SCREENING, BRIEF INTERVENTION, AND REFERRAL TO TREATMENT (SBIRT) FOR INTERPROFESSIONAL GROUPS OF ANESTHESIA STUDENTS (InGAS): USE OF SIMULATION

Ann M. Mitchell, PhD, RN, FAAN
Professor of Nursing

University of Pittsburgh
School of Nursing
This project was supported by the Health Resources and Services Administration (HRSA) of the U. S. Department of Health and Human Services (DHHS) under grant D09HP25025-03. The information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, DHHS, or the U.S. Government.
Project Team

- Ann M. Mitchell, PhD, RN, FAAN  Project Director
- John O’Donnell, DrPH, CRNA  Project Manager
- Kathy Puskar, DrPH, RN, FAAN  Faculty Expert
- Michael Neft, DNP, RN  Faculty Expert
- Holly Hagle, PhD  Director of Training
- Dawn Lindsay, PhD  Project Evaluator
- Martin Houze, PhD  Project Statistician
- Lynn Boucek, MSN, RN  Project Assistant
- Emily Knapp  Project Coordinator
Presentation Aim:

- Provide an overview of the educational and skill-building program
- Discuss outcomes on participants’ attitudes related to confidence and competence for working with patients who use alcohol, tobacco, and other drugs
National Center for
Interprofessional Practice and Education
Nexus Innovations Incubator

* Pioneer Members

- **Minnesota**
  - University of Minnesota

- **Michigan**
  - Grand Valley State University
  - West Michigan IPE Initiative

- **Pennsylvania**
  - University of Pittsburgh

- **Indiana**
  - Indiana University

- **Kentucky**
  - University of Kentucky

- **South Carolina**
  - Medical University of South Carolina

- **Arizona**
  - Arizona State University
  - University of Arizona

- **Colorado**
  - University of Colorado
Interprofessional Collaborative Practice Model

Interprofessional Education: Interprofessional Collaborative Practice (IPCP)

• Based on the Institute of Medicine (IOM) recommendations
• The goal of this interprofessional learning is to prepare all health professions students for deliberatively working together with the common goal of building a safer and better patient-centered and community or population oriented U.S. health care system
• The connection between SBIRT and IPCP → engaging in relationships for patient-centered care

Worldwide Significance

- Alcohol and other drug misuse is an enormous public health burden
- Globally, harmful use of alcohol causes approximately 3.3 million deaths every year (about 6% of all deaths)
- About 5% of global burden of disease is attributable to alcohol consumption
- Causal relationship between alcohol consumption and more than 200 health conditions
Significance in United States

- Over 23 million persons aged 12 or older needed treatment for an alcohol or other drug related problem in 2008, yet only 2.3% received treatment (SAMHSA, 2011).

- Negative social attitudes about the use of alcohol and illicit drugs make substance use one of the most complex public health issues (Healthy People 2020)

- 19 million people were in need of - but did not receive specialty treatment for alcohol or drug problems
  - Cost of excessive Drinking in U.S. was $ 223.5 Billion
  - Cost of illicit Drug Use in U.S. was $193 Billion
Significance to Profession

• **Drug-Drug Interactions:** Risk of interactions between drugs dentists prescribe and the drugs or alcohol some patients consume.

• **Number of prescriptions:** More than half (55.3%) of those who use prescription drugs for non-medical purposes get the drugs from a family member or friend.

• **Significant link between oral health and substance use disorders**
  - heavy drinking is associated with 75% of esophageal cancers
  - heavy drinking is associated with 50% of mouth, larynx, and pharynx cancers
  - increased risk of cancer if the person who is drinking also smokes
  - methamphetamine epidemic and “meth mouth”
Screening, Brief Intervention, and Referral to Treatment (SBIRT)

- Public health model designed to provide universal screening
- Secondary prevention: detecting risky or hazardous substance use before the onset of abuse or dependence
- Early intervention and treatment for individuals who have more severe problematic use
SBIRT is recommended by:

- The US Preventive Services Task Force
  - as part of universal screening in all health visits
- Department of Veterans Affairs/Department of Defense
- The Joint Commission
- American College of Obstetricians and Gynecologists
- The American College of Surgeons Committee on Trauma Accreditation Standards
  - for Level I and Level II trauma centers
Screening

Involves the use of validated screening instruments:

Alcohol and/or drug abuse screening tools

- Alcohol Use Disorders Identification Test (AUDIT)
  - 10 question screen that identifies hazardous drinking, harmful use and alcohol dependency
- The Drug Abuse Screening Test (DAST)
  - 10 question screen for drug use
Early and Brief Intervention

- For those not ready to change:
  - May increase motivation

- For those ready to change:
  - Provides advice on appropriate goals and strategies
  - Provides support

