U.S. Department of Health & Human Services
National Institutes of Health
National Institute on Alcohol Abuse and Alcoholism

ALCOHOL ALERT

Number 69 July 2006

HEALTH SERVICES RESEARCH

Health services research is the study of how health care is organized, managed, financed, and delivered. This *Alcohol Alert* focuses on the issues of access, quality of care, and cost—important aspects of alcohol health services research. In an ideal world, treatment for alcoholism and alcohol abuse would be based solely on solid scientific evidence. It would be cost-effective, would target the most appropriate care to each patient, and would result in real, measurable outcomes—such as reduced rates of alcoholism, fewer incidents of drinking and driving, and the best possible use of limited resources.

In reality, though, there often is a disconnect between what is found in research and what is used in real-world treatment settings. Financial constraints, staffing issues, even a simple lack of understanding of what's working—all can interfere with putting what is learned in the lab into clinical practice (1). Add to this the fact that millions of men and women have achieved stable recovery using treatments that are not based on empirical research, and the distance between research and practice becomes even greater.

This *Alert* examines the challenges researchers and clinicians face when translating scientific findings into practice. It describes how research is helping to inform treatment of special populations such as adolescents, women, and racial/ethnic minorities and the costs and benefits involved in providing treatment.

QUALITY OF CARE: WHAT'S WORKING?

Knowing what is working in the research field is only the first step to bridging the research–treatment gap. Research also plays an important role in helping to identify obstacles that clinicians face when using medications, such as naltrexone, and specialized treatment, such as motivational interviewing, in clinical practice.

Pharmacotherapy—Perhaps one of the greatest disconnects between research and practice involves the use of medications to treat alcohol-related disorders. For example, clinical trials suggest that naltrexone helps reduce the frequency of drinking and the severity of relapse among alcohol-dependent patients (2).

Although there are occasional reports of no effects (3), large-scale analyses of clinical trials have continued to support an improvement in treatment outcomes with the use of this medication (4,5).

Training materials on the use of medications in alcoholism treatment also are available. A Center for Substance Abuse Treatment (CSAT) Treatment Improvement Protocol was developed to provide detailed clinical guidance on how to use naltrexone in alcoholism treatment (2), and the National Institute on Alcohol Abuse and Alcoholism (NIAAA) published as part of its COMBINE Monograph Series the *Medical Management Treatment Manual*, which details the rationale and use of both naltrexone and acamprosate (6).

Despite the availability of training materials for professionals and consistent reports of significant reductions in alcohol use, medications such as naltrexone are not commonly prescribed. Members of the American Academy of Addiction Psychiatry and the American Society of Addiction Medicine prescribed naltrexone to only about 1 in 7 (13 percent) of their patients (7,8). A survey of counselors and physicians specializing in addiction medicine (9) found that few counselors (5 percent) recommended naltrexone to most of their patients, and more than half (54 percent) never suggested that patients try it. A higher percentage of physicians prescribed naltrexone for patients. Eight of 10 physicians (80 percent) reported current or prior use of naltrexone with patients, but only 11 percent prescribed it "often," and only 4 percent prescribed it for "almost all patients" with alcoholism or alcohol abuse problems.

If naltrexone is effective, why isn't it used? Organizational support was the strongest predictor of whether counselors recommended naltrexone. Patient access to insurance benefits also influenced the use of medications. Counselors treating patients who had Medicaid coverage were more likely to promote the use of naltrexone, which was on the Medicaid formulary in the study States (9). Counselors whose patients paid for their own treatment or whose treatment was funded through State and Federal funds were less likely to recommend naltrexone to patients. Among physicians, those involved in research and those in organizations that promoted naltrexone use were more likely to prescribe the medication. Physicians in recovery themselves were the least likely to prescribe naltrexone (9).

Behavioral Therapies—Motivational therapy—that is, a treatment designed to increase a patient's motivation to change his or her drinking behavior—is another approach which is well supported by the literature but not commonly practiced in the field. Motivational interviewing was found to be effective in controlled clinical trials (10,11). Tests conducted in a broad range of community-based alcohol and other drug (AOD) abuse treatment settings suggest that this approach can be easily implemented. Despite these encouraging research findings, however, implementing motivational interviewing in practice settings has proven to be a challenge.

The key reason? Motivational interviewing is complex, and delivering this therapy often requires specialized training and practice. Implementation takes time, resources, and, most important, support from the team responsible for delivering this therapy. Dickinson and colleagues (12) found that local programs attempting to implement motivational interviewing encountered obstacles such as the practitioners' resistance to having their clinical sessions audiotaped for later supervision and coaching, and problems using the complex rating forms and procedures.

Improving Access and Quality of Care Among Special Populations

Research also is helping to define the barriers that exist among special populations of people—such as adolescents, women, and ethnic/racial minorities—in accessing care and achieving recovery from alcohol abuse and alcoholism.

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Adolescents—An increasing number of studies show that treatment is effective for adolescents with alcohol and drug-related problems (13,14), but there are unique challenges to assessing, diagnosing, and treating alcohol problems in young people. Adolescents need a treatment approach that is flexible and integrates all the aspects of their life—including school, family, work, and peers. Such an integrated approach can be difficult in treatment settings, especially in today's managed care treatment environment (15).

