Status of Department of Defense Funded Suicide Research

Peter M. Gutierrez, Ph.D. (moderator), Diana J. Fitek, Ph.D., Thomas Joiner, Ph.D., Dave Jobes, Ph.D., Marjan Holloway, Ph.D., and M. David Rudd, Ph.D.
Dr. Diana J. Fitek
Portfolio Manager – Suicide, Substance Abuse & Violence Prevention
U.S. Army Medical Research and Materiel Command
Military Operational Medicine Research Program
Fort Detrick, MD

The views expressed in this presentation are those of the author and do not represent the official policy or position of the U.S. Army Medical Command or the Department of Defense
Scope of the Problem: Suicide in the Military

- Historically, military suicide rates were below civilian rate of 11 per 100,000
- Multiple hypotheses to explain this pattern
- Absence of standardized data collection on suicides
- Available suicide prevention programs and treatments were not evidence-based
- As suicide rate approached and exceeded civilian rate, the surveillance data and research needed to develop interventions had yet to begin

**CY2010 Suicide Rates (DoDSER)**

<table>
<thead>
<tr>
<th>Air Force</th>
<th>Army</th>
<th>Marine Corps</th>
<th>Navy</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.5</td>
<td>21.7</td>
<td>17.2</td>
<td>11.1</td>
</tr>
</tbody>
</table>
Missed Opportunities to Intervene?

- Recent failure in spousal or intimate relationship, *often in month prior to suicide*
- Occupational and/or legal problems
- History of behavioral health disorder, substance abuse (misuse of prescription medication), accessed *outpatient behavioral health services in month prior to suicide*
- Communicated suicide ideation to spouse, friend or other family members

(DoDSER, 2010)
**Army Active Duty Suicide Deaths**

As of 24 Feb 12

* = Preliminary Civilian Rate NOT CDC OFFICIAL (as of 16 March 2011 update)

**= HP&RR TF Estimated NOT ARMY OFFICIAL: is based on an Active Duty Army strength of 715,662 (as of 1 Oct 11)
Suicide Continuum of Care Determines Research Approach

**RESEARCH NEEDS**
Translation and Implementation, Dissemination
Continuing Education and Reinforcement for Soldiers, Leaders and Service Providers

**PREVENTION**
- Evidenced-based Suicide Prevention Training
- Population-based Training
- Leader Training

**EARLY SCREENING/INTERVENTION**
- Validated Population-based Screening Measure
- Early Selective Identification Screen & Referral
- Selective Indicated

**ASSESSMENT**
- Validated Risk Assessments
- Imaging & Biomarkers
- Impact of Comorbidities

**TREATMENT**
- Clinical Practice Guidelines
- Effective Medications
- Cognitive & Behavioral Interventions

**RECOVERY AND RETURN TO DUTY**
- Recovery Protocols
- Evidenced-based System of Care Models
- RTD Standards

**POSTVENTION**
- Postvention Care for Service Members and Families
- Rescreening
- Unit Support

**SOLUTIONS / CAPABILITIES**

- Basic Science / Neurobiological Mechanisms 1 study, $3M
- Epidemiology / Army STARRS 3 studies, $62.1M

1 study*, $1.1M
1 study, $1.1M
3 studies, $5.5M
12 studies*, $18.2M
1 study*, $2.5M

* Funded by Military Suicide Research Consortium ($17M)

TOTAL ACTIVE: 24 studies, $110M
Research Investment along Continuum of Care

$67.5M: Epidemiology/Basic Sciences – Army STARRS, Hill (risk factors), Reger (role of deployment on suicidality), Cooper (epidemiology of medication abuse and overdose), O’Connor (Study to Examine Psychological Processes in Suicidal Ideation and Behavior [STEPPS])

$4.9M: Prevention, Education & Training – Bernert (behavioral intervention for insomnia), Cerel (understanding resilience during suicide bereavement), Comtois (caring texts), Allen (training family members to assist servicemembers in help-seeking), Renshaw (promoting resilience among family members of high-risk servicemembers)

$1.1M: Early Screening & Intervention – Vannoy (development and validation of a theory-based screening process for suicide risk)
Research Investment along Continuum of Care

$5.5M: Assessment – Jobes (Collaborative Assessment and Management of Suicide), Joiner (Optimizing Screening and Risk Assessment for Suicide Risk in the U.S. Military), Familoni (use of thermal imaging to assess and optimize level of physiologic arousal during treatment)

$21.1M: Treatment – Brenner (Window to Hope), Bryan (brief interventions), Bush (Virtual Hope Box), Schmidt (reducing anxiety sensitivity), George (high-dose left prefrontal TMS), Goodman (DBT), Gutierrez (blister packaging for medication adherence), Holloway (PACT, safety planning), Kubek (intranasal delivery of biodegradable neuropeptide nanoparticles), Rudd (brief CBT)

$2.5M: Recovery – Luxton (caring letters intervention)

$2.0M: Postvention – Stanley, Brown & Holloway (management of suicide-related events during deployment)
## Largest Investments: How Are they Different?

### Army Study to Assess Risk and Resilience in Servicemembers (Army STARRS)
- $62.1M ($50M Army, $12.1M NIMH)
- Co–PIs Robert Ursano, MD (USUHS) and Murray Stein, MD, MPH (UCSD)
- 4 major studies
  - Historical Data Study
  - All Army Study
  - New Soldier Study
  - Soldier Health Outcomes Study
- Studies Army exclusively
- Retrospective and prospective epidemiological studies
- Data informs development of interventions

### Military Suicide Research Consortium
- $17M (funded by Defense Health Program)
- Co–led by Peter Gutierrez, PhD (Denver VA MIRECC) and Thomas Joiner, PhD (FSU)
- 7 currently funded studies, additional proposals under consideration
- Studies may involve any service and/or veterans
- Focus on interventions (prevention, screening, assessment, treatment, recovery and postvention)
Suicide: Challenges/Successes

- Omega-3 and Tau protein—how relevant are they?
- Importance of establishing and maintaining relationship with command of possible study site
- Multi-site studies needed, complicates an already lengthy IRB approval process
- Army STARRS and MSRC
Suicide: The Way Ahead

- Theory-driven, evidence-based treatment studies (in/out patient)
- Research to examine the effects of brief interventions to reduce suicide behavior, problem drinking, and other outcomes (e.g., accidents, homicide, intimate partner violence, etc.)
- Basic science to validate underlying psychological and bio-psychological theories of suicide
- Combined psychotherapy and pharmacotherapy treatment studies
- Validate suicide prevention training (universal, at-risk populations)
- Validate objective suicide screening measure(s) for field and clinic use
How to apply for DoD research funding:


http://www.grants.gov (Search by CFDA number 12.420)

https://momrp.amedd.army.mil/

http://cdmrp.army.mil/

http://www.tatrc.org/about_funding.html
COL Carl A. Castro  
Research Area Director  
Military Operational Medicine Research Program  
Fort Detrick, MD 21702  
301.619.7301  
Carl.Castro@us.army.mil

Diana J. Fitek, Ph.D.  
Portfolio Manager  
Suicide, Substance Abuse & Violence Prevention  
Military Operational Medicine Research Program  
Fort Detrick, MD 21702  
301.619.7765  
Diana.J.Fitek@us.army.mil