Health on the Homefront:
Suicide in the Department of the Navy

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Suicide in the Department of the Navy

- Part 1:
  - Overview of the current policies and procedures
  - Historical public health perspectives
  - Impact of suicide on the Force
  - Prevention and risk reduction efforts
Policies for Suicide Prevention

- OPNAVINST 1720.4A
- MCO 1720.2
  - Describe and implement the structure of the program for each service

Suicide as a Public Health Issue

Military suicide rates were historically lower than the rates for the general population

- Risk Reduction:
  - Selection bias
  - Peacetime employment with lower risks
  - Free medical care including mental health
- Risk Increase:
  - Negative Perceptions
  - Individual mental health issues and behaviors
  - Age and level of responsibility
Suicide as a Public Health Issue

Analysis of suicides and suicide attempts follows a public health model of exposure(s) modified by risk factors leads to an increased risk of suicide.

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Suicide as a Public Health Issue

Study design issues that affect the assessment of exposure and risk factors.

- Currently retrospective
  - Recall bias by family, friends, co-workers
  - Missing information
    - Family history, unobserved behaviors
- Complexity makes the study results difficult to interpret
  - Unmeasured confounding
  - Interaction
  - Survivor effect
- Population methods may not be appropriate
  - Individual characteristics may be the driving force
Impact of Suicide on the Force

“For every suicide, six people are affected” (Shneidman, 1969)
– Could be thousands in the military (Carr, 2011)

- Acute and chronic effects
  - Unit cohesion and morale
  - Unit leadership
  - Unit medical staff
  - Community stress
  - Mental health care providers

Suicide Prevention

- Fostering Resilience
  - Operational stress control, life skills, strengthen families, increase awareness
- Vigilance and Early Warning
  - Referral and counseling
- Crisis Response
  - Get to safety, treatment, and follow-up
  - United States Marine Corps (USMC) can reward a Marine for guiding a person at risk to treatment
- Post Event
  - Reporting, analysis, survivor assistance
  (Chavez, 2010)
Suicide Prevention

- 21st Century Sailor
  - Established in 2013 in response to Task Force Resilient, established a comprehensive effort to build life skills
- Research into genetic and behavioral biomarkers (Nock, 2011)
- Critical evaluation of existing programs to determine value (Nock, 2011)
- In-depth case analysis, bringing together all aspects of the military member’s career and life
- More attention to responses on mental health surveys

Recent Studies

- LeardMann et al, 2013
  - 83 suicides among those that participated in the Millennium Cohort
    - Not all were on active duty at the time of the suicide
  - No direct association between deployment or combat
  - Being male and having a history of mental health disorders were independently associated

“Therefore, knowing the psychiatric history, screening for mental and substance use disorders, and early recognition of associated suicidal behaviors combined with high-quality treatment are likely to provide the best potential for mitigating suicide risk.”
Recent Studies

- Bryan and Clemans, 2013
  - 161 patients referred for suspected traumatic brain injury (0-19 TBIs, mean 2.5)
  - Suicide risk was measured using the 4-item Suicidal Behaviors Questionnaire–Revised (SBQ-R)
  - The more TBIs, the higher the risk for depression, PTSD, and suicide
  - When controlling for PTSD and depression, the number of TBIs was associated with a significant increase in suicide risk.

Suicide in the Department of the Navy

- Part 2: Epidemiology and Case Review Process
  - Background: suicide in the Department of the Navy (DON)
  - Background: the EpiData Center
  - The data mining process
  - Example: 2012 Navy Bureau of Medicine and Surgery (BUMED) case study
  - Future projects
  - References
Background: DOD Reports

- 2010: “Army Health Promotion, Risk Reduction, and Suicide Prevention (HP/RR/SP) Report”
- 2012: “Suicide Data Report”- Department of Veterans Affairs, Mental Health Services, Suicide Prevention Program
Background: The EpiData Center

- **EpiData Center Department:**
  - Created in 2005, part of NMCPHC
  - Provides epidemiologic services to Department of the Navy customers

- **Electronic Data Sources Include:**
  - Inpatient and outpatient medical care, both at home and in-theater
  - Deployment history
  - Self-reported health histories (deployment, yearly physical readiness test)
  - Personnel files (alcohol and drug incidents, monthly personnel files, physical readiness testing)
  - Prescription drug information (Military Treatment Facility, in-theater, in town)
  - Pathology and chemistry testing information

The Data Mining Process

- In-depth case reviews of suicide deaths
  - 2010 USN active duty and reserve members
  - 2011 and 2012 Navy Medicine suicides

- Multi-disciplinary team: epidemiologists, fleet/family services, psychologists, suicide prevention coordinators, NCIS, Armed Forces Medical Examiners, Corpsmen, CNIC, and chaplains

- 10 different data sources utilized by NMCPHC team

- Supplement the normal data collected in the Department of Defense Suicide Event Report (DODSER)
Death Review Team: 2012 Navy Medicine Suicides*

- Surgeon General of the Navy requested a “deep dive” of Navy Medicine suicides. Team met in December 2012

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<th>Year</th>
<th>% of HM Rate in USN</th>
<th>% of Navy Suicides by HM Rate</th>
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<tr>
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<td>7.5</td>
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<tr>
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</table>

Findings as reported in Task Force Resilient Report, released APR 2013*

Death Review Team: 2012 Navy Medicine Suicides*

- Review Methodology:
  - Group split into two teams of experts who reviewed all documentation and followed the same methodology to review cases
  - Recommendations were made in four areas: leadership (including policy), prevention and training, access to and delivery of care, and surveillance.

- 22 suicide deaths in 2011 and 2012 (prior to the month of review)
Death Review Team: Findings

- There are many similarities between Navy Medicine suicide events and other suicide events:
  - Demographics
  - Risk factors (relationship problems, changes in duty status, and personal loss)
- Only 3 of 22 cases presented factors potentially unique to Navy Medicine

Death Review Team: Findings

- Multiple people saw warning signs
- Psychiatric disorders prior to suicide were present in 50% of cases while 64% of cases sought mental health treatment prior to suicide
- Multiple risk factors occur in the lives of cases including:
  - Change in duty status (68%)
  - Significant personal loss (68%)
  - Disciplinary action (32%)
  - Excessive or increased alcohol use (55%)
Death Review Team: Findings

- Sleep problems (diagnosed and undiagnosed) occurred in 59% of suicides
- Stigma about mental health and suicidal behavior
- A lack of awareness for support resources among family members who were concerned about their sailor
- Use of multiple suicide prevention techniques was identified, indicating implementation of Navy training and suicide prevention strategies

Force Health Surveillance: Turning Findings into Action

- Ongoing Work at EpiData Center:
  - Health history prior to suicide attempt in the USMC (2010 and 2011 cohort)
  - Monthly force health surveillance reports (behavioral health encounters, selected medication, and post-deployment surveys)
  - Health history prior to suicide attempt in the USN (2011 and 2012 cohort)
  - TBI and suicide related behaviors
  - Sleep disorders in the USN and USMC
  - Sleep medication prevalence among Sailors and Marines
References


Questions?

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