The Gap Between Research and Practice in Substance Abuse Treatment

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Integrating science-based practices into clinical care has become an increasingly important theme in the substance abuse field. The authors describe various factors that have traditionally kept researchers and practitioners from collaborating with one another and outline steps being taken to encourage a partnership between these two groups. Strategies for continuing to close the gap between research and practice are provided, including the incorporation of policy makers and consumers and their families into the process. The implementation of science-based treatment strategies into mainstream substance abuse care will depend partly on the new relationships that are built on the communication and cooperation between researchers and practitioners. (*Psychiatric Services* 53:984–987, 2002)

Researchers and practitioners will face a pressing and difficult challenge in the coming decade: the integration of science-based substance abuse treatment practices into clinical care. The pressure for this integration comes from many sources: consumer demands for more substance abuse service options, greater accountability for health care expenditures, recognition that reimbursement for substance abuse services should be equivalent to that for other medical and behavioral services (parity), acknowledgment that services require justifications that go beyond personal beliefs and tradition, and a fundamental belief in the scientific method as the standard for developing effective treatments. The 1998 report from the Institute of Medicine (IOM), *Bridging the Gap Between Practice and Research* (1), signaled the movement of the research-to-practice issue into national prominence.

Evidence is readily available to support the existence of a chasm between research and practice. The minimal use of the pharmacotherapies LAAM (levo-alpha-acetyl-methadol) and naltrexone, both of which have been shown to be effective in the treatment of narcotics addiction, is indicative of the difficulty in introducing new medication treatments (2–9). The minimal application of empirically supported behavioral strategies, such as contingency management—the offer of rewards for specific behavioral changes—in the treatment of stimulant dependence and alcohol use disorders further illustrates the distance between the science and the practice of addiction treatment (10).

Efforts to blend research and practice attempt to influence the basic conceptualization of substance use disorders, the clinical approaches used in prevention and treatment programs, and the techniques used to evaluate the effectiveness of these programs. Over the next several years, a major focus of the substance abuse field will be the establishment of empirically supported approaches as the foundation of substance abuse treatment. We believe that the accomplishment of this shift away from traditional methods will improve the effectiveness of treatment and will enhance its acceptance by the mainstream health care system, thereby increasing access to care.

Factors responsible for the gap

New knowledge does not guarantee changes in practice, largely because of human elements. Beliefs and expectations about a new technology have significant effects on what will be done with the new information. Furthermore, the relationship between persons who propose an innovation and those who are responsible for implementing it is critical. Many of the problems in translating research into practice in the substance abuse field—for example, institutional and administrative constraints, lack of staff support, and inefficient knowledge dissemination—are similar to challenges faced by professionals in other fields that have implemented new technologies (11–14).

Growing dissatisfaction with the treatments offered through substance

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abuse services has increased consumer demand for new approaches. The fact that many insurance plans do not provide adequate coverage for substance dependence also indicates a demand for additional treatment options for consumers (15). Consumers, along with their families, are taking an increasingly active role in their health care (16). They are no longer passive recipients of recommendations made by their physicians. The popular press, the Internet, and multimedia advertising have allowed consumers to learn about new health care technologies and medications that may help treat their illnesses.

However, little has been published for consumers on the results of research findings. Communication with consumers of substance abuse treatment and with their families should be an important component in the blending of research and practice, because these people are directly affected by the decisions made. Consumers need to take an active role in state and local advisory groups to voice their concerns and ensure that new treatment services are implemented. It has been suggested that stigma and denial inhibit consumer action and familial support (1). However, if researchers and providers increase their communications with consumers and their families, and if these stakeholders are given more opportunities to provide feedback to the substance abuse treatment community, some of the misunderstandings and apprehensions of consumers may be alleviated.

Differing perspectives

In the substance abuse field, the critical factor contributing to the gap between research and practice is the lack of communication and cooperation between researchers and practitioners. Although the two groups do interact at times, constructive communication traditionally has been absent. Researchers and practitioners have made little effort to understand or accept the relevance of each other's knowledge. Researchers and substance abuse treatment providers have divergent missions, cultures, histories, and information needs (17). They assess, process, and disseminate information in accordance with their distinct perceptions of the world. This divergent thinking produces a broad range of obstacles to the blending of research and practice.

