

**National Institute of Mental Health
Alliance for Research Progress
July 20, 2007
Bethesda, Maryland**

Overview

The National Institute of Mental Health (NIMH) convened its seventh meeting of the Alliance for Research Progress (Alliance) on Friday, July 20, 2007 in Bethesda, Maryland. This document provides an overview of the proceedings. The meeting served as an opportunity for participants to hear about exciting new research and advances in the field, to network with colleagues, and to interact directly with the NIMH director, Dr. Thomas Insel, and senior NIMH staff. The cross-cutting theme of the meeting was co-occurrence of mental illness and addictive disorders. Invitees included representatives from national voluntary organizations representing patients and their families. Luncheon remarks were provided by New York Times Science Correspondent, Gardiner Harris. For more information on the speakers, please see the attached agenda and roster of participants.

Major Themes

State of the NIMH

Dr. Insel welcomed participants and presented a three-tiered update on recent happenings at the Department, Agency, and Institute levels.

Department Level – Dr. Insel discussed campus violence and the [Report to the President on Issues Raised by the Virginia Tech Tragedy](#). Dr. Insel mentioned that there were two challenges identified during the National Listening Tour following the Virginia Tech tragedy – protecting the privacy of those with mental illness while ensuring safety and addressing the risk of violence without increasing stigma. He noted that the key messages from the public related to concerns about high rates of mental illnesses in students; inadequate services for assessment and treatment; and confusion about information sharing between mental health providers/facilities, university officials, law enforcement, and families.

Agency Level – Dr. Insel talked about the upcoming launch of the [NIH Roadmap 1.5](#); the NIH budget; and the Research, Condition and Disease Categorization (RCDC) Project underway at NIH to develop a single coding system to report on funding levels for research. RCDC will provide consistent reporting across NIH, promote transparency and accountability, and expedite the reporting process.

Institute Level – Dr. Insel noted that NIMH has participated in seven Congressional hearings since February. He discussed the NIMH Clinical Trials Network and new scientific research on mental illness produced by NIH's [Whole Genome Association](#) studies. He announced that NIMH is in the initial phases of developing a strategic plan and that there are some emerging issues on which the Institute is focusing, including post traumatic stress disorder (PTSD) and traumatic brain injury in post deployment troops, as well as the mechanism of, and treatment implications for, co-occurring disorders.

State of the National Institute on Drug Abuse (NIDA)

Dr. Nora Volkow, Director of NIDA, told Alliance members about the frequency of co-occurrence of mental illness and substance abuse. She discussed the stigma associated with substance abuse and the essential need to address mental illnesses and substance abuse simultaneously during treatment. Dr. Volkow identified and expanded upon four reasons why science cannot afford to ignore co-occurring disorders – (1) Overlapping developmental, genetic, and environmental vulnerabilities contribute to disorders; (2) Illicit drugs can trigger mental disorders in those who are vulnerable and can exacerbate the course of the disorder; (3) Patients with mental illnesses are at greater risk for substance abuse; and (4) Drugs contribute significantly to the morbidity and mortality of patients with mental illness.

Overlapping Vulnerabilities – Dr. Volkow noted that the age of onset for most drug dependencies (ages 12-25) is similar to the age of onset for many mental illnesses. She said that the brain undergoes major changes from birth to adulthood and that young people who experiment with substances are at higher risk for abuse because their brains are not fully developed. These individuals are unable to control the intense impulses and urges brought about by the neurological changes caused by substance experimentation and abuse.

Triggers – Dr. Volkow said that early stimulation of molecular receptors, such as the nicotine and cannabinoid receptors, by drugs or alcohol can adversely affect brain development. She noted that early use of alcohol, nicotine, and drugs increases the risk for depressive disorders later in life¹ and that adolescent cannabis use may affect or increase the risk of adult psychosis in individuals with variation in the gene for catecho-O-methyltransferase (COMT)—an enzyme that chemically breaks down the neurotransmitter, dopamine². Dr. Volkow also stated that early use of substances may exacerbate the development of mental illnesses in early adulthood.

