

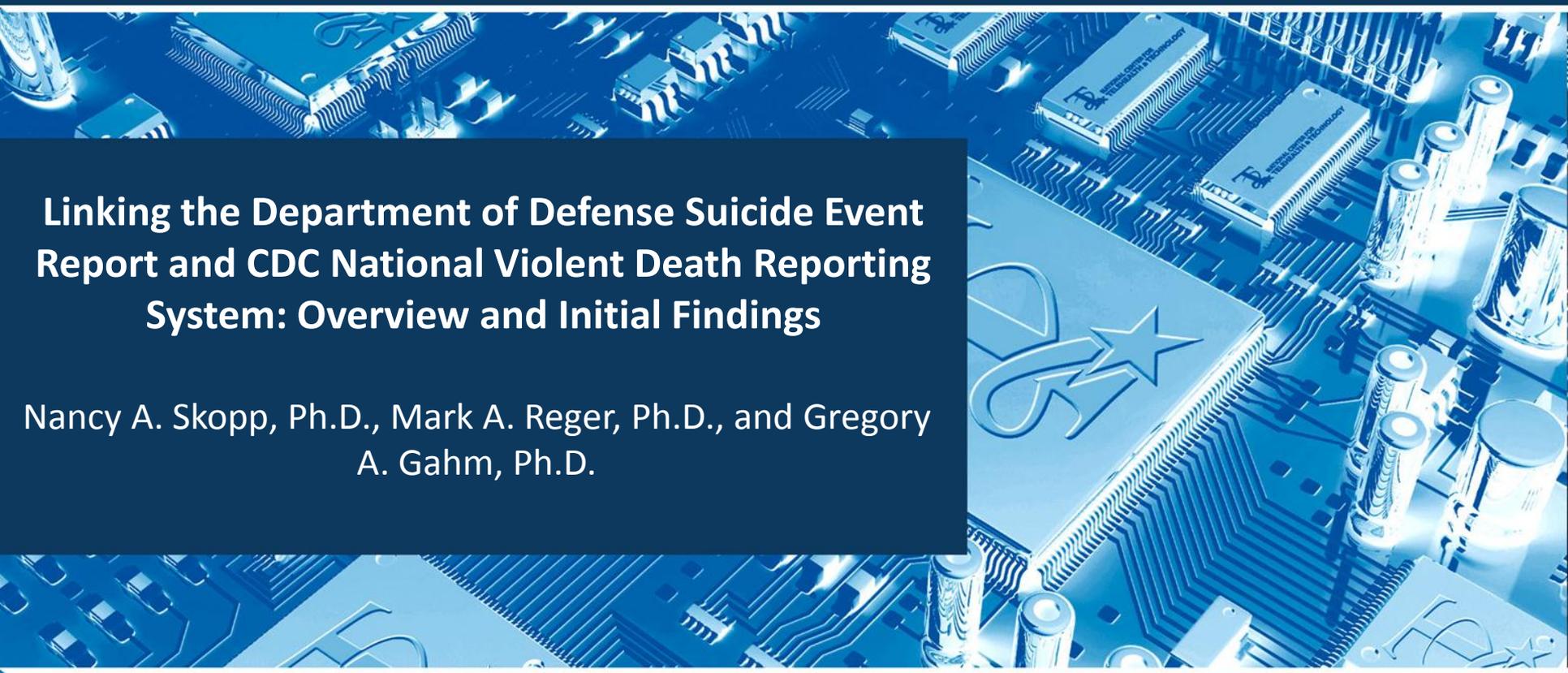


NATIONAL CENTER FOR TELEHEALTH & TECHNOLOGY

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Linking the Department of Defense Suicide Event Report and CDC National Violent Death Reporting System: Overview and Initial Findings

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Collaborators

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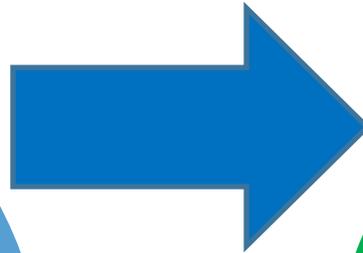
Debra Karch, Ph.D., Centers for Disease Control