- Outcome goals include:
  - Reduction or cessation of use (even temporary)
  - Harm reduction
  - Beginning to think about reduction
  - Agreeing to accept referral
Referral to Treatment

- Only if patient is screened into a high risk user category
- Referral that patient is most likely to utilize
Methods

• University of Pittsburgh partnered with:
  - Institute for Research, Education, and Training in Addictions (IRETA)
  - School of Nursing
  - School of Dentistry

• Training
  - 1.5 hours of didactic instruction
    – Online booster sessions
  - Simulation at The Peter Winter Institute for Simulation, Education, and Research (WISER)
  - Interprofessional case conferences
### Participants (n=296)

<table>
<thead>
<tr>
<th></th>
<th>SRNA Students</th>
<th>Dental Students/ Residents</th>
<th>Dental Hygiene Students</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender (% Female)</td>
<td>73%</td>
<td>42%</td>
<td>100%</td>
<td>65%</td>
</tr>
<tr>
<td>Race (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>88%</td>
<td>77%</td>
<td>94%</td>
<td>84%</td>
</tr>
<tr>
<td>Black</td>
<td>5%</td>
<td>2%</td>
<td>0%</td>
<td>3%</td>
</tr>
<tr>
<td>Asian</td>
<td>4%</td>
<td>20%</td>
<td>2%</td>
<td>10%</td>
</tr>
<tr>
<td>More than one race</td>
<td>2%</td>
<td>0.5%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Unknown</td>
<td>1%</td>
<td>0.5%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Mean Age (SD)</td>
<td>28.8 (5.0)</td>
<td>25.9 (3.4)</td>
<td>21.6 (2.7)</td>
<td>26.5 (2.7)</td>
</tr>
</tbody>
</table>
Sim “Wars” Meets SBIRT Experience

Scenario:

- **Elderly Church Organist vs. Dodge**
  - Level 1 Trauma Call to ED

- Patient: 75-year-old male unrestrained driver of an 88 Dodge failed to stop at traffic light; Pick-up truck into passenger side of Dodge at approximately 40 mph.

- Patient awake wants his eye glasses c/o some abdominal discomfort, questionable alcohol on breathe. Awake, breathing spontaneously with bilateral breathe sounds. BP 155/100, HR 90, RR 28.
Simulation “Wars” Student Data

Turning Point

• Audience Response Data

• Teams rated on 1-5 scale
  – 1 = Novice
  – 2 = Minimally competent
  – 3 = Moderately competent
  – 4 = Highly competent
  – 5 = Expert
## Sim“Wars” Turning Point Data

<table>
<thead>
<tr>
<th>Assessment Point</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Performance of primary survey</td>
<td>- Airway, Breathing, Circulation, Disability, Events</td>
</tr>
<tr>
<td>1. Performance of secondary survey</td>
<td>- Allergy, Meds, PMHx, Last meal, Events</td>
</tr>
<tr>
<td>1. Planning and Implementation</td>
<td>- The assignment of roles and goals worked for the team.</td>
</tr>
<tr>
<td></td>
<td>- The team was able to make new plans as conditions changed.</td>
</tr>
<tr>
<td></td>
<td>- Problems were identified and treated; actions were taken with consideration of other ongoing problems</td>
</tr>
<tr>
<td>1. Teamwork</td>
<td>- The team demonstrated situational awareness and monitoring, Mutual support, everyone had an assigned role and was engaged</td>
</tr>
<tr>
<td></td>
<td>- Decisions were made in a timely manner and were appropriate</td>
</tr>
<tr>
<td>1. Communication</td>
<td>- Closures of loops, SBAR, clarity, one at a time</td>
</tr>
<tr>
<td>1. Global score (includes safety skills)</td>
<td>- Overall Effectiveness of the Performance</td>
</tr>
<tr>
<td></td>
<td>- Appropriate Safety skills were demonstrated, including:</td>
</tr>
<tr>
<td></td>
<td>- management of sharps, blood and body fluid precautions, patient safety interventions</td>
</tr>
</tbody>
</table>
Sim “Wars” Turning Point Data (n=36)

Turning Point Planning Score for Student Team:

- Expert
- Highly competent
- Moderately competent
- Minimally competent
- Novice
Sim “Wars” Turning Point Data (n=36)

Turning Point Teamwork Score for Student Team

- Expert
- Highly competent
- Moderately competent
- Minimally competent
- Novice

[Bar chart showing the distribution of teamwork scores for student teams.]
Sim “Wars” Turning Point Data (n=36)

Turning Point Communication Score for Student Team

- Expert
- Highly competent
- Moderately competent
- Minimally competent
- Novice
Simulation Competency Rating Form

Competent Team Performance

- Patient Interview Scenario
  - SBIRT Competency Example: “Appeared comfortable raising the question of drug and alcohol use with the patient.”
  - IPCP Competency Example: “Communicated well with other professionals, using respectful language.”