Increased Risk – She said that individuals with mental illnesses have an increased risk of substance abuse because they may use substances to self-medicate. Dr. Volkow spoke specifically about nicotine consumption and a theory about the possible perceived benefits of smoking by people with mental illnesses. She noted that cigarettes inhibit the production of monoamine oxidase B (MAO-B), which effects dopamine levels, and produces an antidepressant effect in people with schizophrenia.³ The antidepressant effect of nicotine promotes reliance on cigarettes for the “therapeutic” relief of symptoms.

Mortality and Morbidity – Dr. Volkow stated that persons with diagnosable mental disorders consume nearly half of the cigarettes consumed in the United States.⁴ She noted that substance abusers have twice the mortality rate of non-abusers and that the mortality rate of the people with mental illnesses who abuse substances greatly exceeds that of substance abusers alone.

Additional information on NIDA and the science of addiction can be found at <http://www.nida.nih.gov/scienceofaddiction/>.

Epidemiology of Co-occurring Mental Illness and Substance Abuse

Dr. Kathleen Merikangas, NIMH Senior Investigator and Section Chief, discussed the magnitude of comorbidity in the general population, the explanations for comorbidity, and the cost implications of disability and treatment for mental illness and substance abuse. She told Alliance members that comorbidity of mental disorders and substance abuse has been recognized universally, and the results of treatment and prevention studies incorporating comorbidity are now beginning to emerge in the international arena.⁵ She discussed the use of family studies and prospective community studies to collect epidemiological data on the causes of comorbid disorders, evaluate causality, and identify the possible existence of disease clusters in families or communities. Dr. Merikangas noted that a small

¹ Brook DW, et al. Drug Use and the Risk of Major Depressive Disorder, Alcohol Dependence, and Substance Use Disorders. *Arch Gen Psychiatry*. 2002 Nov;59(11):1039-44

² Caspi A, et al. Moderation of the Effect of Adolescent-Onset Cannabis Use on Adult Psychosis by a Functional Polymorphism in the Catechol-O-Methyltransferase Gene: Longitudinal Evidence of a Gene X Environment Interaction. *Biol Psychiatry*. 2005 May 15;57(10):1117-27

³ Fowler JS, et al. Inhibition of Monoamine Oxidase B in the Brains of Smokers. *Nature*. 1996 Feb;379(22):733-736

⁴ Lasser K, et al. Smoking and Mental Illness: A Population-Based Prevalence Study. *JAMA*. 2002 Nov;284(20): 2606-2610

⁵ Merikangas KR, Kalaydjian A. Magnitude and Impact of Comorbidity of Mental Disorders From Epidemiologic Surveys. *Curr Opin Psychiatry*. 2007 Jul;20(4):353-8

percentage of the U.S. population receives simultaneous treatment for comorbid disorders and that the body of research suggests individuals would be better served if a (1) comprehensive screening approach for comorbid disorders was used⁶, (2) treatment for mental and substance abuse disorders was integrated with treatment for general medical conditions, and (3) barriers to comprehensive treatment in the healthcare and reimbursement systems were eliminated. More information on Dr. Merikangas' research can be found at http://intramural.nimh.nih.gov/research/pi/pi_merikangas.html.

Networking Lunch

New York Times Science Correspondent, Gardiner Harris, candidly discussed with Alliance members his concern about marketing practices of pharmaceutical companies. He noted that pharmaceutical companies invest more money on product marketing than on scientific research and that many companies have enlisted the help of providers, through financial incentives, to promote medications through prescriptions. Mr. Harris said that there is a potential danger in this practice that the financial incentives might influence diagnosis and prescribed treatment regimens. Mr. Harris concluded by stating that the press is also questioning the percentage of money received by small organizations, such as advocacy groups, from pharmaceutical companies.

