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Behavioral and Social Health Outcomes Program (BSHOP) Update

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Briefing Outline

- Overview of BSHOP Mission and Capabilities
- Epidemiology of Suicide in the US Army
- Underlying Factors
- Population Health Implications

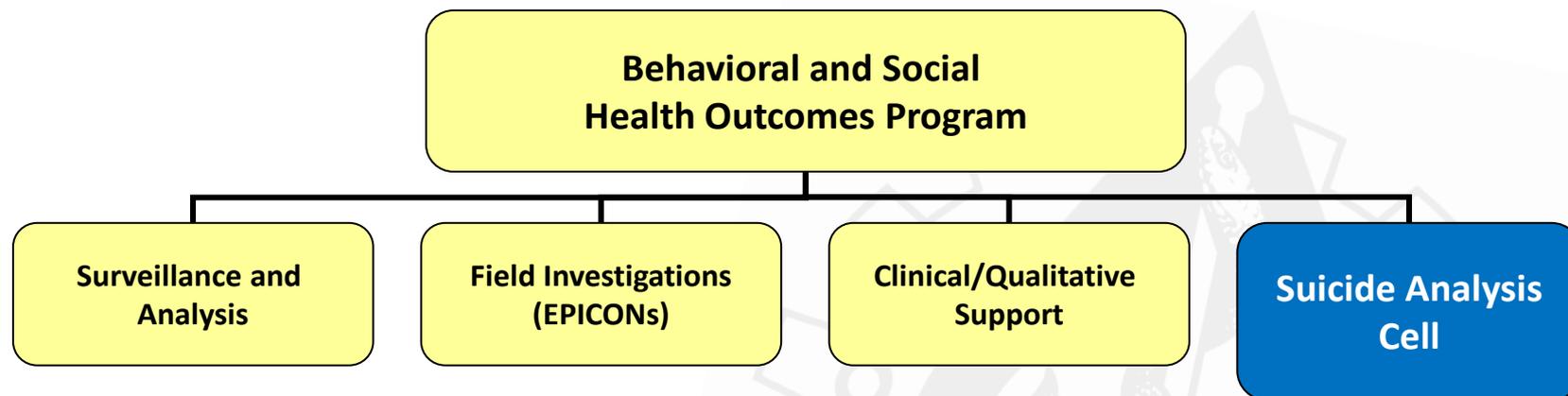


Mission & Objectives

- BSHOP Mission: Maximize total Soldier health and combat readiness by addressing psychological and social threats through the public health process
- BSHOP Program Objectives
 - Surveillance
 - Response (EPICON)
 - Clinical/Qualitative Support
 - Strategic Analysis Cell (SAC): Establish and maintain a registry of all Army suicides and provide immediate actionable intelligence to senior Army leaders.



Functional Organization



Focus Areas

- **Behavioral Health**
 - Adjustment Disorders
 - Anxiety Disorders
 - Substance Abuse Disorders
 - Depression
- **Deployment Health**
 - Post Traumatic Stress Disorder
 - Post Traumatic Growth
 - ARFORGEN Cycle
 - Combat Intensity/Deployments
- **Suicide**
 - Suicide
 - Suicide Ideation
 - Suicide Attempts
- **Homicide/Violent Crime**



Army Behavioral Health Integrated Data Environment (ABHIDE)

- In 2008 the U.S. Army directed development of a suicide registry to facilitate ongoing analysis and generation of actionable information
- System captures all deaths by suicide and suicide attempts/ideations that result in hospitalization or evacuation from theater
- Current data elements include: demographics, Army Suicide Event Reports (ASER), deployment history, medical history, post-deployment health assessments, family advocacy and substance abuse records
- Efforts are underway to include pharmacy data, crime data, drug and alcohol testing, financial data, and medical profiles

