



National Violent
Death Reporting System

NVDRS

Presenters

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NVDRS Mission

- To collect high quality, detailed, timely information on all violent deaths in the US

What is the NVDRS?

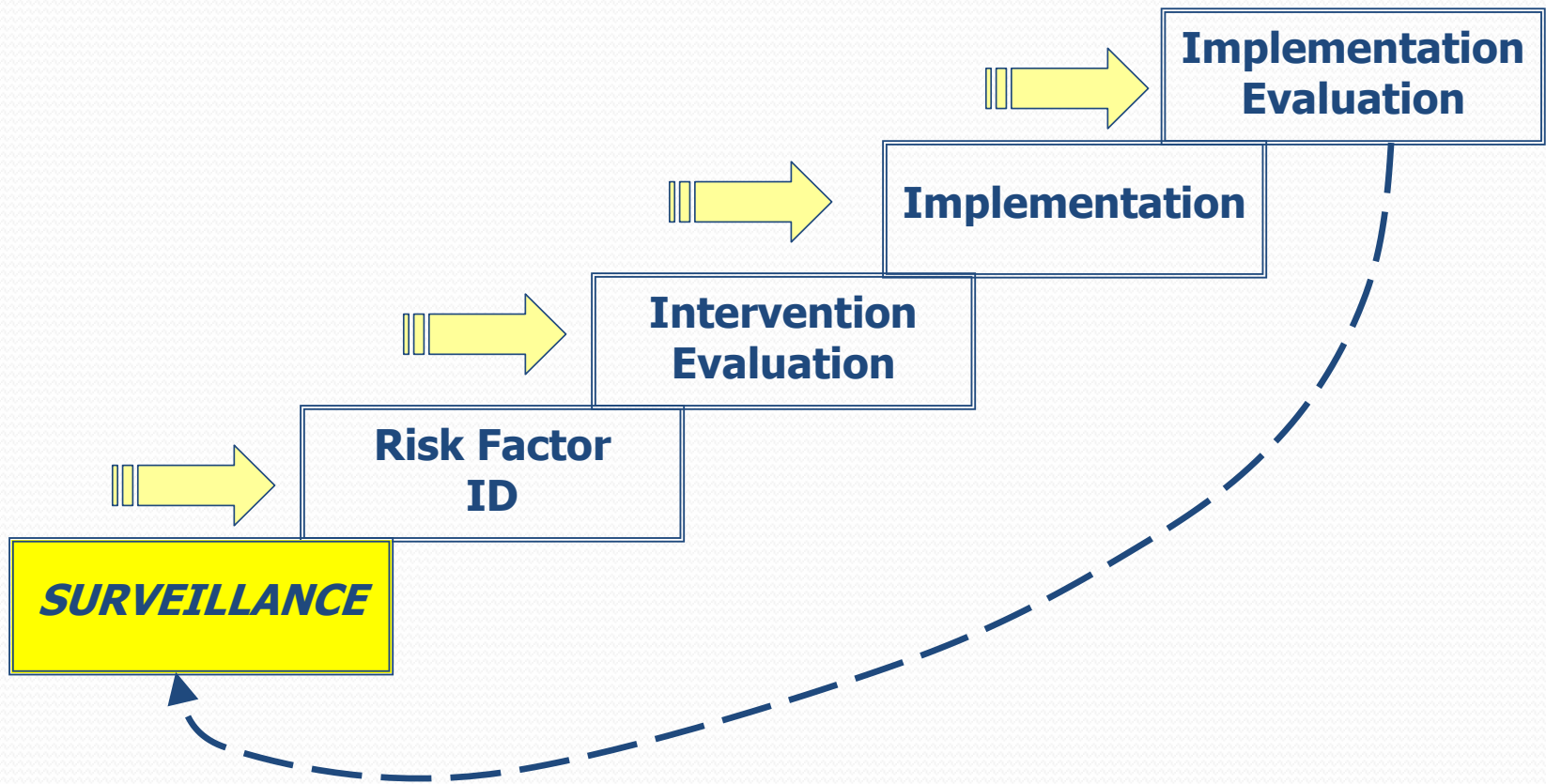
- A public health surveillance system
 - ✓ *Population-based* ✓ *Active* ✓ *Census*
- ...designed to obtain information
 - ✓ *Detailed* ✓ *Timely* ✓ *Of high quality*
- ... from multiple sources on
- ... all violent deaths (in funded states)
 - ✓ *Resident deaths* ✓ *Occurrent deaths*
- ... to provide high quality data useful for prevention of all types of violence.

What Does NVDRS Have To Do With Prevention?

