



American Psychological Society

Building a **science-first** foundation for

For Members
Convention
Journals
Advocacy
Employment Ads
Join APS

OBSERVER

Volume 15, Number 9
November 2002

Contents

Observer Home

Members in the News

Announcements

Meeting Calendar

Employment Search

Advertise

Archive

Subscribe

Contact Us

Payoffs from Investment in Behavioral Research

I mportant new insights into the difficulties of quitting smoking, research improving physician-patient communication during cancer treatment, and multidisciplinary approaches to identifying the causes of mental disease are just some of the behavioral research achievements at the National Institutes of Health since Congress set out to double the NIH budget in 1999.

"Doubling of NIH's budget brings with it the need for accountability - and there is a growing demand by Congress, the Administration and the public that taxpayers' investments in health research drive improvements in the health of Americans," said Jessie Gruman, executive director of the Center for the Advancement of Health. "Behavioral and social science research at NIH is invaluable in linking basic biological science to valuable real world solutions to the major health problems of our time."

Gruman spoke at a Capitol Hill briefing, *Behavior and Health: New Research, New Hope*, which showcased behavioral science advancements at the National Cancer Institute, National Institute on Drug Abuse, and the National Institute of Mental Health. Gruman moderated the briefing, which was sponsored by the American Psychological Society, American Psychological Association, and the Federation of Behavioral, Psychological and Cognitive Sciences.

She said the challenge to behavioral science is to "ensure medical breakthroughs get translated at the right time, to the right people, in ways that will make a difference."

"Behavior mediates between everything science tells us about health and our ability to prevent, cure, and manage disease," she said.

Understanding Withdrawal and Relapse

David Shurtleff, from the National Institute on Drug Abuse, stressed that behavioral research is essential to breaking the cycle of addiction: abuse - addiction (compulsive behavior) - abstinence - relapse.

"Drug addiction is a chronic, relapsing, compulsive behavior that is affected by environmental and emotional factors," Shurtleff said. "That's why treatment is essential."

Shurtleff, who is acting director of NIDA's Division of Neuroscience and Behavioral Research, added that treatment research must address neurobiology, behavior, and social context.

One of the most common - and costly, in terms of both health consequences and health care - addictions is addiction to smoking tobacco. New research funded by NIDA has yielded enormous gains in our understanding of issues relating to withdrawal and relapse.

According to Timothy B. Baker, University of Wisconsin-Madison, each year more than 40

Abou

Med

Stur

< Obs

Tea

Func

Cont

Psyt

Briefing Presentation Downloads

Three of the presentations made by are available for download as Microsoft PowerPoint files.

- [Timothy Baker](#)
(PPT, 318 KB)
- [Terrance Albrecht](#)
(PPT, 1,495 KB)
- [James Gold](#)
(PPT, 312 KB)

percent of smokers try to quit, but only 5 percent are successful. He said many smokers are successful at achieving short-term abstinence, but most relapse.

Baker said that much of the research over the past 20 years used simplistic measurements for a complex phenomenon and failed to understand why people relapse. He said withdrawal was assumed to be a stereotypic physiologic reaction to abstinence.

"We decided that simple minds and conflicting measurements were at the heart of our failure to appreciate the importance of withdrawal. For a number of years, we were telling people [withdrawal symptoms were] an illusion. 'You're not actually feeling that way, you just have forgotten how bad it was when you first quit,' " he said. "We and the rest of the field were saying this sort of thing, and the reason we were is because study after study after study told us that this is what withdrawal is supposed to look like: it gets bad one or two weeks after quitting, then it goes away."

In fact, Baker cited data showing that after 50 days from quitting smoking, a typical pattern was that withdrawal symptoms such as depression, anxiety, irritability, and an inability to concentrate became two to four times worse. A majority of people, he said, have serious withdrawal symptoms four and five weeks after cessation begins.

"Some people do start out bad and get better, but the majority of people don't do that. The majority of people either stay the same over time or they get worse," Baker said.

Armed with this new data about the cycle of relapse, it is possible to track withdrawal and intervene before a person relapses, and even identify specific genes associated with various withdrawal symptoms.

"Until we know more about the cessation process, until we know what leads to relapse, we're not going to be able to design better, more effective treatment," Baker said.

