

ADAMHA Funding Pressed

Study says scientific advances justify research funding on addictions and mental illnesses that is more in line with the carnage they wreak

A new report* by the Institute of Medicine (IOM) says the time has come to give research on mental illness and addiction financial support commensurate with their toll on society. The report, by the IOM's board on mental health and behavioral medicine, says that the explosion of advances in the neurosciences over the past decade has opened up more research opportunities than ever before, which are being underexploited because of perennial underfunding of the institutes in the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA). It recommends that funds should be doubled at the very minimum.

Although the Reagan Administration is interested in drug abuse, particularly among the young, ADAMHA has never enjoyed the kind of growth that the National Institutes of Health (NIH) are accustomed to. Strong political support has been lacking, both because of the perceived vagaries of behavioral research and the powerful social stigmas attached to mental and behavioral disorders.

The institutional organization of research efforts has always been dictated more by political and administrative than by scientific concerns. The National Institute of Mental Health (NIMH), one of the original NIH institutes, left the fold in 1968 after it assumed a massive new service function in the form of the Community Mental Health Centers program during the Johnson Administration. In 1973, the National Institute on Drug Abuse (NIDA) and the National Institute on Alcohol Abuse and Alcoholism (NIAAA) were created from NIMH's rib and ADAMHA was formed.

Early in the Reagan Administration, most of the service functions were put into a single block-grant program. Now that the institutes' primary function is research, the question has repeatedly arisen as to whether the ADAMHA structure has become antiquated.

Two years ago, the Office of Management and Budget (OMB) proposed that the three institutes be moved into NIH to save money. The idea was rejected, but this year again there are rumors that

OMB wants to do something to "streamline" operations. ADAMHA and its supporters strongly oppose any changes at present because it would very likely mean loss of money and of the remaining service and clinical training programs. There is also the assumption that behavioral and social research, if moved to NIH, would suffer badly in the basic biomedical atmosphere. ADAMHA has sought to stave off action by demonstrating to OMB that its dissolution as an umbrella agency would only save the government about \$8 million and would not be worth the hullabaloo.

But the issue of ADAMHA's financial and organization future is still a live one. According to IOM, behavioral disorders are implicated in 50 percent of all morbidity and mortality. Health costs alone are about \$20 billion a year, and if the costs of attendant social disruption—half of it from alcohol abuse—are added, the figure mounts to \$185 billion. According to Frederick Goodwin, director of intramural research at NIMH, the ADAMHA research budget ought to jump from \$300 million to \$1 billion a year, on the basis of treatment costs. A comparison with the cancer research effort in particular points up the sharp discrepancies, says Goodwin. For every patient being treated for cancer, more than \$300 is spent on research. The comparable figure for schizophrenia is \$7.

The IOM panel, chaired by Jack D. Barchas of the Stanford University School of Medicine, estimates that if NIMH research budget had kept pace with increases at NIH since 1966, it would now be well over \$300 million (the 1985 appropriation is \$187 million). The panel recommends a 5-year program of expansion for ADAMHA leading to a total budget of \$500 million in 1983 dollars, including \$100 million apiece for the drug and alcohol institutes.

Barchas, who calls the current funding situation "simply unbelievable," contends that reorganization is not the answer. It would simply be "rearranging the deck chairs on the Titanic."

Nonetheless, developments over the past 15 years have reached a point where researchers are thinking about how to put behavioral disorders on an equal footing with medical ones.

