Welcome to the Poster Session on Suicide and Resources for Opioid Overdose Prevention

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PREVAIL: A Peer Mentorship Program to Reduce Suicide Attempts Among High-Risk Adults  
Diana Curtis, BA, VA Center for Clinical Management Research, Ann Arbor, Michigan; Sara Pasiak, BS, Michigan Medicine

The relationships between risk-taking, depression and alcohol use in the experience of suicidal ideation among adults in the general population  
Juliann Li, MSW, University of Michigan School of Social Work

Trends of Non-fatal Suicide Behaviors Among Adults in the United States from 2009-2017  
Lindsay A. Bornheimer, PhD & Juliann Li, MSW, University of Michigan, School of Social Work

Comparing Attitudes toward Stigmatized Deaths: Suicide & Opioid Overdose Deaths  
Athena Kheibari, PhD, Wayne State University, School of Social Work

Enhancing Opioid Overdose Response Strategies in Genesee County, Michigan  
Keara Sullivan, BA, University of Michigan Injury Prevention Center

Development of an Evidence-based Safer Opioid Prescribing Toolkit for Clinical Care  
Amy Rooker, MPH, University of Michigan Injury Prevention Center
Study Aims

**Methods**

**Recruitment**
- 490 participants with current suicidal ideation or a recent suicide attempt.
- Recruitment from two adult inpatient psychiatric units: Michigan Medicine Adult Inpatient Psychiatry and Henry Ford Kingswood.

**Randomization (one of two groups)**
1. Enhanced Usual Care: Participants receive a caring contact from researchers 48-72 hours after hospital discharge, and continue with their usual care.
2. Peer Mentorship: A Peer Specialist makes weekly contact with study participants by phone or in the community for 3 months to deliver the PREVAIL peer mentorship intervention.

**Peer Mentors**
- Certified by the state of Michigan, have at least one year of professional peer experience, and complete training on the study intervention and suicide risk management.
- Use ILSM (Involve, Learn, Share, Motivate) conversation guides to discuss safety planning, hope, and belongingness.
- Session content flexible for peers to provide general and relevant support, motivation, listening, validation, and sharing.
- Ask about suicidal thoughts at every session.
- Weekly supervision from licensed clinical psychologists.

**Fidelity**
- All sessions are audio recorded.
- Random selection of 20% of each peer’s recorders rated for fidelity.
- One goal of this study is to develop a fidelity rating system that can be easily implemented in healthcare systems.

**Progress to Date**
Of the 284 participants enrolled so far, 142 have been randomized to the peer arm.

Participants report suicidal ideation, suicide attempts, self-efficacy to avoid suicidal behavior, symptoms of depression, social support, hopefulness, beliefs of safety, and quality of life at follow-up assessments. 213 participants have completed the 3-month assessment (75.8%) and 193 have completed the 6-month assessment (71.5%).

**Impact and Innovation**
This is the first effectiveness trial of a peer-delivered intervention to reduce suicidal ideation and suicide attempts, it’s also the first outcome study measuring the degree to which the intervention was delivered with fidelity.

The explicit structured content draws from the interpersonal theory of suicide, addressing hopelessness and belongingness.

The hybrid effectiveness-implementation design aims to maximize the likelihood of rapid implementation in the community.

**References**

**ILSM Conversations**
- Reminders of Hope
- Values Before Goals
- Hopeful Goals
- Grief and Loss
- Strengthening Your Support Network
- Safety Planning
- Recognizing and Managing Distress
- Learning from the Suicidal Crisis
- Relaxation

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Additional contributors to the intervention design: Marcia Vainstein, Matthew Chirman, Pamela Werner, Marilyn Hickory, Laura Hinshaw, and John DeRosa.

Additional contributors to the writing and editing of the manual: Debra Levente, Dunguyen Le, Kelly Cut, Gregory Monroe, Deborah Monroe, Yarrow Hulsez, and Martin Horvathberg.
The relationships between risk-taking, depression and alcohol use in the experience of suicidal ideation among adults in the general population

Julian Li, MSW, LLMSW; Lindsay A. Bornheimer, PhD, LCSW; Lindsay Fernandez, MSW, LLMSW; Jenna Dagher

BACKGROUND

Purpose:
- Suicide is one of the nation's leading causes of preventable death, impacting individuals of all ages.1 The experience of suicidal ideation alone is one of the most significant predictors of ensuing suicide.2
- Risk-taking, defined as engaging in reckless, impulsive or sensation-seeking behaviors,3,4 relates strongly with higher suicidal rates.3,5
- The act of risk-taking involves a number of behavior, to include self harm, various forms of violence (i.e. property damage, interpersonal violence, self-esteem threats), physical risk-taking, and engagement in unsafe sexual activities.6
- Risk-taking and suicidal behavior is particularly prominent among adolescent populations.4,5
- Alcohol is among the nation's most used substances resulting in abuse, dependence, and need for treatment.7,8 Alcohol and abuse are well-established risk-factors for suicide attempts and death by suicide.9
- While it is well-known that alcohol use significantly relates to higher rates of depression and suicidal ideation among adolescents, less is known about the influence of risk-taking within these relationships. There is additionally a gap in the literature regarding these relationships among adult populations.