- Impaired Professional Scenario
  - SBIRT Competency Example: “Recognized the signs of impairment and intervened with the co-worker before patient safety was compromised.”
  - IPCP Competency Example: “Was respectful of each other’s roles, placing the interests of the patient foremost.”
Sim “Wars” Competency Data (n=36)

- SBIRT Competence
- IPCP Competence
Alcohol and Alcohol Problems Perceptions Questionnaire (AAPPQ)

- **Role Adequacy**: Example: “I feel I have a working knowledge of alcohol and alcohol related problems.”

- **Role Legitimacy**: Example: “I feel I have a clear idea of my responsibilities in helping drinkers.”

- **Role Support**: Example: “If I felt the need when working with drinkers I could easily find someone who would help me clarify my professional responsibilities.”

- Other subscales:
  - **Work Satisfaction**
  - **Task-Specific Self-Esteem**
  - **Motivation**

AAPPQ Results (n=252)
Drug and Drug Problems Perceptions Questionnaire (DDPPQ)

- **Motivation**: Example: “I feel that there is little I can do to help drug users.”

- **Work Satisfaction**: Example: “I want to work with drug users.”

- **Task-Specific Self-Esteem**: Example: “In general, I have less respect for drug users than for most other patients/clients I work with.”

- Other subscales:
  - Role Adequacy
  - Role Legitimacy
  - Role Support

DDPPQ Results (n=252)

IPCP Questionnaire: Interdisciplinary Education Perception Scale (IEPS)

- **Professional Competence and Autonomy**: Example “Individuals in my profession are extremely competent.”

- **Perceived Need for Professional Cooperation**: Example “Individuals in my profession must depend upon the work of people in other professions.”

- **Perception of Actual Cooperation**: Example “Individuals in my profession think highly of other related professions.”

- **Understanding Value of other Professions**: Example “Individuals in my profession make every effort to understand the capabilities and contributions of other professions.”

IEPS Results (n=118)

- **Competence and Autonomy**
- Perceived Need for Cooperation
- **Perceived Actual Cooperation**
- Recognizing Value of Other Profession

Pre-training, Post-training, Post-Simulation
Readiness for Interprofessional Learning Scale

- **Attitudes to Interprofessional Learning (IPL)**

- **Teamwork and Collaboration** (Belief that shared learning is beneficial) Example: “Shared learning before qualification would help health care professionals become better team workers.” “I would welcome the opportunity to work on small-group projects with other health care professionals.”

- **Emphasis on Professional Identity** Example: (reverse score) “There is little overlap between my role and that of other health care professionals.”

- **Patient Centeredness** Example: “Thinking about the patient as a person is important in getting treatment right.”

IPLS Results (n=122)

Teams and Collaboration
Sense of Professional Identity
Patient Centeredness

Pre-training
Post-training
Post-simulation
Results Summary

- **AAPPQ subscales that significantly increased:**
  - Role Adequacy
  - Role Legitimacy
  - Role Support
  - Work Satisfaction

- **DDPPQ subscales that significantly increased:**
  - ALL

- **IEPS subscales that significantly increased:**
  - Competency and Autonomy
  - Perceived Actual Cooperation

- **IPLS subscales that significantly increased:**
  - Teamwork and Collaboration
Quotes from Key Informant Interviews

- I wish I had this training when I was a staff nurse
- Give us more examples of things we should say
- We like the role plays
- I would not have known what to do had this happened to me in practice; it was nice to play out the options
- Dental students were not aware that dentists are the number one prescribers of prescription opioids
Conclusions

• Students exposure to interprofessional training involving SBIRT was associated with positive changes of knowledge in both:
  – Perceptions of working with patients who have drug and alcohol misuse, abuse, and dependency
  – Interprofessional collaborative practice competencies

• Interprofessional education will improve patient outcomes and will provide more congruent and effective care
Screening Manual for Nurses

- Trainer’s Manual
- Ring of Knowledge Cards
- Handouts
  - Small Group Scenarios
  - Role Play Scenarios
- PowerPoints
  - Initial Training
  - Review/Refresher Training
Screening Manual for Nurses

- Developed by the University of Pittsburgh School of Nursing

- **Free** Download:
  
  http://www.nursing.pitt.edu/academics/ce/SBIRT_teaching_resources.jsp
Questions?

Contact: Ann M. Mitchell, PhD, RN, FAAN
ammi@pitt.edu