Agenda

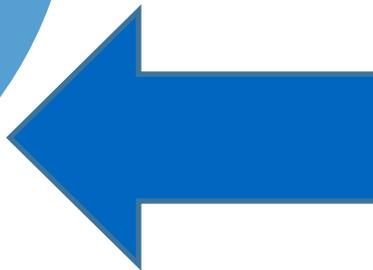
- DoD Suicide Event Report (DoDSER)
- Linking the DoDSER with the CDC National Violent Death Reporting System (NVDRS)
- Initial Research Findings

Importance of Suicide Research Surveillance in the Military

- Track suicide rates and identify patterns across time
- Examine risk factors unique to SMs
- Inform suicide prevention strategies and monitor their effectiveness



- Identify potential solutions/ interventions
- Evaluate the effectiveness of interventions, programs & policies
- Add to the body of research and theory on military suicide



The Department of Defense Suicide Event Report (DoDSER)

**History, Functionality, Current Status,
and Future Directions**

Department of Defense Suicide Event Report (DoDSER)

Acknowledgments

- Dr. Gregory Gahm
- Dr. Mark Reger
- COL Robert Ireland, M.D.
- CDR Janet Hawkins, MSW
- CDR Aaron Werbel, Ph.D.
- Lt Col Steven Pflanz, Ph.D.
- LCDR Bonnie Chavez, Ph.D.
- CDR Anthony Doran, Psy.D.
- Mr. Walter Morales
- MAJ Lisa Hull
- Lt Col Catherine Bobenrieth, M.D.
- Lt Col Michael Kindt, Ph.D.
- Lynne Oetjen-Gerdes
- CAPT Joyce Lapa, M.D., MPH
- Debi Harris

The Department of Defense Suicide Event Report (DoD SER)

- Suicide surveillance system designed by T2 in collaboration with the Services
- Automates standardized data collection on suicide events worldwide across all Services
- Required for all Active component and activated Reserve and Guard suicides
- Provides data for a comprehensive annual DoD suicide report to support examination of risk factors



The Department of Defense Suicide Event Report (DoDSER)

History:

- Services collected suicide data through separate processes (ASER, SESS, DON SIR)
- All Services worked with the Suicide Prevention and Risk Reduction Committee (SPARRC) to develop a standardized system – DoDSER launched 1JAN08

Data Collection Methods:

- DoDSERs submitted via web form for all suicides (Regular, Active Guard Reserve and Activated Reserve and Guard), as determined by the AFMES
- DoDSERs submitted by behavioral health providers, health care providers, or command appointed representatives

Benefits of a Web-based Surveillance System

- Data are:
 - Submitted via secure website
 - Centralized and standardized
 - Automatically archived
 - Potential to link w/ other systems
- Form field validation – quality control
- Radio Buttons/checkboxes
- Training component – to assure quality of data

The screenshot shows a web browser window titled "DoDSER - Report Identifying Information - Microsoft Internet Explorer". The address bar shows the URL: <https://dooser.amedd.army.mil/dooser/showDooserPage.action?currentPage=identification&pageTitle=save>. The page content includes a navigation menu on the left with options like "Create", "Report Info", "Site Options", "Home", "My Profile", and "Logout". The main content area is titled "Report Identifying Information" and contains instructions: "The following fields pertain to information that are necessary to identifying and distinguishing different Suicide Event Reports. All required fields must be filled in order to create a new report record on the DoDSER database and move on to subsequent pages." Below this, there are five numbered fields with radio button options and text input fields. Field 1: "Event type: (required to move on)" with options: Suicide (selected), Suicide attempt (evidence of intent to die), Self harm (without intent to die), and Suicidal ideation only (without an attempt/self harm). Field 2: "Event date:" with a date picker set to "12 Jul 2009" and "Event time:" with a time input set to "1200". Field 3: "Last name:" with input "Doe", "First name:" with input "John", and "Middle name:" with an empty field. Field 4: "SSN:" with input "111-11-1111" and "Date of birth:" with a date picker set to "01 Jan 1970". Field 5: "Sex:" with options: Male (selected) and Female. At the bottom of the form are two buttons: "Save & Return Home" and "Save & Next Page". The footer of the page includes logos for the Medical Center for Telehealth & Technology and the Service Centers of Excellence, along with the copyright notice "© 2008 National Center for Telehealth & Technology".

