

**IMPACT OF DEPLOYMENT ON THE HEALTH  
OF SERVICE MEMBERS  
AND THEIR FAMILIES –  
WHY CLINICIANS SHOULD ASK**

**Clinician Outreach and  
Communication Activity (COCA)  
Conference Call  
September 21, 2010**



# Objectives

**At the conclusion of this hour, each participant should be able to:**

- ❑ Describe at least three ways in which impending deployment may impact a patient's health.
- ❑ Describe at least three ways in which impending deployment may impact a patient's family's health
- ❑ Describe at least three ways in which a past deployment may impact a patient's health
- ❑ Describe at least three ways in which a past deployment may impact the health of patient's family's health
- ❑ State at least two strategies clinicians may use that incorporate the assessment of deployment-related health issues

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## TODAY'S PRESENTERS

**Marc A. Safran, MD, MPA** (Moderator)  
CAPT, U.S. Public Health Service  
Chair, CDC Mental Health Work Group  
Centers for Disease Control and Prevention

**David S. Riggs, Ph.D.**  
Executive Director, Center for Deployment Psychology  
Research Associate Professor  
Department of Medical and Clinical Psychology  
Uniformed Services University of the Health Sciences

**Vikas Kapil, DO, MPH, FACOEM**  
Associate Director of Science, Division of Injury Response  
Centers for Disease Control and Prevention

**Ruth Perou, PhD**  
Child Development Studies Team Leader  
Centers for Disease Control and Prevention

# Agenda

**Introduction – Why Clinicians Should Ask** - Dr. Marc Safran (moderator)

**Behavioral Health Issues Related to Deployment** - Dr. David Riggs

**Traumatic Brain Injury** – Dr. Vikas Kapil

**Family and Child Issues** - Dr. Ruth Perou

**Discussion, Questions, and Answers** – Presenters and audience

# Impact of Deployment on the Health of Service Members and Their Families

## Why Clinicians Should Ask

**Marc Safran, MD, MPA**

*CAPT, U.S. Public Health Service  
Chair, CDC Mental Health Work Group*



*Clinician Outreach Communication Activity, September 21, 2010*



Introduction

**Why clinicians should ask if a patient or family member has been or may be deployed.**

## Examples of How Deployment may impact Health

- ❑ Behavioral health issues
- ❑ Traumatic brain injury
- ❑ Other injuries
- ❑ Infectious diseases
- ❑ Toxic exposures
- ❑ Nutritional changes
- ❑ Medication side effects
- ❑ Other general medical issues
- ❑ Family and child Issues

If the clinician doesn't ask...

**A lot may be missed.**



# The Impact of Deployment on Service Members and Their Family Members

David Riggs, Ph.D.  
Executive Director  
Center for Deployment Psychology

**The findings and conclusions in this presentation are those of the author and do not necessarily represent the views of the Centers for Disease Control and Prevention**





# The Impact of Deployment

**Approximately  
4 Million  
Parents have had a child  
Deployed**

**Approximately  
2 Million  
People with a  
Sibling  
Who has Deployed**

**Approximately  
2 Million  
Service Members  
Deployed**

**Approximately  
1 Million  
Spouses Coping with  
Deployment**

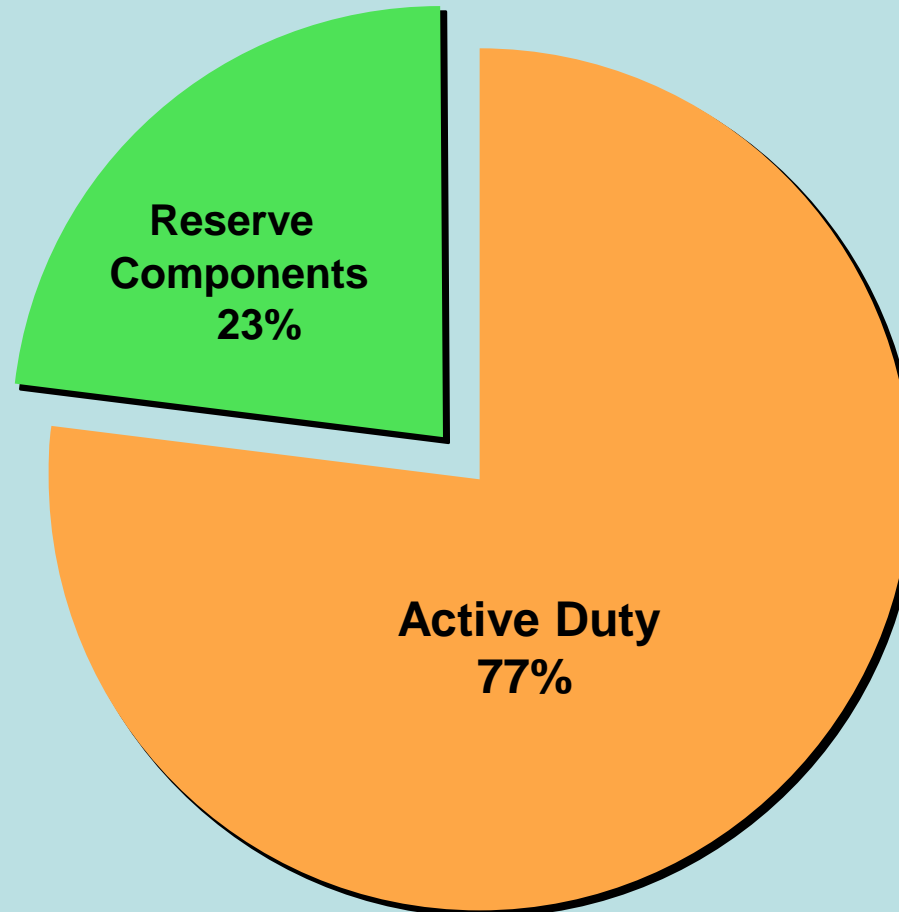
**Approximately  
2 Million  
Children have had  
a Parent Deployed**