10 Leading Causes of Death, United States 2014, All Races, Both Sexes

Rank	Age Groups										All Ages
	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	
1	Congenital Anomalies 4,746	Unintentional Injury 1,216	Unintentional Injury 730	Unintentional Injury 750	Unintentional Injury 11,836	Unintentional Injury 17,357	Unintentional Injury 16,048	Malignant Neoplasms 44,834	Malignant Neoplasms 115,282	Heart Disease 489,722	Heart Disease 614,348
2	Short Gestation 4,173	Congenital Anomalies 399	Malignant Neoplasms 436	Suicide 425	Suicide 5,079	Suicide 6,569	Malignant Neoplasms 11,267	Heart Disease 34,791	Heart Disease 74,473	Malignant Neoplasms 413,885	Malignant Neoplasms 591,699
3	Maternal Pregnancy Comp. 1,574	Homicide 364	Congenital Anomalies 192	Malignant Neoplasms 416	Homicide 4,144	Homicide 4,159	Heart Disease 10,368	Unintentional Injury 20,610	Unintentional Injury 18,030	Chronic Low. Respiratory Disease 124,693	Chronic Low. Respiratory Disease 147,101
4	SIDS 1,545	Malignant Neoplasms 321	Homicide 123	Congenital Anomalies 156	Malignant Neoplasms 1,569	Malignant Neoplasms 3,624	Suicide 6,706	Suicide 8,767	Chronic Low. Respiratory Disease 16,492	Cerebrovascular 113,308	Unintentional Injury 136,053
5	Unintentional Injury 1,161	Heart Disease 149	Heart Disease 69	Homicide 156	Heart Disease 953	Heart Disease 3,341	Homicide 2,588	Liver Disease 8,627	Diabetes Mellitus 13,342	Alzheimer's Disease 92,604	Cerebrovascular 133,103
6	Placenta Cord Membranes 965	Influenza & Pneumonia 109	Chronic Low. Respiratory Disease 68	Heart Disease 122	Congenital Anomalies 377	Liver Disease 726	Liver Disease 2,582	Diabetes Mellitus 6,062	Liver Disease 12,792	Diabetes Mellitus 54,161	Alzheimer's Disease 93,541
7	Bacterial Sepsis 544	Chronic Low. Respiratory Disease 53	Influenza & Pneumonia 57	Chronic Low. Respiratory Disease 71	Influenza & Pneumonia 199	Diabetes Mellitus 709	Diabetes Mellitus 1,999	Cerebrovascular 5,349	Cerebrovascular 11,727	Unintentional Injury 48,295	Diabetes Mellitus 76,488
8	Respiratory Distress 460	Septicemia 53	Cerebrovascular 45	Cerebrovascular 43	Diabetes Mellitus 181	HIV 583	Cerebrovascular 1,745	Chronic Low. Respiratory Disease 4,402	Suicide 7,527	Influenza & Pneumonia 44,836	Influenza & Pneumonia 55,227
9	Circulatory System Disease 444	Benign Neoplasms 38	Benign Neoplasms 36	Influenza & Pneumonia 41	Chronic Low. Respiratory Disease 178	Cerebrovascular 579	HIV 1,174	Influenza & Pneumonia 2,731	Septicemia 5,709	Nephritis 39,957	Nephritis 48,146
10	Neonatal Hemorrhage 441	Perinatal Period 38	Septicemia 33	Benign Neoplasms 38	Cerebrovascular 177	Influenza & Pneumonia 549	Influenza & Pneumonia 1,125	Septicemia 2,514	Influenza & Pneumonia 5,390	Septicemia 29,124	Suicide 42,773

The Public Health Approach



What Does The NVDRS Have To Do With Prevention?

- Violence can be predicted through the analysis of risk and protective factors
- Timely, accurate, and comprehensive surveillance data is needed to understand these factors

What Does The NVDRS Have To Do With Prevention?

- NVDRS aggregates data from multiple data sources
 - providing more detail than any one data source
- Includes information on preceding and precipitating circumstances (if available)

What Does The NVDRS Have To Do With Prevention?

- Also provides the means of looking at more comprehensive data on specific sub-types of violent death, e.g.—
 - Murder-suicides
 - Suicide deaths of veterans
 - Assault weapon deaths
 - Intimate partner violence-related deaths
 - Homicides of young, black males
 - Etc.

What is a 'violent death'?

Conceptual Definition

“A death that results from intentional use of force or power, threatened or actual, against oneself, another person, or a group or community.”

Source: Krug EG et al., eds. *World report on violence and health*. Geneva, WHO, 2002.