DoD SER Item Content

Objective & Subjective, Detailed, Standardized Information:

Comprehensive Event Data

Location

Method

Setting

Extensive Risk Factor Data

Dispositional/
Personal

Historical/
Developmental

Contextual

Clinical/
Symptom
Factors

e.g., demographics, communication of intent, substance using during suicide, deployment history, combat exposure

e.g., abuse history, prior suicide attempt, relationship hx financial, legal, administrative hx

e.g., firearm in home, living situation, children in the home, duty environment

e.g., diagnoses, medical & BH visits, psychotropic meds, health care utilization

Non-Fatal Suicide Events

All Services also collect suicide attempt data

Army also collects:

- Self-harm without intent to die
- Suicidal ideation

DoDSEER Data Sources

Suicides

**Non-Fatal Suicide Behaviors
(Some Services)**

**DoDSEER responses
are derived from review
of all relevant records**

Interview of co-workers/supervisors,
responsible investigative agency
officer, other involved professionals,
or family members when appropriate
(some Services)

The Current DoD Suicide Event Report

Current DoDSER software includes secure (CAC) login website with



- Accounts that differ by role (Basic users, program managers, DoD managers)
- Core set of DoD items & functionality for unique items by Services
- Coding guidance
- Save/Edit functionality
- Delete and restore DoDSERs

Screen Shot of DoDSER Software

DoDSER - III. Event - Microsoft Internet Explorer

Address: https://dodser.amedd.army.mil/dodser/showDodserPage.action

Department of Defense Suicide Event Report

III. Event

Patient Name: Doe, John **Event Type:** Suicide **Report Type:** DoDSER Navy
Patient SSN: 111-11-1111 **Event Date:** 12 Jul 2009

If a question is marked with an asterisk (), you must provide an answer before you can submit the DoDSER*

24. Geographic location of event:

*Country:

*City/post/camp:

25. *Setting: Residence (own) or barracks
 Residence of friend or family
 Work/jobsite
 Automobile (away from residence)
 Inpatient medical facility
 Other

Question 26 does not pertain to completed suicides.

27. *Primary method used: Drugs
 Alcohol
 Gas, vapor poisoning by vehicle exhaust
 Gas, vapor poisoning by utility (or other) gas
 Solvents, pesticides and other agricultural chemicals
 Hanging
 Drowning
 Firearm/gun, military issue or duty weapon
 Firearm/gun, other than military issue
 Fire, steam, etc
 Sharp or blunt object
 Jumping from high place
 Lying in front of a moving object
 Crashing a motor vehicle
 Other
 Don't know

28. *During the event, was alcohol used? Yes
 No
 Don't know

29. *During the event, were drugs used? Yes
 No
 Don't know

30. *The above evidence that the patient/subject intended to die?

Done Local intranet

DoDSER: User Defined Reports facilitate analysis of submitted DoDSER data

Patient Sex	Event Type	Count	Percent
Female	Self harm (without intent to die)	21	5.41%
	Suicidal ideation only (without an attempt/self harm)	41	10.57%
	Suicide attempt (evidence of intent to die)	26	6.7%
Male	Self harm (without intent to die)	52	13.4%
	Suicidal ideation only (without an attempt/self harm)	142	36.6%
	Suicide	30	7.73%
	Suicide attempt (evidence of intent to die)	76	19.59%
	Total	388	100%

User Defined Queries

User Defined Reports are designed to facilitate analysis of submitted DoDSER data. Report data is limited to that data to which you have access.

Select Service Type(s): [Only available to DoD Managers]

Army
Air Force
Marine Corps
Navy

Check here to include Service as a Break Down option.

Select Event Type:

Data analyzed will be limited to the selected Event Type(s). **At least one must be selected.** (Multiple selections may be made by dragging the mouse or by holding down the Ctrl key as you select.)

Suicide
Attempt
Self Harm
Ideation

Select Date Range:

Data analyzed will be limited to the date range selected. Dates may be entered using the format mm/dd/yyyy , dd mmm yyyy, or by using the calendar pop-up provided. If no dates are entered, analysis will include data beginning with the first day of the current calendar year to the present date.