# Total Deployed to OIF & OEF

1,991,578 as of 31 AUG 2009

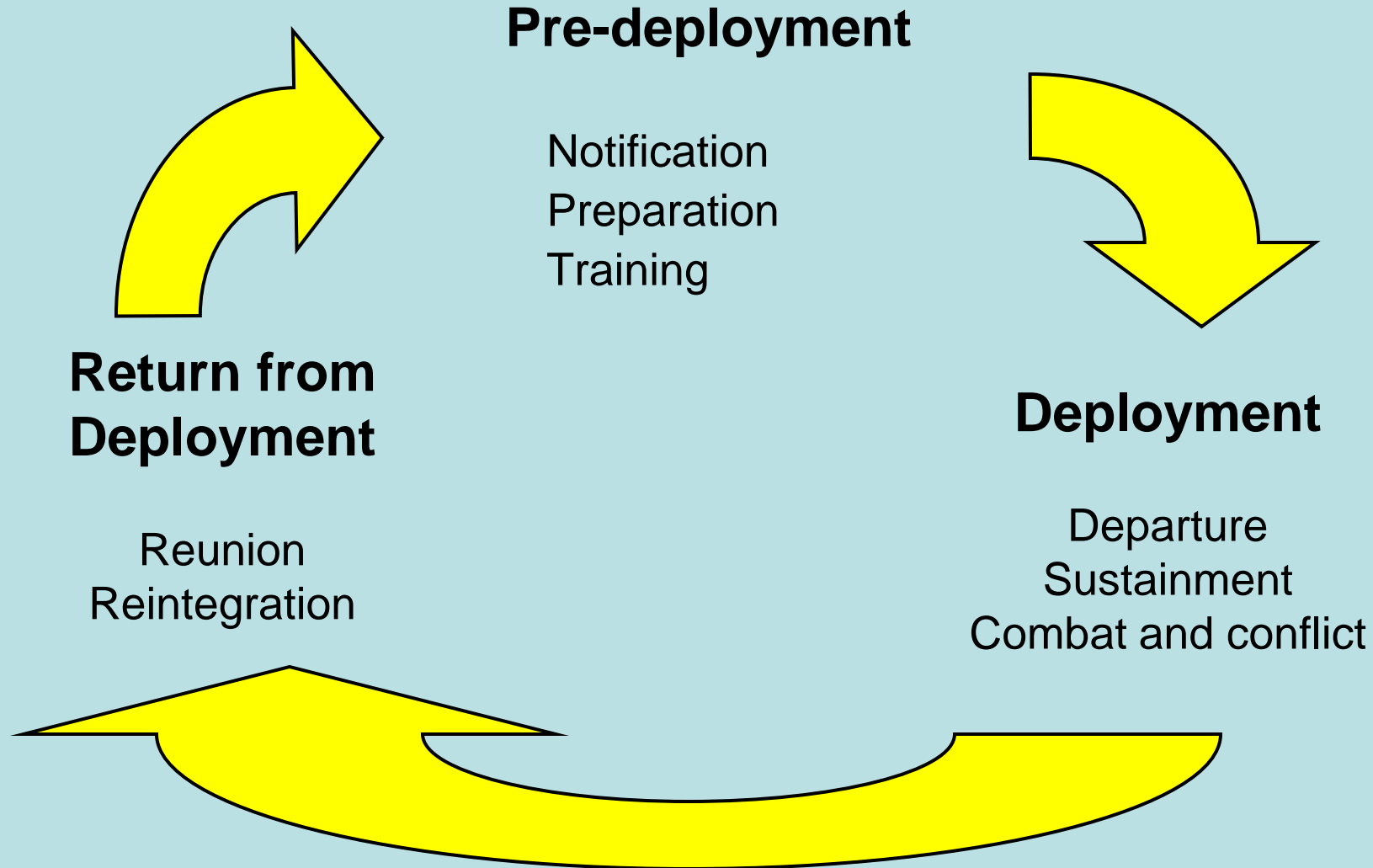
## Active Duty vs Reserve Components



Data from Defense Manpower, Office of the Asst Sec of Def for Public Affairs



# Pre-Deployment





# Stress Injury Mechanisms

(Briefing by Capt Koffman, 2008)

