Military Personnel, Veterans & Their Families: How Substance Abuse Research is Effecting Positive Change
Research Shows that Social *Stressors* Can Have Profound Effects on Illicit and Licit Drug Use

1. Facilitate Initiation

2. Increase Risk of Addiction

3. Trigger Relapse
Iraq and Afghanistan Wars

• Since September 11, 2001, more than two million service members have deployed to Iraq and Afghanistan

• Many of these service personnel have or will experience multiple deployments

• A high number of military personnel survive severe injuries that in previous wars would have resulted in death

• Long deployments and intense combat conditions require optimal support for the emotional and mental health needs of our service members and their families

Combat Exposure Is the Key Driver of Mental Health Problems Across Outcomes

Soldiers who report high levels of combat are significantly more likely to screen positive for acute stress (PTSD symptoms)

Number of Combat Experiences

Adapted from presentation by: MAJ Jeff Thomas, Walter Reed Army Institute of Research.
Research Shows that Social **Stressors** Can Have Profound Effects on Illicit and Licit Drug Use

**Who else is affected?**

- Spouses
- Families
- Communities
Complexities Regarding Substance Use in the Military

• Typical problems related to illicit drug use

• Compounded by zero tolerance regarding illicit drug use
  — Possibility of discharge
  — Reduced confidentiality of medical records

• Potential consequences of treatment on military career

• Stigma related to treatments for drug abuse


Substance Use, Past 30 Days, DoD Services: 1980 -- 2008

Year of Survey

Source: RM Bray, et al., 2008 Department of Defense Survey of Health Related Behaviors Among Active Duty Military (Published Sept. 2009)
Smoking in Military Personnel

- Smoking rates are higher in the military than in the general population (32.2% vs 24.9% in 2005).
  
  *Bray & Hourani. *Addiction* 2007;102:1092-1101; *NSDUH, SAMHSA.*

- $130 million are spent annually by the military on excess training alone due to smokers that are prematurely discharged.
  
  *Klesges et al., 2001, Tob Control, 10, 43-47.*

- Service members who smoke have lower fitness levels and are at greater risk for physical injury.

*Smoking has been shown to be a coping mechanism for those exposed to stress.*

*Smith et al., Am J Preventive Medicine 2008.*
Excessive Alcohol Drinking & Related Harms are Common Among Military Personnel

43.2% of active duty military reported at least one episode of *binge drinking* in the past month vs 26.1% for comparable age civilians.

Standardized Comparisons of Civilians and All Services “Heavy Alcohol Use” By Age Group, 2008

<table>
<thead>
<tr>
<th>Age Group</th>
<th>All Services</th>
<th>Civilian</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-25</td>
<td>26*</td>
<td>16</td>
</tr>
<tr>
<td>26-35</td>
<td>18*</td>
<td>11</td>
</tr>
<tr>
<td>36-45</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>46-64</td>
<td>4*</td>
<td>9</td>
</tr>
<tr>
<td>All Ages</td>
<td>20*</td>
<td>14</td>
</tr>
</tbody>
</table>

* indicates significance level.
Military physicians wrote nearly 3.8 million prescriptions for pain medication in 2008, more than quadruple the number of such prescriptions written in 2001.


Source: RM Bray, et al., 2008 Department of Defense Survey of Health Related Behaviors Among Active Duty Military (Published Sept. 2009)
New-onset PTSD Symptoms or Diagnosis

7.6% - 8.7% deployed with combat
1.4% - 2.1% deploy without combat
2.3% - 3.0% did not deploy

• Army OR=3.59
• Air Force OR=3.38
• Marine Corps OR=2.78
• Navy or Coast Guard OR=2.48

PTSD three-fold higher among deployed with combat exposures

Alcohol Misuse & Relationship to PTSD

Mild Traumatic Brain Injury (TBI) has been reported in 12-18% of soldiers evacuated from Iraq and Afghanistan (Carson study: 1 in 6 shows TBI symptoms. Associated Press. April 11, 2007).

Mild TBI occurring among soldiers deployed in Iraq is strongly associated with PTSD and poorer physical health 3 to 4 months after returning home (Hoge CW et al., NEJM 2008).
Brain Areas Affected by TBI

Diffuse Axonal Injury
Subdural Hemorrhage
Contusions

Orbitofrontal Cortex

The orbitofrontal cortex is disrupted in addicted subjects and this may contribute to their vulnerability for SUD

Taber et al., J Neuropsychiatry Clinical Neuroscience 2006.

Volkow et al., Neuropharmacology 2009.
Additional Problems in Veterans from the Iraqi and Afghanistan Wars: **PAIN**

- As a result of improvements in battlefield medicine 90% of severely wounded soldiers survive and face additional challenges imposed by significant **PAIN**.

- **Chronic pain** increases the risk of mental health disorders including substance abuse disorders.

- Exposure to opiate medications for the treatment of chronic pain can result in opiate addiction.

*Peoples et al., NEJM 2004.*
Post-Deployment Health Consequences

2,863 Iraq War returnees one-year post-deployment


2+ missed work days/mo

Twice as many sick call visits
Alcohol and other drug use in the armed forces remain unacceptably high, constitute a public health crisis, and both are detrimental to force readiness and psychological fitness.

