

Review of Suicide and Suicide Attempt Data Sources: Insights and Recommendations

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Review of Suicide and Suicide Attempt Data Sources: Insights and Recommendations

**Illinois Suicide Prevention Alliance
Data Training
September 18, 2009**

Presented by
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&
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Session Objectives

- To review National and Illinois suicide data
- Understand suicide/ suicide attempt sources of data (national, state, local)
- Use data to monitor suicide prevention needs in your community
 - Triangulation of Data
- Recommendations to improve data sources

Definitions

- Suicide - A death that results from self-inflicted injury in which there is evidence that the person intended to kill him/herself.
- Suicide attempts - Potentially self-injurious behavior with non-fatal outcomes, in which the evidence suggests: 1) the injury was self-inflicted, and 2) there was intention to kill one's self. Suicide attempts do not have to result in an actual injury.
- Self-inflicted injury - Term is not synonymous with suicide. Many people who injure themselves have no desire to die.

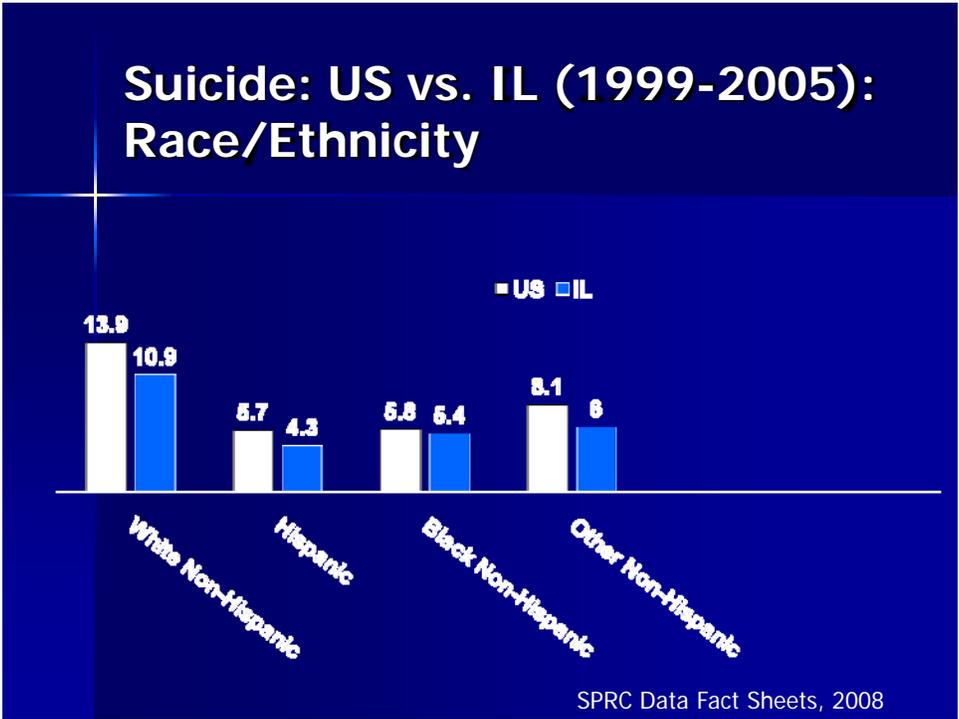
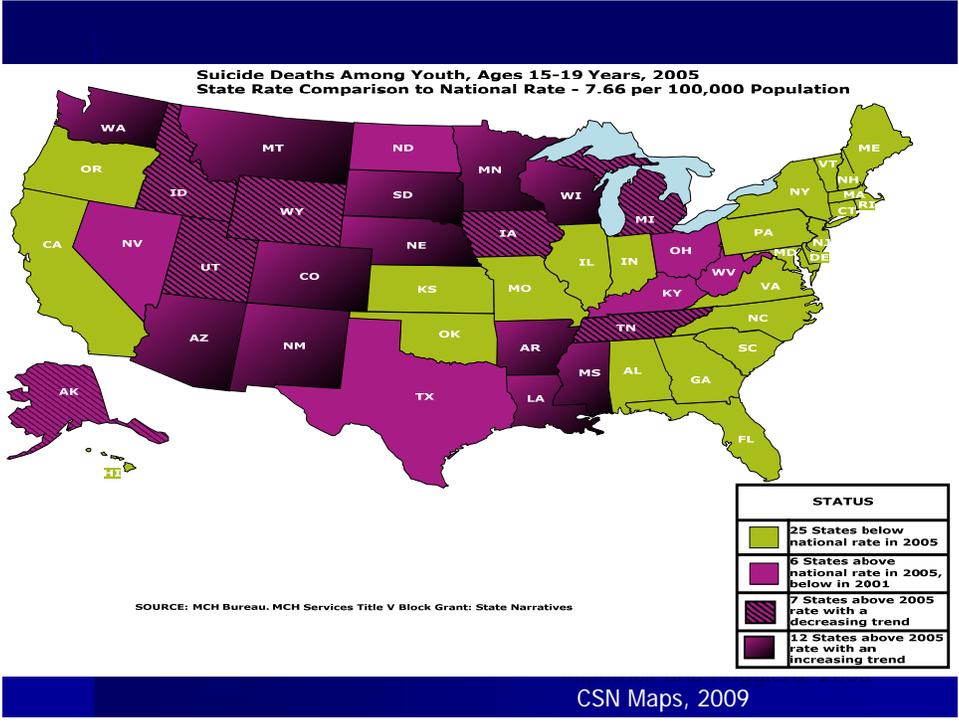
IL Suicide Prevention Plan, 2007