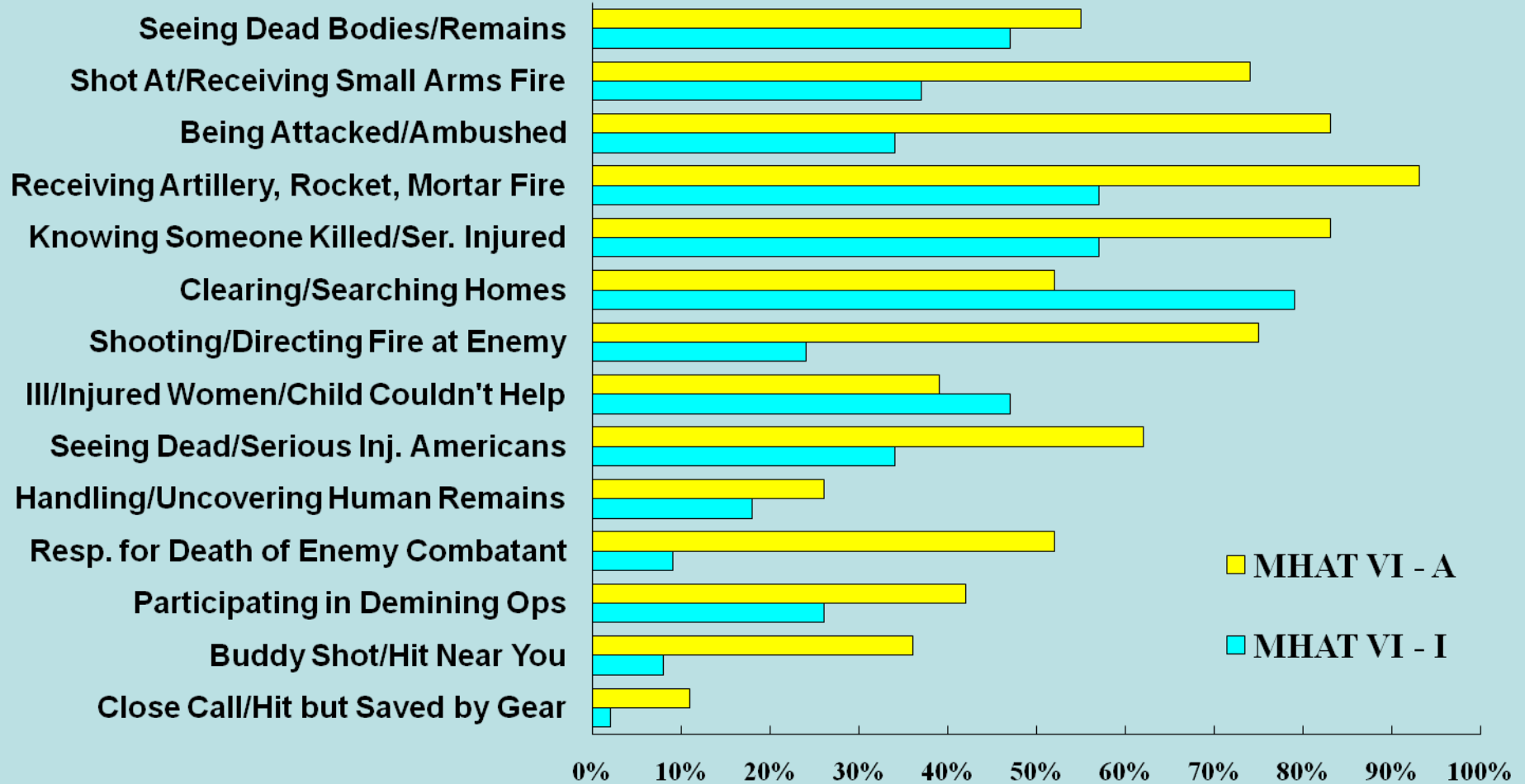






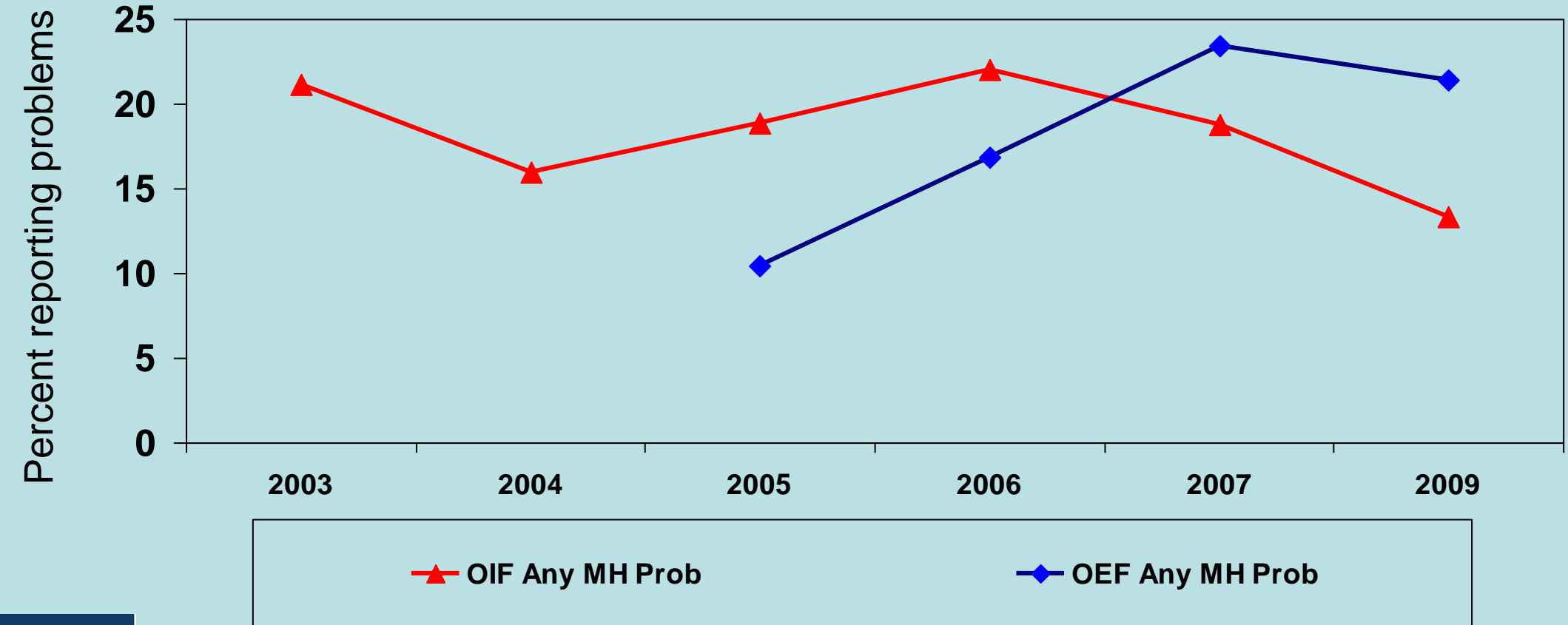
# Combat Exposure in Iraq and Afghanistan