PTSD and Risk of Substance Abuse

Dr. Dean Kilpatrick, Director of the Medical University of South Carolina's National Crime Victims Research and Treatment Center, presented information on the use of a telephone survey to assess the prevalence of child and adult victimization experiences and the extent to which victimization increases risk for PTSD and substance use disorders. He discussed three federally-funded studies which used the Victimization Survey Method and other models to collect data from the general public on exposure to traumatic events and substance use. Dr. Kilpatrick explained that the risk of PTSD, depression, and substance abuse increases with the number of traumatic events experienced by an individual.^{7 8} He concluded by stating that individuals who have mental disorders, such as PTSD or depression, are at increased risk for substance abuse. Additional information on this research can be found at http://www.drugabuse.gov/PDF/DARHW/285-308_Kilpatrick.pdf.

ADHD and Risk of Substance Abuse

Dr. Brooke Molina, Associate Professor of Psychiatry and Psychology at Western Psychiatric Institute & Clinic, discussed her research using a longitudinal study concerning the use of the Multimodal Treatment of Attention Deficit Hyperactivity Disorder (ADHD) Method to assess the risk of substance abuse in persons with ADHD. Children ages 7-9 received various interventions for a 14-month period and transitioned to follow-up at the 24- and 36-month periods. Dr. Molina noted that initial results showed that children who received an intervention that included medication management and behavioral therapy had the greatest decrease in ADHD symptoms in the first year of the study. However, when reassessed at the 8-year period, researchers found that children with ADHD reported higher levels of alcohol consumption and drug experimentation than their peers in the control group. Dr. Molina stated that ADHD is a risk factor for substance abuse, but substance abuse does not occur in all children with ADHD, as behavioral therapy and parental involvement in treatment often function as positive protective factors. More information on Dr. Molina's research can be found at <http://www.nimh.nih.gov/press/mtafollowup.cfm>.

⁶ Nunes EV, et al. Treatment of depression in patients with opiate dependence. *Biol Psychiatry*. 2004 Nov 15;56(10):793-802.

⁷ Kilpatrick DG, et al. Risk Factors for Adolescent Substance Abuse and Dependence: Data from a National Sample. *J Consult Clin Psychol*. 2000 Feb. 68(1):19-30.

⁸ Resnick HS, Kilpatrick DG, et al. Prevalence of Civilian Trauma and Posttraumatic Stress Disorder in a Representative National Sample of Women. *J Consult Clin Psychol*. 1993 Dec;61(6):984-91.

Discussion

Throughout the day, Alliance members used discussion periods to engage presenters, Dr. Insel, and senior NIMH staff in active dialogue in response to the information shared and other pressing needs in the public health arena.

Participants discussed the implications and effects of co-occurring disorders on their respective constituencies. Education was the predominant topic of the discussion periods. Alliance members commented that providers need to be trained to identify and treat co-occurring disorders simultaneously rather than treating each disorder individually. With regard to mental health on college campuses, participants noted the importance of sharing scientific research on brain development, mental illness, and co-occurring disorders with university presidents and service providers to better equip them to respond to the needs of students with co-occurring disorders. Participants thanked and encouraged NIMH and NIDA to continue to educate policy makers, the general public, and consumers on cross-cutting health issues and research findings related to mental illness.

In closing, Dr. Insel summarized the key points discussed during the meeting and thanked Alliance members for providing helpful feedback and expertise. He reiterated that the semi-annual meetings serve as a valuable opportunity for NIMH to get essential feedback from national voluntary organizations representing patients and their families as well as to foster dialogue on the future path and directions of NIMH-funded research. Dr. Insel also identified two themes to consider for future meetings – (1) Continued monitoring of how disorders affect individuals between childhood and young adulthood and (2) Research on how psychosocial treatments are promoted in the clinical setting. Participants also thanked Dr. Insel and NIMH for developing a comprehensive agenda to highlight research on co-occurring mental disorders and substance abuse.