Violent Death

- Intent to use force or power
 - intent to harm/kill not necessary
- “Physical force” and “power” broadly interpreted to include
 - Use of poisons and drugs
 - Acts of neglect or omission by one person with power over another, e.g., caretakers.
- Unintentional firearm deaths not violent deaths by this definition, but are included

NVDRS Incidents

- Homicide, incl. legal intervention
- Suicide
- Undetermined manner
- Unintentional firearm
- Exclusions: legal executions, operations of war

Violent Death

Operational Definition

- Underlying cause on the death certificate coded to one of specified external cause codes
- Excluded:
 - Deaths prior to birth (fetal deaths) due to violence
 - person must have a standard death certificate, not a fetal death certificate

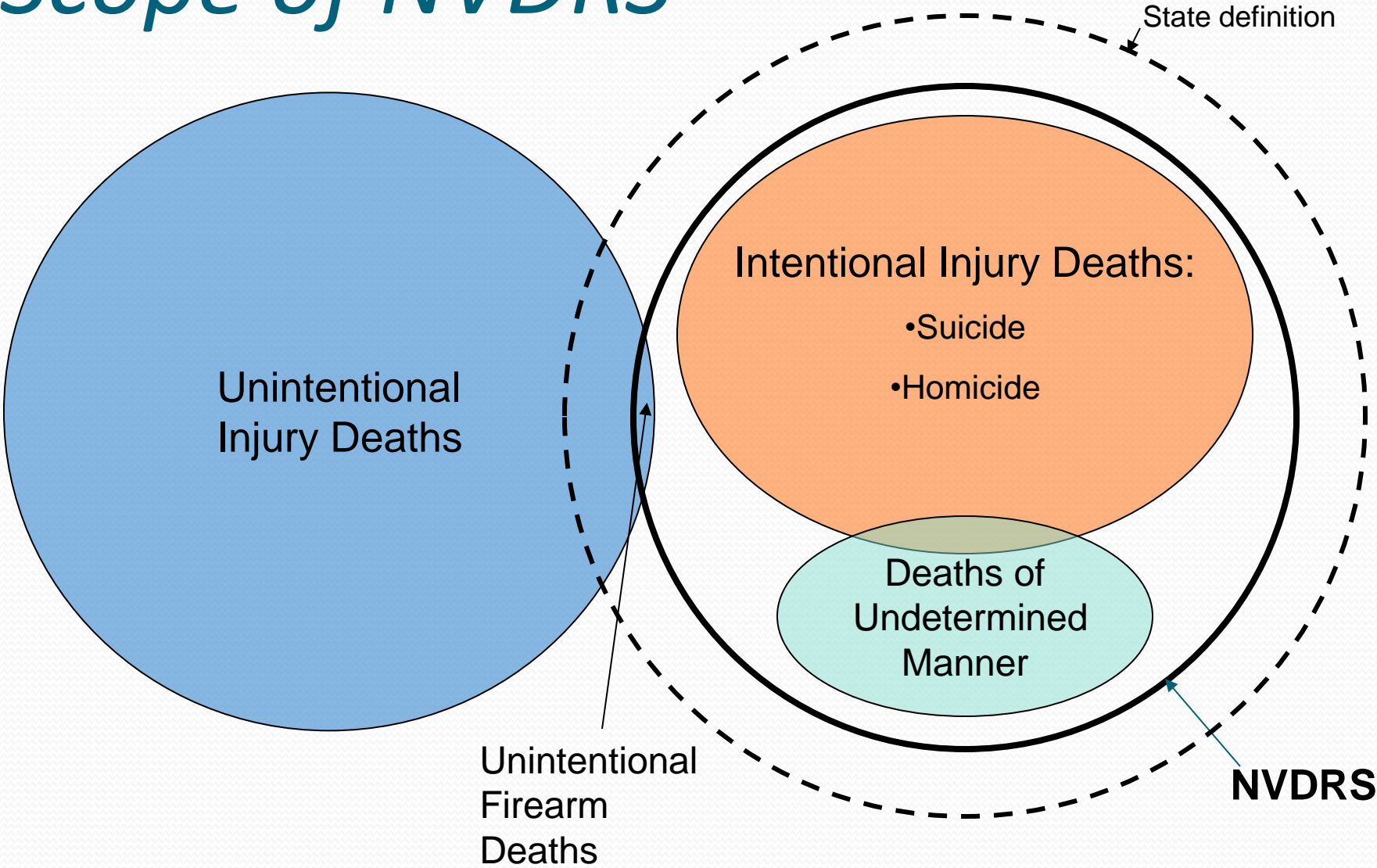
ICD-10 Codes that Define NVDRS Cases

Manner of Death	Death <1 yr after Injury	Death \geq1 yr after Injury
Suicide	X60-X84	Y87.0
Homicide	X85-X99, Y00-Y09	Y87.1
Undetermined manner	Y10-Y34	Y87.2, Y89.9
Unintentional firearm	W32-W34	Y86 (gun only)
Legal intervention	Y35.0-Y35.7 except Y35.5	Y89.0
Terrorism	U01, U03	U02