Reports from MHAT-VI





# Behavioral Health Data from MHAT-VI Report



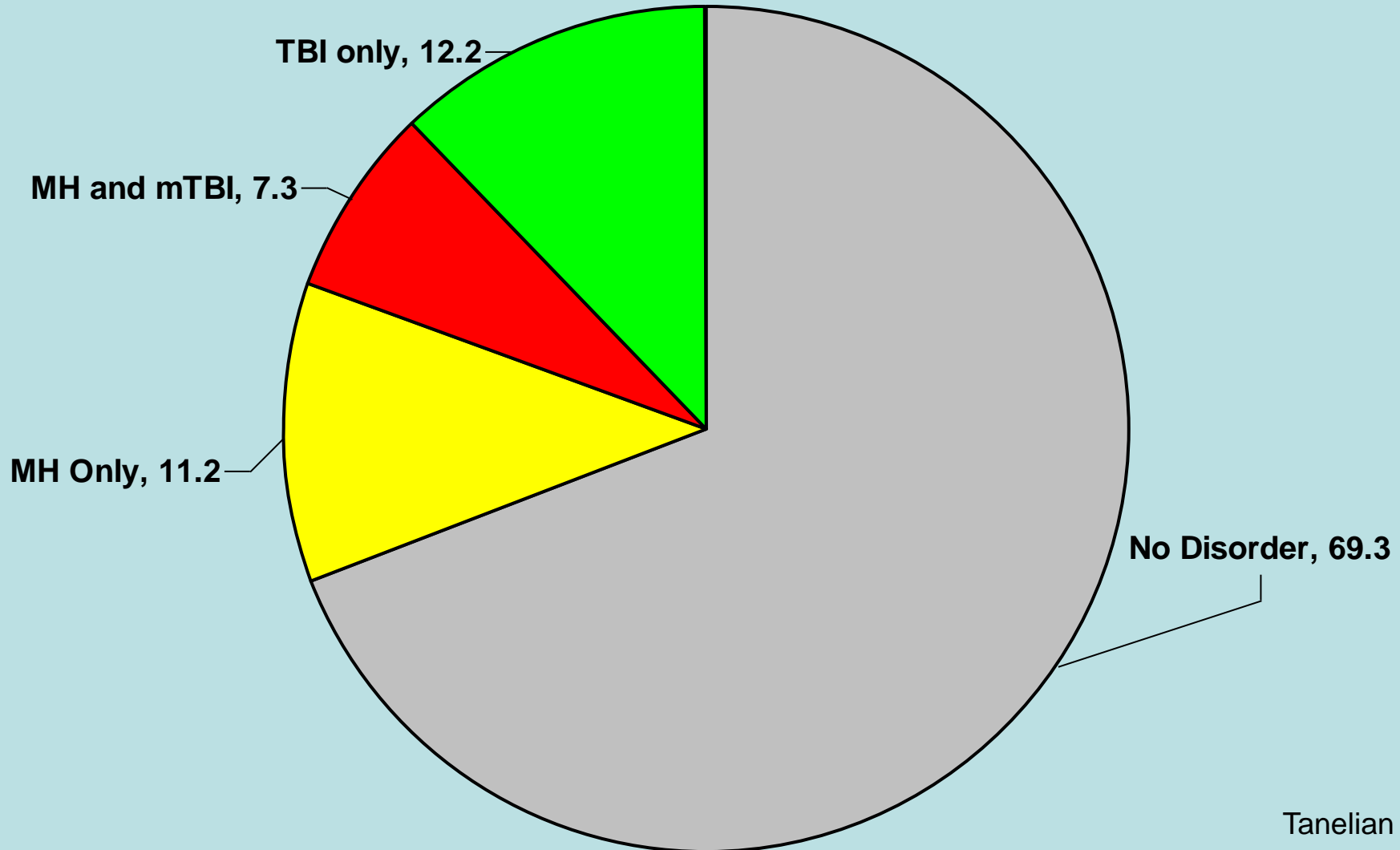


# Reintegration

- **5 critical challenges / tasks service member needs to master**
  1. Overcome alienation
  2. Move from simplicity to complexity
  3. Replace war with another form of high
  4. Move beyond war and find meaning in life
  5. Come to peace w/self, God, and others