A recent study (16) examined the use of one model—the "research-to-practice integration model"—for treating adolescents within a managed health care plan. Key findings from this study include the following:

- Compared with matched control subjects, adolescents entering AOD treatment had higher rates of several psychiatric and medical conditions and more legal, educational, and family problems.
- Adolescents entering treatment reported high levels of AOD use and often fit the criteria for abuse and dependence, indicating that these patients were waiting until their problems were severe before seeking treatment.
- Patients came into treatment in a variety of ways. For example, boys were more likely than girls to have been referred to treatment from the legal system. Only a relatively small proportion were referred by one of their health plan's medical or psychiatric providers.
- Girls were significantly more likely than boys to have received previous mental health treatment.

Based on the results of this study, it appears that adolescents seeking AOD treatment often have serious problems in other parts of their lives, and that different health care professionals (treatment providers, primary care clinicians, and psychiatrists) who are likely to come in contact with adolescents need to consider this so that they can identify and refer patients for treatment before serious problems develop. The study also shows that increased integration between AOD and psychiatric programs ("one-stop shopping") could significantly improve treatment outcomes.

Women—Women historically consume less alcohol than men, drink alcohol less frequently, and are less likely to develop alcohol-related problems. Yet when women do develop alcohol-related problems, they tend to develop them faster (17), and their problems are more severe (18). In fact, women develop higher blood alcohol concentrations than men, even when drinking the same amount of alcohol, which increases their risk of injury and illness from conditions such as alcohol-related liver disease (18).

Gender differences also exist in alcoholism treatment, beginning

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with diagnosis. Women are less likely than men to be diagnosed with an AOD problem in health care settings (19). Primary care physicians may fail to accurately identify women with alcohol use disorders because women tend to seek treatment for nonspecific health complaints, nervousness, anxiety, or insomnia.

Once a woman decides to seek treatment, she faces different barriers than men do in finding and accessing services. Women are more likely to experience economic barriers to treatment, to report having trouble finding time to attend regular treatment sessions because of family responsibilities, and to have problems with transportation (20).

Women also tend to have a higher prevalence of anxiety and depressive disorders and more severe mental health problems (21). These co-occurring problems may make it harder for women to find and follow through with treatment (20).

Given the obstacles women face in seeking treatment, it seems to follow that women would be less likely to seek, initiate, or complete treatment, and would therefore have poorer long-term outcomes. But this is not the case. A recent study found that men and women were equally likely to complete treatment, but women who completed treatment were nine times more likely to be abstinent than women who did not complete, whereas men who completed treatment were only three times more likely to be abstinent than men who did not complete treatment (22).

Are specialized women-only programs needed? In one study, women who lived with their children in a residential program remained in treatment significantly longer (average of 300 days) than did women whose children were placed with caretakers (average of 102 days) (23). Thus, providing services such as child care may help to keep women in treatment (20).

Ethnic and Minority Groups—According to national surveys, alcohol consumption and alcohol-related problems among White Americans have declined since the mid-1980s (24). At the same time, however, alcohol consumption and alcohol-related problems have remained stable or even increased among Blacks and Hispanics. Studies also show that, for any given level of alcohol consumption, ethnic minority populations experience more negative health and social consequences of drinking (e.g., unemployment, poor education outcomes, and alcohol-related legal problems) than Whites (25).

Most of the studies of treatment effectiveness have compared Whites with the largest minority groups, primarily Blacks and Hispanics. Although some studies reported poorer treatment outcomes for minority patients, most found no significant differences in treatment effectiveness across groups (26). In many studies, minority patients enter treatment with more characteristics that predict lower rates of success (e.g., lower income, less education, more extensive family histories of alcoholism, more co-occurring drug abuse, and poorer physical health) compared with Whites (27). But even with poorer odds of success at the beginning of treatment, minority patients often appear to be as successful as Whites when followed for a year or more after treatment.

Although research on alcoholism treatment with these groups is very limited, some studies have suggested ethnic differences that may be relevant for treatment planning.

Kaskutas and colleagues (28) found that a higher proportion of Blacks in treatment (76 percent) report having had some previous treatment compared with Whites (65 percent). Blacks are almost twice as likely as Whites to have gone to Alcoholics Anonymous (AA) meetings as a part of their treatment. Arroyo and colleagues (29) found that although Hispanics attended more formal alcoholism therapy sessions and fewer AA meetings than Whites, both groups had similar treatment outcomes. The authors speculate that Hispanics may make greater use of their existing social support system and thus may not need AA as a support system, or their treatment preferences simply may reflect a belief that AA is not as effective as formal treatment programs. The NIAAA Project MATCH study showed that Native American patients experienced better outcomes from motivational enhancement therapy than from cognitive-behavioral therapy or 12-step facilitation (such as AA) (30).

Mandated Treatment—Many people enter alcoholism treatment through the legal system (31), a large proportion of them for driving under the influence (DUI) (32). Research on mandated treatment for DUI offenders consistently shows that treatment has a modest effect on reducing drinking–driving and alcohol-impaired crashes among offenders who were mandated to attend and who actually received the intervention (33,34).

