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FRIENDS of NIDA

Dear Transition Team Member:

"Drug abuse and addiction are major burdens to society; economic costs alone are estimated to exceed half a trillion dollars annually in the United States, including health, crime-related costs, and losses in productivity. However, staggering as these numbers are, they provide a limited perspective of the devastating consequences of this disease," Dr. Nora Volkow, Director of the National Institute on Drug Abuse, Congressional Testimony, 3/1/07

Congratulations to The President Elect for a well deserved victory! There is now much to be done in preparation for a new administration. Your contribution as a member of the transition team is invaluable to our nation and will set the tone for the administration, as well as the drug abuse prevention and treatment community.

Drug Abuse and Addiction are major burdens to society.

The costs of drug abuse and addiction to our nation are staggering.

- Fourteen percent of patients admitted to hospitals have alcohol/drug abuse and addiction disorders. Almost 20 percent of all Medicaid hospital costs and nearly $1 of every $4 Medicare spends on inpatient care is associated with substance abuse.
- 70 percent of individuals in state prisons and jails have used illegal drugs regularly. Drug offenders account for more than one-third of the growth in state prison population and more than 80 percent of the increase in the number of prison inmatess since 1985.
- The economic burden in the United States for addiction is twice that of any other disease affecting the brain, including Parkinson's and Alzheimer' Disease, as well as all the others.

Science-Based Prevention and Treatment Works.

When it is made available to patients, drug abuse prevention and treatment works! Untreated substance abuse and addiction adds significant avoidable costs and major disruptions to families and communities. However, discoveries in the science of addiction have led to advances in drug abuse treatment that help people stop abusing drugs and resume their productive lives.

- Research has shown that every dollar invested in addiction treatment programs, there is:
    - a $4 to $7 reduction in the cost of drug-related crimes
    - a $3 - $5 reduction in emergent medical care use (ER and Crisis Center)
    - among women – a $4 reduction in welfare and child welfare costs
    - among employed men – a $7 increase in productivity (fewer absences and health claims)
    - among returning Iraq veterans – a 35% reduction in family medical claims and reductions in family violence problems

A Call for an Expanded Science-Based Drug Abuse Strategy

We call upon our nation's 44th President to expand the current investment in research. This will lead to even more effective addiction treatment effective drug abuse strategy must:

1. Review pending appointments of the Secretary of Health and Human Services, the Director of the Office of National Drug Control Policy and the Director of the National Institutes of Health, to ensure that each will bring a research-informed approach to the medical problems of addiction to tobacco, alcohol and other drugs. Appointees should recognize that expanding science-based drug abuse and addiction treatments is essential to reducing health care costs, and thus a critical part of comprehensive health care reform.
2. Recognize that drug addiction is a brain disease with behavioral, genetic, environmental and development components as proven by research supported by the National Institute on Drug Abuse.
3. Increase our nation's investment in the National Institute on Drug Abuse. We recommend a 50% budget increase over the next five years. Scientists are now poised to capitalize on recent advances in genetics, neuroscience and developmental biology to create breakthrough treatments that could revolutionize care and reduce associated public health and safety problems. NIDA needs support to continue these efforts.
4. Recognize that it is essential to expand science- and evidence-based addiction treatment programs to reduce health care costs of this devastating disorder. Treatment programs should be integrated with prevention strategies to form a comprehensive health care reform. Supporting addiction research is an obvious, reasonable and cost-effective strategy for improving our nation's health and reducing health care costs, and should be considered in any health care reform proposal.
5. Create a Targeted Medications Development Venture Capital Fund within the Department of Health and Human Services. This will bring needed private sector investment to the development of medications specifically targeting drug abuse and addiction. There are many promising drugs in the pipeline waiting to get to the next stage in their development.
6. Expand the Department of Defense's commitment to drug abuse research and its investment in evidence-based substance abuse programs for our nation's returning war heroes.

I have attached additional information for your review. You can also contact me at (804) 827-0375 with further questions.

Sincerely,

William L. Dewey, Ph.D.
President and Chair of Executive Committee

ADDICTION RESEARCH:
A NATIONAL IMPERATIVE

RECOMMENDATIONS FOR THE PRESIDENTIAL TRANSITION TEAM

PROVIDED BY

FRIENDS OF THE NATIONAL INSTITUTE ON DRUG ABUSE

NOVEMBER 2008

"Drug abuse and addiction are a major burden to society; economic costs alone are estimated to exceed ***half a trillion dollars*** annually in the United States, including health, crime-related costs, and losses in productivity. However, as staggering as these numbers are, they provide a limited perspective of the devastating consequences of this disease."