Suicide: US vs. IL (1999-2005)

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| <ul style="list-style-type: none">■ Nationwide■ 11th ranking cause of death■ Average of 31,045 residents died by suicide each year■ Suicide rate: 11.6 per 100,000■ Average of 85 suicides every day | <ul style="list-style-type: none">■ Illinois■ 12th ranking cause of death■ Average of 1,062 residents died by suicide each year■ Suicide rate: 9.1 per 100,000■ Average of ~3 suicides every day |
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Hospitalized Attempts: US (2005) vs. IL (2006)

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|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none">■ Nationwide■ Total of 174,861 attempts per year■ Hospitalized attempt rate: 63.3 per 100,000■ Average of 479 attempts every day | <ul style="list-style-type: none">■ Illinois■ Total of 6,083 attempts per year■ Hospitalized attempt rate: 50.9 per 100,000■ Average of ~17 attempts every day |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



Suicide Methods: US vs. IL (1999-2005)

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|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| ■ Firearm: rate 6.3 per 100,000 | ■ Firearm: rate 3.8 per 100,000 |
| ■ Suffocation: rate 2.4 per 100,000 | ■ Suffocation: rate 2.6 per 100,000 |
| ■ Poisoning: rate 2.0 per 100,000 | ■ Poisoning: rate 1.7 per 100,000 |
| ■ If half of undetermined intent poisonings were self-inflicted, suicides in the U.S. would be 5% higher | ■ If half of undetermined intent poisonings were self-inflicted, suicides in IL would be 2% higher |

SPRC Data Fact Sheets, 2008

SPRC Data Fact Sheets, 2008

Hospitalized Attempts: US (2005) vs. IL (2006)

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|-------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| ■ Poisoning: rate 52.4 per 100,000 | ■ Poisoning: rate 40.9 per 100,000 |
| ■ Cut/Pierce: rate 7.3 per 100,000 | ■ Cut/Pierce: rate 7.0 per 100,000 |
| ■ If half of undetermined intent poisonings were self-inflicted, suicide attempts in U.S would be 9% higher | ■ If half of undetermined intent poisonings were self-inflicted, suicide attempts in IL would be 8% higher |

Cost Components: US vs. IL

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| <ul style="list-style-type: none"> ■ US ■ Fatal <ul style="list-style-type: none"> – Average medical cost/case: \$3,983 – Average work-loss cost/case: \$1,224,322 ■ Nonfatal <ul style="list-style-type: none"> – Average medical cost/case: \$9,127 – Average work-loss cost/case: \$11,146 | <ul style="list-style-type: none"> ■ IL ■ Fatal <ul style="list-style-type: none"> – Average medical cost/case: \$4,213 – Average work-loss cost/case: \$1,399,332 ■ Nonfatal <ul style="list-style-type: none"> – Average medical cost/case: \$8,792 – Average work-loss cost/case: \$12,033 |
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Risk Factors/ Psychological Consequences

- **Suicide overlaps with alcohol and drug violence**
- **Suicide can be the result of depression, antisocial behavior, anxiety, low self-esteem, fear of intimacy, & suicidal behavior** (Miller & Taylor (2005) *Suicide and Life-Threatening Behavior*, 35(4), 425–435.)