Study Aim:
- The current study examined suicidal ideation, alcohol dependence or abuse, depression, and risk-taking tendencies among adults in the United States.
- We predicted that risk-taking would mediate the relationships between alcohol use, depression and suicidal ideation in our adult sample.

METHODS

Data Source:
Data included adults who participated in the Substance Abuse and Mental Health Services Administration (SAMHSA) National Survey on Drug Use and Health (NSDUH).10 In 2017, data were collected using stratified, area probability sampling methods and involved computer-assisted self-administered surveys in US households; greater study details are described elsewhere.10

Inclusion Criteria:
Our sample for the current study was restricted to adults ages 18 to 65 who were asked questions about major depression (n=8,145).

Demographic Characteristics:
The NSDUH assessed for a wide range of sociodemographic characteristics, including age, sex, race/ethnicity, education, employment, marital status, and income.

Measurements:
- Depression: The NSDUH assessed lifetime history of Major Depressive Episode (MDE) based on endorsement of at least 5 out of 9 DSM-5 criteria for MDE.
- Risk-taking: Two risk-taking items were used to measure risk-taking tendencies. Both items were measured on a 4-point scale. A latent variable was created using these two items.
- Alcohol use: A single item assessed past year alcohol dependence or abuse based on DSM-5 criteria. Scoring was binary “yes” or “no”.
- Suicidal ideation: Participants were asked about their experience of past-year suicidal ideation by the following question: “At any time in the past 12 months...did you seriously think about trying to kill yourself?” Response categories were binary “yes” or “no”.

RESULTS

Data Analysis:
Data were analyzed using SPSS26 and Mplus6. Structural equation modeling (SEM) was performed to estimate the study aims using a robust (Huber-White) maximum likelihood algorithm to deal with nonnormality and variance heterogeneity.

CONCLUSIONS

Conclusions:
Depression, alcohol use, and risk-taking behaviors were all independently related to past-year suicidal ideation. Risk-taking also partially mediated the relationships between depression and alcohol use, suggesting that risk-taking directly influenced experiencing depression and suicidal ideation among our adult sample.

Innovations/Significance:
Globally, there are over 800,000 deaths annually due to suicidal behavior and intoxication combined,11 and risk-taking is evidently important to consider within these relationships.

Screening for risk-taking in clinical assessment: Because early detection in clinical care has been shown to optimize suicide prevention,12 mental health providers can be trained to evaluate risk-taking as an intentional consideration during intake and assessment.

Adaptation and development of interventions for risk-taking: Adapting preexisting interventions for risk-taking to serve adults can be beneficial in aiding public health efforts to prevent suicide death.12

LIMITATIONS:
Measurement included some single items, self-report and social desirability must be considered, suicide attempt may be underestimated given surveys didn’t collect data from adults who died by suicide, participants not in U.S. households were exclude (e.g. homeless or institutionalized), and the results should not be considered as causal relationships since the examinations were cross-sectional.

ACKNOWLEDGEMENTS

We acknowledge the Substance Abuse and Mental Health Services Administration (SAMHSA) and Research Triangle Institute (RTI) International for allowing the use of data from the National Survey on Drug Use and Health (NSDUH).

REFERENCES

BACKGROUND

Suicide is a leading public health concern in the United States with a 30% increase in the age-adjusted rate of suicide death from 2000 (10.4 per 100,000) to 2016 (13.3 per 100,000).\(^1\)

Non-fatal suicidal behaviors (i.e., suicidal ideation, plan, and attempt with intent to die) are important clinical events and risk factors that are potentially important prevention targets.\(^2\)

Though data support suicide death rates to vary by gender, age, race, and ethnicity,\(^3,4\) findings of sociodemographic factors in non-fatal suicidal behaviors among adults are inconsistent in the literature.

Example: Some data show that black adults have a higher rate of suicide mortality and attempt rates, and that females are more likely to report suicidal ideation than males, while others report no significant differences in rates of ideation or attempt between males and females.\(^5\)

This study aimed to examine:

1. Trends in the rates of non-fatal suicidal behaviors (suicidal ideation, plan, and attempt) in the US among adults.
2. Whether the trends differ by sociodemographic and clinical characteristics in a nationally representative sample of adults ages 18 to 65 from 2009 to 2017.