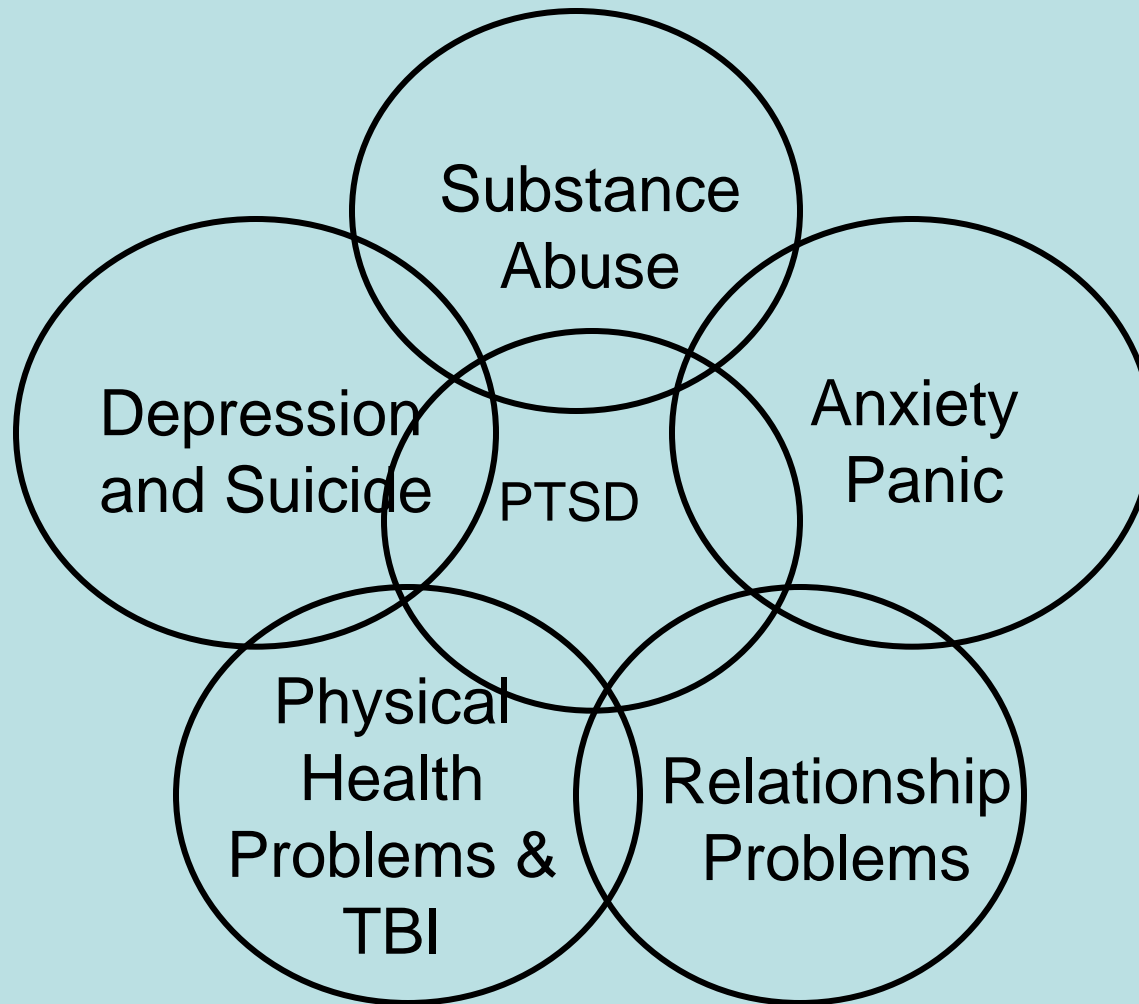


# Emotional Distress Reported from RAND Report



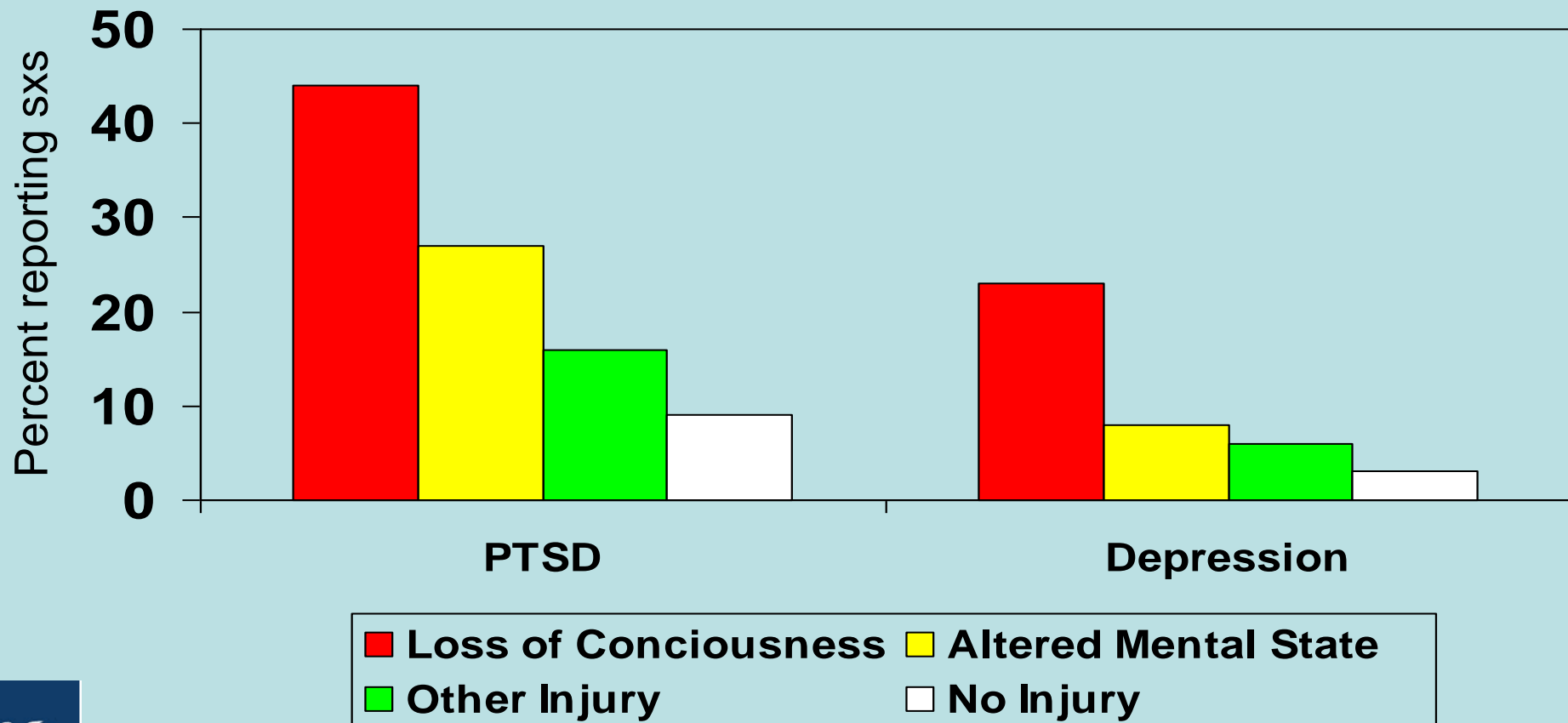


# Co-Occurring Problems





# PTSD and TBI





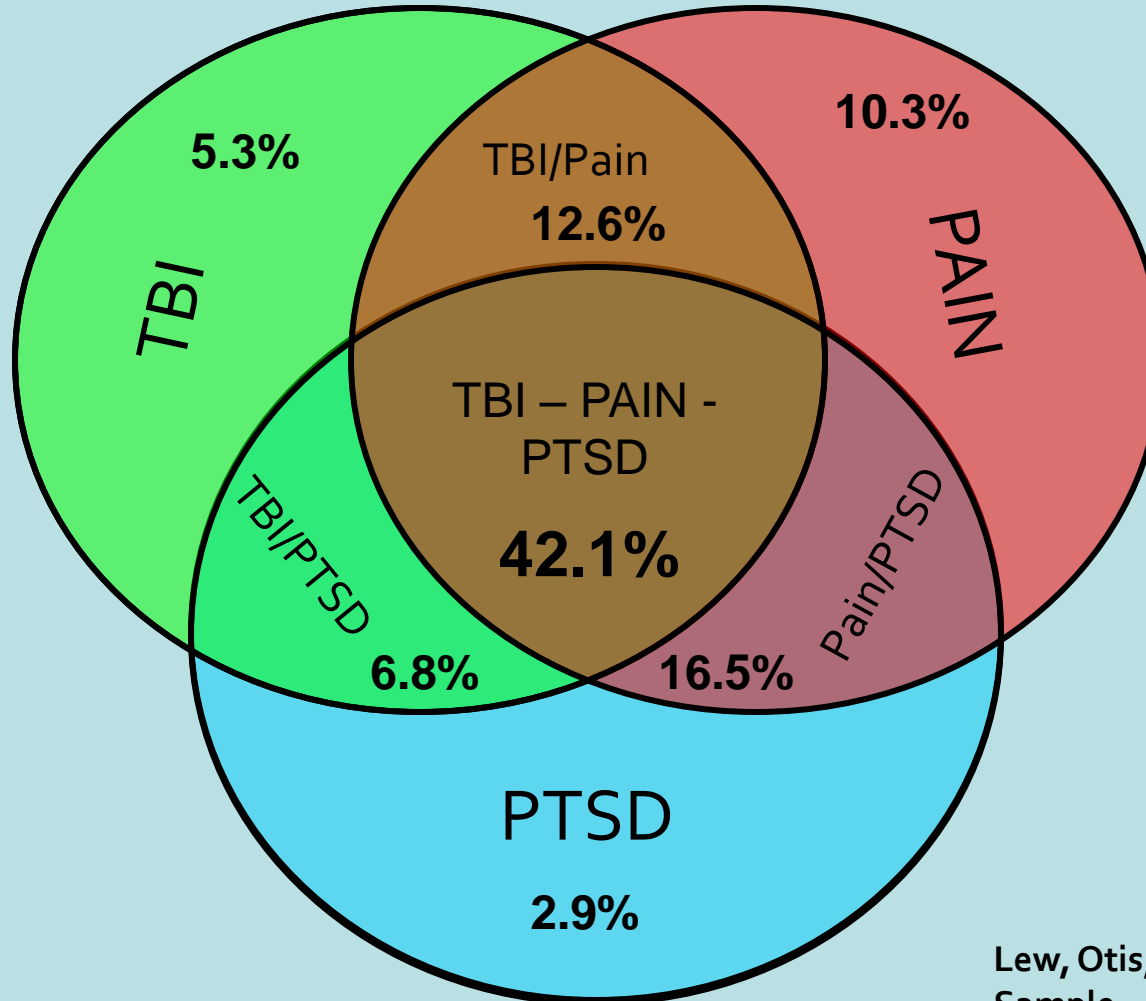
# There is substantial symptom overlap in mTBI, pain, PTSD, SUD, depression