Event Date From: 01 Oct 2009



Event Date To: 06 Jul 2010



Break Down Results By:

Choose one to three fields to query by. For example, you can display a breakdown of the numbers in the database by marital status and educational level by selecting those two criteria. **At least one field must be selected.**

Break Down by: Event Type (innermost)

Break Down by: Patient Sex

Break Down by: -- Select (optional) --

Limit Results To:

Optional. You may choose one or more fields by which to limit your data. For Example, you can query ONLY cases where the individual's Gender is Female, and the primary method is Firearm/Gun, Military Issue. If no choice is made, results will be a query of all records in the database for which you have access.

Limit to: -- Select (optional) --

Limit to: -- Select (optional) --

Limit to: -- Select (optional) --

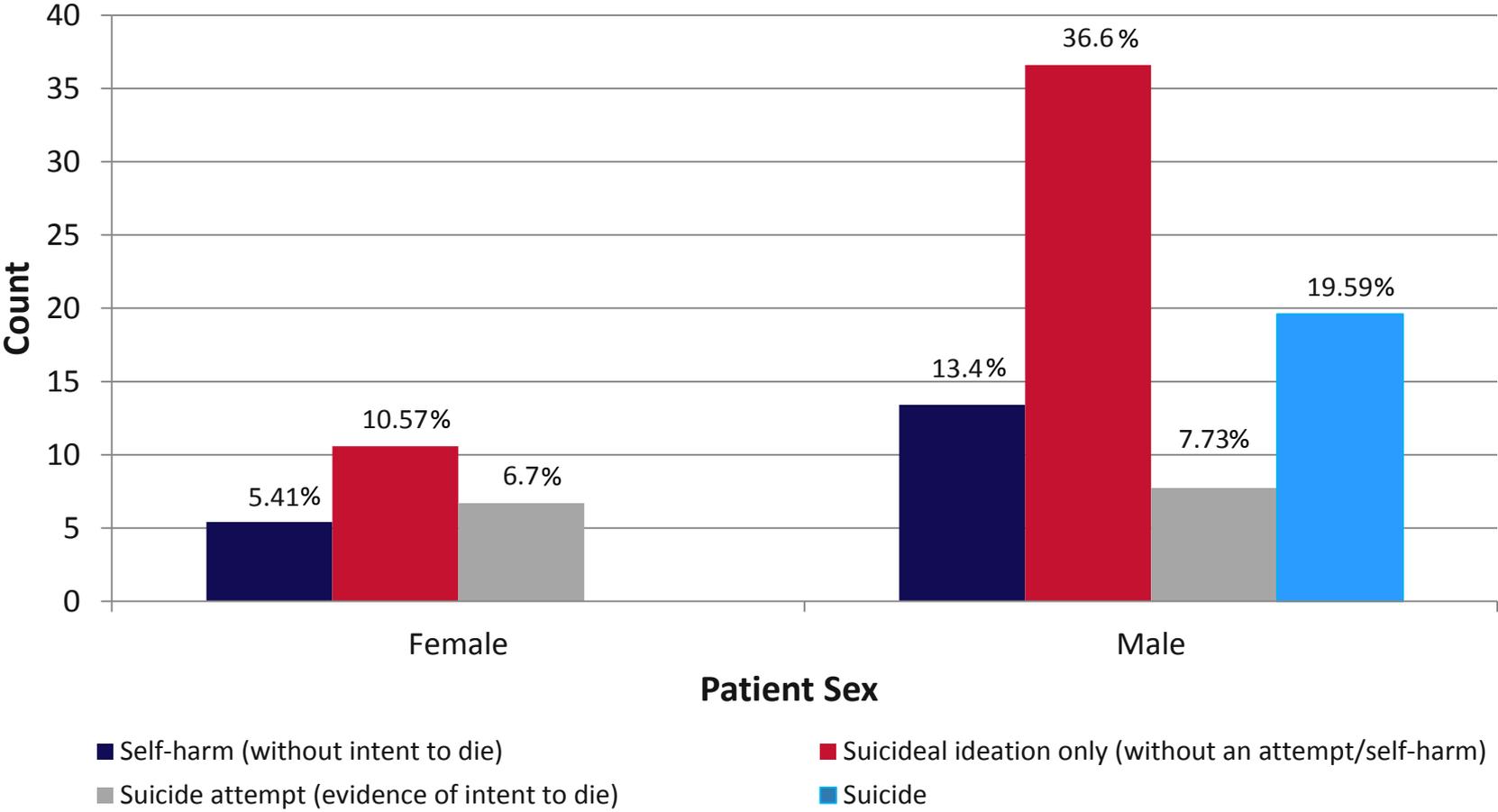
Limit to Age Group: Under 25 26 - 29 30 - 39 40+

