

# ***NIMH UPDATE***

**For the NIMH Outreach Partnership Program**

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**March 24, 2011**

**Thomas R. Insel, M.D.**

**Director, NIMH**



**NIMH**  
National Institute  
of Mental Health



Parity

ARRA

# Health Care Reform

SMI      Autism      Global health      Cures

Postpartum depression      Suicide in soldiers

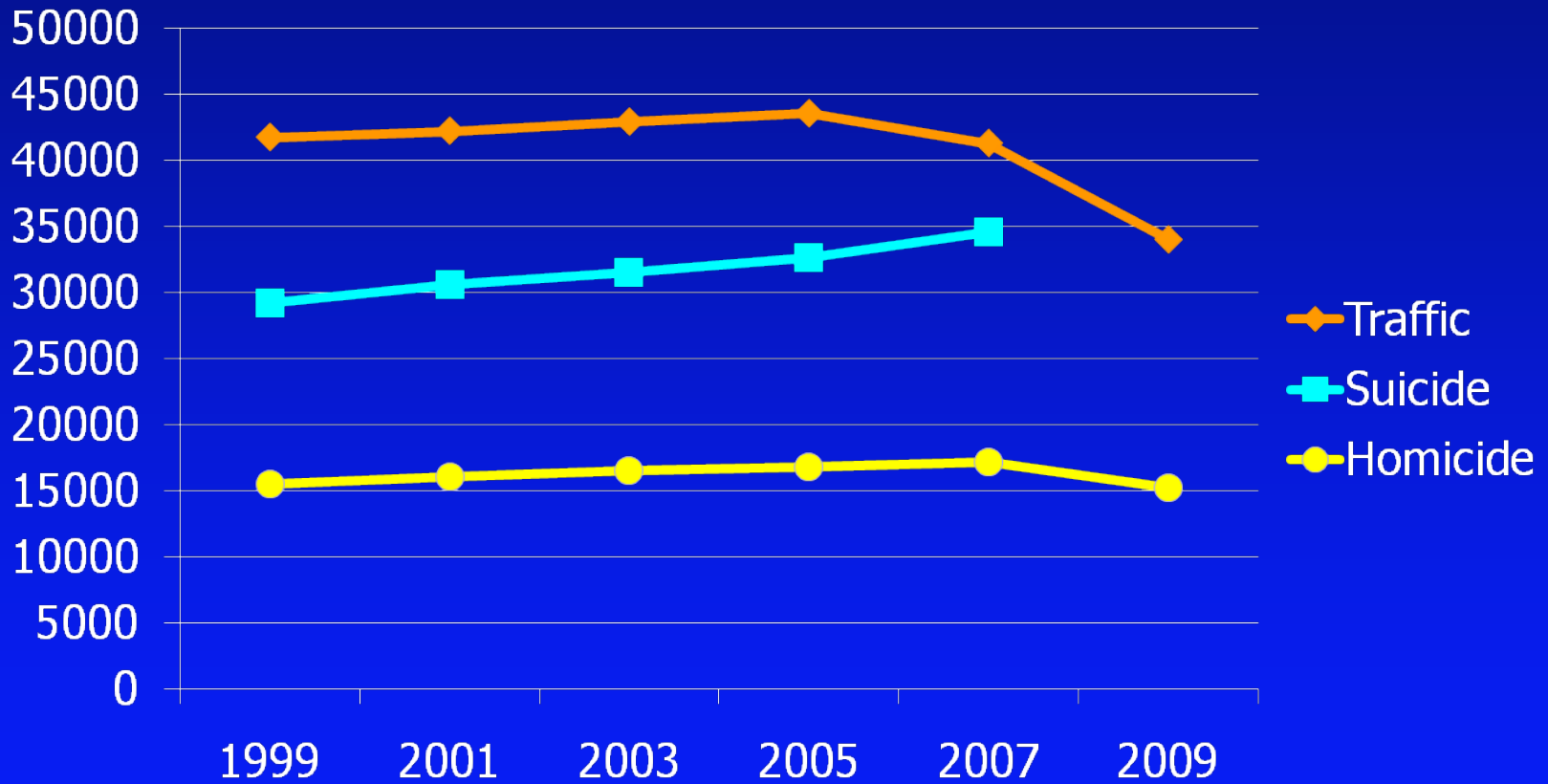
Violence      Anorexia      Health Disparities

# Update

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- Ongoing projects (STARRS, RAISE)
- Upcoming Events (Children's Mental Health, Next Frontier)
- Recent Research (Imaging, Collaborative Care, Prevention)

# Number of Fatalities for Traffic Accidents, Suicide, & Homicide



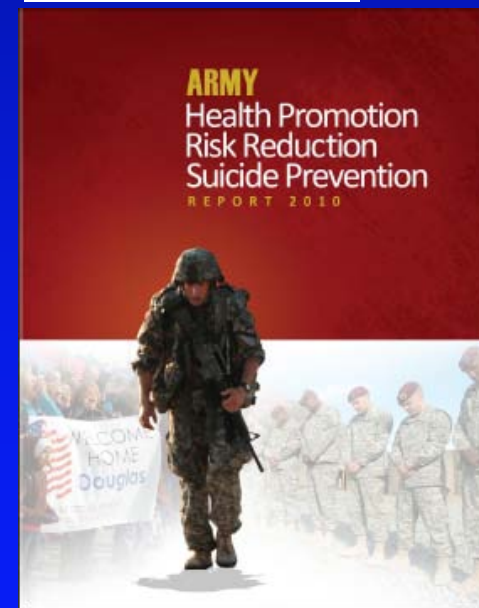
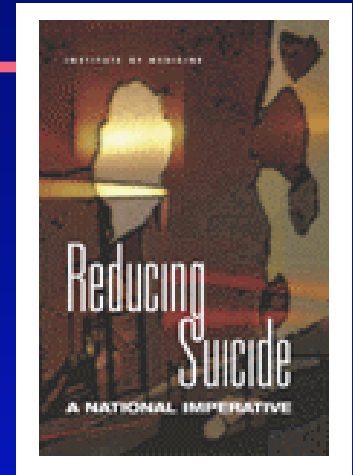
Sources:  
CDC Web-based Injury Statistics Query and Reporting System; 2007 NCHS Data.  
Department of Justice. *Crime in the United States, 2009*. Washington, D.C.; 2010.  
Department of Transportation. *An Analysis of the Significant Decline in Motor Vehicle Traffic Fatalities in 2008*. Washington, D.C.; 2010.