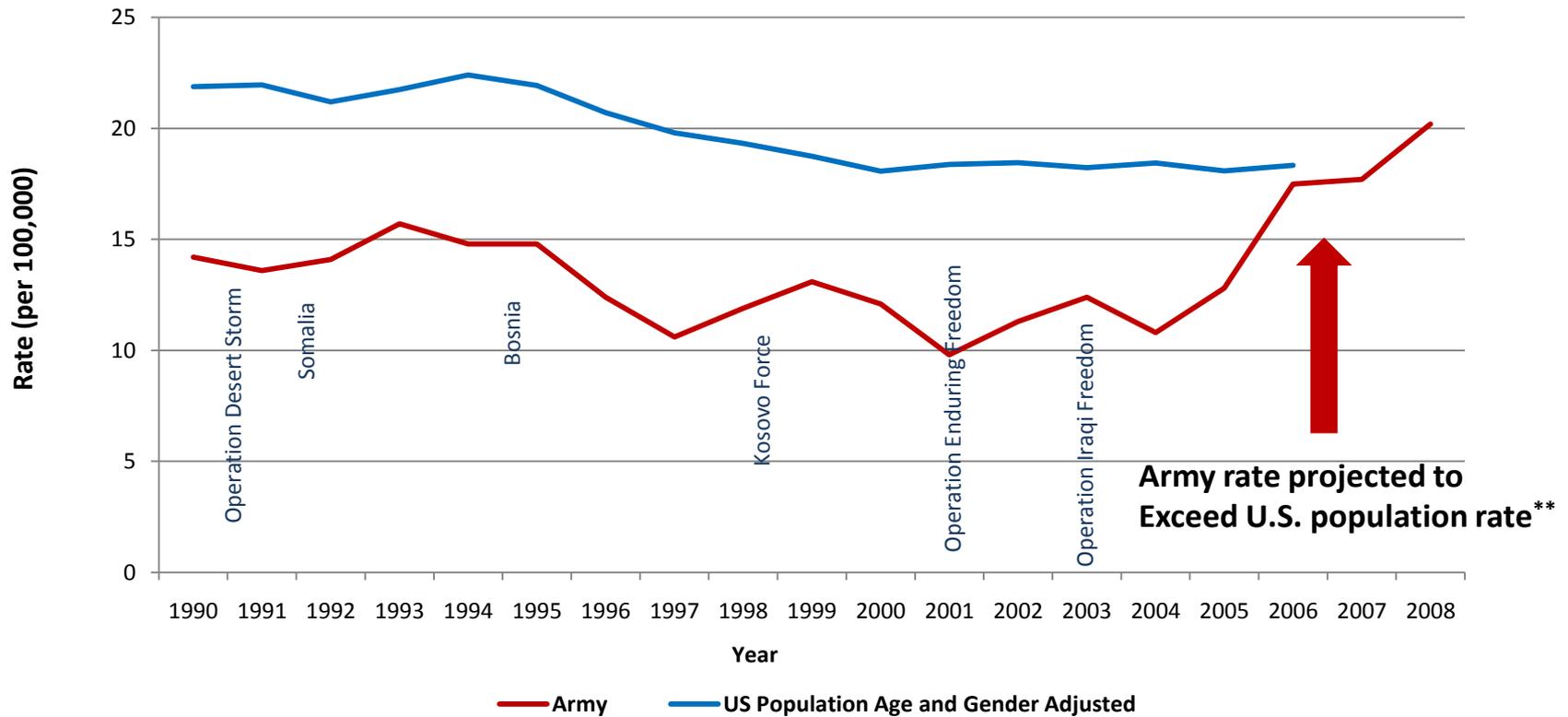


Epidemiology of Suicide in the US Army



Suicide Rates from 1990-2008

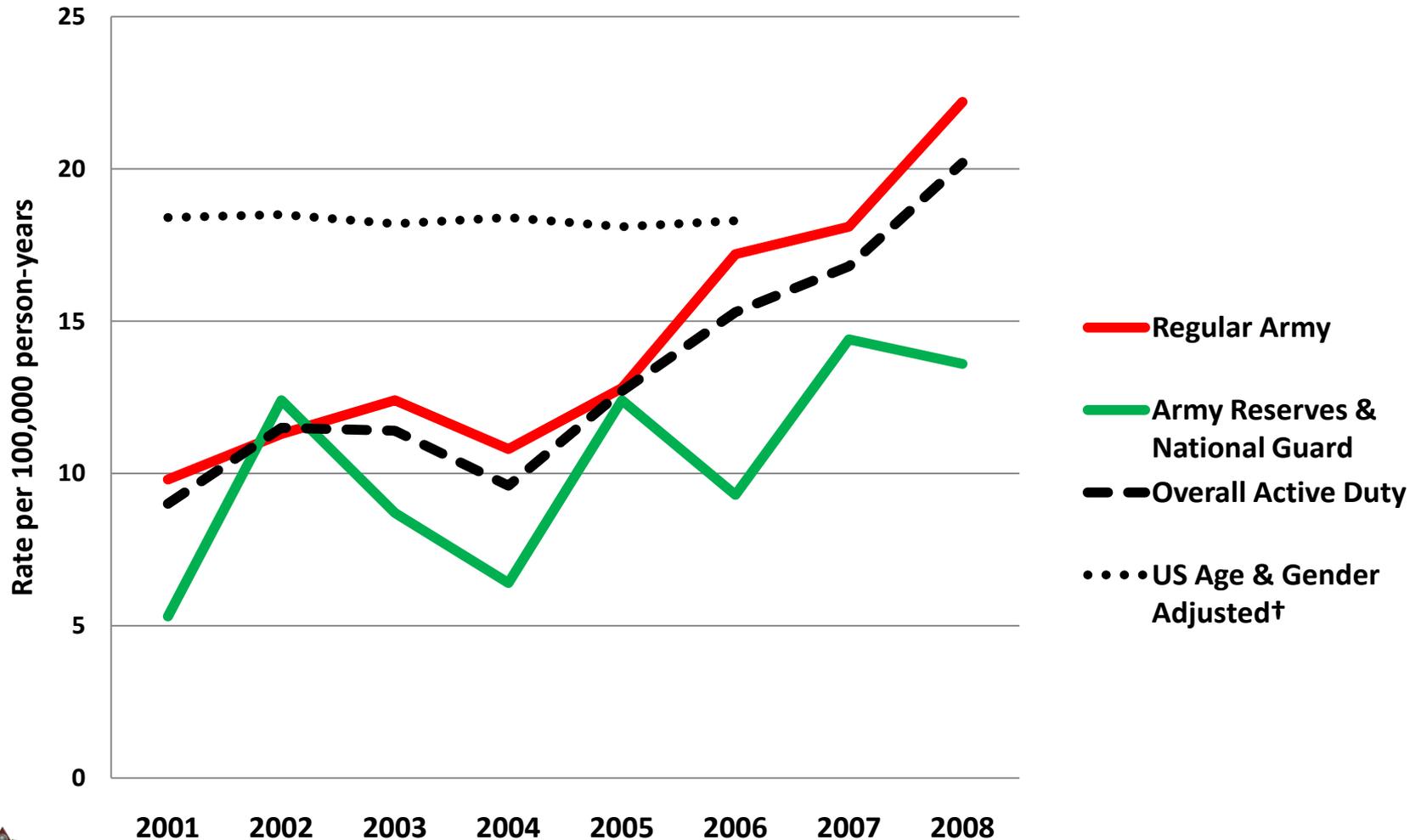
- Historically, the US Army rate has been lower than the US population rate
- Both populations experienced a downward trend from the mid-90's to 2001
- From 2001 to 2006, the US population rate was steady around 18/100k while the Army rate roughly doubled



Data Sources CDC/NCHS, National Vital Statistics System (civilian data). G1 (Army data)