--Dr. Nora Volkow, Director, the National Institute on Drug Abuse, Congressional Testimony, 3/1/2007.

Approximately 22 million Americans still suffer from drug abuse and addiction, the effects of which are wide- ranging and affect people of all ages including children growing up in homes with parents who still struggle with their addiction. Expanding addiction research and using those finds to improve care are the keys to successfully ameliorating these problems. Given the scope of the public health burden of drug addiction, the number of lives affected and the associated morbidity and mortality, supporting addiction research at the National Institute on Drug Abuse (NIDA) - through increased resources - is an obvious and reasonable strategy for improving our Nation's health and should be included in any consideration of health care reform in the United States. As the President-Elect and his transition team consider next steps, we ask that the new Administration place addiction prevention, treatment and recovery as a top priority – including a major commitment to research at NIDA.

Throughout much of the last century, scientists studying drug abuse and addiction labored in the shadows of powerful myths and misconceptions about the nature of addiction. People addicted to drugs were thought to be morally flawed and lacking in willpower. Those views shaped society's response to drug abuse, treating it as a moral failing rather than a health problem, which led to an emphasis on punitive criminal justice strategies rather than preventative and therapeutic actions based on public health understanding of addiction and recovery.. Today, thanks to science and the work at NIDA, our views and our responses to addiction have changed dramatically.

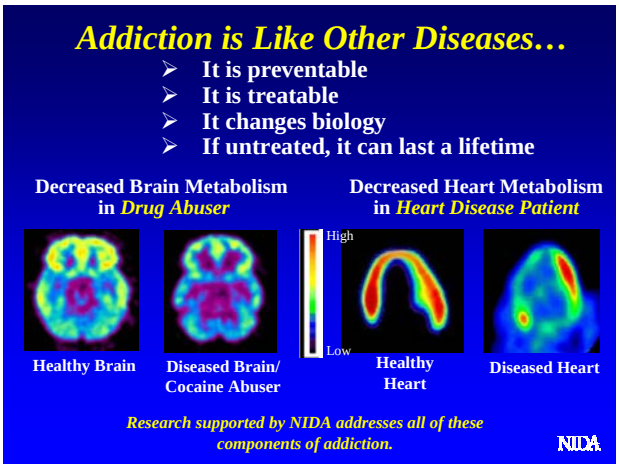
NIDA-supported discoveries about the brain have revolutionized our understanding of drug addiction, enabling us to respond effectively to the problem. We know that addiction is a chronic disease that affects both brain and behavior. Researchers have identified many of the biological, psychological and environmental factors that contribute to the development and progression of addiction, and are beginning to search for the genetic variations, that contribute to the development and progression of the disease. Scientists have used this knowledge to develop a variety of effective prevention, treatment and recovery support approaches that reduce the toll drug abuse and addiction takes on individuals, families and communities.

As a nation, our ultimate goal should be to reduce the burden and especially the health burden of drug abuse and addiction and their many related adverse consequences to individuals and to society at large. By advancing the science of addiction, we can change people's perceptions and replace stigma and shame with a new understanding of addiction as a treatable disease much like any other medical disease and one which demands a broad but focused, intense and sustained public health solution.

Research must continue to take advantage of emerging scientific findings and address critical knowledge gaps, broadly focusing efforts on: epidemiology, prevention, treatment, recovery, HIV/AIDS, and other critical priority areas.

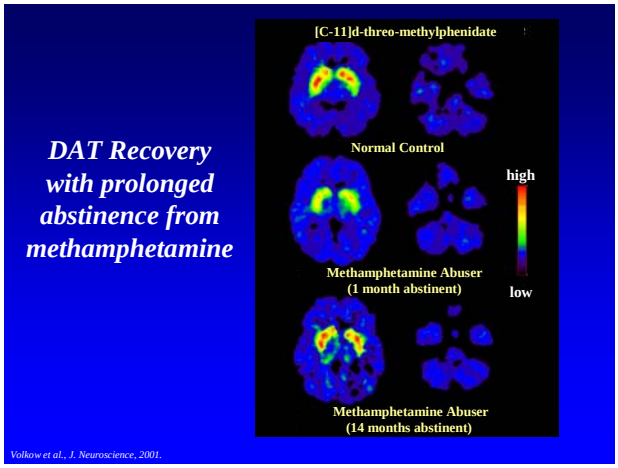
Addiction is a Brain Disease!