PCS Symptoms*	Mild TBI	PTSD	Chronic Pain	SUD	Depression
Memory impairment	√	√	√	√	√
Concentration problems	√	√	√	√	√
Irritability	√	√	√	√	√
Insomnia/Sleep Problems	√	√	√	√	√
Fatigue	√	√	√	√	√
Headache	√	?	√	√	-
Dizziness	√	-	√	?	-
Intolerance of stress, emotion	√	√	√	√	√
Affective disturbance	√	√	√	√	√
Personality change	√	√	√	√	√
Apathy	√	√	√	√	√
Hypervigilance	-	√	-	?	-
Nightmares	-	√	-	-	?
Intrusive memories	-	√	-	-	-
Sensitivity to light or noise	√	-	?	?	-
Nausea or vomiting	√	-	?	?	-



# Post-Deployment Disorders



Lew, Otis, Tun, Kerns, Clark, & Cifu, 2009  
Sample = 340 OEF/OIF outpatients at  
Boston VA







# Primary Care in the Military

*It's where Soldiers get their care*



- Mean primary care use is 3.4 visits per year
- 88-94% have one or more visits per year
- Opportunity to...
  - Reduce stigma
  - Reduce barriers & unmet needs
  - Intervene early

# Overview of Traumatic Brain Injury

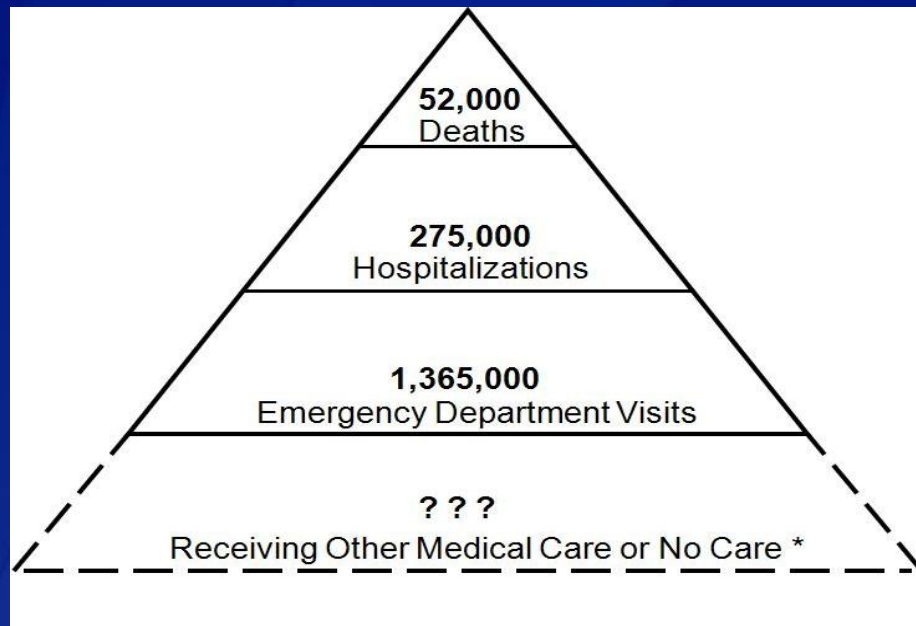
**Vikas Kapil, DO, MPH, FACOEM**  
**Associate Director for Science**  
**Division of Injury Response**  
**Centers for Disease Control and Prevention**

# Traumatic Brain Injury

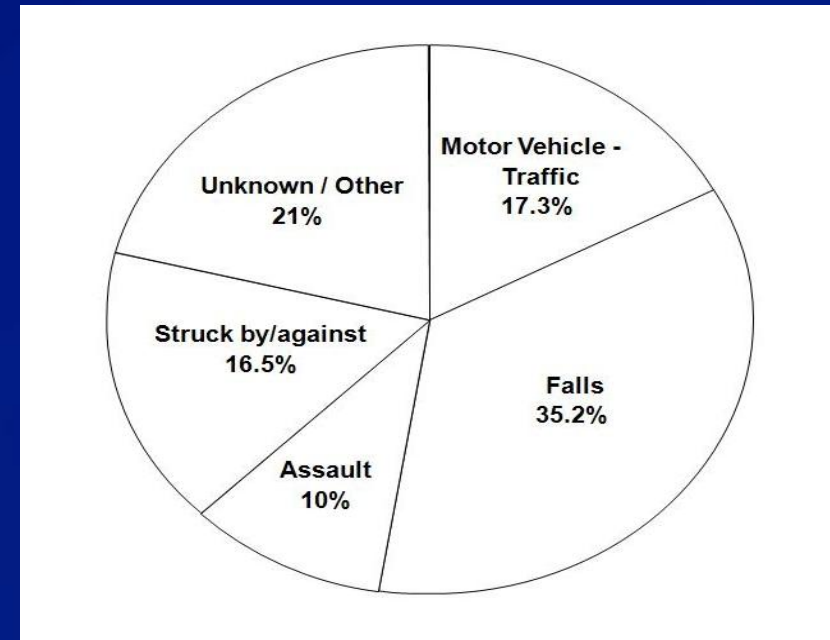
- **A TBI is a bump, blow or jolt to the head or a penetrating head injury that disrupts the normal brain function**
- **Does NOT require direct impact to the head**
- **Most cases recover fully without treatment however some may have longer lasting sequelae**