Submit Query

Reset

Close Window & Return to Main

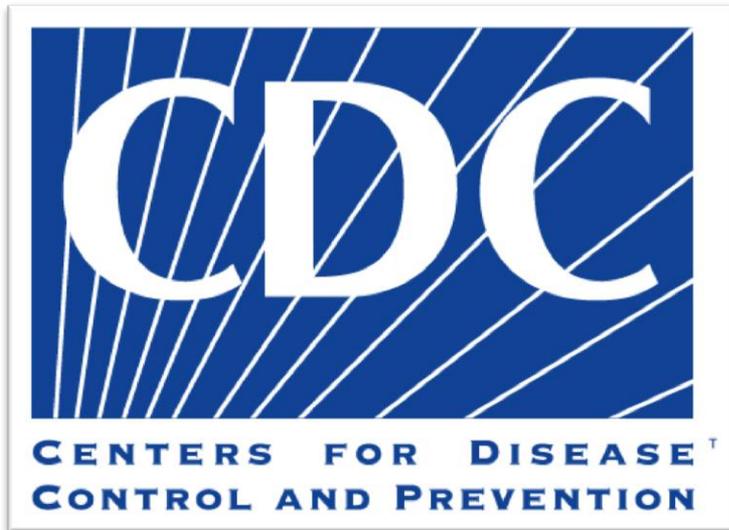
DoDSEER: User Defined Reports



Future Directions

- Refined DoDSER coding guidance/manual
- Annual SPARRC update of item content
- Program evaluation of software refinements
- Project examining non-fatal DoDSER cases subsequently identified in the VA system
- DoDSER-CDC NVDRS collaborative research

DoD SER-National Violent Death Reporting System Linkage Project



CDC Collaborators:

J. Logan, Ph.D.

Debra Karch, Ph.D.

Faye Floyd

**Linking Data on
Suicide Decedents
who Served in the
Armed Forces**

DoDSER-National Violent Death Reporting System Linkage Project

Objective: To link CDC-NVDRS and DoDSER data to comprehensively characterize suicide risk factors