# Natl Action Alliance for Suicide Prevention

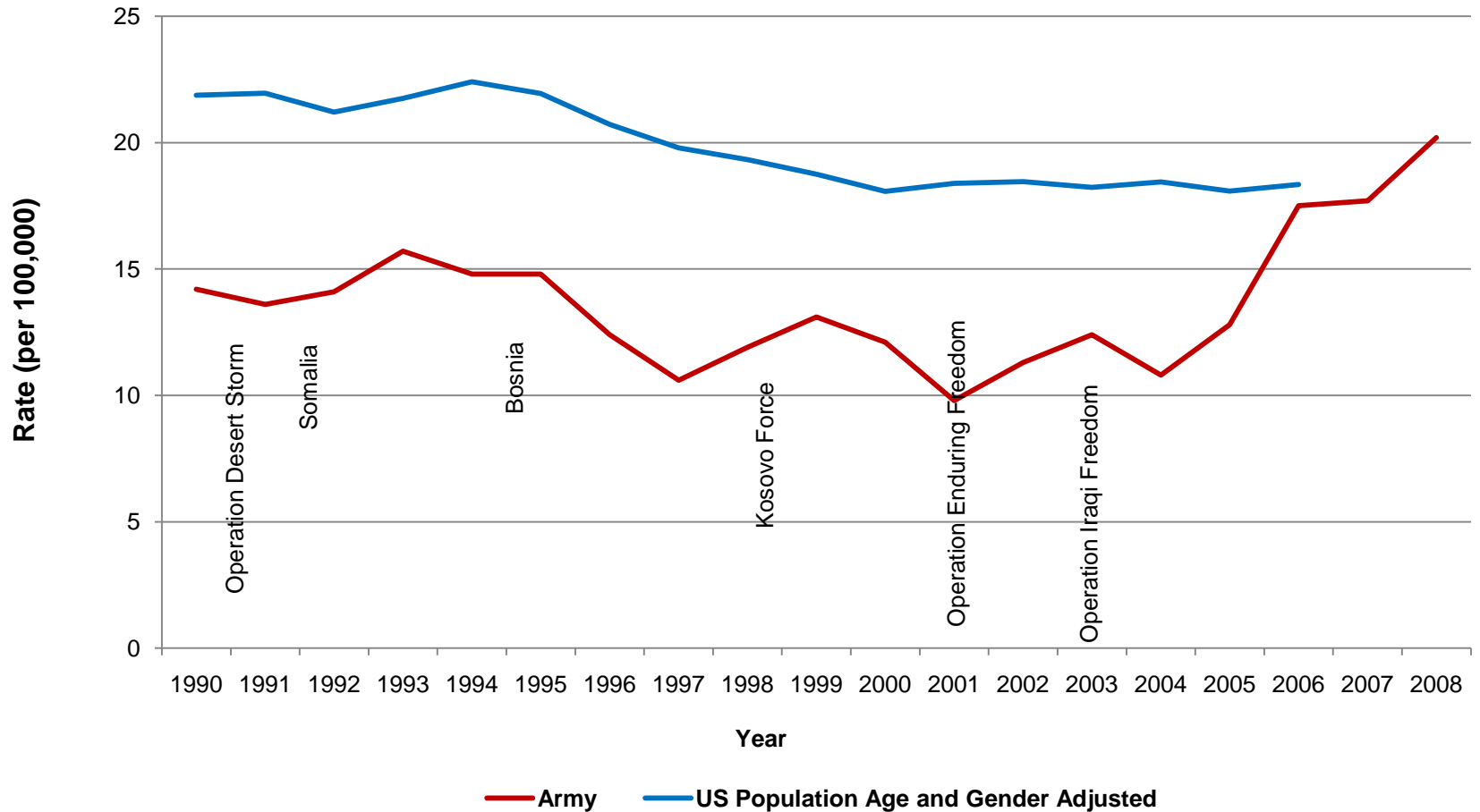
## Est 9/10/10

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- National Strategy for Suicide Prevention (2001) needs updating
- Executive Cte chaired by fmr Sen Gordon Smith and Sec John McHugh
- Develop an agenda for research to reduce mortality by at least 20% in 5 years, if successfully implemented.
- Obtain stakeholder input, review federal and foundation research portfolios, identify research gaps and opportunities, and seek guidance from scientific experts to complete the prioritization process.