ARMY Suicide Rate Trends, by Component



Army Suicides: CY 2001 through 31 JULY 2009

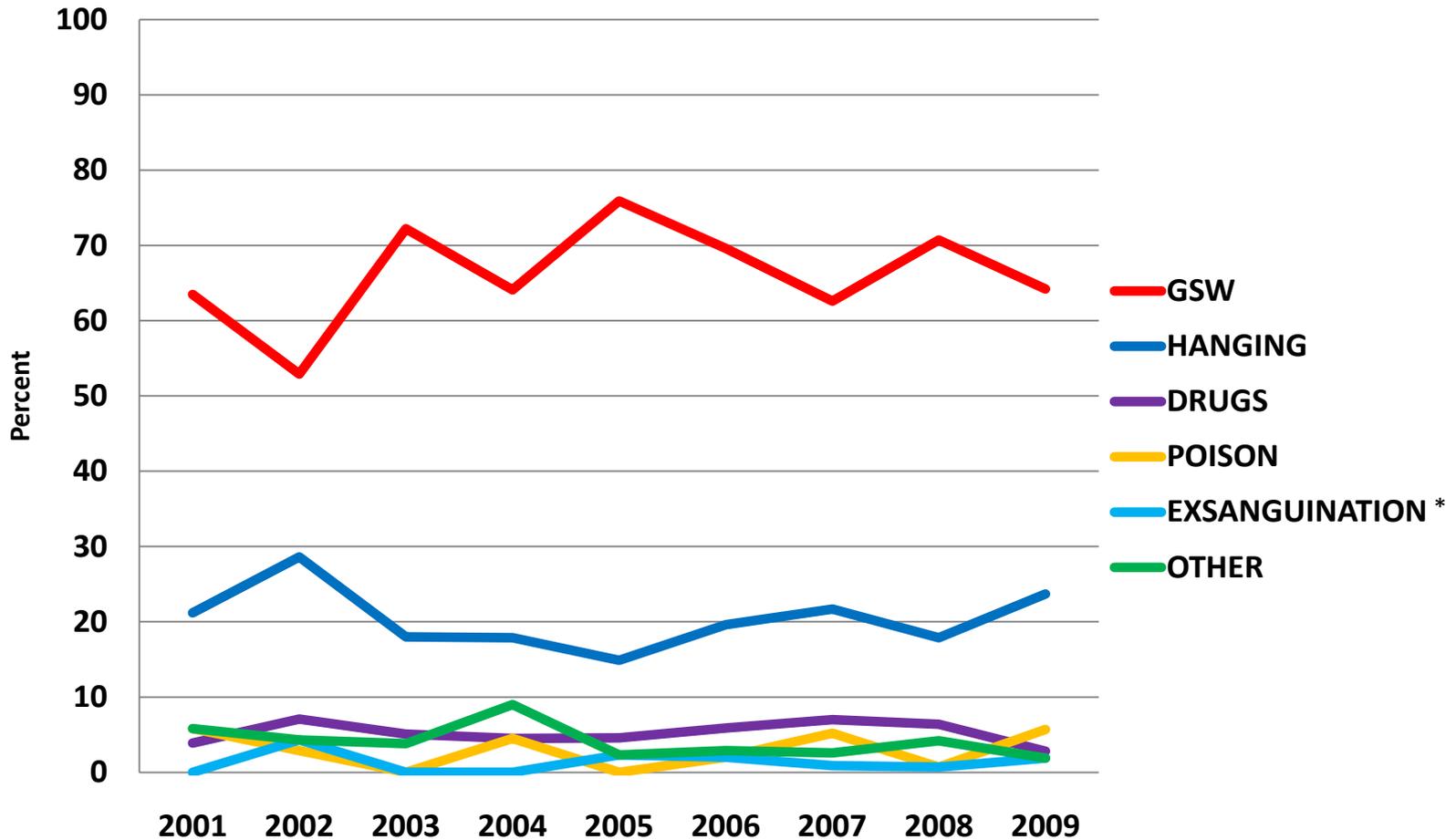
	2001-2009†		Overall ARMY‡	
NUMBER OF SUICIDES	817			
	N	%		
MALE	774	94.7	86.0	***
FEMALE	43	5.3	14.0	
AVERAGE AGE	28		25	***
Aged 18-25	365	44.7	43.2	
Aged 25-35	287	35.1	38.4	
Aged 36-60	165	20.2	18.4	
RACE-ETHNICITY				
Caucasian/White	615	75.3	74.6	*
African American	104	12.7	15.7	
Hispanic and Other	98	12.0	9.7	
MARITAL STATUS				
SINGLE	365	44.7	39.1	***
MARRIED	423	51.8	53.4	
DIV/SEP/WIDOWED	29	3.5	7.5	

† Through 31 July 2009; ‡ Based on 2008 figures; * p<.05; ** p<.01; *** p<.001



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US ARMY Suicides: Method of Death



* Bleeding



Estimated Rate of Suicide by Army Functional Group, 2004-2009

Functional Group	# Suicides (N=508)	% of Suicides	Population 2004-July 2009	Estimated Rate per 100,000*	99% Confidence Limits
OVERALL	508	100	2,831,568	18.1	18.07-18.13
Maneuver, Fire & Effects	267	52.6	1,226,517	21.8	21.75-21.86
Force Sustainment	118	23.2	708,260	16.7	16.65-16.75
Operations Support	70	13.8	559,224	12.5	12.46-12.54
Special Branches	36	7.1	212,933	16.9	16.81-16.99
Other	17	3.3	106,574	16.0	15.87-16.13

* Based on number of individuals, not person-years;