Photographs



Speakers (L to R): Dr. Volkow, Dr. Insel, Dr. Merikangas, Dr. Kilpatrick, Dr. Molina



Alliance Members



Alliance Members



Dr. Insel and Mr. Harris

National Institute of Mental Health
NIMH Alliance for Research Progress
Agenda
July 20, 2007

8:00 -8:30 am	Registration & Continental Breakfast	
	Addiction and Co-Occurring Mental Illnesses	
8:30 – 9:00 am	Welcome and State of the NIMH	Thomas R. Insel, M.D. <i>Director, NIMH</i>
9:00 –10:00 am	Welcome and State of the NIDA	Nora Volkow, M.D., <i>Director NIDA</i>
	Dialogue	
10:00 – 10:30 am	Group Discussion	Alliance Participants, NIMH Director, NIDA Director, and staff
10:30 –11:00 am	Break and Networking	
11:00– 12:00 pm	Epidemiology of Co-occurring Mental Illness and Substance Abuse	Kathleen Merikangas, Ph.D. <i>Senior Investigator & Chief, Section on Developmental Genetic Epidemiology, Division of Intramural Research Programs, NIMH</i>
12:00 – 1:30 pm	Networking Lunch	Gardiner Harris <i>Science Correspondent The New York Times</i>
1:30 – 2:30	PTSD and Risk of Substance Abuse	Dean Kilpatrick, Ph.D. <i>Distinguished University Professor of Clinical Psychology and Director, National Crime Victims Research and Treatment Center, Medical University of South Carolina</i>
2:30 – 3:00 pm	Break and Networking	
3:00 – 4:00 pm	ADHD and Risk of Substance Abuse	Brooke Molina, Ph.D. <i>Associate Professor of Psychiatry and Psychology Western Psychiatric Institute & Clinic, Pittsburgh, Pennsylvania</i>
	Dialogue	
4:00 – 4:30 pm	Q&A WRAP -UP	Alliance Participants, NIMH Director, and staff

**NIMH Alliance for Research Progress
Participant List**

Jean Teichroew
Anxiety Disorders Association of America

Lucille Norville Perez, M.D.
Black Women's Health Imperative

Sheila McDonald, J.D.
Child and Adolescent Bipolar Foundation

Susan Resko
Child and Adolescent Bipolar Foundation

Anne Teeter Ellison, Ed.D.
Children and Adults with Attention
Deficit/Hyperactivity Disorder

Marc Lerro, M.L.A.
Eating Disorders Coalition

James Radack
Mental Health America

Trish Veatch
National Alliance for Research on
Schizophrenia and Depression

Mary Giliberti
National Alliance on Mental Illness

Anand Pandya, M.D.
National Alliance on Mental Illness

Gail Kennedy
National Association of Anorexia Nervosa and
Associated Disorders

Lynn Grefe
National Eating Disorders Association

Thomas Bryant, M.D., J.D.
National Foundation for Mental Health

Marion Crawford Kiley
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Jane Smither
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Donna Barnes, Ph.D.
National Organization for People of Color
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Susan Stone, M.S.W.
Postpartum Support International

Andrew Kessler
Slingshot Solutions

Sherry Marts, Ph.D.
Society for Women's Health Research

Regina Piscitelli
TARA National Association for
Personality Disorder

Valerie Porr, M.A.
TARA National Association for
Personality Disorder

Joanna Locke, M.D., M.P.H.
The Jed Foundation

Christina Pearson
Trichotillomania Learning Center, Inc.

Archie Fobbs, Jr.
Walter Reed Army Medical Center

Speakers

Dean Kilpatrick, Ph.D.
Medical University of South Carolina

Nora Volkow, M.D.
National Institute on Drug Abuse

Kathleen Merikangas, Ph.D.
National Institute of Mental Health

Gardiner Harris
The New York Times

Brooke Molina, Ph.D.
Western Psychiatric Institute and Clinic

National Institute of Mental Health

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Richard Nakamura, Ph.D.
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Marlene Guzman
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Dawn Johnson, Ph.D.
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Susan Koester, Ph.D.
Roger Little, Ph.D.
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Gemma Weiblinger