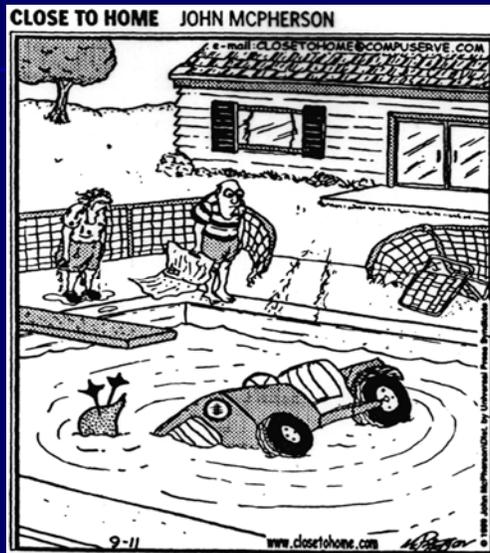
What are Data?

- Definition: Data are factual measurements or statistics
- Self-inflicted data differ among varying data sources because different pieces of information are being collected
 - Example: “Suicide ideation” vs. “Depressed” will produce different data

Definition of Suicide / Suicide Attempt

- Issues
 - Alcohol & drug-facilitated incidents?
 - Males & females?
 - Severity (medically treated attempts vs. suicide gestures)
- How does one dataset’s definition compare with another’s
 - Self-inflicted vs. suicide

Who/What Is In the Data?



Interview Methods

- IL Suicide Prevention Alliance compiled list of Data Managers
- Phone interviews of Data Managers
- No data analysis involved
- Results
 - Webinar
 - Report

Interview questions

- Agency/ Contacts:
- Description of Database(s), including how data are collected:
 - Statewide; county, year
- Key suicide-related variables collected:
- Access to data
 - Annual report, public use data, web-based
- Any relevant suicide information

What Data are available

FATAL DATA

- **Center for Health Statistics** - *Mark Flotow, Illinois Department of Public Health*
- **Child Death Review** - *Sherry Barr, Illinois Department of Children & Family Services*
- **Illinois Violent Death Reporting System** - *Kathleen Monahan, Children's Memorial*

NON-FATAL DATA – State Agencies

- **Hospital Discharge Data** - *Rich Forshee, Illinois Department of Public Health*
- **Trauma Registry** - *Adelisa Orantia, Illinois Department of Public Health*
- **Pre-Hospital** - *Dan Lee, Illinois Department of Public Health*
- **Youth Behavior Risk Surveillance Survey** - *Glenn Steinhausen, Illinois State Board of Education*
- **Youth Behavior Risk Surveillance Survey Chicago** - *Ken Papineau, Chicago Public Schools*
- **Fire Incident Reporting System** - *Joe Woodward, Office of the State Fire Marshal*
- **Illinois Criminal Justice Information Authority** - *Becky Block/Chris Devitt*
- **Accident/Crash Data** - *Mehdi Nassirpour, Illinois Department of Transportation*

NON-FATALITY DATA – State Agencies (con't)

- **Behavior Risk Surveillance Survey** - *Bruce Steiner, Illinois Department of Public Health*
- **Pregnancy Risk Assessment Monitoring System** - *Theresa Sandidge, Illinois Department of Public Health*
- **Health Data Dissemination Initiative** - *Tom Szyrka, Illinois Department of Public Health and Peter Eckart, Illinois Public Health Institute*
- **State Police: Crime Scene Data** - *Mike Narish and Mike Trummel, Illinois State Police*
- **Psychiatric Hospitals** - *Patricia/Sharneice*
- **Illinois Department on Aging** - *Mary Mayes*
- **Illinois Department of Corrections** - *Wendy Blank*
- **Illinois Department of Children and Family Services** - *Marilyn Peebles*
- **Illinois Commerce Commission (suicide by train)** - *Chip Pew and Stephen Laffey*

NON-FATAL DATA – Non-State Agencies

- **Illinois Youth Survey** - *Alan Markwood, Chestnut Health Systems (per Kim Fornero and Sherrine Eckersley at IDHS)*
- **Poison Centers** - *Gail Moran, Illinois Poison Center*
- **Hotlines** - *Patricia/Stephanie/MHAI/Farm Resource Center*

FATALITY DATA

Mortality Database

- **Illinois Center for Health Statistics:** *Mark Flotow, Illinois Department of Public Health*
(<http://www.idph.state.il.us/health/statshome.htm>)
- **Database(s):** Mortality Database—State & County Level, 2006 and Prior
- **Key Suicide-Related Variables:** Cause of Death (COD) by E Code, Demographics
- **Access to Data:** Annual Report 2003, raw data by MOA, web-based queries and reports
- **Other Relevant Suicide Information**