Significantly greater than average



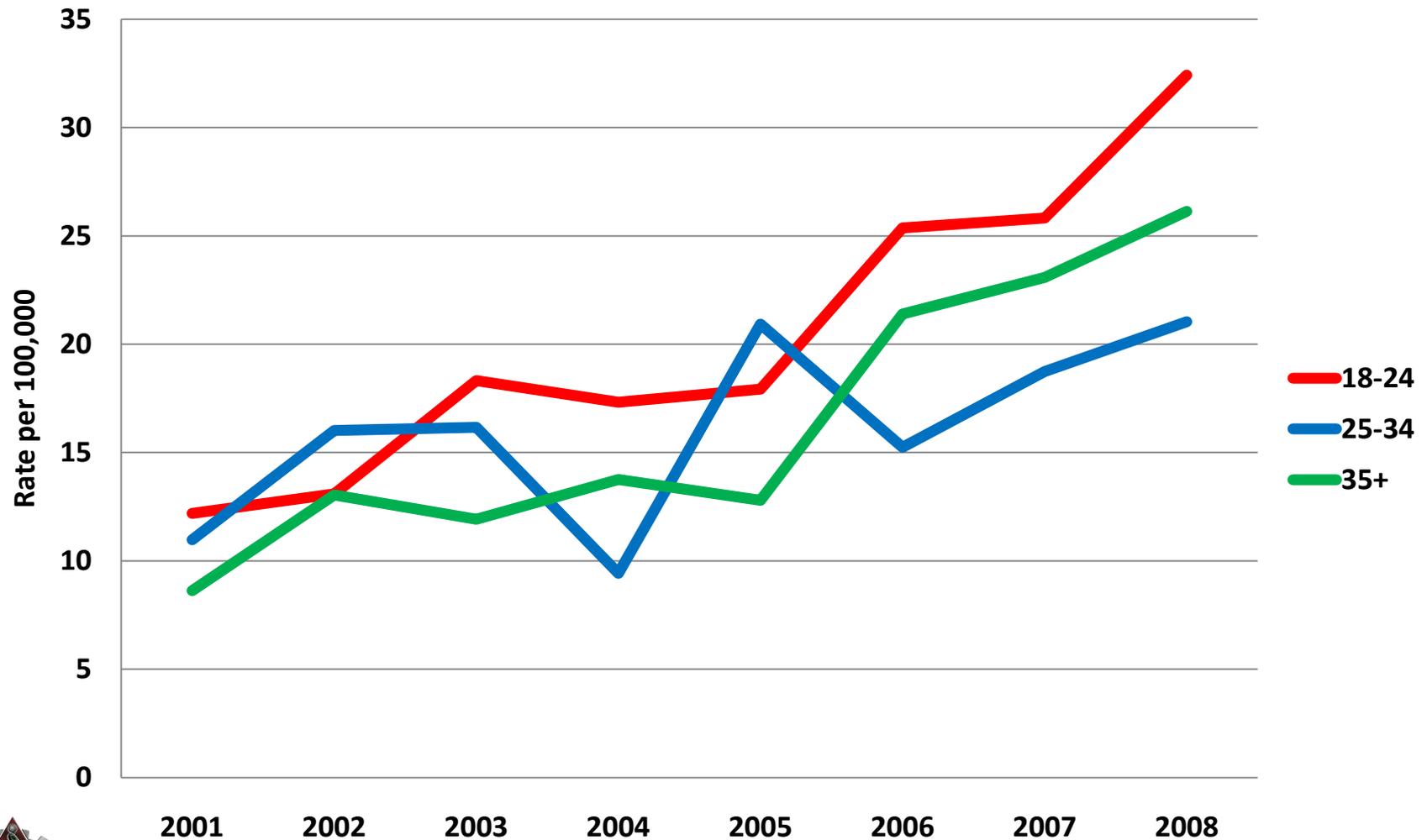
Estimated Rate of Suicide by Army Branch, 2004-2009

MOS Group	# Suicides (N=508)	% of Suicides	Population 2004-2009	Estimated Rate per 100,000*
Infantry	106	20.9	369,267	28.7
Mechanical Maintenance	42	8.3	186,414	22.5
Communications	33	6.5	196,615	16.8
Supply	30	5.9	300,425	10.0
Field Artillery	29	5.7	161,169	18.0
Medical ‡	29	5.7	178,487	16.2
Armor	27	5.3	131,009	20.6
Military Intelligence	25	4.9	141,952	17.6
Engineers	24	4.7	116,869	20.5
Aviation	23	4.5	159,867	14.4
Military Police	21	4.1	105,487	19.9
Ordnance	18	3.5	105,240	17.1
Transport	13	2.6	123,596	10.5
Recruiting & Retention	13	2.6	20,916	62.2
Chemical-Biological	12	2.4	47,488	25.3
Air Defense	10	2.0	62,124	16.1
Other	53	10.4	406,643	13.0



Note: These data are not adjusted for age, gender, and other demographic factors
 Categories with estimated rates > 20 per 100,000 are highlighted
 Data represents 508 Soldiers for whom MOS group data was available