The cultures and the ethical values of substance abuse research and substance abuse treatment practice vary greatly. These differences may play a significant role in shaping the use of evidence-based practices (18). Researchers revere evidence-based, or empirical, science. Without data, a phenomenon does not exist. When there are data, inferences from the data must be made in the most cautious and circumscribed manner possible. "Proof" is difficult, slow, and expensive to produce. In clinical trials research, the participants' well-being and safety are paramount concerns and are the responsibility of the investigator. However, the products of the research are not the results of any one patient's treatment; rather, they are the data, whether positive or negative.

Not only do researchers and practicioners have different philosophies, but they also hold that each other's perception is fundamentally flawed.

Practitioners frequently have little understanding or appreciation of the role of science in the delivery of care. This absence of a scientific framework is particularly acute in the field of substance abuse treatment (1). Historically, a large proportion of providers of substance abuse treatment services—such as counselors, physicians, nurses, and program administrators—entered the profession as a result of their personal histories of substance abuse and recovery (19). Many of these practitioners had little formal training in the treatment approaches they were delivering, much less education in the scientific method.

For numerous treatment-delivery personnel, the product of their work is the "conversion" of a substance user into a person who is in recovery. Not only do researchers and practitioners have different philosophies, but they also hold that each other's perception is fundamentally flawed. Practitioners commonly view the scientific agenda as esoteric, sterile, and lacking in empathy for the true psychological, social, emotional, and economic challenges faced by real-world substance users who are grappling with their problems. A number of researchers view various clinical practices as quasi-religious, ideological propaganda. Some researchers view practitioners as poorly educated, naive, and ignorant of the most basic appreciation of empirical principles. For many researchers, both the practices and the practitioners need to be replaced.

Barriers to new therapies

The substance abuse service delivery system is one of the most regulated areas of health care. Specifically, opiate pharmacotherapies, including methadone and LAAM, are among the most highly regulated services in all of medicine (1). Few other treatments are restricted to only one small set of treatment outlets for delivery and regulated by numerous entities, which in the case of opiate pharmacotherapies include state agencies, the Food and Drug Administration (FDA), the Drug Enforcement Administration (DEA), payers, and other regulatory bodies. The use of LAAM, an effective opiate agonist treatment, was delayed for three years in several states after its FDA approval and DEA rescheduling (15). This delay resulted in a tremendous loss of enthusiasm on the part of researchers, policy makers, and consumers.

Not only are medications closely regulated, but also specific types and modalities of treatment fall under cumbersome and expensive regulations by many states and localities (1). In many locations, effective behavioral strategies such as contingency management techniques do not appear feasible, because there is no acceptable means of reimbursement of funds used to implement contingency management approaches.

Funding barriers

In several regions of the United States, managed care and related funding policies have stripped the treatment delivery system of flexibility (20). It is difficult for a treatment program administrator to be concerned about the scientific basis of a treatment when he or she is unsure of whether the facility's rent will be paid. Providers may want to hire staff with professional degrees to implement new treatments but may find that the treatment reimbursement levels are barely adequate to attract staff who are willing to work for the minimum wage (21). The preliminary findings of an ongoing investigation indicate that the cost of naltrexone and the medical staff required to prescribe it has been a serious deterrent to the use of this efficacious medication for the treatment of alcohol-related disorders (unpublished data, Rawson R, Marinelli-Casey P, Carpursor A, et al, 2001). Many treatment providers face the choice between using relatively inexpensive traditional methods that are advocated by the staff and using new, prohibitively expensive approaches that the staff view with skepticism (22).

An example of what is at stake

California's Proposition 36 illustrates the complex set of influences that will shape the future of addiction treatment in the United States. This initiative, passed by a 2:1 margin by Californian voters in November 2000, has resulted in an annual appropriation of $120 million in new treatment funding for persons with substance abuse who would previously have been prosecuted and incarcerated.

The success or failure of Proposition 36—real or perceived—will depend partly on the effectiveness of the treatments delivered to persons who are treated under its provisions. Polls have suggested that voter support for the initiative was based on dissatisfaction with the rapidly expanding prison population, due in part to the incarceration of persons with drug offenses. Treatment offers a potentially less expensive alternative to incarceration.