Avram Goldstein of Stanford says "most scientists look down their noses at ADAMHA." Yet, tremendous advances have been made in the neurosciences which offer new hope for biological elucidation of behavior. One indicator is that in recent years, NIMH-supported researchers have received three Lasker awards and a Nobel Prize (to Roger W. Sperry for his work on hemispheric lateralization). The discovery of opioid peptides—in work largely funded by NIDA—has given tremendous impetus to research on mental disorders as well as drug abuse. New fields have opened up in alcoholism research with adoption studies in the early 1970's, which demonstrated that there is a heritable vulnerability to the disorder. Genetic bases have been ascertained for depression and schizophrenia. And new technology, such as positron emission tomography, is making it possible to achieve detailed information on the chemistry and anatomy of living brains. The potential payoffs are huge. Lithium, for example, which was introduced for the treatment of manic depressive illness in 1969, has saved the country \$17.5 billion in treatment costs over the past 15 years, according to NIMH.

On the social front, there is much better information about the toll that mental disorders and addictions extract from society. NIMH's Epidemiologic Catchment Area Program recently revealed that in any given 6-month period, 19 percent of the population suffers from one or more psychiatric disorders. Yet only 20 percent of these people have sought treatment. The extent and pervasiveness of the alcohol problem is also coming to be better recognized. Statistics now show that alcohol is implicated in a majority of all accidents, as well as in most violent crimes, domestic violence, and suicides. Up to 50 percent of hospital admissions are alcohol-related.

As new discoveries have propelled ADAMHA research into a more biologically oriented direction, recognition of the importance of behavior—particularly in the field of prevention—has gained ground at NIH.

In view of the increasing parallelism of the research missions in NIH and ADAMHA, as well as the rumblings

*Research on Mental Illness and Addictive Disorders: Progress and Prospects, Institute of Medicine, National Academy of Sciences, 2101 Constitution Avenue, NW, Washington, D.C. 20418.

from OMB, officials have been pondering a variety of possible reorganization schemes.

One—putting everything in NIH—would be welcomed by neuroscientists and psychopharmacologists, but would be fiercely resisted by NIH as well as behavioral researchers and those who want to preserve vestigial service functions for potential future revival. The idea would also meet White House resistance because Nancy Reagan, who has adopted youthful substance abuse as her area of interest, is known to want to retain the separate visibility of drug and alcohol research.

Another option, unpalatable to all but budget specialists, would be to collapse the three institutes back into one. The drug and alcohol people would fight this tooth and nail, having struggled mightily to gain separate statuses. Another idea, regarded by mental health people as too horrifying to contemplate, would involve cannibalizing NIMH and distributing its functions to existing NIH institutes.

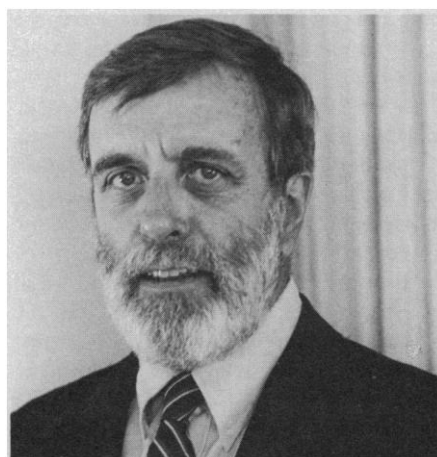
Basically, then, the proposals boil down to two: putting NIMH back in NIH [a proposal repeatedly advanced by Senator Daniel Inouye (D-Hawaii) of the health appropriations subcommittee] or combining the alcohol and drug abuse institutes into an institute on substance abuse, which finds its greatest advocate in NIDA director William Pollin.

Former NIH director Donald Fredrickson says the separation of NIMH from NIH was “probably one of the most unfortunate things that could happen to behavioral research.” But NIMH is ambivalent (its new director Shervert Frazier has not taken a position). Among researchers and administrators, the main concern is what would happen to nonbiological research. NIMH’s intramural program, which is heavily biological in focus, would be comfortable since it never left the NIH campus. But former NIMH director Herbert Pardes says NIH simply “hasn’t embraced the psychological and behavioral aspects of mental health.” This bias could affect a wide array of research, such as work on cognition, family systems, psychotherapy, personality, and socially relevant topics such as violence and minority mental health.

