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

hosted by the Children’s Safety Network
11:00 am – 12:30 pm EDT

On your telephone please dial 1-800-361-5659, and then type in pass code 220737#

Please be sure to mute the volume on your computer.
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)

- **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

- **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


- **Nationwide**
  - Total of 174,861 attempts per year
  - Hospitalized attempt rate: 63.3 per 100,000
  - Average of 479 attempts every day

- **Illinois**
  - Total of 6,083 attempts per year
  - Hospitalized attempt rate: 50.9 per 100,000
  - Average of ~17 attempts every day

SPRC Data Fact Sheets, 2008
Suicide: US vs. IL (1999-2005):
Race/ Ethnicity

13.9 10.9
8.7 4.3
8.8 6.4
8.1 6

SPRC Data Fact Sheets, 2008
## Suicide Methods: US vs. IL (1999-2005)

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

- Firearm: rate 3.8 per 100,000
- Suffocation: rate 2.6 per 100,000
- Poisoning: rate 1.7 per 100,000
- If half of undetermined intent poisonings were self-inflicted, suicides in IL would be 2% higher

SPRC Data Fact Sheets, 2008


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

- Poisoning: rate 40.9 per 100,000
- Cut/Pierce: rate 7.0 per 100,000
- If half of undetermined intent poisonings were self-inflicted, suicide attempts in IL would be 8% higher

SPRC Data Fact Sheets, 2008
### Cost Components: US vs. IL

<table>
<thead>
<tr>
<th>Country</th>
<th>Fatal</th>
<th>Nonfatal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>US</strong></td>
<td></td>
<td></td>
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</table>
| Fatal   | - Average medical cost/case: $3,983  
|         | - Average work-loss cost/case: $1,224,322 |
| Nonfatal|       |          |
|         | - Average medical cost/case: $9,127  
|         | - Average work-loss cost/case: $11,146 |
| **IL**  |       |          |
| Fatal   | - Average medical cost/case: $4,213  
|         | - Average work-loss cost/case: $1,399,332 |
| Nonfatal|       |          |
|         | - Average medical cost/case: $8,792  
|         | - Average work-loss cost/case: $12,033 |

### 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?

IL Suicide Prevention Alliance compiled list of Data Managers
Phone interviews of Data Managers
No data analysis involved

Results
- Webinar
- Report

Interview Methods
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 Rapineau, Chicago Public Schools
- Fire Incident Reporting System - Joe Woodward, Office of the State Fire Marshal
- Illinois Criminal Justice Information Authority - Becky Black/Chris Dehle
- Accident Crash Data - Mehdi Nassirpour, Illinois Department of Transportation

**NON-FATAL DATA - State Agencies (con’t)**
- Behavior Risk Surveillance Survey - Bruce Steiner, Illinois Department of Public Health
- Pregnancy Risk Assessment Monitoring System - Theresa Sandridge, 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/Sharmeice
- 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 - Gill 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](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**

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**Illinois Youth Survey**

- **Illinois Youth Survey** - Alan Markwood, Chestnut Health Systems ([http://www.illinoisyouthsurvey.org](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/](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

- **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

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](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](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)

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**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.

Acknowledgements

- Jennifer Martin and Carol Gall
- Illinois Data Managers and Agencies
- Children’s Safety Network (CSN)
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