An Education Program to Address Patient and Colleague Substance Misuse in Anesthesia

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*Project SBIRT Expert*

Facts

- **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 approximately 75% of esophageal cancers
  - heavy drinking 50% of mouth, larynx and pharynx cancers
  - increased cancer risk if the drinker smokers
  - methamphetamine epidemic and “meth mouth”
Why is this project important?

- Nurse anesthetists and dentists are in a unique position to assess and intervene with patients about their substance use

Screening, Brief Intervention, and Referral to Treatment (SBIRT)

- Public health model provides universal screening
- Detecting risky or hazardous substance use before the onset of abuse or dependence
- Short, valid and reliable evidence-based used within the time constraints of a health visit
- Brief set of questions to assess patient’s alcohol and other drug use risk level
**Project Goal**

- To educate inter-professional groups of anesthesia students (Student Registered Nurse Anesthetists (SRNAs), Dental Anesthesia Residents, Dental Students, and Dental Hygiene Students) working in hospitals and community settings to work collaboratively utilizing Screening, Brief Intervention and Referral to Treatment (SBIRT).

**Project Objectives**

- Learn to apply the SBIRT model
- Promote inter-professional collaborative practice
- Increase comfort level with SBIRT and collaborative practice
Project Components

Education Methods

1. Face-to-face didactic instruction
2. Online booster sessions
3. Simulation components
4. Inter-professional case conferences
5. Simulation scenarios:
   a. Impaired professional nurse
   b. Pre-op college student with heavy alcohol use
   c. Inebriated father of a child who was involved in a car crash
Simulation component

Simulation increases participants’ ability to share knowledge and skills
1. Enhances personal confidence
2. Increases respect for other professions
3. Reduces errors and increases safety
4. Promotes teamwork
5. Enhances inter-professional communication and ability to identify professional roles and responsibilities

Interprofessional Collaborative Practice Model

Four Interprofessional Collaborative Practice Competency Domains

- Competency Domain 1: 
  - Values/Ethics for Interprofessional Practice
- Competency Domain 2: 
  - Roles/Responsibilities
- Competency Domain 3: 
  - Interprofessional Communication
- Competency Domain 4: 
  - Teams and Teamwork
Educational materials: 
Ring of Knowledge (ROK)

Addiction Training for Nurses using SBIRT Program 
(Screening, Brief Intervention and Referral to Treatment) 

University of Pittsburgh 
School of Nursing 

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**What's “low-risk” drinking?**

<table>
<thead>
<tr>
<th>Low-risk drinking limits</th>
<th>MEN</th>
<th>WOMEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>On any single DAY</td>
<td>No more than 4 drinks on any day</td>
<td>No more than 3 drinks on any day</td>
</tr>
<tr>
<td><strong>AND</strong></td>
<td><strong>AND</strong></td>
<td><strong>AND</strong></td>
</tr>
<tr>
<td>Per WEEK</td>
<td>No more than 14 drinks per week</td>
<td>No more than 7 drinks per week</td>
</tr>
</tbody>
</table>

To stay low risk, keep within BDTH the single-day AND weekly limits.

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EFFECTS OF HIGH-RISK DRINKING

- Aggression, institutional behavior, violence, violence, violence.
- Depression, major depression.
- Premature aging.
- Cancer of throat and mouth.
- Fragile lung, weakened immune system, increased risk of pneumonia.
- Liver damage.
- Impaired brain, impaired cognitive function, impaired memory.
- Fish.
- Impaired vision, leading to falls.
- Heart, fragile bones, brittle bones.

High-risk drinking may lead to social, legal, medical, domestic, job and financial problems. It may also set your lifespan and lead to accidents and death from drunken driving.

Alcohol Pre-Screen:
How many times in the past year have you had X or more drinks in a day?
(X equals 5 for men and 4 for women. Reporting 1 or more occurrences of this is considered a positive result and should trigger more in-depth screening and possibly a brief intervention.)


Drug Pre-Screen:
How many times in the past year have you used an illegal drug or used a prescription medication for non-medical reasons?

A score of 1 or more is considered a positive result and should trigger more in-depth screening and possibly a brief intervention.


Tobacco Pre-Screen:
Do you currently smoke or use any form of tobacco?

Yes = a positive screen and should trigger more in-depth screening and possibly a brief intervention.

THE DRINKERS PYRAMID

AUDIT Scores

Type of Drinkers

Abstainers

Low-Risk Drinkers

0

1 - 7

20%

1 - 7

35%

> 8 - 19

20%

High-Risk Drinkers

Probable Alcohol Dependence

> 20+

5%

Abstainers

Job of Brief Interventions:

- **Raise the Subject:** “If it’s okay with you, let’s take a minute to talk about the screening questions you answered today.”
- **Provide Feedback:** “I can tell you that drinking (drug use) at this level can be harmful to your health and possibly responsible for the health problem you came in for today (and/or may interact in a harmful way with your medication).”
- **Enhance Motivation:** “On a scale of 0-10, how ready are you to cut back your use?”
  - If > 0: “Why that number and not a ___ (lower number)
  - If 0: “Have you ever done anything while drinking (using drugs) that you later regretted?”
- **Negotiate Plan:** “How steps can you take to cut back your use?”
  “How would your drinking (drug use) have to impact your life in order for you to start thinking about quitting or cutting back?”
Participants