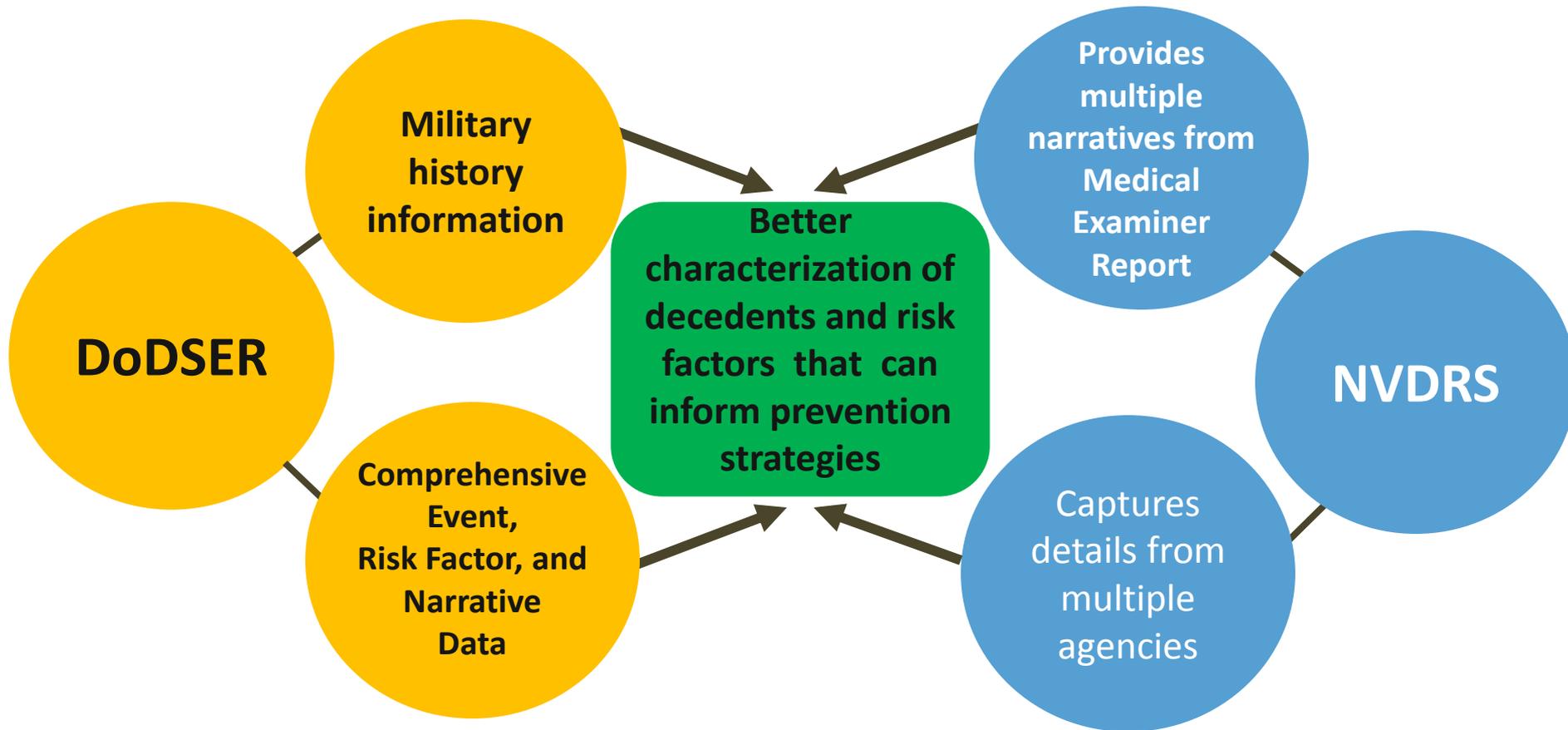
- Effort to maximize the use of existing systems
- Will examine the value of combining DoDSER and NVDRS

Value of Linking the DoDSEER & NVDRS

Two large-scale surveillance systems that comprehensively characterize decedents

- Enables better characterization of decedents and risk factors
- When capturing circumstance information, multiple sources for similar variables is better than one
- Can inform and improve focus of prevention strategies

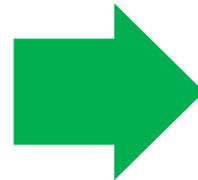
Data Captured by Department of Defense Suicide Event Report (DoDSER) vs. National Violent Death Reporting System (NVDRS)



Pilot Study: Linkage of DoDSER with NVDRS

Project Objective:

To link DoDSER data to NVDRS via probabilistic matching



Pilot examined linkage between de-identified data (2005-07) from DoDSER

Probabilistic Record Linkage (PRL):

- 1) Set of pairs of records are labeled as matching or differing pairs
- 2) Statistics calculated from agreement of fields on matching and differing records to determine the weights on each field

2005-2007 Data Linkage

Goal:

Assess frequency of known risk factors & military related stressors

Method:

Probabilistic matching of records identified in DoDSER

- Matching Variables:
 - State of event
 - Date of suicide
 - Age
 - Gender
 - Race/ethnicity

Results:

- 2005-07 DoDSER suicide cases (n=285); 59 eligible
- 56/59 (95%) of DoDSER cases matched w/ high confidence

TABLE 1 (cont.)—Demographic and Other Background Characteristics of Active Duty U.S. Army Suicide Decedents and Characteristics of the Suicide Events, 2005-2007 (N=56)

Variable	No.	%
Duty status		
Active duty	45	80.40%
Active Guard/Reserve	3	5.40%
Active duty for training duty	4	7.10%
Other	4	7.10%
Pay grade		
E1-E2	6	10.70%
E3	8	14.30%
E4	16	28.60%
E5	8	14.30%
E6	6	10.70%
E7	4	7.10%
E8-E9	3	5.40%
W1-5	*	*
O1-10	4	7.10%

TABLE 1 (cont.)—Demographic and Other Background Characteristics of Active Duty U.S. Army Suicide Decedents and Characteristics of the Suicide Events, 2005-2007 (N=56)