# Army Suicide Rates 1990-2008



SOURCE: CDC/NCHS, National Vital Statistics System (civilian data). G1 (Army data)

Component	Milestones
<b>Historical Data Study</b>	<ul style="list-style-type: none"> <li>• Preliminary data analyses USAPHC &amp; TAIHOD/USARIEM conducted; additional analyses underway</li> <li>• DMDC Master Personnel Transaction file delivered to UM (18 Feb 2011)</li> <li>• DoDSER non-fatal suicide event data delivered to UM (4 Mar 2011)</li> </ul>
<b>New Soldier Study (NSS)</b>	<ul style="list-style-type: none"> <li>• Active production mode at Ft. Jackson (Jan 2011) – <b>448 participants as of 3/5/2011</b></li> <li>• Site visits at Ft. Benning (Feb 2011) and Ft. Leonard Wood (Dec 2010)</li> <li>• Production phase-in at Ft. Benning (Mar 2011)</li> <li>• Production phase-in for Ft. Leonard Wood delayed by storm damage (Jun 2011)</li> </ul>
<b>All Army Study (AAS)</b>	<ul style="list-style-type: none"> <li>• Site visits conducted at Fts. Carson, Bliss, and JBLM (Dec 2010)</li> <li>• AAS data collection began Ft. Carson (Jan 2011); Ft. Bliss, JBLM, Ft. Bragg (Feb 2011); Ft. Polk (Mar 2011)</li> <li>• <b>2907 total AAS participants as of 3/5/2011</b></li> </ul>
<b>In Theater Data Collection</b>	<ul style="list-style-type: none"> <li>• Draft CENTCOM IRB package submitted for review by JC2RT liaison (Feb 2011)</li> <li>• CENTCOM IRB next meeting Mar 2011</li> <li>• Target data collection start: late Q2 2011</li> </ul>
<b>Soldier Health Outcome Study (SHOS-A &amp; B)</b>	<ul style="list-style-type: none"> <li>• Letter requested by IRB has been finalized for SA signature</li> <li>• Pending resolution of IRB issues: Phase 1 of SHOS-A study to begin Q2 2011</li> <li>• SHOS-B CID Case File Study               <ul style="list-style-type: none"> <li>• CID Case File consensus panel analyses of pilot data (Jan 2011)</li> <li>• CID Case File abstraction – full study: to begin Q2 2011</li> </ul> </li> </ul>

Army Study to Assess Risk and Resilience in Servicemembers



**SOURCE:** NIMH calculations using data from TAIHOD (<http://www.usariem.army.mil/pages/taihod.htm>) on Regular Army Soldiers.

Army Study to Assess Risk and Resilience in Servicemembers

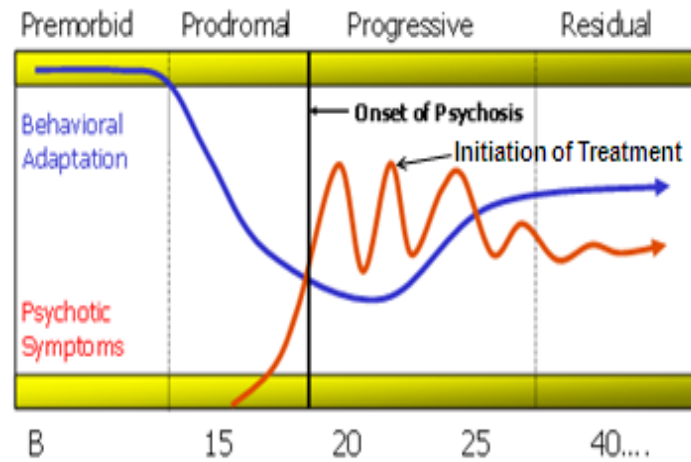


SOURCE: NIMH calculations using data from TAIHOD (<http://www.usariem.army.mil/pages/taihod.htm>) on Regular Army Soldiers.

# RA1SE

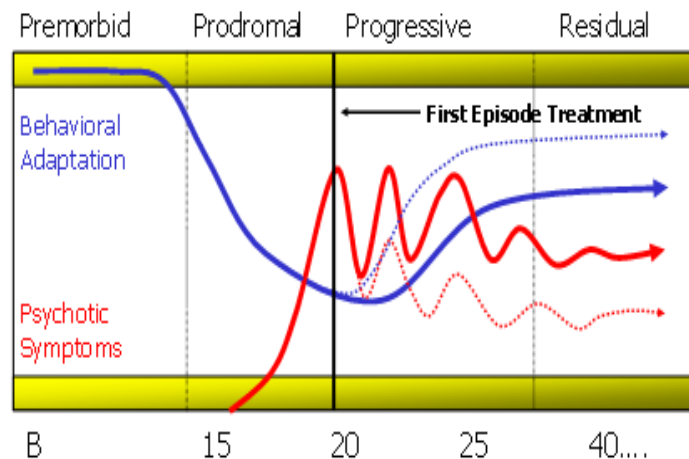
## Recovery After an Initial Schizophrenia Episode

A Research Project of the NIMH



# RAISE Objectives

- RAISE will test whether early, aggressive, and pre-emptive intervention can slow or halt clinical and functional deterioration in schizophrenia



# RAISE Strategies

- Design and test effective interventions for early phase schizophrenia that can be implemented on a population-level basis
- Engineer rapid adoption and implementation of effective treatment packages by engaging “end users” at the start of intervention development
- Assess clinical, functional, and economic outcomes
- Generate information relevant to key stakeholders, including health care policy makers