<table>
<thead>
<tr>
<th></th>
<th>SRNA Students (N=113)</th>
<th>Dental Students/Residents (N=117)</th>
<th>Dental Hygiene Students (N=48)</th>
<th>TOTAL (N=278)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender (% Female)</td>
<td>70.8%</td>
<td>41.0%</td>
<td>100.0%</td>
<td>63.3%</td>
</tr>
<tr>
<td>Race (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>86.7%</td>
<td>76.9%</td>
<td>95.8%</td>
<td>84.2%</td>
</tr>
<tr>
<td>Black</td>
<td>5.3%</td>
<td>1.7%</td>
<td>-</td>
<td>2.9%</td>
</tr>
<tr>
<td>Asian</td>
<td>4.4%</td>
<td>19.7%</td>
<td>2.1%</td>
<td>10.4%</td>
</tr>
<tr>
<td>More than one race</td>
<td>2.7%</td>
<td>0.9%</td>
<td>2.1%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Unknown</td>
<td>0.9%</td>
<td>0.9%</td>
<td>-</td>
<td>0.7%</td>
</tr>
<tr>
<td>Mean Age (SD)</td>
<td>29.2 (5.2)</td>
<td>25.8 (3.4)</td>
<td>21.6 (2.8)</td>
<td>26.5 (4.9)</td>
</tr>
</tbody>
</table>

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**

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

Preliminary results – AAPPQ

Pre- to Post- Scores on AAPPQ

Preliminary results – DDPPQ

Baseline differences on DDPPQ
**Preliminary results – DDPPQ**

**Pre-to Post-Scores on DDPPQ**

- **Role Ambiguity**
- **Role Legitimacy**
- **Role Support**
- **Motivation**
- **Task Specificity**
- **Work Satisfaction**

- **Pre-Training**
- **Post-Training**

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**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.”

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.”

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Preliminary Results - IEPS

![Baseline Differences on IEPS](chart.png)

- **CODA (n=112)**
- **Dental Students (n=115)**
- **Dental Hygiene Students (n=47)**
Preliminary Results - IEPS

Pre- to Post-Scores on IEPS

Follow Up Scores on IEPS
Preliminary Results - IPLS

Baseline differences on IPLS

Pre- to Post-Scores on IPLS

Teamwork and Collaboration
Professional Identity
Patient Centredness
Preliminary Results - IPLS

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
Simulation “Wars” Student Data

Scenario:

- Elderly Church Organist vs. Dodge
  - Level 1 Trauma Call to ED
- Patient: 75-year-old male unrestrained driver of “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.

<table>
<thead>
<tr>
<th>Assessment Point</th>
<th>Performance of primary survey</th>
<th>Airway, Breathing, Circulation, Disability, Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Planning and implementation</td>
<td>The assignment of roles and goals worked for the team.</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>
<td></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>
<td></td>
</tr>
<tr>
<td></td>
<td>Decisions were made in a timely manner and were appropriate</td>
<td></td>
</tr>
<tr>
<td>1. Communication</td>
<td>Closures of loops, SBAR, clarity, one at a time</td>
<td></td>
</tr>
<tr>
<td>1. Global score (includes safety skills)</td>
<td>Overall Effectiveness of the Performance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Appropriate Safety skills were demonstrated, including: management of sharps, blood and body fluid precautions, patient safety interventions</td>
<td></td>
</tr>
</tbody>
</table>
Simulation “Wars” Student Data

Turning Point Planning Score for Student Team:

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

Turning Point Teamwork Score for Student Team:

- Expert
- Highly competent
- Moderately competent
- Minimally competent
- Novice
Simulation “Wars” Student Data

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.”
Preliminary Results – Wiser Simulations

Scenario 1

Scenario 2

Preliminary Results – Simulation “Wars”

Scenario 3

Scenario 4
Preliminary Results – Hygiene Simulations

Implications

- Inter-professional educational activities are effective for teaching SBIRT to nurse anesthetist and dental students
- They are also effective in increasing nursing and dental student’s knowledge about substance use, misuse, and dependence
- Enables participants to practice SBIRT in realistic situations
- Participants were able to transfer knowledge from the classroom to simulation
Student Focus Group

- “I would not have known what to do had this happened to me in practice; it was nice to play out the options” ~ Student Nurse Anesthetist
- “I wish I had this training when I was a staff nurse” ~ Student Nurse Anesthetist
- “I was not aware that dentists are the number one prescribers of prescription opioids” ~ Dental Student
- “We love the role plays!” ~ Student Dental Hygienist

Screening Manual for Nurses

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

Access the curriculum here
http://www.nursing.pitt.edu/academics/ce/SBIRT_teaching_resources.jsp
Evidence-Based Practice Award

- Advances evidence-based practice through work in integrating knowledge and evidence in practice.
- Influences health of individuals and communities by bringing together professionals from various disciplines and roles.
- Engages researchers, clinicians, patients and families.

Award for SBIRT to Puskar & Mitchell 2013

Publications by Team

Publications by Team


Save the Date

*Interprofessional Collaboration for Wellness: Screening and Brief Intervention at the WISER Simulation Center Conference*

Pittsburgh, PA

June 9 & 10, 2015
Questions?

Contact Ann Mitchell, PhD, RN, FAAN
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