Illinois Violent Death Reporting System Questions

- **Illinois Violent Death Reporting System** – Kathleen Monahan, Children's Memorial Research Center (<http://www.chdl.org/ivdrs.htm>)
- **Database(s):** a state-wide database related to violent deaths. Includes Cook, Kane and Peoria. 2005-06 data. Data follow NVDRS format.
- **Key suicide-related variables collected:** Circumstances leading incident; date and location; weapon type, demographics and more.
- **Access to data:** Annual Newsletters; will run data, no public use data
- **Other Relevant Suicide Information**

Child Death Review

- **Child Death Review** – Sherry Barr, Illinois Department of Children & Family Services
- **Database:** All child death certificates referred to Child Welfare and reviews deaths of children (0-17 yrs) involved with child welfare within 1 year prior to death throughout State, latest data, 2007
- **Key Suicide-Related Variables:**
 - Circumstances leading incident; date and location; method, demographics and more
- **Access to data:** Annual report
- **Other Relevant Suicide Information** - only 1% of cases referred and reviewed are due to suicide

NON-FATALITY DATA – State Agencies

Hospital Discharge Data

- **Hospital Discharge Data** – *Rich Forshee, Illinois Department of Public Health*
(<http://www.idph.state.il.us/patientsafety/index.htm>)
- **Database(s)** : Statewide, 2008+ by county, 08 county assigned by zip, 2008 E code 88%
- **Key Suicide-Related Variables:** hospital discharge, attempt mechanisms, length of stay, transfers
- **Access to data**
 - data/data runs may cost \$, web-based data
- **Other Relevant Suicide Information (ED Data)**

Trauma Registry

- **Trauma Registry** – *Adelisa Orantia, Illinois Department of Public Health*
(<http://app.idph.state.il.us/emsrpt/trauma.asp>)
- **Database(s)** : 65 centers, combination level 1 & 2; *Statewide, region & county, year*
- **Key Suicide-Related Variables:** E Code, ED discharge disposition; data from 2004, 2007 data available, data for 2008 on going.
- **Access to data:** Annual report, no public use data, web-based data available, will run data
- **Other Relevant Suicide Information**

Emergency Medical Services Data

- **EMS (Pre-Hospital)** – *Dan Lee, Illinois Department of Public Health*
(<http://www.nhtsa-tsis.net/ems/state/IL/il.htm>)
- **Database(s)** : EMS transports collected quarterly, updating to NEMSIS format, county level, data up to 2007 data
- **Key Suicide-Related Variables:** mechanism but not intent
- **Access to data:** Annual report, will run data no \$, will have limited web-based query, web re-design
- **Other Relevant Suicide Information**

Youth Risk Behavior Surveillance System (YRBSS)

- a national school-based survey conducted by CDC, and
- state and local school-based surveys conducted by education and health agencies
- among students in grades 9–12
- Every 2 years

Youth Behavior Risk Surveillance Survey

- **YRBS**– Glenn Steinhausen, *Illinois State Board of Education* (<http://www.isbe.state.il.us>)
- **Database(s)** : school based survey, grades 9-12; Statewide & regional but not county (not Chicago), recent year = 2007, weighted data = 93, 95, 07, 05.
- **Key Suicide-Related Variables:** depression, seriously considered attempt, made plan, Attempted, medically treated attempt
- **Access to data:** Detailed CDC reports available, staff can send out disk with tables; data runs managed by staff.
- **Other Relevant Suicide Information**

YRBS Chicago

- **YRBS Chicago** – *Ken Papineau, Chicago Public Schools*
- **Database(s)** : done in odd years since 1991 with 22 high schools, grades 9-12
- **Key Suicide-Related Variables:** depression, seriously considered attempt, made plan, Attempted, medically treated attempt
- **Access to data:** does not provide runs, CDC link for data tables
- **Other Relevant Suicide Information**

Illinois Youth Survey

- **Illinois Youth Survey** – *Alan Markwood, Chestnut Health Systems*
(<http://www.illinoisyouthsurvey.org>)
- **Database(s)** : biennial by IL DHS grades 6, 8, 10, or 12; 884 schools as of 2008; statewide, county not representative, year
- **Key Suicide-Related Variables:** Past depression (all) & suicide ideation in 2008 (not 8th)
- **Access to data:** biennial report, data released for research approved by state, will run data as feasible; no web-based
- **Other Relevant Suicide Information**

Behavior Risk Factor Surveillance System (BRFSS)