ARMY Suicide Rate Trends, by Age Group

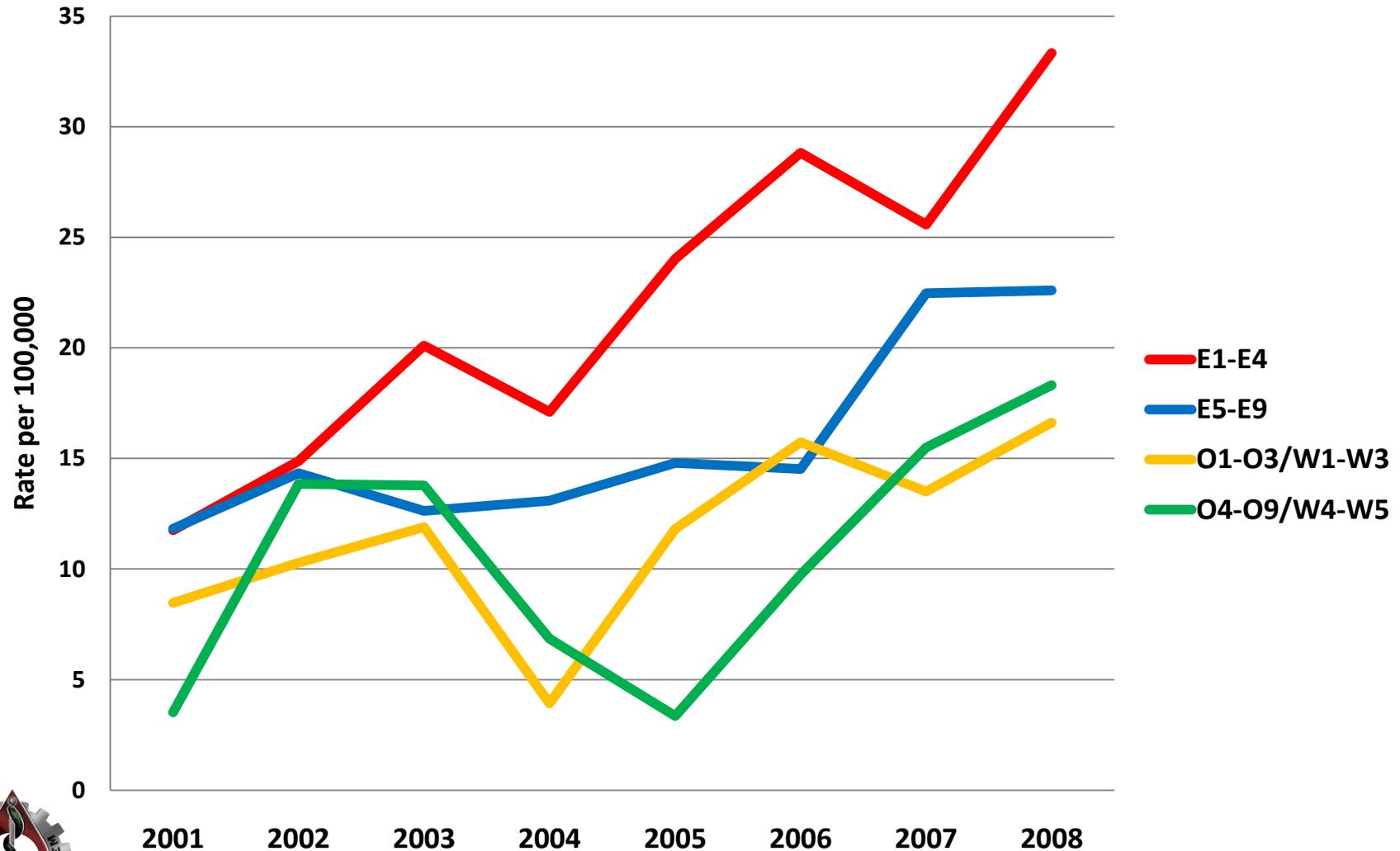


Source: ABHIDE

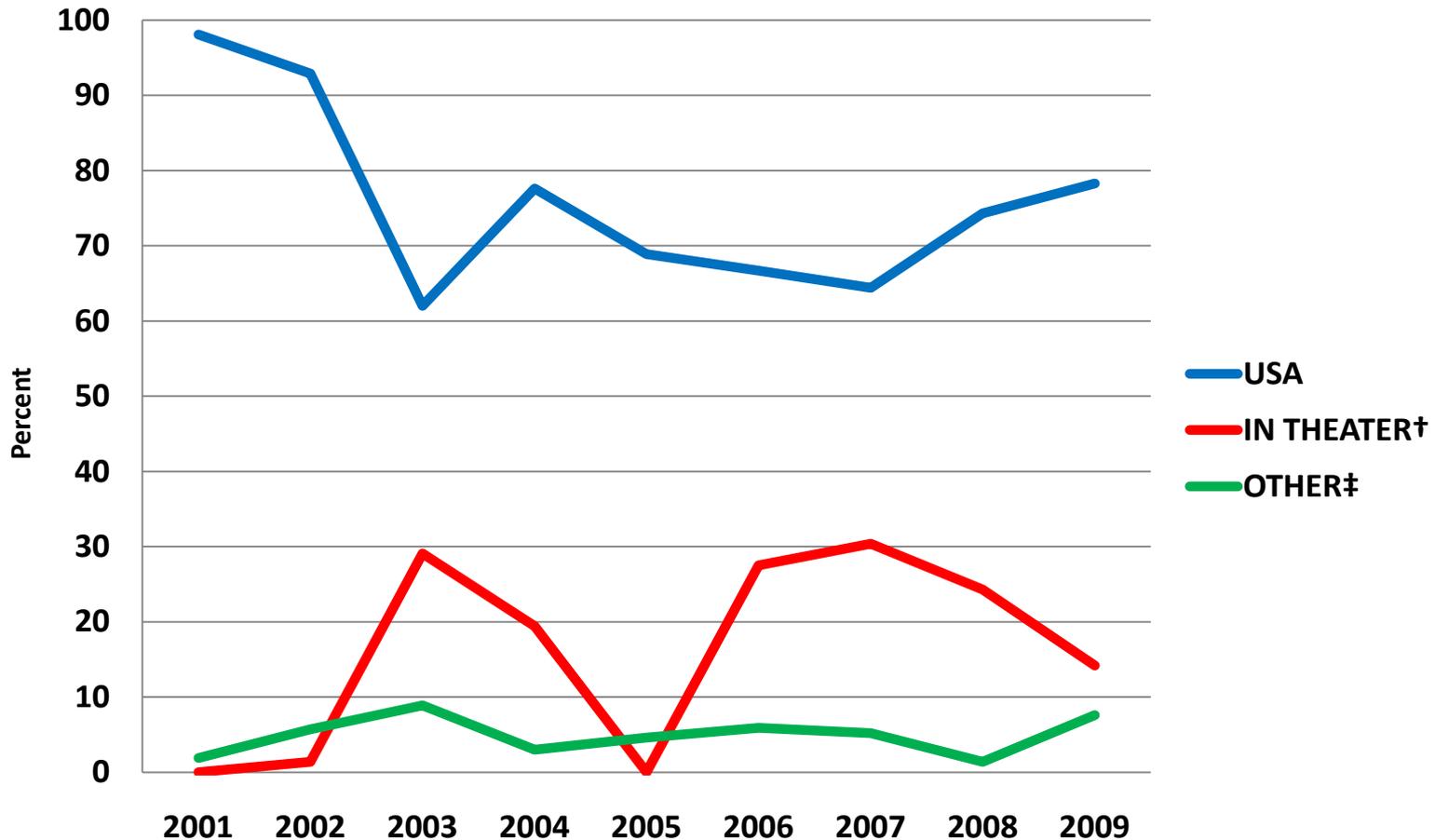
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Army Suicide Rate Trends, by Rank



US Army Suicides by Place of Death, 2001-2009



† OEF/OIF

‡ Africa, Cyprus, Germany, Kosovo, South Korea, Cuba, Italy, Belgium, Djibouti, Mexico, Poland, Thailand, Uzbekistan



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US Army Suicides 2003-2009* : Mental Health Diagnoses

N = 696

	N	%
INPATIENT CARE for any MH Disorder	107	15.4
OUTPATIENT CARE for any MH Disorder	306	44.0
Any MH Disorder	313	45.0
More than one MH Disorder	198	28.5
ANY MOOD DISORDER	136	19.6
Major Depression	59	8.5
Bipolar	17	2.5
Dysthymia	31	4.5
Any Anxiety Disorder (not PTSD)	88	12.7
Post-Traumatic Stress Disorder	50	7.2
Acute Stress Disorder	21	3.0
Adjustment Disorder	161	23.2
Personality Disorders	37	5.3
Psychotic Disorders	19	2.7
Substance-Related Disorders	114	16.4
Previous Suicidal Behavior (E-codes)	49	7.1