However, this initiative puts the spotlight clearly on the treatment system to deliver what it promises—successful treatment that results in a reduction in drug use and related crime. If the treatment system fails to deliver, it is likely that support for Proposition 36 will dissipate rapidly. Unless the most effective approaches for use with the patient groups generated by Proposition 36 are adopted promptly and successfully, the outcome may be unsatisfactory to the initiative's sponsors—the voting public. Such a vote of no confidence could be a very damaging and unfortunate consequence of the failure to use the best and most effective treatments that are available.

First steps toward closing the gap

Federal agencies, researchers, and community stakeholders have attempted to work in new ways. Forums that encourage an exchange of ideas have emerged, publications have been made available, and initiatives for translating research into practice have been developed. Organizations such as the American Society for Addiction Medicine and the American Methadone Treatment Association provide forums through which various stakeholders can come together to exchange ideas and information about substance abuse services. Such conferences encourage dialogue among policy makers, practitioners, and researchers. In recent years the conferences of these organizations have included specific presentations that address the gap between research and practice.

In addition to these endeavors, the National Institute on Drug Abuse (NIDA) recently sponsored the first conference on "Blending Clinical Practice and Research: Forging Partnerships to Enhance Drug Addiction Treatment," held November 1 and 2, 2000, in Los Angeles. The conference, which had more than 800 attendees, successfully provided a forum for dialogue between scientists and treatment providers. The Center for Substance Abuse Treatment (CSAT) has also sponsored conferences aimed at building research-to-practice partnerships, such as "Common Ground, Common Language, Common Goals: Bringing Substance Abuse Practitioners and Researchers Together," which was held April 26 and 27, 2001, in Los Angeles and had more than 500 participants, and regional conferences focusing specifically on methamphetamine dependence. Participants in these conferences included stakeholders from academic, treatment, prevention, and criminal justice settings.

Recently, publications have been made available that discuss actions arising from collaborative efforts and that express opinions about future directions (23–26). Most notable is the IOM report, now seen as the benchmark resource publication on the research-practice relationship. The report prompted two federal agencies—NIDA and CSAT—to develop initiatives to facilitate research in a network of community-based treatment programs and to publish documents that aim to reduce the gap between research and practice. Participation by researchers, community-based treatment providers, policy holders, and stakeholders in CSAT's Practice Improvement Collaborative puts practitioners' problems on the scientific agenda. Participation by a research infrastructure comprising 14 nodes of researchers and practitioners in NIDA's Clinical Trial Network provides opportunities for treatment innovations to be tested in community-based treatment programs.

Although these preliminary collaborative efforts appear to have ambitious agendas, it is too early to assess their impact. Policy makers and consumers need to participate in these conferences and ongoing dialogues. It is our belief that involvement and commitment on the part of federal agencies, practitioners, researchers, policy makers, and consumers will be necessary to advance the field.

Further steps toward closing the gap

We offer several additional observations and strategies for closing the gap between research and practice. First, researchers and practitioners must recognize that the gap will not disappear quickly without an active, reciprocal effort. Second, additional joint forums—meetings and conferences—must be developed so that practitioners and researchers can exchange ideas and information. These discussions must also include policy makers and consumers of substance abuse treatment.

Third, a multilevel effort must be made to promote the implementation of new substance abuse treatments. The following groups must work together to ensure that evidence-based treatments are available to persons who are seeking substance abuse treatment services: treatment innovators and researchers; regulatory agencies; service providers; physicians, nurses, and allied health care providers; program administrators; counseling staff; payers and purchasers of substance abuse services; and consumers and their families. Finally, we must adapt the lessons provided by industry and other areas of science and facilitate system changes such as those described in the literature on technology transfer (27).

Although these strategies are examples of ways in which researchers and practitioners can work to bridge the gap, they constitute only the initial phase of integrating research and practice. All the groups that play a role in this challenge—researchers, practitioners, policy makers, and consumers—need to cooperate and communicate with one other and to be open to feedback and new knowledge pertaining to the implementation process.

As the number of persons who present with substance use disorders increases, the importance of such collaboration grows exponentially. To provide the most effective treatment for patients who are trying to overcome a substance use disorder, the researchers and practitioners in this field must put aside their differences and form an allied commitment to advancing addiction treatment. ♦

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