Research has not specifically examined the cost-effectiveness of mandated treatment for drinking and driving. However, considering that alcohol was a factor in 41 percent of U.S. traffic deaths in 2002 (35), and that in 1998 the U.S. economic costs related to alcohol use problems was $185 billion (36), the design of cost-effective treatment is imperative. Developing cost-effective alcoholism intervention and treatment for mandated populations could mean a decrease in alcohol-related problems nationwide.

Treatment efforts aimed at DUI offenders also need to consider the changing characteristics of the DUI offender population. For example, stricter laws, such as zero-tolerance laws for underage drinkers (which set the legal blood alcohol limit for drivers younger than age 21 at 0.00 or 0.02 percent) have led to a 19-percent reduction in drinking–driving and a 20-percent reduction in fatal crashes among young drivers (37,38). Still, many young people continue to drink

and drive. With zero-tolerance laws, drinking–driving youth who might otherwise have avoided criminal sanctions can be mandated to receive treatment.

TANF Welfare Recipients—The 1996 welfare reform law, which replaced the cash entitlement with an emphasis on employment, has important implications for the organization of alcoholism treatment services. Studies have estimated that 6 to 10 percent of Temporary Assistance to Needy Families (TANF) recipients were dependent on either alcohol or other drugs (39,40). Women with AOD use disorders experience substantially more barriers to employment and are less likely to become employed and more likely to be sanctioned and lose welfare benefits than women without substance abuse problems (41).

Identifying people with AOD use disorders is the first step to improving their employment outcomes, but this can be difficult. Most people are reluctant to disclose having an AOD use problem because of the stigma involved (42), and TANF recipients may be especially reluctant because of added concerns about losing their welfare benefits. A number of welfare systems attempt to screen for AOD use problems using generic screening methods, such as CAGE–AID, a nine-item measure designed to screen for AOD problems, but these methods identified far fewer TANF recipients with AOD use problems than did a specialized screening method (43).

Specialized screening was designed to augment generic screening methods, providing more intensive interview-type questioning by trained staff. In one study, such specialized screening resulted in a higher rate of referral to treatment than found in surrounding counties that used a generic screening method (10.3 percent vs. 4.4 percent).

Costs of Treatment

Staying abreast of the latest research and understanding the needs of special populations can help improve health care access and quality. But another part of the health services research equation—economics—also must be considered. Increases in health care costs in recent years have pressured providers, insurers, and policymakers to monitor the costs, cost-effectiveness, and cost–benefit of all health care services, including alcohol-related treatment.

The costs of alcohol abuse and alcoholism are staggering. In 1998 the social costs of alcohol abuse and dependence were estimated to be $185 billion (36). Although alcohol-abusing drinkers and their families pay some of these costs (e.g., the medical and legal costs), the nonabusing population also bears costs, such as those related to alcohol-related motor vehicle crashes, crime, and increased health care expenses. Because of these enormous societal costs, alcohol abuse and alcoholism are major concerns for policymakers and researchers. But without solid information regarding the economic implications of alcohol-related services, health insurance companies, managed care organizations, and policymakers may be reluctant to fund these services.

In recent years, especially with the advent of managed care, there has been a greater emphasis on cost containment, leading researchers to focus on the evaluation of treatment service costs. To investigate the role of these economic analyses, NIAAA's National Advisory Council formed a Subcommittee on Health Services Research. In its report to the Advisory Council, the Subcommittee noted that studies of the cost and cost-effectiveness of alcoholism treatments are essential to ensure that people with alcohol-related problems receive appropriate care and recommended that future research compare the costs of alcoholism treatment programs with their outcomes and benefits (44).

In addition to looking at costs and benefits, Gold and colleagues (45) recommend that analysts adopt a broad societal perspective. Fleming and colleagues (46) used this approach in their cost–benefit analysis of Project Trial for Early Alcohol Treatment (TrEAT), in which physicians in primary care clinics administered brief interventions to problem drinkers in a randomized controlled trial. The TrEAT intervention resulted in economic benefits in the form of reduced hospital and emergency department use, fewer criminal and legal events, and fewer motor vehicle incidents (crashes, violations, and related arrests).

The total cost benefit of Project TrEAT was estimated to be $423,519, which included $195,448 in emergency department and hospital use savings, and $228,071 in avoided costs of crime and motor vehicle crashes. This works out to be about $1,151 in savings per person. On the other hand, the total cost for the intervention was estimated to be $80,210, or about $205 per person, leading the researchers to conclude that the benefits of the intervention far outweigh its cost (47).

Conclusion

Health services research is providing valuable information for people involved in treating alcoholism and its related problems. In recent years studies have shown that medications can have an important role in treating addiction. Research also has helped to identify barriers to treatment for special populations, such as adolescents, women, ethnic/racial groups, people mandated to receive treatment, and people receiving welfare. Health services research is critical for the

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AOD treatment field, as well as for health insurance companies, managed care organizations, and policymakers who require solid information regarding the economic implications of alcohol-related services to fund these services.

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