**Recommendations:**

- Increasing emphasis on efforts to prevent substance use disorders

- Developing strategies for identifying, adopting, implementing, and disseminating evidence-based programs and best practices for SUD care

- Increasing access to care

- Strengthening the SUD workforce
Sec. 5. Improved Research and Development  (a) ...establish a National Research Action Plan within 8 months of this order.

(b) The National Research Action Plan shall include strategies to establish surrogate and clinically actionable biomarkers for early diagnosis and treatment effectiveness; develop improved diagnostic criteria for TBI; enhance our understanding of the mechanisms responsible for PTSD, related injuries, and neurological disorders following TBI; foster development of new treatments ...; improve data sharing between agencies ...; and make better use of electronic health records ... In addition, .. research to address suicide prevention.
MH Problems in Veterans from Iraqi and Afghanistan Wars

• Specific concerns have been centered on
  • post-traumatic stress disorder
  • traumatic brain injury
  • suicide
  • substance use disorders
NIDA Response

• Understanding the risks for and trajectories of comorbid problems

• Development and testing of prevention and treatment interventions

• Working with Key Partners in HHS, DOD, VA and elsewhere
NIDA Initiatives/Activities

• January 2009 Interagency Meeting

• Substance Use and Abuse among U.S. Military Personnel, Veterans and their Families -- $6 million in grants funded in 2010 by NIDA, NIAAA, NCI and VA

• Research on Children in Military Families...Standing funding opportunity announcements issued July 2012 with NICHD, OBSSR & ORWH

• Prevention and Health Promotion Interventions...RFAs issued January 2013 with NIAAA, NCCAM and OASD/HA

• Responding the Executive Order
  — Working with HHS partners, under leadership of SAMHSA
  — Focusing on addressing research needs through the National Research Action Plan (with NIMH, NIAAA, DOD, VA and others)
Purpose:

• To develop a multi-agency collaboration (NIDA, other NIH ICs, DoD, VA)

• To identify cross-agency expertise on substance abuse and comorbid problems

Areas of Research Gaps:

• National Guard and Reservists
• Combat wounded
• Pain and prescription drugs
• Co-morbidities
• Stigma
• Military families
NIDA Grants

• BACK, SUDIE E -- Integrated Treatment of OEF/OIF Veterans with PTSD and Substance Use Disorders

• GEWIRTZ, ABIGAIL -- Effectiveness of a Web-enhanced Parenting Program for Military Families

• HUDSON, TERESA JO -- Use and Abuse of Prescription Opioids Among OEF/OIF Veterans

• LARSON, MARY JO -- First Longitudinal Study of Missed Treatment Opportunities Using DOD and VA Data

• MCGOVERN, MARK P -- Integrated CBT for Co-Occurring PTSD and Substance Use Disorders
• AMSTADTER, ANANDA B -- Stress-induced Drinking in OEF/OIF Veterans: The Role of Combat History and PTSD

• GOLUB, ANDREW L -- Veteran Reintegration, Mental Health and Substance Use in the Inner-City

• ARTENS, MATTHEW P -- Personalized Drinking Feedback Interventions for OEF/OIF Veterans

• ROSENBLUM, ANDREW BRUCE -- Web-based CBT for Substance Misusing and PTSD Symptomatic OEF/OIF Veterans

• MALONE, RUTH E -- Enhancing Civilian Support for Military Tobacco Control
DESAI, RANI A -- **Gender Differences** in Post-deployment Addictive Behaviors Among Returning Veterans

CURRAN, GEOFFREY -- An **Ethnographic Study** of Post-Deployment Substance Abuse and Treatment Seeking

BOYKO, EDWARD J -- **Tobacco Use and Alcohol Misuse** among Participants of the Millennium Cohort Study

OSLIN, DAVID W -- **Integrated vs. Sequential Treatment** for Post Traumatic Stress Disorder and Addiction Among Operation Enduring Freedom/Operation Iraqi Freedom Veterans
Prevention and Health Promotion Interventions to Prevent Alcohol and Other Drug Abuse and Associated Physical and Psychological Health Problems in U.S. Military Personnel, Veterans and their Families (R01) RFA-DA-13-012, (R34) RFA-DA-13-013 With NIAAA, NCCAM and OASD/HA

Accelerate research on health promotion and prevention interventions

- \textit{reduce onset and progression of alcohol, tobacco, and other drug use and abuse (including illicit and prescription drugs) and associated mental and physical health problems}
- \textit{promote health-enhancing behaviors among active-duty or recently separated (e.g., Iraq and Afghanistan) military troops, Veterans, and their families.}
Where Do We Need to Go From Here?

We Need to...

Advance the SCIENCE in order to …

Help our Military Friends and their Families
Now NIDA resources are with you wherever you go!

We’re connecting communities with a new mobile Web site that gives you drug-related information by topic, audience, and format—when you need it, where you need it.

The new mobile site (m.drugabuse.gov) provides:

- Easy access to NIDA’s resources through iphone, android, iPad, and other smartphones and tablets.
- A convenient way to find, view, request, and share publications—right in the palm of your hand.
- E-books of all publications to allow offline reading on all major e-readers, including Kindle and Nook.
- New Spanish language content on drugs of abuse and related topics.

www.drugabuse.gov