* Through 31 July 2009

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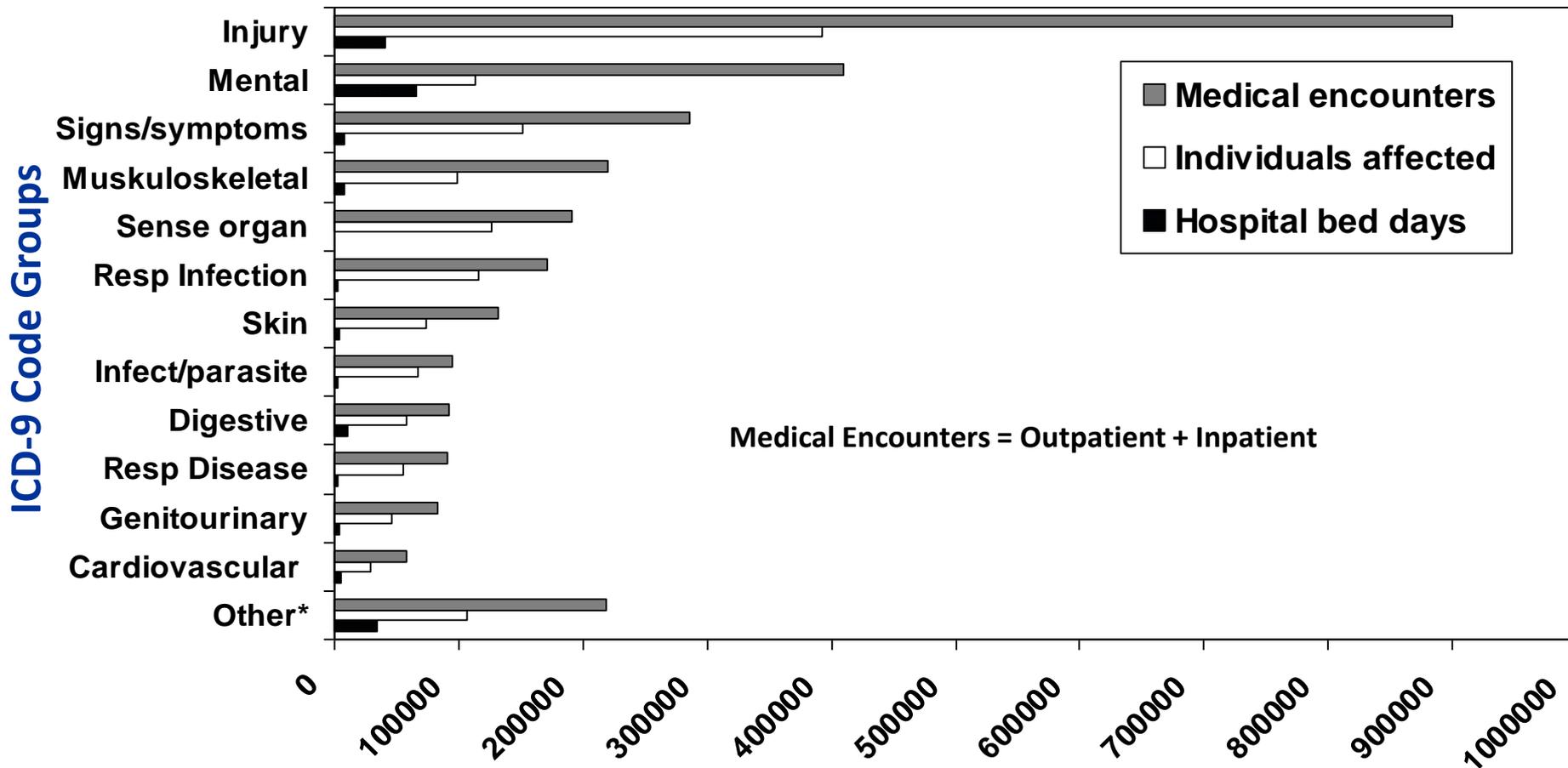
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Epidemiology of Suicide in the US Army: Underlying Factors



Burden of Injuries and Diseases

U.S. Army active duty, 2007



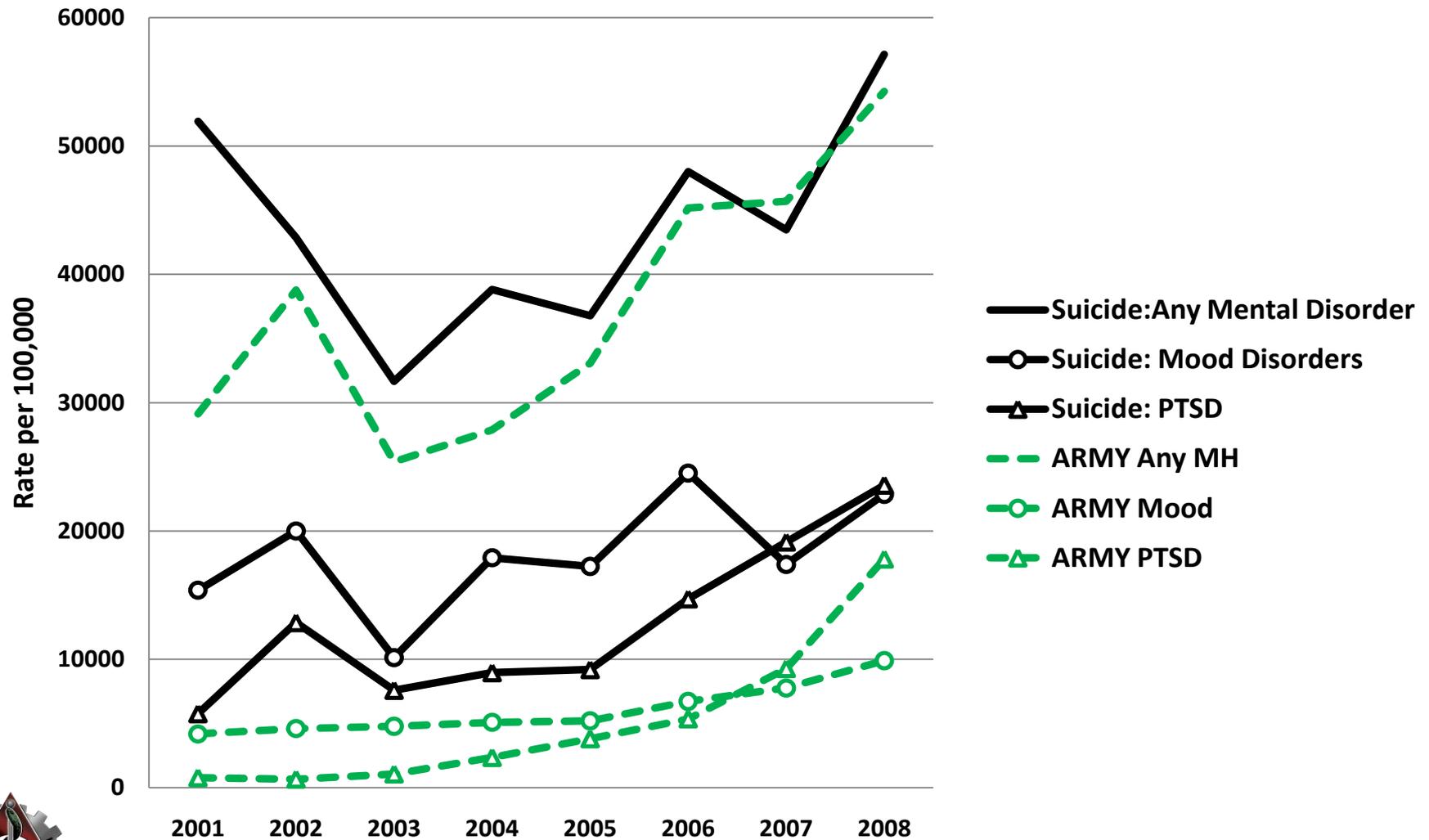
Medical Encounters/ Individuals Affected