METHODS

Data included adults 18 to 65 years of age who participated in the Substance Abuse and Mental Health Services Administration (SAMHSA) National Survey on Drug Use and Health (NSDUH)\(^6\) from 2009 to 2017 (N=835,339).

Data were collected using stratified, area probability sampling methods and involved computer-assisted self-administered surveys in U.S. households; greater study details are described elsewhere.\(^7,8\)

Measurement: Suicide ideation, plan, and attempt were all measured in the past 12 months as a binary “yes” or “no.” The mental health and treatment status variable was comprised by two indicators (any mental illness and mental health treatment)\(^8\) and included 3 categories in the past 12 months: no mental illness/no treatment, mental illness/no treatment, and mental illness/treatment received.

Data Analysis: We followed the guidelines for trend analysis from the National Center for Health Statistics. We used logistic regression to explore relationships between 3 time variables (linear, quadratic, and cubic) to obtain the adjusted trends of three non-fatal suicidal behaviors. We individually tested the interaction terms between the linear year variable and each covariate for all non-fatal suicidal behaviors to examine whether the linear trends differ by sociodemographic and clinical subgroups. All statistical analyses were conducted using Stata 15.2.

RESULTS

Suicidal ideation, plan, and attempt showed significantly positive linear trends with the odds of suicidal ideation increasing by an average of 2% per year (OR\(_{linear}\) = 1.02, 95% CI: 1.01, 1.04), suicidal plan increasing by an average of 3% per year (OR\(_{linear}\) = 1.03, 95% CI: 1.01, 1.05), and suicide attempt increasing by an average of 4% per year (OR\(_{linear}\) = 1.04, 95% CI: 1.02, 1.06).

DISCUSSION

Suicide ideation, plan, and attempt significantly increased from 2009 to 2017 among adults ages 18 to 65 in the United States. Expanding on prior research,\(^9\) the trends of suicidal ideation and plan in the current study increased the most among young adults as compared to other adult mental health age groups. The mental illness/treatment findings likely point towards less professional and familial support surrounding mental health issues given a lack of exposure to behavioral health services and/or psychoeducation.\(^10\)

Clinical implications: Efforts may consider implementing a protocol to mandate suicide prevention psychoeducation for all individuals who have a mental health symptom group (e.g., emergency medicine and primary care) and increasing awareness of risk and protective factors among the general public (e.g., via schools, libraries, places of worship, workplace, etc).

Help-seeking and service use barriers may include stigma, suicide risk and prevention awareness, low perceived need for behavioral health treatment, hopelessness, and logistics (e.g., finances, insurance, transportation, scheduling).

Limitations: Measurement included some single items, self-report and social desirability must be considered, suicide attempt may be underestimated given survey didn’t collect data from adults who died by suicide, participants not in U.S. households were excluded (e.g., homeless or institutionalized), and diagnostic criteria changed in the DSM from the 4th to 5th edition during the 2009-2017 data collection timeframe, potentially impacting the prevalence of diagnosed mental illness and substance use.

ACKNOWLEDGEMENTS

We acknowledge the Substance Abuse and Mental Health Services Administration (SAMHSA) and Research Triangle Institute (RTI) International for allowing the use of data from the National Survey on Drug Use and Health (NSDUH).

REFERENCES

Comparing Attitudes toward Stigmatized Deaths: Suicide & Opioid Overdose Deaths

Athena Kheibari, PhD1, Julie Cerel, PhD2, & Grant Victor, PhD1
Wayne State University1, University of Kentucky2

BACKGROUND
- Given the strong association between suicide & substance use, it is important to investigate whether they share similar stigmatized perceptions & ambivalence toward intervention that would impede prevention & treatment efforts.
- This study is the first to conduct a comparative analysis of suicide & opioid overdose death attitudes.

METHODS & SAMPLE
- 503 respondents were recruited via Amazon Mturk for an online Qualtrics survey.
- Respondents were randomly assigned to respond to questions related to: (1) suicide (N=274) and (2) fatal opioid overdose (N=223).
- Measures: (1) Stigma of Suicide Scale & (2) Willingness to Intervene Scale (adapted to also address fatal overdose).

RESULTS
- Suicide viewed as being more attributed to depression/isolation than opioid overdose.
- Greater endorsement of overdose decedents being labeled as:
  - Pathetic
  - Stupid
  - Embarrassment
  - Irresponsible
- Greater willingness to intervene in a hypothetical case of a person at-risk for suicide than those who were asked about a person at-risk for overdose.
- For overdose risk, more willing to:
  - Do nothing
  - Tell person to stop being “dramatic”
  - Ignore the situation

CONCLUSIONS
- Findings could be interpreted as more severe stigmatization of fatal opioid overdose.
- The pejorative language directed to opioid overdose decedents could be understood as these individuals having ‘bad character,’ poor decision-making, & being more worthy of blame.
- Additional studies needed to understand multidimensional nature of these attitudes.

