Congress in 1974, when the Public Health Services Act, one of the principal acts of Congress providing legislative authority for Federal health activities, was amended to create the National Center for Health Services Research (NCHSR) within the Public Health Service (*3*).

Many definitions of health services research stress its hybrid nature. Health services research combines concepts and techniques from economics, medicine, sociology, psychology, epidemiology, business administration, and a number of other disciplines.

Other definitions stress the subject of the research. In a dictionary of health care terminology prepared in 1976 by the House Subcommittee on Health and the Environment, health services research was defined as "research concerned with the organization, financing, administration, effects, or other aspects of health services; rather than with human biology or disease and its prevention, diagnosis, and treatment" (*4*). In 1979, the Institute of Medicine of the National Academy of Sciences, in a report on health services research in the Federal Government, defined health services research as "inquiry to produce knowledge about the structure, processes or effects of personal health services"(*5*). According to the report, a "personal health service" is any "interaction between a provider of health services and a client for the purpose of promoting the health of the client."

The Institute of Medicine report offered two criteria necessary to define research as health services research. First, the research must deal with some features of the structure, processes, or effects of personal health service. Second, at least one feature must be related to a conceptual framework other than that of contemporary applied biomedical science (*5*).

In the years since its recognition as a discipline, health services research has continued to expand both in the public and the private sector. In the 1970s, much of the impetus for the growth of the field came from the debate over national health insurance. In the 1980s, research has been most often stimulated by public and private initiatives to contain health care costs. In 1983, a health services research professional association, the Association for Health Services Research (AHSR), was founded. Based in Washington, DC, AHSR serves as an active lobby in Congress on behalf of health services research (*6*).

Types of Health Services Research

In addition to defining health services research, the Institute of Medicine report (*5*) gave an excellent description of the kinds of research included in the field. The report's authors noted that studies of health services may address problems at any one of the following four levels.

- Clinical level. Although methodologically similar to biomedical studies that are clinically oriented, health services research studies at the clinical level take into account nonmedical considerations that affect outcomes (such as setting and provider characteristics) and also address a broad range of outcome criteria (such as patient satisfaction or treatment costs).
- Institutional level. Although institutional studies in health services research also may share many of the concerns of clinically oriented research, they focus more on organizational and administrative features of the settings where services are delivered. Emphasis may be on how the organization of services affects outcomes (such as quality of care or cost) or on how patient characteristics (such as income or insurer) affect the setting.
- Systems level. Studies at the systems level examine interrelationships among various aspects of the health care system. Systems studies, for example, may attempt to understand how financing mechanisms, the organization of health care services, the demand for health care, and health care expenditures are related.
- Environmental level. Environmental studies seek to understand the circumstances and events in the larger social, political, and economic contexts that shape the health services system and define its functions in relation to the overall social system.

The report noted that the collection of data to administer programs does not constitute health services research unless analysis of these data is directed toward answering a question that applies to other programs or organizations as well. This qualification does not necessarily exclude descriptive research as an important kind of health services research. Data such as statistics on the use of health care services or estimates of national health care expenditures can identify trends and variations that raise theoretical and policy questions. These questions may then help guide analytic research. Analytic research in turn attempts to answer cause-effect questions or to make projections.

Mental Health Services Research

Mental health services research is a subcategory of health services research. It has its own history as a specialized research discipline with its own professional identity. The field was substantially affected in its early years by the community mental health movement of the 1960s, which generated both issues and funding for mental health services

research, but the National Institute of Mental Health has been collecting data on mental institutions as far back as the 1840s (*7*). As the delivery of mental health services continued to move out of State mental hospital settings and into the primary care sector, the issues of concern to mental health researchers have become similar to those of researchers working in the general health care sector (*8*). The Association for Health Services Research now publishes a newsletter devoted exclusively to mental health research.

Mental health services research, like health services research generally, has been strongly influenced in recent years by public and private initiatives to contain health care costs and to develop appropriate financing and reimbursement strategies. Other priority areas, at least as indicated by research support from the National Institute of Mental Health, include the provision of mental health care in the primary sector and the organization and delivery of care for the chronically mentally ill (*9*).

Alcohol Services Research

Alcohol services research has a shorter history than mental health services research as a self-defined discipline. Nonetheless, the same trends in health care and health care financing that have influenced research in physical and mental health services research are also important in relation to research on alcohol services research. Indications are now appearing that alcohol services research is being defined as a field in its own right. In 1987, one of the panels at the most recent National Conference of the Alcohol and Drug Problems Association was titled "Alcoholism Treatment Service System Research."