More than three decades of research supported by the National Institute on Drug Abuse has proven addiction to be a brain disease characterized by compulsive, at times uncontrollable, drug craving, seeking, and use that persist despite potentially devastating consequences. Research has taught us that addiction is a complex disease, influenced by a multitude of highly entangled factors, with genetic, behavioral, environmental, and developmental factors all contributing.



Addiction is similar to other chronic diseases. Using imaging technology to measure metabolism (in this case, glucose uptake) in the brain and heart, one can see that both addiction and heart disease produce observable changes in organ function. Like heart disease, drug addiction can be prevented and treated successfully. If left untreated, however, its effects can last a lifetime.

Science has come a long way in helping us understand how drugs of abuse change the brain. We now know that while the initial decision to use drugs may be voluntary, this ability to choose can be relatively short-lived. The human brain is an extraordinarily complex communications network that is programmed to reward certain behaviors so that we will repeat them. Research has shown that drugs of abuse tap into these vital mechanisms geared for our survival. In fact, science has revealed that addiction affects multiple integrated brain circuits involved not only in reward and motivation, but also memory and inhibitory control. When these circuits are disrupted, so is a person's capacity to freely choose *not* to use drugs, even when it means losing everything the individual used to value. In fact, this inability to stop is the essence of addiction.



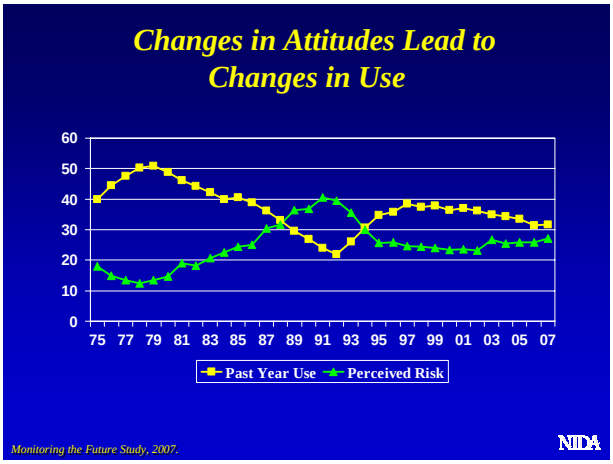
It takes time, but the brain can recover. Brain images show a dramatic drop in dopamine transporter (DAT) binding in the brain of a methamphetamine abuser, even a month after drug abuse has stopped. Sustained abstinence, however, allows a near-full return of DAT binding to normal levels. Still, some of the behavioral effects of methamphetamine do not completely return to normal (not shown). This means that it can take a long time to recover from methamphetamine abuse, but recovery is possible.

But…research has also shown us that with prolonged abstinence, the brain can recover at least some of its former functioning, enabling people to regain control of their lives. However, like any other medical disorder that impairs the function of vital organs, recovery of the addicted brain depends upon effective treatments that address the complexity of the disease. That said, the chronic nature of the disease means that relapsing to drug abuse is not only possible, but likely, with relapse rates similar to those for other well-characterized chronic medical illnesses such as diabetes, hypertension, and asthma. For all these diseases, treatment involves changing deeply embedded behaviors, so lapses should not be considered failure but rather they indicate that treatment needs to be reinstated or adjusted, or that alternate treatment or recovery support is needed.

The continued use of science-based approaches to tackling drug abuse and addiction will yield smart solutions that bring positive change.

Prevention is the key!

The best approach to reducing the tremendous toll drug abuse and addiction exacts from individuals, families, and communities is to prevent drug abuse from ever starting. In fact, research has shown that *every dollar invested in prevention achieves a savings of up to $7 in areas such as substance abuse treatment and criminal justice system costs*, not to mention their wider impact on the trajectory of young lives and their families.



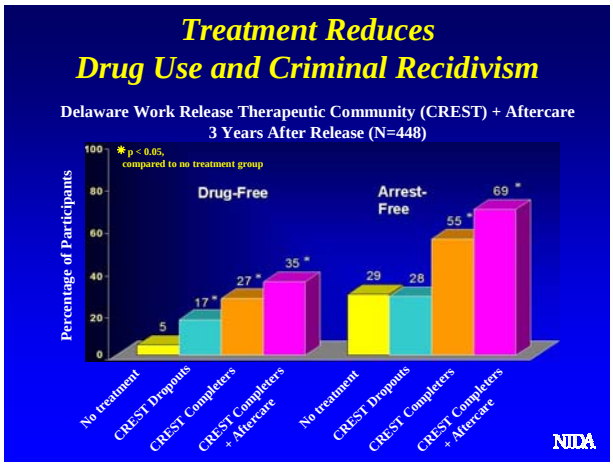
Prevention messages can make a difference. They can convey information to change attitudes about drug use, which can in turn change behavior. For example, as perceived risk associated with marijuana use increases among teens, its abuse decreases.