Another major consideration is the service role that NIMH has in common with the other two ADAMHA institutes. That role is now pretty vestigial, but many contend that behavioral health services cannot be compared to those for diseases. NIH does not have direct involvement with services because treatment occurs in hospital settings. Provid-

ers and treatments are relatively well defined and treatment is more often acute rather than long-term. Behavioral disorders, in contrast, are subject to tremendous variance in treatments and settings. Because a comprehensive approach involves the social services and legal systems as well as the medical system, these problems have traditionally been a governmental responsibility. Thus, guidance from the federal government and close links with research are seen as essential.

The reassignment of NIMH to NIH seems like a remote prospect at present because of the important implications for its future identity. Such a move would also be strongly opposed by Senator Orrin Hatch (R-Utah), chairman of the Labor and Human Resources Committee.



Donald Ian Macdonald

ADAMHA head resisting OMB “streamlining.”

Combining the drug and alcohol institutes, though, appears to be a more plausible possibility. There is one powerful political obstacle: the alcoholism constituency. People have struggled long and hard to get alcoholism recognized as a disease rather than a moral failing. They regard the establishment of the NIAAA as a major triumph and do not want alcohol, unique in its social pervasiveness, to be treated as just another drug.

Most experts, however, do not regard alcoholism as any more—or less—a disease than, say, heroin addiction. Although a biological vulnerability to alcoholism has been demonstrated (but not identified), NIDA intramural research chief Jerome Jaffe notes that “anyone who gets hooked on anything has a [differential] biological vulnerability,” since no substance is universally addictive.

The argument that alcoholics comprise a discrete population has lost some force in view of the growing phenomenon of polydrug abuse and cross-addiction.

Many ex-heroin addicts are now becoming alcoholics. Abuse of pharmaceutical drugs routinely supplements primary addictions. Thus, treatment programs increasingly have as their goal abstinence from all psychoactive drugs.

At the same time, a strong trend in research has been toward looking for “commonalities” in drug abuse. The term applies not only to biological processes but to behavioral tendencies—some of them probably biologically based—that many substance abusers have in common.

NIDA director Pollin believes that combining the two institutes would achieve the “critical mass” required for a broad multidisciplinary attack on these problems. He particularly wants to give smoking fullblown status as an addictive disorder (he claims it’s “no different from heroin or cocaine”). He is confident that “we will soon find a common biological pathway for all addictions.”

Pollin cites in particular the work of Roy Wise of Concordia University in Montreal, who has found that in rats, cocaine and morphine activate the same dopamine transmission pathways in the brain (*Science*, 4 May 1984, p. 516). Another researcher, Alexander Glassman of Columbia University has found that clonidine, an antihypertensive drug that has been found to modify withdrawal symptoms of alcohol and opiates, also blocks nicotine withdrawal, by calming noradrenergic activity in the locus coeruleus (*Science*, 16 November 1984, p. 864). Glassman thinks it possible that even if different drugs achieve their rewarding effects through different pathways, the locus coeruleus may be a common area for physical craving and withdrawal.

The classical definition of addiction, which includes physical withdrawal symptoms, is now being rethought. Wise has found that in rats, brain sites for reward and withdrawal appear to be separate. Furthermore, the experience with cocaine has demonstrated that a drug can be powerfully addicting without producing withdrawal.

Growing recognition of the importance of psychological factors has persuaded researchers that “dependence” is a more comprehensive and appropriate term than “addiction.” In fact, Pollin favors an “institute on addictive behaviors” that would allow for research on disorders of impulse control such as compulsive gambling, which bears all the behavioral hallmarks of an addiction.

Meanwhile, drug and alcohol research are drawing closer together. The NIAAA has for the first time organized its intra-

mural research program under a single director, University of Illinois psychopharmacologist Boris Tabakoff, and last year it started a clinical program. NIDA has finally brought its intramural program up from its birthplace in Lexington, Kentucky, and established it in Baltimore under the leadership of Jaffe, who was last seen in Washington heading the Nixon war on drugs.