Most alcohol services research fits into one of five major categories:

- Descriptive studies of resources for alcoholism treatment and of the use or cost of these resources.
- Estimates of the need or demand for alcohol services in the population or in particular subpopulations.
- Studies of the costs or cost-effectiveness of alcohol treatment or of alternative treatments.
- Studies of the possible "cost-offsets" of treating alcoholism.
- Studies of possible strategies for financing and reimbursement for alcoholism treatment or assessments of the impact of alternative strategies on the organization, cost, delivery, quality, availability, or outcomes of alcoholism treatment.

'Only about 15 percent of individuals with diagnosable alcohol problems receive alcohol treatment services.'

The following discussion delineates these areas and points to some of the limitations of existing research in each area.

Descriptive studies. Assembling descriptive data on alcoholism treatment resources and their use is an important aspect of alcohol services research. The National Drug and Alcoholism Treatment Utilization Survey (NDATUS), jointly sponsored by NIAAA and the National Institute on Drug Abuse (NIDA), is a major vehicle for collecting periodic data on the capacities, utilization rates, funding sources, staffing patterns, and client and staff demographic characteristics of alcohol and drug treatment facilities (*10*).

Many alcoholism treatment services are provided outside of specialized alcoholism treatment facilities. Alcoholics admitted for alcohol problems to short-term hospitals or for medical complications related to their alcoholism are often treated in hospitals with no alcoholism or chemical dependency treatment units (*11*). Little is known about the care provided to alcoholics in these settings. Still less is known about "minimal" or informal interventions that may be provided in primary care or in nonmedical settings.

A comprehensive typology is needed for alcoholism treatment services and settings and a description of the frequency with which various services are provided in different settings. The NDATUS survey produces limited information on services by setting, but many services are not identified because NDATUS collects data only on facilities offering specialized alcoholism or chemical dependency treatment. Data on treatment provided outside these specialized facilities, including information on the use of Alcoholics Anonymous (AA), would improve our ability to describe the alcoholism treatment service system. Such data would also assist clinical researchers in their attempts to characterize treatments for the purpose of studying the relative effectiveness of different treatment modalities for different kinds of patients.

'Research to date has generally failed to demonstrate that any one treatment or treatment setting is better than another . . . One issue of particular concern is the relative cost-effectiveness of inpatient versus outpatient treatment.'

Estimates of Need

Existing research suggests that the need for alcoholism services in the population is far greater than might be assumed on the basis of current patterns of use. Only about 15 percent of individuals with diagnosable alcohol problems receive alcoholism treatment services (*11*).

Some populations are at particular risk for alcohol problems and may also be high users of other kinds of health care services. Relatively little is known, for example, about the needs and patterns of health care use of persons with combined alcohol, drug, or mental health diagnoses (for example, alcohol and drug, alcohol and mental disorder). Research is also needed on the general health care costs and use patterns of individuals with alcohol problems.

Cost-Effectiveness

Cost-effectiveness research in alcoholism treatment addresses the question of how efficient or how costly a particular program or type of program is in producing a particular outcome, usually abstinence. The findings of such research are important for policy and planning decisions concerning the financing, organization, and delivery of alcoholism treatment services. They are also valuable as a guide to appropriate reimbursement strategies for Federal and State governments as well as for employers and private insurers.

Probably because of their clinical focus, studies of the outcomes of alcoholism treatment have rarely measured the cost of treatment. In a paper prepared for an NIAAA Ad Hoc Scientific Advisory Board meeting on alcoholism treatment, Putnam (*12*) noted that those studies that do compare treatment costs typically do not include an outcome measure of drinking behavior. Instead, outcomes are defined in terms of reduced use of services, most often health care services.

A major problem in research on the cost-effectiveness of alcoholism treatment is highlighted in a report prepared by the Office of Technology Assessment (OTA) in 1983 (*13*). Research to date has generally failed to demonstrate that any one treatment or treatment setting is better than another. Although it is possible to compare treatments with respect to cost, it is difficult to develop a measure of relative effectiveness. The OTA report concluded that there is some evidence to support the conclusion that alcoholism treatment in general is cost-effective, but there is little evidence for concluding that one kind of treatment is more cost-effective than another. One issue of particular concern is the relative cost-effectiveness of inpatient versus outpatient treatment.