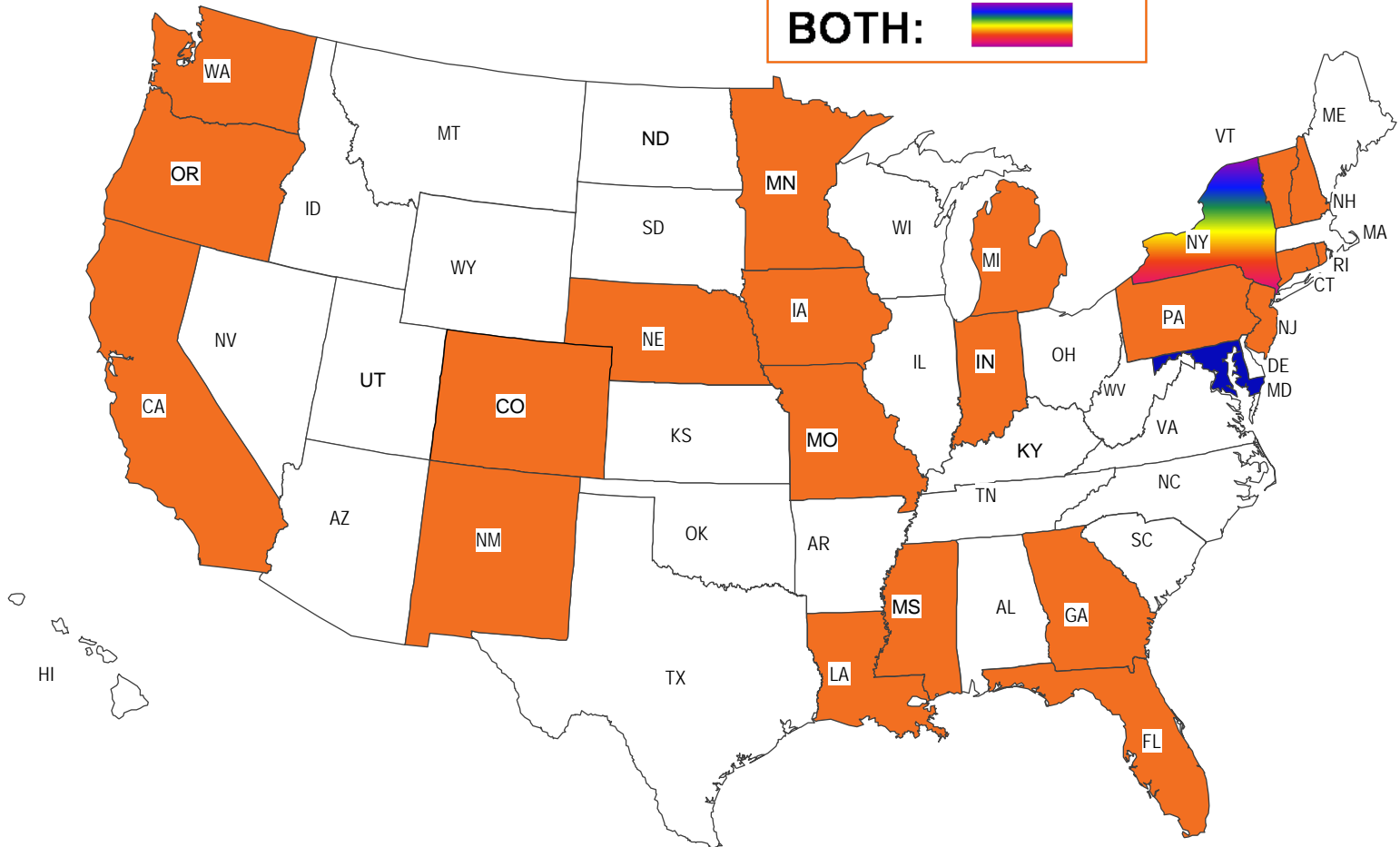
# Projected Cost Savings

Outcome	Degree of Improvement	Annual Cost Savings
Reduced Unemployment	10%	\$2.5 billion
	25%	\$6.3 billion
Reduced Caregiver Burden	10%	\$0.9 billion
	25%	\$2.3 billion
Reduced Justice Involvement	10%	\$0.3 billion
	25%	\$0.8 billion
Reduced Homelessness	10%	\$0.7 billion
	25%	\$1.9 billion

Leslie, D.L., The economic burden of schizophrenia in the United States: A report prepared for the National Institute of Mental Health, 2007.



# States with Clinical Sites Participating in RAISE



# **Service Utilization for Lifetime Mental Disorders in U.S. Adolescents: Results of the National Comorbidity Survey–Adolescent Supplement (NCS-A)**

Kathleen Ries Merikangas, Ph.D., Jian-ping He, M.Sc., Marcy Burstein, Ph.D.,  
Joel Swendsen, Ph.D., Shelli Avenevoli, Ph.D., Brady Case, M.D.,  
Katholiki Georgiades, Ph.D., Leanne Heaton, Ph.D., Sonja Swanson, Sc.M.,  
Mark Olfson, M.D., M.P.H.

6,483 adolescents (13 – 18 y.o.)

36.2% w mental disorder rec'd services

50% with “severe” disorders never received services

59.8% - ADHD; 45.4% - behavior disorders

<20% anxiety, eating disorders, substance use disorders

< 50% utilization for Hispanic and Afr Amer w mood disorders

# Connect the Dots: Understanding Children's Mental Health

- May 3, 2011 – National Children's Mental Health Awareness Day
  - Daniel Pine
  - Ellen Leibenluft
  - Jay Giedd
  - Ben Vitiello
- Webcast available



# THE NEXT FRONTIER

ONE MIND FOR BRAIN RESEARCH



*Building the superhighway for research on brain disorders*

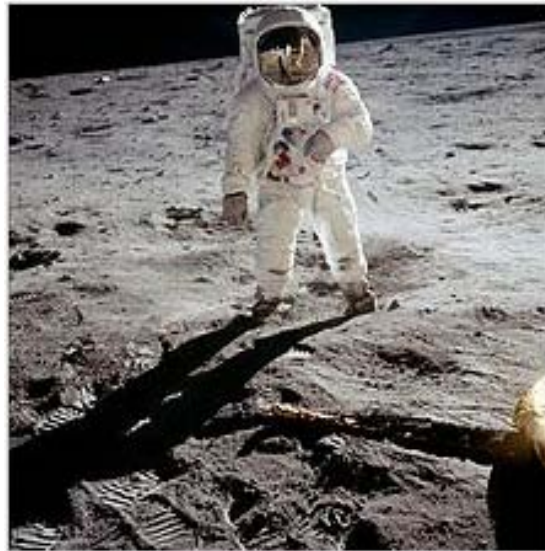
Creating a national campaign to support research to:

Reduce the invisible wounds of war

Reduce the disability of serious mental illness

**May 23 – 25 : Moonshot for the Mind**

**Kennedy Library – Boston, Mass**

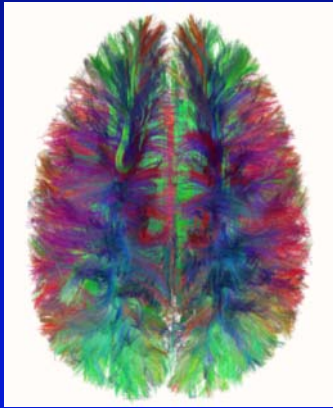


# Recent Research Discoveries

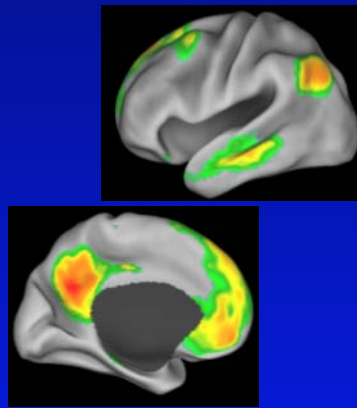


# The Human Connectome: Mapping the Connections

Structural  
Connectivity



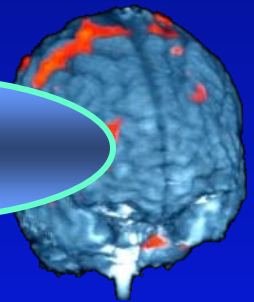
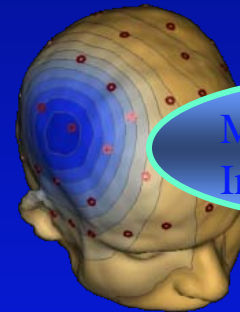
Functional  
Connectivity



Temporal Connectivity

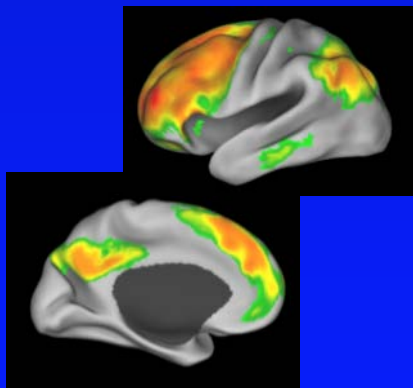
EEG

fMRI

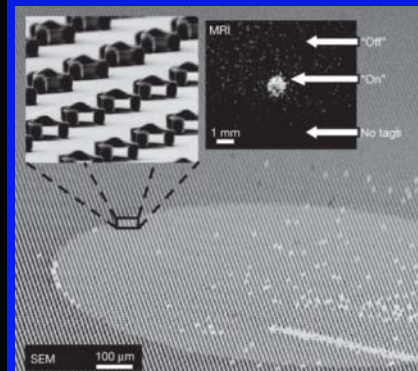
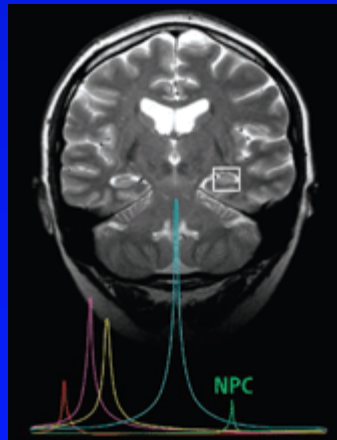