Today more than ever, science is providing us with the tools we need to better tailor our prevention efforts. Scientists are now poised to capitalize on recent advances in genetics, neuroscience, psychology developmental biology to create targeted science-based prevention programs that reflect the complexities underlying drug abuse and addiction. NIDA needs support to continue these efforts to:

- Understand the changing patterns and course of drug abuse and addiction to spot trends early (e.g., prescription drug abuse) and develop customized interventions for those at risk.
- Identify risk and protective factors (e.g., genetic, environmental) to achieve a better understanding of vulnerability to drug abuse and addiction throughout the lifespan (e.g., during adolescence when drug abuse and addiction typically begin) to design more effective prevention messages, programs and strategies
- Understand the interconnected brain circuitry involved in reward, decision-making, risk-taking, emotional control, motivation, and inhibition of behaviors that influences drug abuse and addiction.
- Apply research findings to develop and test promising prevention interventions and improve adoption and long-term sustainability.

Addiction treatment works!

Untreated substance abuse and addiction adds significant costs, and results in major disruptions, to families and communities. However, discoveries in the science of addiction have led to advances in drug abuse treatment that help people stop abusing drugs and resume their productive lives. In fact, research has shown that drug addiction treatment not only reduces drug use but also criminal recidivism. *It is estimated that for every dollar spent on addiction treatment programs, there is a $4 to $7 reduction in the cost of drug-related crimes.* With some outpatient programs, total savings can exceed costs by a ratio of 12:1.



Drug abuse treatment works and brings about reductions not just in drug abuse, but also in criminal recidivism. A therapeutic community approach (CREST) was tested in prison and continued during participants' transition back to the community. Among those who completed treatment and aftercare programs, 35% remained drug free, and 69% were not arrested within three years of release from incarceration.

As a society, we must fund research to:

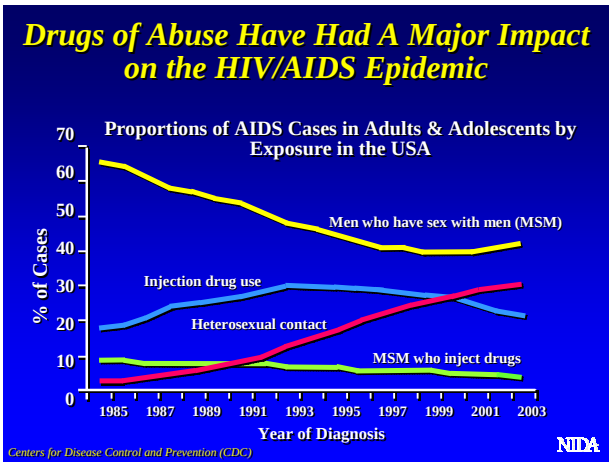
- Develop effective anti-addiction medications and targeted behavioral interventions to counter relapse triggers, reinstate the reward value of natural reinforces, and therefore initiate and sustained recovery.
- Adapt and integrate treatments for comorbid drug abuse and other mental illnesses to improve outcomes for both.
- Exploit new tools, data, and technologies (e.g., genetics, epigenetics, brain imaging) to help customize treatments for drug abuse and addiction.
- Test research-based treatments in real-world settings to identify obstacles to the implementation of treatments thereby optimizing treatment approaches.
- Identify ways to overcome barriers to implementing research-based treatments to translate the results of drug addiction research into widespread clinical practice in a variety of settings.

Research is especially needed to improve outcomes for the large number of drug-addicted citizens involved in the criminal justice system. One out of every 100 U.S. citizens is now behind bars. Approximately 80% of these individuals abuse drugs or alcohol and nearly one-half are clinically addicted. It is imperative to find better ways to deliver effective and cost-effective treatments within the criminal justice system, and to intergrate the delivery of treatment services with other supervisory conditions. NIDA's CJ-DATS studies have focused on identifying and resolving barrier to delivering evidence-based treatments in the criminal justice systems, including in prisons, jails, juvenile detention facilities, and drug courts. These studies have uncovered numerous approaches to improving both public health, public safety and this work must continue.

Drug Addiction Treatment is HIV Prevention!

Drug abuse and addiction have been inextricably linked with HIV/AIDS since the beginning of the epidemic, when it became apparent that sharing of injection paraphernalia was contributing to the spread of the HIV virus. Since that time, effective addiction treatment, including medications and HIV risk reduction interventions for intravenous drug abusers (IDUs) have been successful in helping curb the spread of IDU-related HIV.