Variable	No.	%
Location of death		
Personal residence	34	60.70%
Residence of family or friend	6	10.70%
Automobile (away from residence)	5	8.90%
Other	11	19.60%
Weapon/mechanism used		
Firearm	31	55.40%
Poisoning	7	12.50%
Hanging, strangulation	15	26.80%
Other or unknown	3	5.40%
Other event characteristics		
Left evidence suggesting the event was planned	20	35.70%
Left a suicide note	12	21.40%

TABLE 2—Health Related Characteristics of Active Duty U.S. Army Suicide Decedents Preceding Death, 2005-2007 (N=56)

Variable	No.	(%)
Health Related Factors		
Suicidal ideation-disclosed intent of self harm	20	35.70%
Current depressed mood	18	32.10%
Substance use at time of incident		
Alcohol use	16	28.60%
Drug use (% is calculated among those tested)	8	30.80%

TABLE 2—Health Related Characteristics of Active Duty U.S. Army Suicide Decedents Preceding Death, 2005-2007 (N=56)

Variable	No.	(%)
Current Mental Health Problem	13	23.20%
Diagnoses		
Depression/dysthymia	9	69.20%
Post-traumatic stress disorder	3	23.10%
Other	3	23.10%
Unknown	*	*
Alcohol or other substance abuse problems	7	12.50%
Current physical health problem	4	7.10%

*% is calculated among those who had a current mental health problem

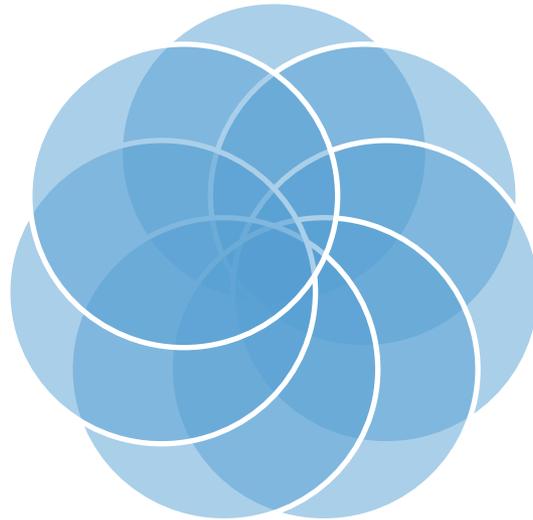
TABLE 3 – Stressful Life-Event Circumstances of Active Duty U.S. Army Suicide Decedents Preceding Death, 2005-2007 (N=56)

Stressful Life-Event Factors		
Recent intimate partner problems	25	44.6%
Any military-related stressful circumstances	23	41.1%
Military specific circumstances (% is calculated among those who had any military-related stress)		
Current job-related problems	14	60.9%
Experienced combat in last deployment	9	39.1%
Subject to administrative separation	5	21.7%
Subject to AWOL proceedings	4	17.4%
Subject to medical evaluation board	3	13.0%
Subject to courts martial proceedings	*	*
Recent crisis (within 2 weeks of death)	18	32.1%
Subject to other civil criminal or Article 15 proceedings	8	14.3%
Recent civil legal issues	8	14.3%
Recently perpetrated interpersonal violence	5	8.9%
Recent financial problems	4	7.1%

Planned Research

Compare characteristics of suicides among active duty US Army to US civilian suicides

Compare characteristics of suicide decedents to suicide attempters



Assess value added in combining circumstance data collected from NVDRS and DoDSER systems

Future Directions

- Linkage of 2008-10 DoD SER data to NVDRS
- Automation of the linkage process
- Development of a research panel between CDC and T2 to track and expand research aimed toward military suicide

Thank-you!

Questions?

NVDRS Data Sources

- Coroner or medical examiner reports
- Toxicology reports
- Law enforcement records
- Death certificates to provide details
 - Demographics
 - Method
 - Stressful life events

CDC NVDRS States

1. Alaska
2. California (5 counties)
3. Colorado
4. Georgia
5. Kentucky
6. Maryland
7. Massachusetts
8. New Jersey
9. New Mexico
10. North Carolina
11. Oklahoma
12. Oregon
13. Rhode Island
14. South Carolina
15. Utah
16. Virginia
17. Wisconsin

References

1. Kuehn, BM (2010). Soldier suicide rates continue to rise. *JAMA*, 301, 1111-1113.