- The BRFSS, the world's largest telephone survey, tracks health risks in the United States. Information from the survey is used to improve the health of the American people.
- State estimates available
- Administered every other year
- Sample permits estimates for each state
- Ages 18+
- Suicide/ suicide attempt questions are an optional module; politics, competition for space, need to pay for it

Behavior Risk Surveillance Survey

- **Behavior Risk Surveillance Survey** – *Bruce Steiner, Illinois Department of Public Health* (<http://app.idph.state.il.us/brfss/>)
- **Database(s)** : measures risk factors for adults 18+; measures 2007 = serious psychological distress module; 2008 = anxiety & depression module
- **Access to data:** can custom run urbanicity strata, but not county level data; 2008 data on CDC website; Cross tabs on web-site
- **Other Relevant Suicide Information**

Pregnancy Risk Assessment Monitoring System

- **Pregnancy Risk Assessment Monitoring System (PRAMS)** - *Theresa Sandidge, Illinois Department of Public Health*
- **Database(s)** : IL uses standardized (CDC) forms, 1997-2006, Statewide, no county but Cook
- **Key Suicide-Related Variables:** 04-06 post-partum depression, stressor before pregnancy; recent years have expanded depression & anxiety
- **Access to data:** Annual reports, web-based @ CPONDER; will run data with DRRC approval
- **Other Relevant Suicide Information**

Illinois Department of Corrections

- **Illinois Department of Corrections** – Wendy Blank, Chief of Mental Health & Psychiatric Services (<http://www.idoc.state.il.us/>)
- **Database(s)** : Report by facility of incidence; mortality review committee; psychological autopsy; data are statewide; include 97-2008; juvenile and adult system
- **Key Suicide-Related Variables:** serious attempt, suicide, medical treatment,
- **Access to data:** need specific request; need to clear through legal
- **Other Relevant Suicide Information**

Psychiatric Hospitals

- **Psychiatric Hospitals** – Patricia Ready
- **Database(s)** : Division of Mental Health oversees 9 inpatient facilities—free standing
- **Key Suicide-Related Variables:**
- **Access to data:** Includes fatal suicides in hospitals and monitors 1 week after discharge
- **Other Relevant Suicide Information:** No private hospital data

Illinois Commerce Commission

- **Illinois Commerce Commission (suicide by train)** – Chip Pew and Stephen Laffey, Railroad Safety Specialists (www.icc.illinois.gov)
- **Database(s)** : Spreadsheet of suspected railroad related suicides in IL. Since 2002; statewide; county
- **Key Suicide-Related Variables:** suspected suicide & attempt; demographics; location; date/time
- **Access to data:** *Submit FOIA request to* Michael E. Stead, Rail Safety Program Administrator
- **Other Relevant Suicide Information:** (AAS, CA intervention)

Illinois Department on Aging

- **Illinois Department on Aging** – *Mary Mayes, State Agency Representative*
(<http://www.state.il.us/aging>)
- **Database(s)** : Data collected through Community Care Program, Seniors 60+
- **Key Suicide-Related Variables:** Geriatric Depression Scale
- **Access to data:** Data collected but not yet tracked; no uniform state assessment; request through Care Coordination Unit
- **Other Relevant Suicide Information**

Crime Scene Data

- **State Police: Crime Scene Data** – *Mike Narish and Mike Trummel, Illinois State Police*
- **Database(s)** : jurisdiction highway and officer involved; data only crimes worked; statewide; county (but mostly highway), 2004+, 1 month lag
- **Key Suicide-Related Variables:** Little data on suicide and little access to data
- **Access to data:** Annual report for Governor but not public, death investigation may not determine suicide; reports weapon involvement
- **Other Relevant Suicide Information**

Accident/Crash Data

- **Accident/Crash Data** – *Mehdi Nassirpour, Illinois Department of Transportation*
(<http://www.dot.il.gov/>)
- **Database(s)** : Several years, most recent database is 2008.
- **Key Suicide-Related Variables:** No data
- **Access to data:** Web queries available. Extensive reports on-line re crashes, facts, and statistics--
<http://www.dot.il.gov/safety.html>.
- **Other Relevant Suicide Information**

Fire Incident Reporting System

- **Fire Incident Reporting System** - *Joe Woodward, Office of the State Fire Marshal*
(<http://www.state.il.us/osfm/>)
- **Database(s)** : has cause but no indication of intent; 60-70% participation, Statewide, county, several years but 2006+ best data
- **Key Suicide-Related Variables:** narrative data may be useful if know suicide
- **Access to data:** access by third party not clear
- **Other Relevant Suicide Information**