Research has also advanced the less acknowledged link between drug abuse and addiction in general and the resulting impaired judgment that can lead to risky sexual behavior and HIV transmission, highlighting the value of addiction treatment in preventing the spread of HIV. To further reduce the impact drug abuse and addiction have on this epidemic, we must continue research to:



Injection drug use has contributed to nearly one third of the cases of HIV in this country since the epidemic began. But the epidemic is changing--effective medications and HIV risk-reduction interventions in intravenous drug abusers have helped to curb the spread of HIV occurring though injection drug use (blue line), while transmission through heterosexual contact is increasing.

- Monitor trends and better understand the natural history of HIV/AIDS among drug abusing populations especially persons with addiction to elucidate HIV transmission dynamics and thereby better target interventions.

- Identify vulnerability markers for and the effects of drug abuse on HIV infection, progression, and pathology in individuals who are addicted to drugs to improve prevention and treatment interventions.
- Prevent or change drug abuse-related behaviors associated with the acquisition and spread of HIV, especially among persons with addiction.
- Understand the factors leading to the disproportionate impact of HIV/AIDS on ethnic minorities, particularly African Americans, and develop targeted interventions to reduce HIV/AIDS and its consequences among these populations.
- Understand drug interactions and enhance medication adherence to improve outcomes.

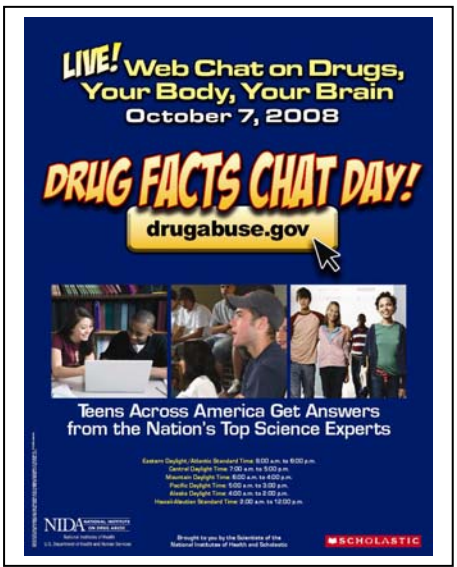
Other Critical Priority Areas

Health Disparities

The pattern of addictions and the burden of disease are not shared equally among members of our population. For example, the disproportionate addiction to methamphetamine among American Indians and Alaskan Natives—higher than in any other subgroup—prompts a need for targeted interventions that can effectively reach these groups. However, contrary to a common stereotype, overall rates of drug abuse and addiction among racial and ethnic minorities, particularly African Americans and Hispanics, are similar to rates in the general population. In the case of nicotine and some other drug addictions, rates among blacks are lower than rates among whites. Nonetheless some minority groups incur greater *medical and social consequences* of their drug use than members of the minority population. This includes greater disease vulnerability and greater involvement with the criminal justice system. Therefore, we must continue to investigate: (1) factors that convey protection or risk across different economic and age categories, (2) the role of culture, religion, ethnic identity, family, peer, and community level factors in drug abuse and recovery trajectories, (3) racial/ethnic implications of genetic variation; and (4) pharmacokinetic differences which affect sensitivity to drugs' pharmacological effects towards the ultimate goal of eliminating these health disparities.

Translation of Research Findings

We must close the unacceptably long lag between the discovery of an effective health treatment intervention and its implementation into clinical practice in the community. These efforts include: (1) training community providers to deliver research-based treatments (2) working to engage the medical community so that they can be the first line of defense in detecting potential drug abuse and in referring patients to addiction treatment as needed; and (3) providing opportunities for information sharing and research collaboration.



Education

The U.S. is the leading nation in the world on recognizing the health hazards of drug abuse and addiction, is uniquely positioned to educate the public (e.g., children, parents, teachers, media, legislators, and others) and displace long-held mistaken beliefs about people with drug problems with scientific evidence about drugs, addiction and recovery. Because most drug abuse

problems develop during adolescence, it is vitally important that youth be made aware of the effects that drugs have on their developing brains and bodies so that they have the knowledge to help them choose not to use drugs. The U.S. must continue to design and develop public information, education campaigns, and materials on drug abuse and addiction and recovery for a variety of audiences, taking advantage of mainstream media vehicles and past successes such as Internet Chats and television broadcasts. Such action will help ensure the best possible future for all Americans, regardless of their economic and social backgrounds.