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*Includes all ICD-9 codes groups with less than 50,000 medical encounters

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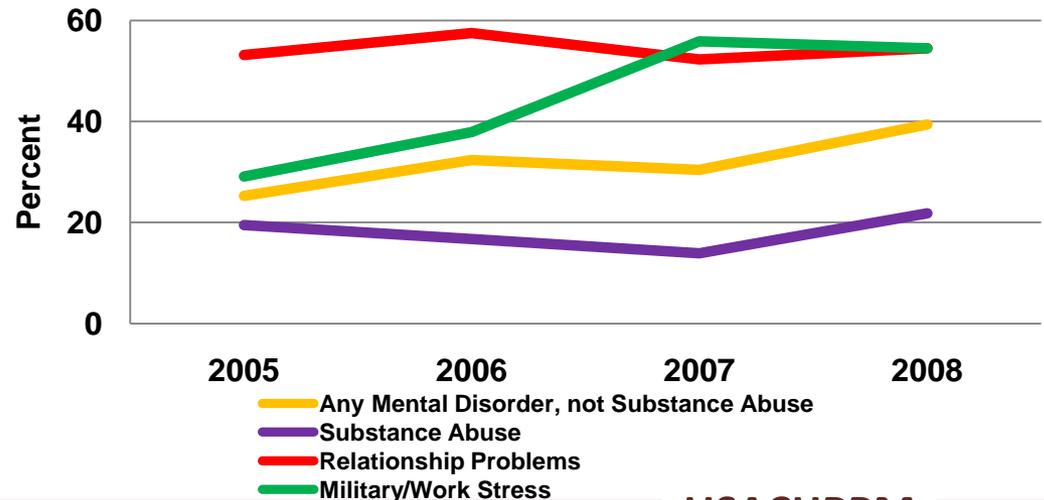
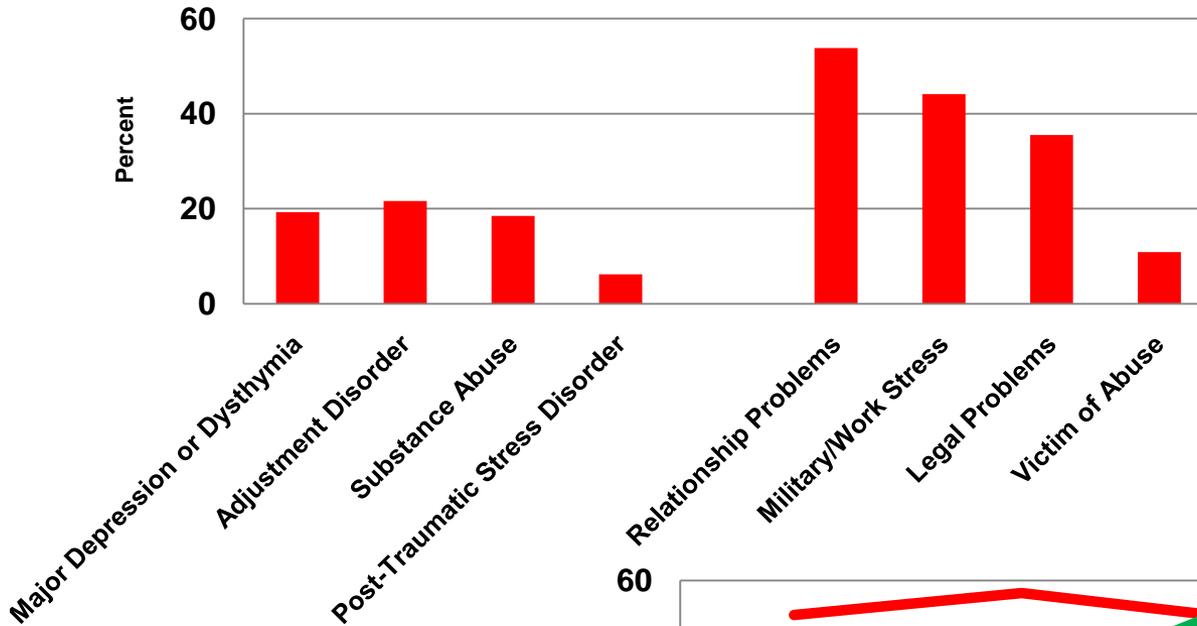
US Army Suicides: Mental Health Trends, 2001-2008



Source: ABHIDE & DMED

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US Army Suicides: Modifiable Risk Factors 2005-2008



From 2005-2008, the proportion of suicides with identified risk factors of military/work stress and any mental disorder increased significantly

Source: AFHSC, PDHA
Data represents 245 Soldiers who redeployed and completed the PDHA



Stigma

- Focus Groups from a recent field study revealed four types of stigma: career, leadership, peer-to-peer, and personal
- Stigma was reported differently across rank groups; lower enlisted were more concerned about peer and self-perceptions, senior enlisted were most concerned about their career and perceived leadership abilities

Career	Leadership	Peer-to-Peer	Personal
On permanent record, affects future promotion and employment	Some old school, senior NCOs, and early promoted NCOs create/maintain stigma	Peer stigma is the worst	Weak, isolated, embarrassed
End career, lose retirement	More stigma for senior enlisted, others think they can't lead, fear of effecting retirement	More stigma if never deployed	Profile makes them feel worthless
Lose security clearance	Many squad/platoon leaders don't support	Treated differently, Ridiculed	Pride/Denial
"Boarded out" rather than rehabilitated	Treated differently; doubt 'warrior' abilities; ridicule those with a profile	Gossiped about/Perceived faking	Don't want to be viewed as a "bad" Soldier