Multimodal  
Integration

Molecular Imaging



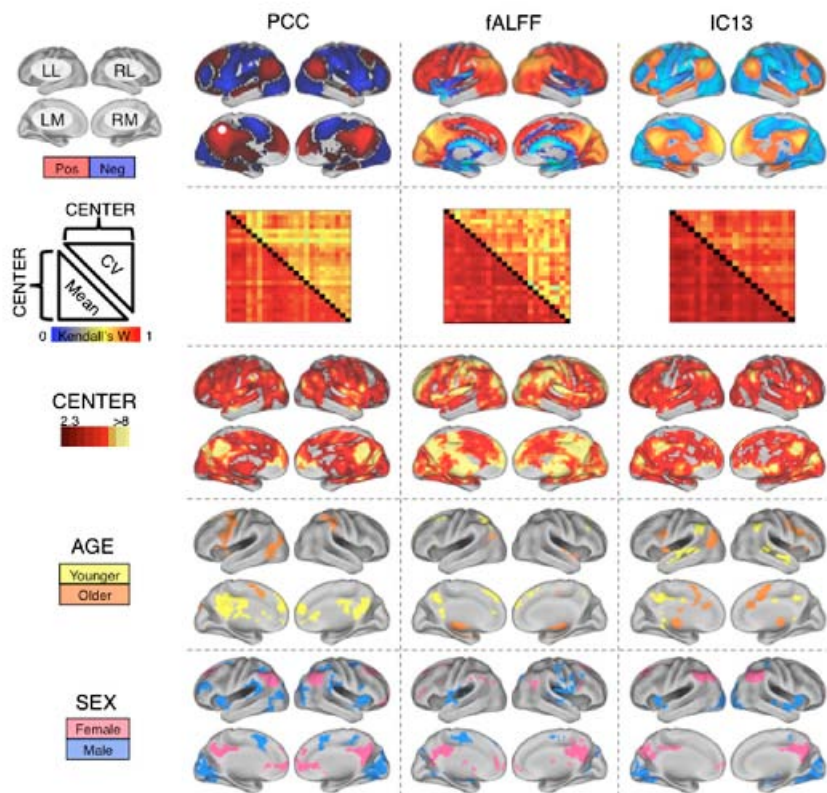
New Molecular Imaging



Wash U  
U Minn  
MGH

# Toward discovery science of human brain function

Bharat B. Biswal<sup>a</sup>, Maarten Mennes<sup>b</sup>, Xi-Nian Zuo<sup>b</sup>, Suril Gohel<sup>a</sup>, Clare Kelly<sup>b</sup>, Steve M. Smith<sup>c</sup>, Christian F. Beckmann<sup>c</sup>, Jonathan S. Adelstein<sup>b</sup>, Randy L. Buckner<sup>d</sup>, Stan Colcombe<sup>e</sup>, Anne-Marie Dugonowski<sup>f</sup>, Monique Ernst<sup>g</sup>, Damien Fair<sup>h</sup>, Michelle Hampson<sup>i</sup>, Matthew J. Hoptman<sup>j</sup>, James S. Hyde<sup>k</sup>, Vesa J. Kiviniemi<sup>l</sup>, Rolf Kötter<sup>m</sup>, Shi-Jiang Li<sup>n</sup>, Ching-Po Lin<sup>o</sup>, Mark J. Lowe<sup>p</sup>, Clare Mackay<sup>c</sup>, David J. Madden<sup>q</sup>, Kristoffer H. Madsen<sup>f</sup>, Daniel S. Margulies<sup>r</sup>, Helen S. Mayberg<sup>s</sup>, Katie McMahon<sup>t</sup>, Christopher S. Monk<sup>u</sup>, Stewart H. Mostofsky<sup>v</sup>, Bonnie J. Nagel<sup>w</sup>, James J. Pekar<sup>x</sup>, Scott J. Peltier<sup>y</sup>, Steven E. Petersen<sup>z</sup>, Valentin Riedl<sup>aa</sup>, Serge A. R. Rombouts<sup>bb</sup>, Bart Rypma<sup>cc</sup>, Bradley L. Schlaggar<sup>dd</sup>, Sein Schmidt<sup>ee</sup>, Rachael D. Seidler<sup>ff,u</sup>, Greg J. Siegle<sup>gg</sup>, Christian Sorg<sup>hh</sup>, Gao-Jun Teng<sup>ii</sup>, Juha Veijola<sup>jj</sup>, Arno Villringer<sup>ee,kk</sup>, Martin Walter<sup>ll</sup>, Lihong Wang<sup>q</sup>, Xu-Chu Weng<sup>mmm</sup>, Susan Whitfield-Gabrieli<sup>nn</sup>, Peter Williamson<sup>oo</sup>, Christian Windischberger<sup>pp</sup>, Yu-Feng Zang<sup>qq</sup>, Hong-Ying Zhang<sup>ii</sup>, F. Xavier Castellanos<sup>b,j</sup>, and Michael P. Milham<sup>b,1</sup>