# TBI in the United States

- **Approx. 1.7 million TBIs annually**



- **Causes of TBI**



# **Some Signs and Symptoms of TBI**

- Headache**
- Nausea, vomiting**
- Balance complaints**
- Vision disturbance**
- Memory complaints**
- Irritability**
- Difficulty concentrating**
- Sleep disturbance**

# TBI in the Military

- TBI has been called the “signature injury” of the current conflicts in Iraq and Afghanistan
- Since 2001, approximately 1.6 million military personnel have been deployed to OIF and OEF

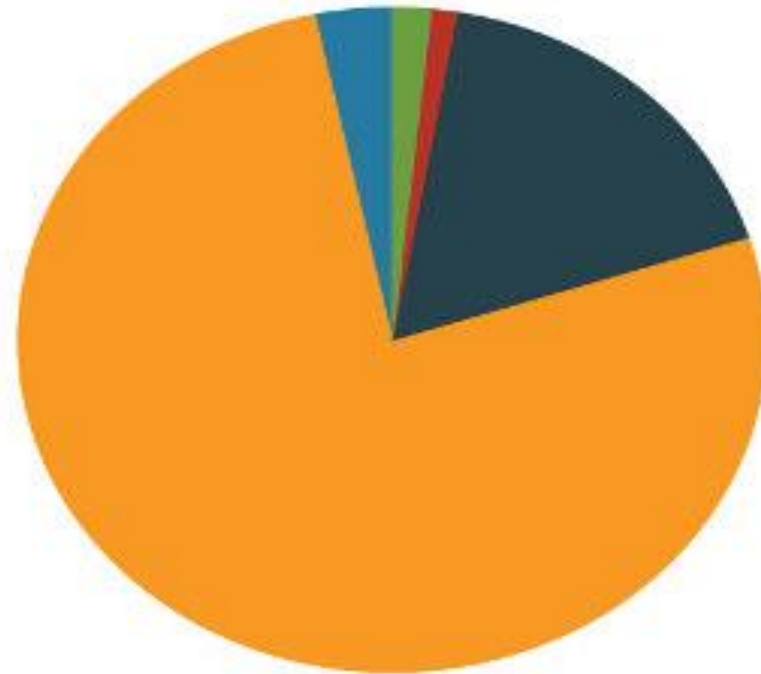
# Confirmed TBI among Military Members

**2000-10**

	Penetrating	3,175
	Severe	1,891
	Moderate	30,893
	Mild	137,328
	Not Classifiable	5,589

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**TOTAL - All Severity 178,876**



Source: Defense Medical Surveillance System (DMSS) and Theater Medical Data Store (TMDS)/ Armed Forces Health Surveillance Center (AFHSC)

# Important Causes of TBI in the US Military

- **Blast injury (primary, secondary or tertiary)**
- **Other penetrating head injury**
- **Falls**
- **Motor vehicle crashes**
- **Assaults**

Source: [DVBIC.ORG/TBI](http://DVBIC.ORG/TBI)



# **Challenges in Management of TBI Among Military Personnel**

- **Accuracy of diagnosis (overlapping symptoms)**
- **Remote history of injury, cognitive impairment**
- **Desire to return to active duty**
- **Risk of repetitive mTBI or recurrent impact while still symptomatic**

# **Key Summary Points in the Care of Patients**

- **Ask patients about history of military service and potential TBI (including possible primary blast injury)**
- **Be alert for overlapping and sometimes long duration of varying s/s which may be confused with a variety of other conditions**
- **Seek appropriate imaging, specialty consultation, neuropsychological assessment etc. if TBI and/or sequelae suspected**

# Thank You!

**Dr. Vikas Kapil**  
**[vck3@cdc.gov](mailto:vck3@cdc.gov)**

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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.



# **Impact of Deployment on the Health of Service Members and Their Families – Why Clinicians Should Ask: Family and Child Issues**

**Ruth Perou, PhD**

Child Development Studies Team Leader

Clinician Outreach Communication Activity (COCA) Teleconference  
Centers for Disease Control and Prevention  
September 21, 2010, 1:00 PM to 2:00 PM EST



*“If you want to honor a service member, the best way to accomplish this is to honor and support their legacy, their children.”*

COL Elisabeth Stafford, MD, FAAP, FSAM, Career-long  
Military Child Advocate, Pediatrician, and Adolescent Medicine Specialist



# Military Families Demographics

- Almost 2 million children living in military families
- 43% of Active Duty Military Families with children:
  - 35.1% - Married to civilian
  - 5.2% - Single
  - 2.9% - Dual military with children
- Largest percent of children are between birth and five years of age (41.0%)
  - 31.4% - 6-11 yrs
  - 23.8% - 12-18 yrs
  - 3.8% - 19-23 yrs

# Impact of Deployment on Families

- Deployed primary caretaker is most stressful event for children
- Strain on parent left behind
- Exposure to life-changing stressors challenging ability to reintegrate on return
- Disruptive to civilian life
- Family functioning is affected by combat exposure
- Rates of child neglect (twofold increase) and maltreatment are elevated especially for young families
- Wives of deployed soldiers have higher rates of mental health issues

# Impact of Deployments on Children's Health & Well-being

- Emotional and behavioral difficulties
  - Sadness, Anxiety, Anger, Symptoms consistent with depression, Loneliness, Numbness, Feeling overwhelmed, poor coping
- School performance/academic problems
- Peer-related difficulties
- Disrespecting parents and authority figures
- Sleep disturbances
- Health complaints
  - higher heart rates and systolic blood pressures



# Response of Children to Stress and Separation

- **Infants (Birth - 12 months)** may respond to disruptions with decreased appetite, weight loss, irritability and/or apathy.
- **Toddlers (one-three yrs.)** may become sullen, tearful, throw temper tantrums or develop sleep problems.
- **Preschoolers (three-six yrs.)** their behavior may regress in areas such as toilet training, sleep, separation fears, physical complaints, or thumb sucking.
- **School age children (6-12 yrs.)** may show irritable behavior, aggression or whininess. And may become more regressed and fearful about parents' safety
- **Teenagers (13-18 yrs.)** may be rebellious, irritable or more challenging of authority. Parents need to be alert to high-risk behaviors such as problems with the law, sexual acting out, and drug/alcohol abuse.