Health Data Dissemination Initiative

- **Health Data Dissemination Initiative** – *Tom Szpyrka, Illinois Department of Public Health and Peter Eckart, Illinois Public Health Institute*
- **Database(s)** : A compilation of databases, data are generally statewide & county*, 2 year lag, IPLAN old system; release 1 & 2 aggregate data; 06-07
- **Key Suicide-Related Variables:** suicide data spread across site, Suicide rates, leading cause
- **Access to data:** Will have to use CMS to make data public; web-based data
- **Other Relevant Suicide Information**

Child Health Data Lab

- **Child Health Data Lab**– *Tracie L. Smith, Epidemiologist* (<http://www.chdl.org/index.htm>)
- **Database(s)** : CHDL funded to hosts a compilation of health data; piloted Illinois Health Survey & proposed mental health questions in future
- **Key Suicide-Related Variables:** Various mortality, hospitalization, and risk factors
- **Access to data:** State & Community Reports Injury website; can use but not share datasets; has YRBS & Hospital data
- **Other Relevant Suicide Information:**
<http://www.chdl.org/sources/index.html>

NON-FATALITY DATA – Non-State Agencies

Poison Control Centers

- **Poison Control Centers** – *Gail Moran, Illinois Poison Center*
- **Database(s)** : Data are current, based on calls
 - **Statewide; county, year**
- **Key Suicide-Related Variables:** toxicology, 19 reasons including self-harm, severity, some post-event information
- **Access to data**
 - Annual web-based reports include suicide; no public use data but will run request
- **Other Relevant Suicide Information**

Farm Resource Center

- **Farm Resource Center;** *Shasta Casper*, Office Manager. Established to respond to the needs of rural families in crisis. (<http://www.frci.org/>)
- **Database(s)** : Records of calls, outreach & follow up; county, 11+ years of data
- **Key Suicide-Related Variables:** Scores on Well-Being Scale, call logged and client tracked, include child survey.
- **Access to data:** Data request through Executive Director, Rodger Hannan; annual report create by ED; public use data, web-based
- **Other Relevant Suicide Information** (Veterans)

Suicide & Crisis Hotlines

- **Illinois Suicide Prevention Services Lifeline and Hotlines**–*Stephanie Weber*, Executive Director; (<http://www.spsfv.org/10001.html>)
- **Database(s)** : limited formal follow-up; call data statewide (down & outside state); county info not in screener; data back to 2000; ~3500-4000 a month
- **Key Suicide-Related Variables:** depression, Ideation, plan, in progress, lethal, depression screening
- **Access to data:** Annual report, e-mail Steve Binns for data runs,
- **Other Relevant Suicide Information**

Relevant Agencies Not Interviewed

- Uniform Crime Reporting
- Veterans Administration
- Disability

Risk & Protective Factors



- Do we really know all the risk & protective factors for suicide / suicide attempts?
- Your program's public health approach tries to minimize the risk factors & accentuate the protective factors

Data & Suicide / Suicide Attempt Prevention Efforts

- What data do your program collect?
- How do you know if it's "enough" to say something?
- How can these data drive program and resource development?
- How do you know if the resources are working?

Recommendations

Preliminary Recommendations

- Education – share results of telephone interviews; illicit feedback
 - Improve awareness of data in State
 - Training programs for professionals
- Missing data
 - Alcohol and substance abuse
 - Representativeness of the sample
 - Inclusion or exclusion criteria
- Electronic data
 - Move from paper to computer
 - Web-based systems
- Triangulation of data

Triangulation of Data

- Many different types of data
- Many different sources
- Can you mix & match
 - What are the ramifications
 - Can data sources be combined
 - Is it possible to summarize everything

Triangulation of Data

- **Illinois Example: You want to say something about depression among high school female victims of assault**
 - Major depression at some time in their lives, experienced by 30% of rape victims and 10% of women never victimized by violent crime (Kilpatrick et al 2003)
 - Number of Illinois high school female students experienced dating violence & had physically forced sexual intercourse

Summary

We have covered...

- Sources of data (national, state, local)
 - Fatal data
 - Non-fatal data
 - Surveillance data systems
 - Survey Data
 - Other
- Preliminary Recommendations
 - Focusing Suicide Prevention Efforts
 - Triangulation of Data

Conclusions

- Augment the data from your program with other state, local and national sources of data for suicide
- Use combined data to show that your program is effective

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- Children's Safety Network (CSN)

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