Both ADAMHA director Donald MacDonald and NIAAA director Robert Niven have indicated they find the merger idea conceptually attractive. But they want to address it with extreme caution, in recognition of the fact that any change in this budgetary climate is likely to be for the worse.

In the long run, there is little question that something should be done to accord

ADAMHA's functions higher priority in the federal health research effort. Says Pollin: "During the rest of this century, the behavioral and emotional components of a wide variety of physical illnesses will become increasingly clear and apparent. The agency taking the lead in these areas should not have the status of an afterthought."

—CONSTANCE HOLDEN

Restoration of the Humanities Urged

NEH chairman decries "garage sale" look of college curricula; says it's time to get back to the classics

Now that widespread alarm over the state of science education has led to an array of new initiatives, it appears the time has come to make the case for well-roundedness.

In October the National Institute of Education (NIE) produced a report which called for two full years of "liberal education" for all undergraduates. More recently William Bennett, chairman of the National Endowment for the Humanities (NEH), attracted considerable attention with an eloquent report on the need to restore the humanities to their rightful place at the heart of higher education.

Bennett, a leading candidate to succeed Terrell H. Bell as Secretary of Education, is regarded as an elitist by many less conservative academics, particularly feminists. But during his tenure he has been a forceful advocate for reversing the deterioration of the humanities in high schools and colleges.

Statistically, the decline of interest in humanities has been remarkable: Since 1970, for example, the number of English majors has declined by 57 percent; history by 62 percent, philosophy by 41 percent, and modern languages by 50 percent. In three-quarters of all American colleges, a student can obtain a bachelor's degree without taking any European history. Foreign language study, which was almost universally required for undergraduates in 1966, is now required in fewer than half of the institutions.

The declining job market for humanists is a big factor. But Bennett contends that the devaluation of the humanities is largely the fault of colleges, which have failed to communicate to students "a clear vision of what is worth knowing and what is important in our heritage that

all educated persons should know." Too often, he says, colleges are "allowing the thickness of their catalogues to substitute for vision and a philosophy of education."

Bennett's manifesto, "To Reclaim a Legacy," may be one of a string of reports drawing attention to excess specialization and vocationalism as well as lack of coherence in college curricula. In addition to the NIE report, a forthcoming report by the Association of American Colleges also reinforces the theme that special expertise is no substitute for well-roundedness. And the Carnegie Foundation for the Advancement of Teaching has launched a study of liberal arts colleges.

The report, which draws on the recommendations of a study group Bennett convened early this year, has plenty to

say about what is wrong with college teaching. It notes that colleges often assign their most inexperienced faculty to teach introductory courses. Many teachers seem "apologetic" about their fields, says Bennett, and present the ideas as subjective and relativistic, with little inherent value. Others filter their instruction through political ideology. There are also those who give short shrift to their students, their primary interest being research. There are few teachers, in short, who communicate a broad knowledge and passionate appreciation of their subject matter, and students are allowed to conclude that the humanities are of marginal importance.

College administrations are also at fault, says Bennett. The report suggests that in curriculum design, many colleges have been more concerned with satisfying the political demands of various campus constituencies than with articulating a clear educational vision. And college presidents, as documented in a recent report,* spend so much time fund raising that they have little time to attend to academic questions.

Bennett asserts that, despite the career anxiety driving many students, there is time in the average curriculum to include adequate exposure to humanities without undue sacrifice in other areas. He says many college catalogs offer the equivalent of a "garage sale" in courses and that many offerings, designed to cater to contemporary concerns of dubious substance, could be cleaned out. "Universities are not there to cater to students' uninteresting whims." He says college presidents must start setting some firm academic priorities and that



William Bennett

Foe of "intellectual relativism" regarded by many as an elitist.

*"Presidents Make a Difference," by the Association of Governing Boards of Universities and Colleges