# Transitions: Protective Factors

- Resilience plays major factor in deployment
  - Most families “rise to the occasion”
  - Family readiness is a key factor
  - Feeling connected and supported
- Family preparedness for deployment
- Mental health status of at-home parent
- Active Coping Style
  - Accept military life style
  - Are optimistic and self reliant
  - Adopt to flexible gender roles

# Transitions: Risk Factors

- History of rigid coping styles
- Family dysfunction
- Young families (especially first military separation)
- Families recently moved to new duty station
- Foreign born spouse
- Families with young children
- Families without unit affiliation
- Pregnancy
- Dual career/single parents

# What can you do?

- Develop awareness of the presence of military children and families within your communities and practices
- Consider screening children at check-in to see if they are members of a military family
- Develop knowledge about the culture of military
  - Engage youth and families in a way that will allow them to share their true concerns

# What can you do?

- Child health issues may be the entry point for Family health
  - Consider screening the non-deployed parent for psychosocial stressors and functional impairment
  - Consider discussing Service-member health issues
- Monitor mental health pre, during, and post deployment
- Discuss resources with the family

# Resources: Overarching

- U. S. Department of Veterans Affairs
  - Mental Health home page <http://www.mentalhealth.va.gov/Services.asp>
  - National Center for PTSD <http://www.ptsd.va.gov>
  - Vet Centers <http://www2.va.gov/directory/guide/vetcenter.asp>
- U.S. Department of Defense Military Health System Mental Health home page [http://www.health.mil/Themes/Mental\\_Health.aspx](http://www.health.mil/Themes/Mental_Health.aspx)
- Substance Abuse and Mental Health Services Administration Veterans home page <http://www.samhsa.gov/vets>
- Defense Centers of Excellence For Psychological Health and Traumatic Brain Injury (DCoE) <http://www.dcoe.health.mil/Default.aspx>
- Real Warriors Campaign <http://www.realwarriors.net>
- Wounded Warrior Project <https://www.woundedwarriorproject.org/content/view/415/876/>
- AAP Section on Uniformed Services (Deployment) <http://www.aap.org/sections/uniformedservices/deployment/index.html>

# Additional Resources

- U.S. Army Medical Department Resilience Training  
<https://www.resilience.army.mil/>
- Department Of Defense Deployment Health Clinical Center  
[http://www.pdhealth.mil/clinicians/scp\\_trackII.asp](http://www.pdhealth.mil/clinicians/scp_trackII.asp)
- Understanding Military Culture When Treating PTSD, information for clinicians  
[http://www.ptsd.va.gov/professional/ptsd101/flash-files/Military\\_Culture/player.html](http://www.ptsd.va.gov/professional/ptsd101/flash-files/Military_Culture/player.html)
- Military OneSource [www.militaryonesource.com](http://www.militaryonesource.com)
- Iraq and Afghanistan Veterans of America <http://iava.org>
- Vets4Vets <http://www.vets4vets.us>
- Vietnam Veterans of America <http://vva.org>
- Veterans Suicide Prevention Hotline 1-800-273-TALK, Veterans Press 1

# Resources: Family and Children

- National Military Family Association <http://www.militaryfamily.org>
- Blue Star Military Families <http://www.bluestarfam.org>
- Families Overcoming Under Stress <http://www.focusproject.org>
- Military Wives Network <http://www.MilitaryWives.com>
- Tragedy Assistance Program for Survivors, Inc. <http://www.taps.org>
- Our Military Families, an organization for children of National Guard and Military Reserve families <http://www.ourmilitarykids.org>
- Operation Enduring Families, free, online family education curriculum for OIF/OEF families [www.ouhsc.edu/oef](http://www.ouhsc.edu/oef)



# Resources: Family and Children

- Resources for Military Children Affected by Deployment  
<http://old.armymwr.com/cys-images/Deployment%20A%20Compendium%20of%20Resources.pdf>
- Sesame Workshop Talk, Listen, Connect  
<http://archive.sesameworkshop.org/tlc>
- Seeds of Hope Books offers materials for teenagers in military families <http://www.seedsofhopebooks.com>
- Zero To Three: Coming Together Around Military Families® (CTAMF)  
<http://www.zerotothree.org/about-us/funded-projects/military-families/>
- This Emotional Life <http://www.pbs.org/thisemotionallife/military-families>

**Thank you.**  
**Ruth Perou**  
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National Center on Birth Defects and Developmental Disabilities

Place Descriptor Here



# Deployment Stages and Children's Responses

(Amen et al., 1988; Murray, 2002; Pincus et al., 2001; Stafford & Grady, 2003)

## Pre-Deployment

Infants	Fussy, changes in eating habits
Preschoolers	Confused, saddened
School-Aged	Saddened, angry or anxious
Adolescents	Withdrawn, deny feelings about pending separation

## Deployment

Infants	No research
Preschoolers	Sadness, tantrums, changes in eating/elimination habits, symptoms of separation anxiety may appear
School-Aged	Increased somatic complaints, mood changes, decline in school performance
Adolescents	Angry, aloof, apathetic, acting out behaviors may increase, loss of interest in normal activities, decline in school performance

## Post-Deployment

Infants	May not recognize returning service member and be fearful
Preschoolers	Happy and excited, but also experience anger at separation
School-Aged	Happy and angry, often leading to acting out behaviors
Adolescents	Defiant, disappointed if their contributions at home are not acknowledged

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## Emergency Preparedness and Response

**Emergency Preparedness & Response**



- Specific Hazards
- Preparedness for All Hazards
- What CDC Is Doing
- What You Can Do
- What's New

### Impact of Deployment on the Health of Service Members and Their Families - Why Clinicians Should Ask

**CE** = Continuing Education Credits

**Date:** Tuesday, September 21, 2010  
**Time:** 1:00 PM – 2:00 PM (Eastern Time)

**Presenter:**

-  **Marc A. Safran, MD**  
CAPT, U.S. Public Health Service  
Chair, Mental Health Work Group, CDC
-  **David S. Riggs, Ph.D.**  
Executive Director, Center for Deployment Psychiatry

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