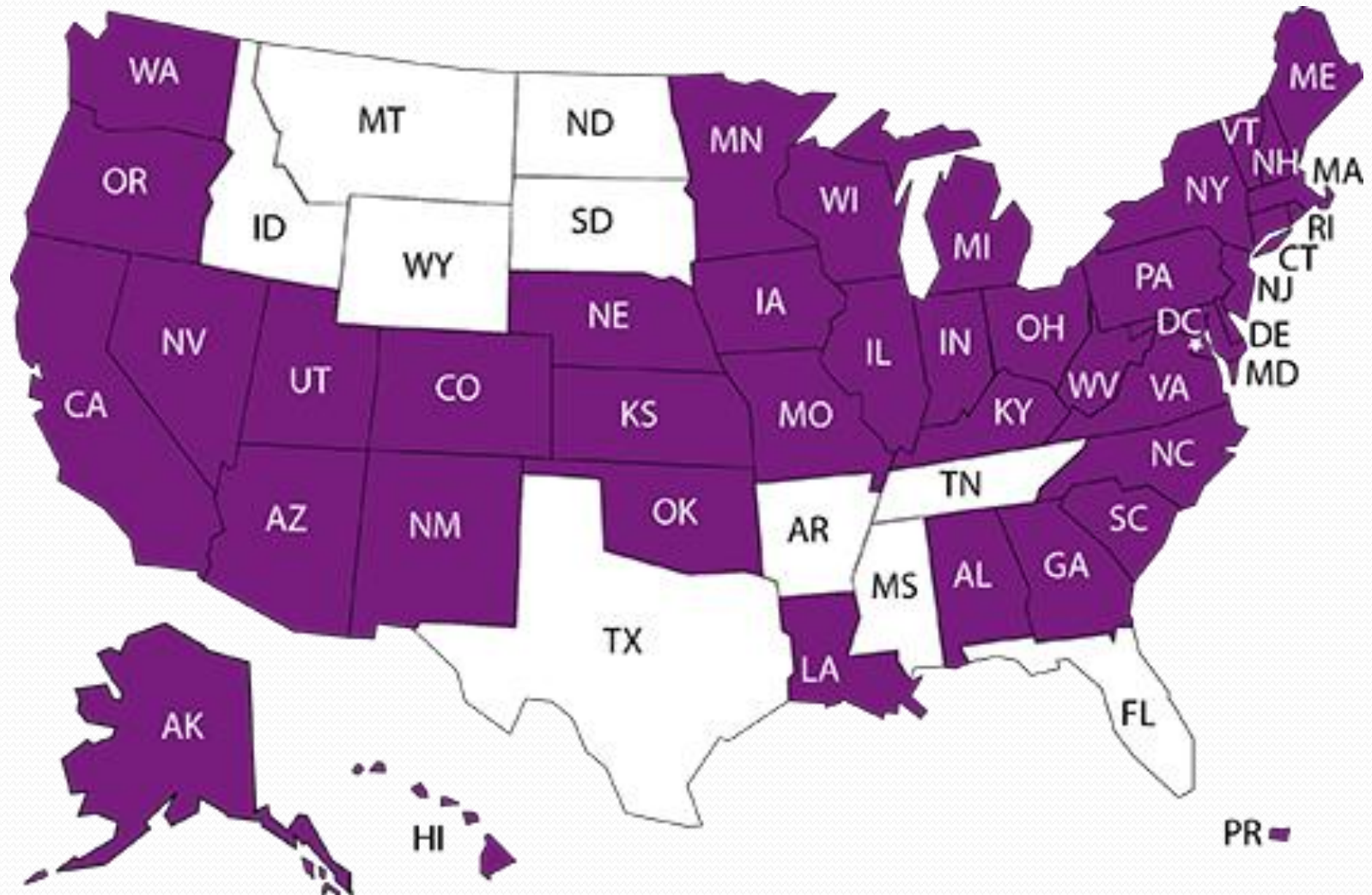
Use of Definitions

- States can use broader definitions to identify and collect cases at state level
- CDC operational definitions are used to select incidents for reporting on national level
 - CDC will select only those incidents meeting the CDC operational definition for national reporting
- CDC conceptual definitions are used to assign standardized manners of death

Scope of NVDRS



Current NVDRS States (+Washington D.C.)