Cost-Offsets

The primary question asked by authors of cost-offset studies is whether the benefits of alcoholism treatment outweigh the costs of treatment. The question of costs and benefits is somewhat different from the question of cost-effectiveness. For instance, the most cost-effective treatment for alcoholism might still be quite expensive in absolute terms. It would be cost-beneficial, then, only if its cost were offset by cost reductions in another area. Cost-effectiveness studies do not address this issue because they only show the cost of treatment; they do not measure the "degree of cure" in cost terms. They also do not compare the overall costs of treating alcoholism with the costs of not treating alcoholism.

Ideally, cost-offset studies compare the dollar cost of treatment with the dollar costs of the untreated condition. Unfortunately, the cost of treatment is often difficult to determine from available data, and the cost of the untreated condition is even more difficult to measure. Proxy measures of cost, such as number of physician visits or days of work missed, are often used instead.

For example, some cost-offset studies have examined the effects of alcoholism treatment on the use of medical care services (*14–16*). Alcoholics and their families tend to use a disproportionate amount of medical care. The researchers have found that alcoholism treatment is typically followed by reduced use of medical care services on the part of alcoholics and, in some cases, on the part of family members. Putnam (*12*) points to a

need for more studies that incorporate both cost and use data. She also argues that outcome should be directly measured in these studies. Because the assumption that the treatment has actually worked is rarely addressed in cost-offset literature, the research does not establish that the alcoholism treatment accounted for the reduced use of medical care services.

Another point made by Putnam is that it is important to understand precisely how the use of medical care services changes after alcoholism treatment. Treated alcoholics may simply be substituting other services (such as mental health and counseling services) for the medical care they may have been using inappropriately before treatment. If so, it is their pattern of use, not their health, that has changed. Another possibility is that families may not use health care services after alcoholism treatment because the costs of the treatment may have strained their budget. In this case, their reduced use of health care service would be a negative consequence of treatment. Still another possibility is that treated alcoholics and their families may become more sensitive to general health care needs and therefore may seek care sooner, when the condition is easier and less costly to treat. Research is needed to distinguish among these possibilities.

Another problem with the cost-offset research is that few studies cover a sufficient number of years before and after treatment to guarantee that long-term use patterns are being revealed (rather than the immediate effects of the crisis that may have precipitated the alcoholic into treatment). Some studies have investigated the overall cost to society of untreated alcoholism and have related it to treatment costs. Medical care costs account only for a part of the total costs of untreated alcoholism. Other social costs include reduced productivity, motor vehicle and other property damage, incarceration, fetal alcohol syndrome, child and spouse abuse, and years of productive life and income lost, as well as such noneconomic costs as family disruption, emotional difficulties, and lower work morale. The estimated cost of alcoholism in 1983 was $117 billion (*17*).

Putnam (*12*) points out that employer-based studies, especially when the employers are large corporations and are self-insured or have a large medical department, offer a rich opportunity for studying social costs and cost-offsets. Because they are relatively closed systems, large corporations can provide data on the behavior of treated and untreated alcoholic employees in a number of areas related to the social costs of untreated alcoholism and to treatment outcomes. Two such large-scale employer-based studies are currently being funded by NIAAA: "A Randomized Trial of Worksite Alcoholism Treatments," directed by Diana C. Walsh (R01 AA06461), and "Health Care Costs for Employed Alcoholics in Treatment," directed by Harold D. Holder (R01 AA06248). It is also important to include unemployed populations in estimates of the overall costs of untreated alcoholism, although these groups are more difficult to study (*12*).

Financing and Reimbursement

Financing refers to the general questions of who pays for alcoholism treatment services and how these funds are distributed by third parties. Reimbursement refers specifically to the question of how and for what services the providers are paid by third-party payers.

Federal, State, and local governments are major sources of financing for alcoholism treatment services (*2*) but coverage for alcoholism treatment in employer-based insurance policies has been expanding rapidly. According to the Bureau of Labor Statistics, the percentage of employees with health coverage for alcoholism treatment increased from 38 percent in 1981 to 70 percent in 1986 (*18*).

Descriptive data on the financing of alcoholism treatment services are needed to assess the effects of current financing trends. These trends include the change to Federal block grant funding, the increase in private insurance coverage for alcoholism services, the increase in private ownership of alcoholism treatment facilities, and changes in reimbursement policy (*1*). Important changes in reimbursement include the rise of health maintenance organizations and preferred provider organizations, as well as Medicare's prospective payment system based on the diagnosis-related groups (DRG).

Research is also needed to assess access on adequacy of insurance coverage for alcoholism treatment in the population.

Key Questions

The following list summarizes key questions for alcohol services research and suggests data that could be used to address them:

- How are alcoholism treatment services now delivered? What does the alcoholism treatment service system look like, and what services are provided in

what settings? What are the characteristics of the clients who use these services, and how does cost vary from one setting to another?