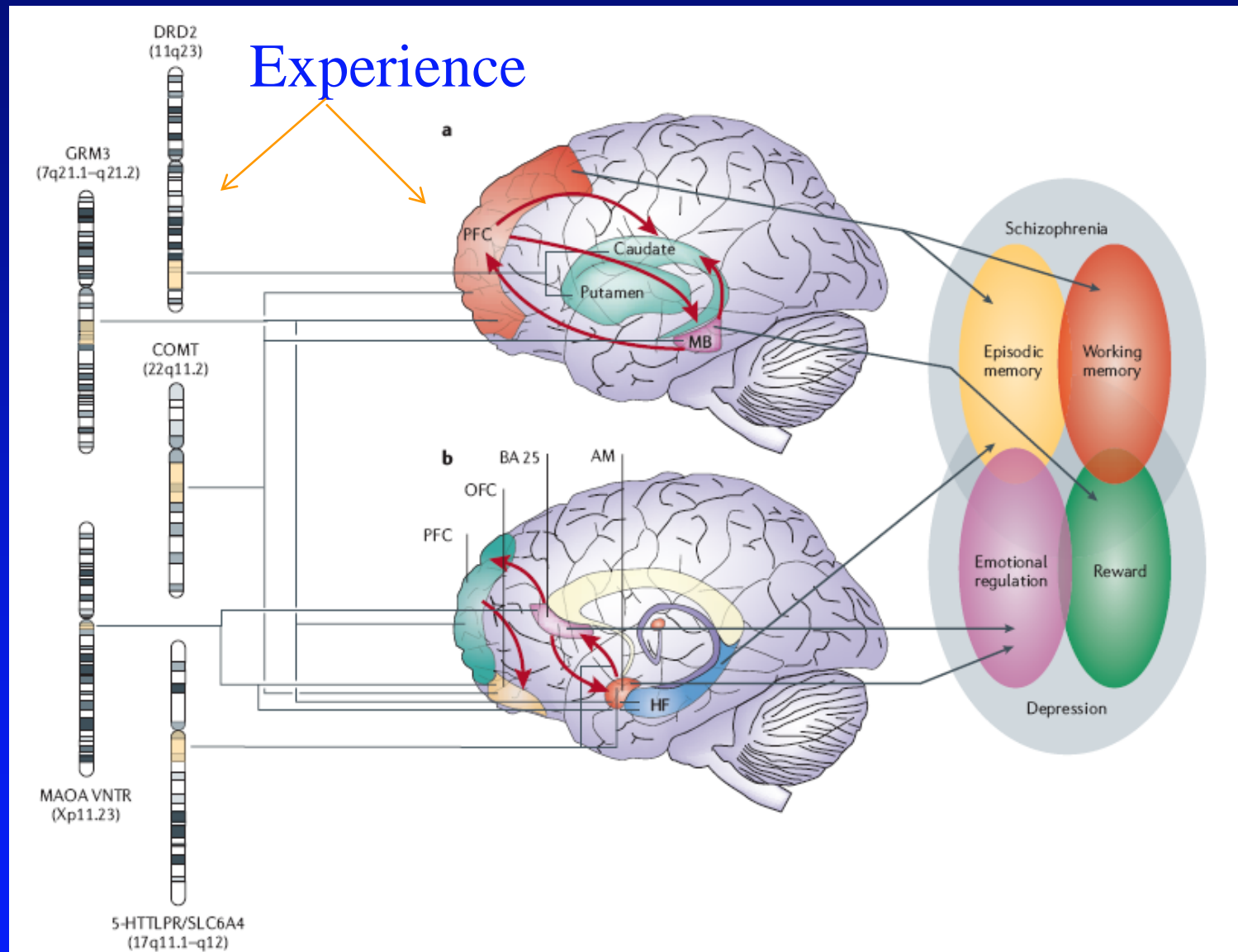


PNAS 2010

Resting state fMRI in 1,441 volunteers  
35 international sites  
Stable individual differences  
Sex and age specific patterns

[www.nitrc.org/projects/fcon\\_1000/](http://www.nitrc.org/projects/fcon_1000/)

# Pathways to Pathophysiology



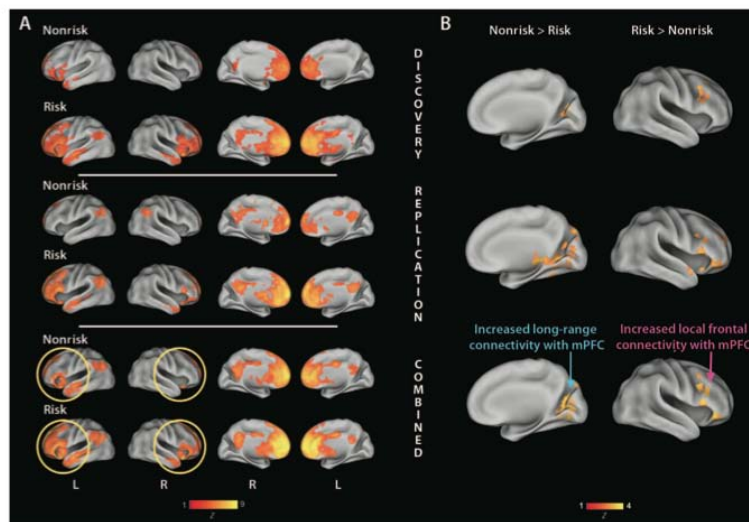
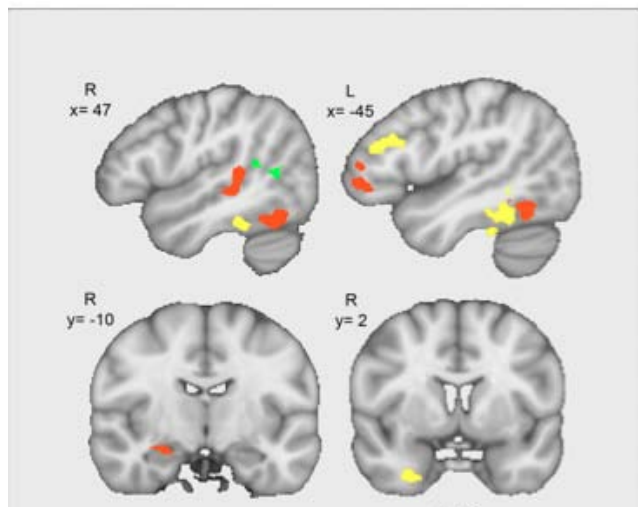
Meyer-Lindenberg & Weinberger, Nature Rev Neurosci, 2007

# Neural signatures of autism

PNAS 12/7/10

Martha D. Kaiser<sup>a</sup>, Caitlin M. Hudac<sup>a</sup>, Sarah Shultz<sup>a,b</sup>, Su Mei Lee<sup>a,b</sup>, Celeste Cheung<sup>a</sup>, Allison M. Berken<sup>a</sup>, Ben Deen<sup>a</sup>, Naomi B. Pitskel<sup>a</sup>, Daniel R. Sugrue<sup>a</sup>, Avery C. Voos<sup>a</sup>, Celine A. Saulnier<sup>a</sup>, Pamela Ventola<sup>a</sup>, Julie M. Wolf<sup>a</sup>, Ami Klin<sup>a</sup>, Brent C. Vander Wyk<sup>a</sup>, and Kevin A. Pelphrey<sup>a,b,1</sup>

<sup>a</sup>Yale Child Study Center, Yale School of Medicine, New Haven, CT 06520, and <sup>b</sup>Department of Psychology, Yale University, New Haven, CT 06520



## Altered Functional Connectivity in Frontal Lobe Circuits Is Associated with Variation in the Autism Risk Gene *CNTNAP2*

Ashley A. Scott-Van Zeeland,<sup>1,2,3</sup> Brett S. Abrahams,<sup>4\*</sup> Ana I. Alvarez-Retuerto,<sup>4,5</sup> Lisa I. Sonnenblick,<sup>4</sup> Jeffrey D. Rudie,<sup>2</sup> Dara Ghahremani,<sup>6</sup> Jeanette A. Mumford,<sup>7</sup> Russell A. Poldrack,<sup>7</sup> Mirella Dapretto,<sup>5,6,8</sup> Daniel H. Geschwind,<sup>4,5††</sup> Susan Y. Bookheimer<sup>1,5,6,7††</sup>

(Published 3 November 2010; Volume 2 Issue 56 56ra80)

ORIGINAL ARTICLE

# Collaborative Care for Patients with Depression and Chronic Illnesses

Wayne J. Katon, M.D., Elizabeth H.B. Lin, M.D., M.P.H., Michael Von Korff, Sc.D.,  
Paul Ciechanowski, M.D., M.P.H., Evette J. Ludman, Ph.D.,  
Bessie Young, M.D., M.P.H., Do Peterson, M.S., Carolyn M. Rutter, Ph.D.,  
Mary McGregor, M.S.N., and David McCulloch, M.D.