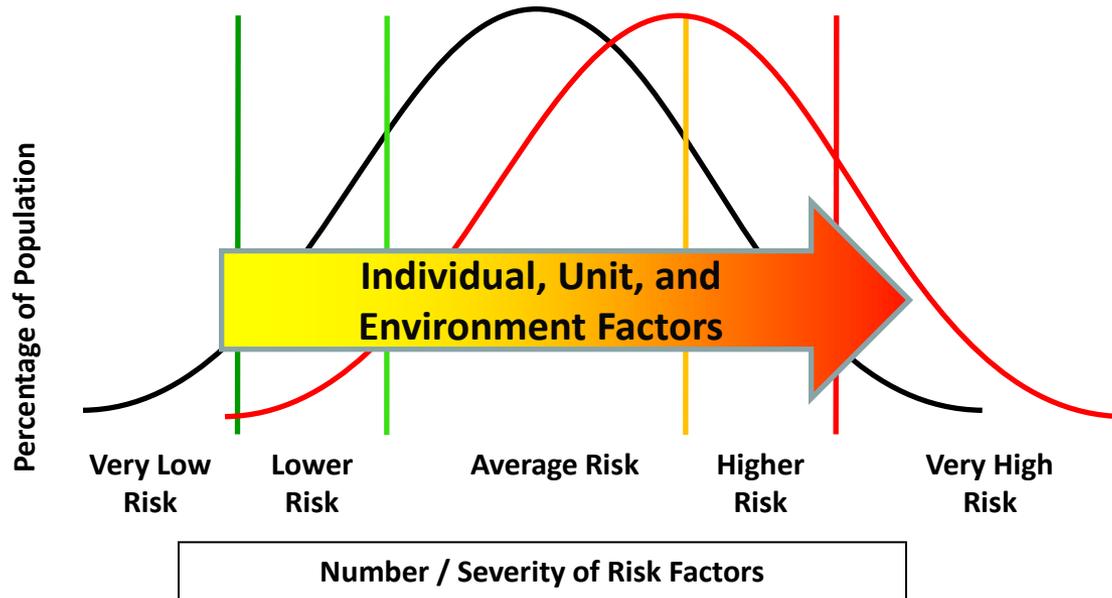


Population Health Perspective



Multifactorial Risk Model

- Multiple individual, unit, and environmental factors may converge to shift the population risk to the right
- This would put more Soldiers in the Very High Risk category making increased numbers of adverse outcomes more likely



Hypothesized Risk Factors

Individual

- Adverse Childhood Events
- Prior history of Mental Illness
- Alcohol / Drugs
- Behavioral Health Issues (untreated/under-treated)

Unit

- Turnover
- Leadership (Stigma)
- Training / Skills

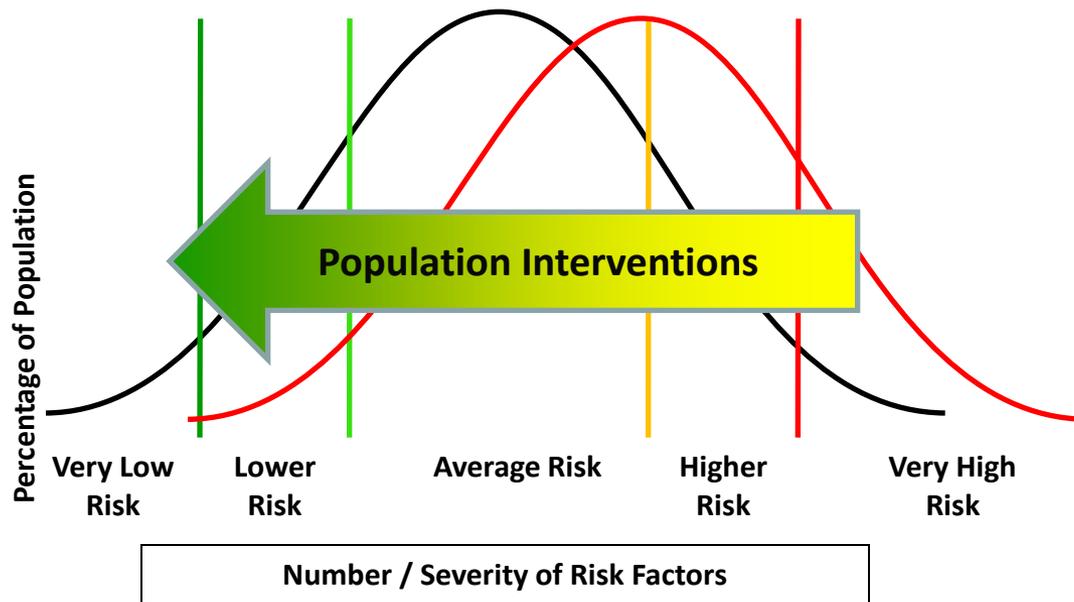
Environment

- Turbulence
- Family Stress / Deployment
- Community
- Stigma



Risk Mitigation Strategies

- Programs that shift the overall population risk back to the left may have greatest impact.
- The Army is implementing comprehensive programs designed to shift the curve back to the left, reducing underlying population risk, while continuing to improve individual-level care and follow-up.



- Comprehensive Soldier Fitness:** Health Promotion, Risk Reduction, and Suicide Prevention
- Increase Resiliency
 - Decrease Alcohol/Drug Abuse
 - Decrease Untreated/Undertreated BH
 - Decrease Stigma to Seeking Care
 - Decrease Relationship/Family Problems
 - Decrease Legal/Financial Issues
 - Consistent Stigma Reduction themes



Population Based Strategies for Suicide Mitigation

- *The best evidence-based suicide mitigation strategies are optimal identification of high-risk groups and treatment of suicidal individuals*
- “Gatekeeper” strategies, which identify high risk individuals, may decrease suicides if identification leads to appropriate clinical management or reduction of stress
- Recent literature suggests interventions which decrease risk-factors in the population may impact suicide rates
- Current Army suicide mitigation programs focus on identification/treatment of high risk individuals, not groups.
- Incorporating strategies to mitigate risk-factors in the general Army population and among specific high risk groups may decrease risk for suicide in the population