- Who uses alcoholism treatment services? How do clients in different treatment settings and with different kinds of insurance differ from one another in their treatment needs and in their other characteristics (income, social stability, education, etc.)? How do patients receiving alcoholism treatment differ from individuals with alcohol problems who do not receive treatment?
- How does the organization or setting in which a service or treatment is provided affect its quality, effectiveness, cost, and accessibility?
- Who pays for alcoholism treatment? How are the costs and benefits of alcoholism treatment distributed in society?
- How do various reimbursement policies influence the supply and organization of alcoholism treatment services and the demand for these services?

Data bearing on these questions can be gathered at each of the four levels identified by the Institute of Medicine in its report on health services research (5).

At the clinical level, it would be extremely useful if studies of the effectiveness of treatment collected data on treatment costs as well as treatment outcomes. These data would permit cost-effectiveness analyses to be carried out even when cost factors were not the direct focus of a study.

At the institutional level, a number of data bases are available that provide data on services utilization in particular settings or by particular populations, such as HMOs, large self-insured corporations, the military, the Veterans Administration, Medicare, and private insurers. These data bases could be used for studies of economic factors in the delivery of alcoholism treatment services or the influence of program organization on access to, or cost of, care.

Data on whole health care systems could be obtained from State data bases, from NDATUS, CHAMPUS, and the Epidemiological Catchment Area data compiled by the National Institute of Mental Health, and from such surveys as the National Ambulatory Medical Care Survey, conducted by the National Center for Health Statistics.

Attempts to obtain data at the environmental level, relating alcoholism treatment to the larger health care system and to larger social and political factors, such as the level of economic development in society, might be premature at this time, although international cooperative studies might be one source of such data. For example, the AMETHYST project, sponsored by NIAAA and the World Health Organization, is studying the effectiveness of a low-cost screening and early intervention technique in several different countries. These data might be useful for some environmental analyses. Other large-scale social issues include the question of the effects of warning labels on alcoholic beverage containers or estimates of the overall cost to society of alcohol abuse and alcoholism.

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Alcohol Problem Resources and Services in State Supported Programs, FY 1987

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This paper consists primarily of excerpts from a report entitled "State Resources and Services Related to Alcohol and Drug Abuse Problems, Fiscal Year 1987—An Analysis of State Alcohol and Drug Abuse Profile Data," which was published in August 1988. All of the data for the report were voluntarily contributed by the State Alcohol and Drug Agencies from all 50 States, the District of Columbia, Guam, and Puerto Rico.

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Synopsis

During fiscal year 1987, expenditures for alcohol and drug abuse services in facilities receiving at least some funds from State alcohol and drug agencies totaled $1,809,749,013. Of this total, approximately 51.1 percent was contributed by State governments, 17.9 percent by the Federal Government, 9.1 percent by county or local agencies, and 21.9 percent by other sources (for example, private health insurance).

Approximately 76.5 percent of the funds was expended for treatment services, 12.6 percent for prevention services, and 10.9 percent for other services (for example, administration, research, training). Between fiscal years 1985 and 1987, total expenditures increased 31.2 percent, although great variability existed among States, with some undergoing significant cuts.

The total number of alcohol and drug treatment units that received State funds was 6,632. During fiscal year 1987, admissions for alcoholism treatment in these State-supported facilities totaled 1,317,473. Most admissions were to a nonhospital environment (84.6 percent) and were for outpatient care (44.9 percent).

Of the total number of admissions, 76.2 percent were men and 19.8 percent women; the sex of 4.0 percent was not reported. With regard to age, 27.4 percent were 25–34, 21.7 percent were 35–44, 10.7 percent were 21–24, and 4.1 percent were under 18.

In terms of race or ethnicity, 69.7 percent of those admitted were white, 15.6 percent black, 5.5 percent Hispanic, 3.6 percent Native American, 0.2 percent Asian or Pacific Islander, 0.3 percent others, and 5.2 percent not reported.

Compared with the 1,317,473 admissions for alcoholism, the combined total of all other drug admissions was only 450,553. The highest numbers of other drug admissions were 98,549 for heroin, 84,707 for cocaine, and 63,740 for marijuana/hashish. Also, compared with drug treatment admissions, those admitted for alcoholism are more likely to be male, white, and older.

ALCOHOL AND DRUG ABUSE dependency constitute major public health problems for the nation. During 1983, the most recent year for which cost data are available, the economic costs of these problems totaled more than $176 billion (*1*). These enormous problems must be addressed at all levels