NVDRS: Design

- Case identification primarily through death certificates and C/ME's
- Incidents identified and data collected by states
- Document-based data from multiple sources
- System managed by CDC
- Data de-identified
- Web-based data entry system

NVDRS: Design

- Incident-based system
- Required source documents:
 - Death certificate (DC)
 - Coroner/Medical Examiner report (CME)
 - Law enforcement report (LE)
- Optional source documents:
 - Crime lab
 - Supplemental homicide report or NIBRS
 - Hospital discharge record
 - Child fatality review

Sampling of Variables Captured

- Demographics
- Victim-suspect relationship
- Weapons
- Injury – place, time, wounds, etc
- Death – place, date, etc
- Toxicology
- Autopsy status
- Precipitating/preceding circumstances
- Victim's mental health/substance abuse status

Special Population Variables

- U.S. or foreign born
- Veterans
- Homeless persons
- Pregnant women
- Persons in custody: jail / mental hospital / state institution / foster care
- Work-related

Person Type

- *Includes*
 - Fatally injured victim(s)
 - Person(s) suspected of inflicting the fatal injury
- *Excludes*
 - Nonfatally injured victims
 - Witnesses
 - Fetal deaths

A Valuable Resource in NVDRS

Incident Circumstances

Suicide Circumstances

- Mental health (Dx, treatment, history of suicide attempts)
- Alcohol/drug abuse problems
- Suicide note/disclosed intent to die by suicide
- Crisis in past 2 weeks
- Physical health problem
- Intimate partner/other relationship problems
- Job/school/financial problems
- Suicide/other death of a family member or friend
- Recent criminal or civil legal problem
- Perpetrator/Victim of interpersonal violence in past month

Homicide Circumstances

- Precipitated by another crime
- Argument over money or property
- Other argument/abuse/conflict
- Jealousy (lover's triangle)
- Intimate partner related violence
- Drug or gang related
- Justifiable self defense/law enforcement
- Hate crime
- Brawl
- Victims was bystander/police officer on duty/intervener
- Mercy killing
- Victim used a weapon
- Gang-related
- Drive-by/walk-by

Unintentional Firearm Circumstances

- **Context**

- Hunting
- Target shooting
- Celebratory firing
- Loading/unloading
- Cleaning gun
- Showing gun to others
- Playing with gun

- **Situation**

- Thought safety was engaged
- Thought was unloaded
- Unintentionally pulled trigger
- Bullet ricochet
- Gun defect/malfunction
- Fired while holstering/unholstering
- Gun mistaken for a toy

Another Valuable Resource in NVDRS

Incident Narratives

The V, a 53 year old white male, was found in the motel room he had been living in for the past month. He always paid in cash and when paying 5 days before said he would be leaving after that. The staff found the door locked from the inside when they came to clean the room. During the past month he had regularly visited the local emergency room complaining of suicidal thoughts and was thinking about jumping off the balcony or in front of a train. He admitted to abusing alcohol most of his life and intentionally over-medicating himself. He was admitted to a mental health treatment facility for a several days and his release papers stated his discharge diagnoses as bipolar, depression, alcohol dependence, hypertension and hypercholesterolemia. His ex-wife stated he told he her he was going to kill himself three weeks ago when he was fired from his job for being intoxicated while at work. Without his job, he said he could not make the rent payment and had nowhere to live. Ex-wife stated V attempted suicide last year by overdosing on sleeping pills. Manner of death is suicide; cause is severe brain injury due to GSW to the head.

- ← Disclosed intent
- ← Alcohol dependence
- ← Other substance abuse
- ← Current treatment for mental illness
Ever treated for mental illness
- ← Current mental health problem
- ← Job problem
- ← Financial problems
- ← History of suicide attempts

How NVDRS Data is Being Used

- Restricted access dataset (RAD)
 - Detailed case-level data for researchers submitting formal research proposals
- CDC NVDRS WISQARS (2005-2014)
<http://www.cdc.gov/injury/wisqars/nvdrs.html>
- NVDRS MMWR Surveillance Summaries
 - 2005 - 2013 data published
 - Latest: <http://www.cdc.gov/mmwr/volumes/65/ss/ss6510a1.htm>
- State level publications for policy makers and stakeholders
- Collaborations with CDC scientists
- Collaborations with state scientists



QUESTIONS?