Research has shown that the typical scenario for someone quitting smoking is 1) a person stops, 2) the person goes through a couple weeks of withdrawal, 3) the cravings and other withdrawal symptoms disappear, then 4) one of two things happens - cure or relapse. According to Baker, this is the same scenario for stopping cocaine, heroine, and alcohol use.

Health Communication and Clinical Trials

Since the NIH budget doubling began, the National Cancer Institute has been able to cast a wider net in terms of the behavioral research it funds. Robert Croyle, who heads NCI's behavioral research program, said NCI used to focus only on issues such as why people don't get preventative screening like mammograms. Such issues are extremely important, he noted, but they don't capture the broader health care context. Since the budget doubling, NCI has been able to support research into various aspects of the physician-patient relationship.

"Most recently, we've looked at health communication. High-quality cancer care, and health care in general, depends on excellent physician-patient communication," Croyle said. One area where this relationship is critical is in enrolling patients in clinical trials.

Terrance Albrecht, H. Lee Moffitt Cancer Center and Research Institute at the University of South Florida, said that while clinical trials often identify the best treatments and cures for cancer, there are a range of factors inhibiting success, including:

- An insufficient number of participants
- Underrepresentation of minority and elderly populations
- Unmet needs of patients, family members, and physicians
- Wide variation in physician communication behavior
- Negative press reports that inspire resistance from eligible patients and family.

- Keeping participants involved through the end of the study

"[There is] all this biomedical research going on, but we're having trouble with patients enrolling in clinical trials," Albrecht said. "Their [patient's] resistance is mainly from fear and anxiety and worry and misunderstanding. This is a social and behavioral issue and not a biomedical one."

She outlined an NCI study examining the role of communication in the physician-patient decision-making process during clinical trials. Albrecht said that research already links a physician's communications style and content to a patient's treatment decisions, but there is still a disconnect between what is thought to occur and what actually occurs in physician-patient encounters.

"It's this [behavioral and biomedical] symbiosis that our work is addressing," Albrecht said. "In this case social and behavioral research presents a direct consequence to biomedical research."

It has taken a year, Albrecht said, to develop a way to study patient-physician interactions in an ethical, affordable, and confidential way. Albrecht and her team of behavioral and medical researchers designed a digital video recording and editing suite and analysis system. Using this system, the researchers are able to examine physician-patient consultations and provide "concrete" evidence of effective communication.

The researchers, Albrecht said, are about a year away from being able to make recommendations to improve this process. Current and future directions of research, she added, include increasing the quality of life and survivorship, such as assisting parents of children undergoing painful procedures; improving public education about genetic risks, and reducing health disparities in cancer care for minority and underserved patients.

Seeing the Smoke, Finding the Fire

James Gold, Maryland Psychiatric Research Center, described research funded by the National Institute of Mental Health that seeks to advance the understanding of schizophrenia. Gold's approach seeks to explain the actual mechanisms and neural systems of the illness by first exploring the deficiencies of the processes involved in the disease. Major symptoms of schizophrenia include hallucinations, delusions, loss of motivation and social interest, and cognitive impairment.

"There's smoke, but we can't find the fire," Gold said. "[We can] take a clinical problem and the best neuroscience and make some headway."

Gold said through translational research teaming clinical and basic researchers, it is possible to get a better understanding of how attention works in the normal brain by examining how it breaks down with disease. According to Gold, research needs to take the next step and move away from simply describing mental deficits. "We're getting major feedback on how attention works in the brain by learning how it doesn't work."

"The goal of our work is to bring recent advances in the basic cognitive neuroscience of attention and short-term memory into the clinic."

Gold said there is evidence that patients with schizophrenia have attention and short-term memory impairments when using standard clinical measurements. However, he said, these measurements can't isolate the specific mechanisms involved in the observed deficits.

Based on new research indicating that the brain has separate attention mechanisms for different cognitive systems, Gold believes that schizophrenia may differentially impact specific attention mechanisms.

According to Gold, research has also shown that the level of cognitive deficits in schizophrenic patients is highly predictive of whether they'll get employment or not. The ability to make this determination illustrates the potential of behavioral research to address the full spectrum of needs of people with mental illness.