INNOVATIONS
- This study is first of its kind & demonstrates significant differences in perceptions of suicide & opioid overdose deaths.
- Contributes to the broader understanding of public attitudes toward two types of stigmatized deaths.
- Draws attention to the need for reducing stigma toward persons who use drugs & educating on how to intervene when a person is at-risk for overdose.

REFERENCES
### Background
- Opioid overdose is a growing local and national public health problem. In 2018, there were 2,036 opioid overdose deaths in Michigan.¹
- In Michigan, a challenge historically faced by public health and public safety stakeholders addressing the opioid epidemic at the local level is the lack of access to timeline fatal and non-fatal opioid overdose data.
- In 2016, the CDC-funded University of Michigan Injury Prevention Center (IPIC) and Michigan High Intensity Drug Trafficking Areas (HIDTA) partnered to develop the System for Opioid Overdose Surveillance (SOS).
- SOS provides near real-time mapping of suspected non-fatal and fatal overdose cases, as well as demographic reports to authorized public health and public safety stakeholders across the state of Michigan.

### Methods
- A pilot project was conducted in Genesee County, MI with community stakeholders to determine how near real-time suspected opioid overdose data through the SOS can be used to improve planning, implementation, and responses to opioid overdoses.

### Sample SOS Report
- Number of mappable incidents
- Approximate location of mappable incidents
- Zip code and city frequency tables
- Incident demographic data

### Qualitative findings from stakeholder focus groups and interviews identified:
1. How near real-time overdose reports can be used to inform prevention and response.
2. Barriers to prevention and response; and
3. Promising strategies that can lead to a coordinated community-level response.

### Stakeholder feedback examples:
- "The biggest thing that we look at would be actually identifying locations for education, right? So, if we can start to figure out what’s happening in these communities and these specific areas, that would help us figure out more ways to strategize and really educate these populations."
  - Public Health Stakeholder
- "So, being able to implement a mobile unit to our program, I foresee that being part of our community response, in terms of how we use the SOS database because that would help us inform where it needs to be parked, what areas we need to be making sure have access to our services that may be don’t currently get to access us."
  - Outreach and Prevention Stakeholder

### Conclusions
- A toolkit based on stakeholder feedback describing barriers, needs, and strategies in activating community responses in opioid overdose is being developed and will be disseminated to stakeholders and Genesee County officials.
- Genesee County stakeholder feedback initiated important enhancement to the SOS web-based dashboard. For example, data is updated daily, and users have the option to customize their own reports.

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¹Data provided by the SOS web-based dashboard. Available at: https://www.nytimes.com/2018/10/04/us/michigan-opioid-overdoses.html
This toolkit is one of the first fully online, comprehensive, evidence-based clinical resources to address the opioid epidemic.

**RESULTS**

Toolkit resources were developed across seven domains:
- Background resources on pain and pain management
- Management strategies for chronic opioid use and opioid use
- Non-opioid/non-pharmacological pain management
- Opioid pain management
- Just-in-time resources
- Special populations

**BACKGROUND:** Despite a 30% reduction nationwide in new opioid prescriptions since 2012, prescription opioid overprescribing, as well as opioid misuse and overdose remain significant U.S. public health issues. To address a deficit in educational resources/tools for clinical providers and their patients, the Injury Prevention Center (UM-IPC), in partnership with the Department of Health and Human Services (MDHHS), created the Michigan Safer Opioid Prescribing Toolkit (michmed.org/optoolkit), — a comprehensive, evidence-based, on-line resource.

**METHODS:**
1. Needs assessment of PCPs in Michigan
2. Review of literature and publicly available opioid prescribing resources
3. Provider- and patient-focused resources were identified from existing sources or newly developed for the toolkit
4. Expert review for usability and applicability/relevance

**CONCLUSIONS**

Development/dissemination of a just-in-time toolkit to guide evidence-based primary care pain management (i.e., safer opioid prescribing), harm reduction, and opioid use disorder treatment/linkage to care has potential for broad public health and clinical impact in addressing the opioid epidemic.
Q&A

Please type your questions in the Q&A box and the moderator will ask the panelists select questions.
- Evaluation survey to follow by email

- Register now for our upcoming summit - The Science of Suicide Prevention: New Strategies for Understanding and Intervening on March 16, 2021 from 12PM – 5PM. Information on how to register and submit abstracts can be found on the event page on our website injurycenter.umich.edu

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- All recordings from today will be available on our website in the coming weeks

Thank You!