214 patients w diabetes and or heart disease + depression  
at 14 primary care sites

Comparing nurse administered guideline-based care collaborating w MD

Results: Improved control of diabetes, cholesterol, BP at 12 months

Better quality of life and improved satisfaction w care

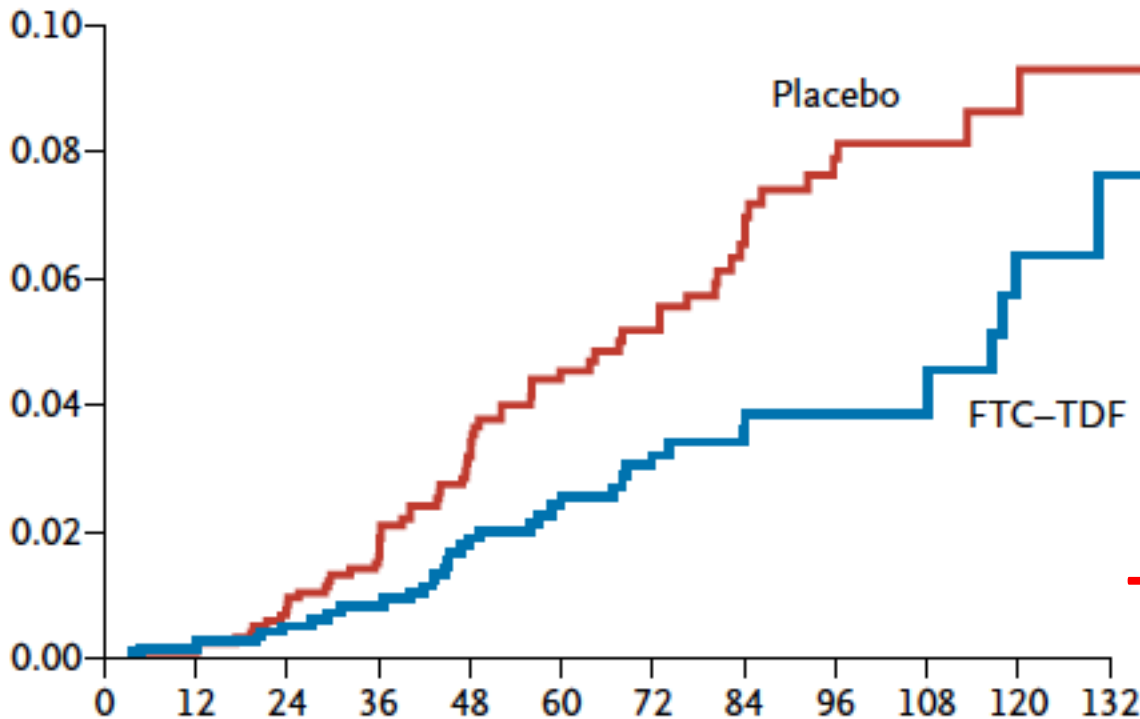
# The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812

DECEMBER 30, 2010

VOL. 363 NO. 27

## Preexposure Chemoprophylaxis for HIV Prevention in Men Who Have Sex with Men



2,499 HIV-negative MSM  
Followed for < 2.8 yrs  
100 infected  
36 FTC-TDF; 64 placebo  
Overall protection 44%  
50% adherence      73%  
Full adherence      95%

**Treatment as Prevention**

nature

www.nature.com/nature

Vol 463 | Issue no. 7277 | 7 January 2010

## A decade for psychiatric disorders

There are many ways in which the understanding and treatment of conditions such as schizophrenia are ripe for a revolution.

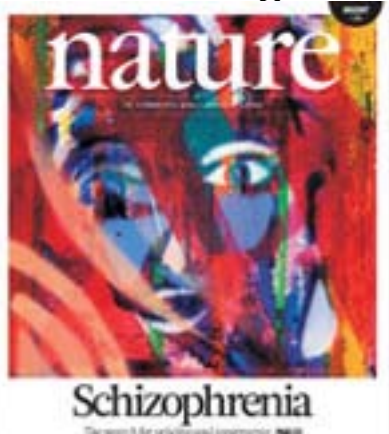
MEDICINE

### The Future of Psychiatric Research: Genomes and Neural Circuits

Huda Akil,<sup>1\*</sup> Sydney Brenner,<sup>2</sup> Eric Kandel,<sup>3</sup> Kenneth S. Kendler,<sup>4</sup> Mary-Claire King,<sup>5</sup>  
Edward Scolnick,<sup>6</sup> James D. Watson,<sup>7</sup> Huda Y. Zoghbi<sup>1</sup>

Integrating the tools of genomics and neural science is needed to reveal causes of neuropsychiatric illnesses and to suggest new strategies for treatment and prevention.

Theme Issue on Mental Health  
May 18, 2010  
"Rethinking Mental Illness"



Nov 11, 2010, Theme issue on Schizophrenia

Science

AAAS

JAMA<sup>®</sup>

The Journal of the American Medical Association

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