INTERPROFESSIONAL SIMULATION FOR WORKPLACE VIOLENCE IN THE EMERGENCY DEPARTMENT

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Disclosures

- Nothing to disclose

- Signed consents were obtained for sharing photos for educational purposes

- Funding was provided by the Minnesota Job Skills Partnership Grant [11-16-1184, 2016].
    - The funding source had no input on design, data collection, analysis or interpretation of data

Institutional Review Board (IRB)

- IRB rulings from the healthcare institution and from the educational institution deemed this project: Not human subjects research therefore IRB approval is not needed.
    - Quality improvement project
    - Education taking place in a common educational setting

Objectives

At the end of this presentation the learner will be able to:

- Examine how evidence-based practice and theory were incorporated into the development and implementation of an interprofessional violent patient behavior simulation

- Explore the practice implications, lessons learned, and results of this interprofessional simulation experience to make recommendations for future implementation of simulation training in your organization

Clinical Problem

- Escalating trends of Workplace Violence (WPV) (ENA, 2014)

- Approximately 2.9 million nonfatal assaults occur annually (U.S. Department of Labor, 2015)

- Emergency Departments (EDs) have a higher risk patient population (National Institute for Occupational Safety and Health [NIOSH], 2016)

- Detrimental consequences (NIOSH, 2002)
  - Individual
  - Organizational

Definition of WPV

- "Violent acts (including physical assaults and threats of assaults) directed toward persons at work or on duty" (NIOSH, 2002, p. 1)
  - Intent to cause harm
  - Verbal threats
  - Threatening body language
  - Physical attacks

Project Purpose

- To address threats and assaults at an upper Midwest Emergency Department (ED), managing 30,000 patients annually
  - By creating interventions to increase staff knowledge, skills, abilities, confidence, and preparedness
  - For interprofessional staff (Nursing, Providers, Social Services, and Security)

Statement of Clinical Practice Problem

- For healthcare staff working in the emergency department, does adding interprofessional simulation training using verbal de-escalation techniques and physical restraint application to the current classroom-based education program enhance staff learning style satisfaction, self-confidence in learning, and self-perception of knowledge, skills, ability, confidence, and preparedness when responding to violent patient behaviors?

LITERATURE REVIEW

Review of Evidence: Search Strategy

- 4 major concepts
  - WPV occurrence
  - Interventions for mitigating WPV
  - Educational delivery method
  - Interprofessional education
- Eight databases
  - 93 pieces of evidence reviewed; 39 selected
- Keywords
  - Workplace Violence, Simulation, Interprofessional, Emergency Department, and Education

Review of Evidence

- Educational Methods
  - Relevant to practice (Lee, Allen , & Daly, 2012)
  - Innovative methods preferred (Mager & Lange, 2014)

- Multiple Educational Methods
  - Learning increases with the use of didactic methods and interactive methods (Forsetlund et al., 2009)
  - Participants were satisfied with multiple methods (Lee, Allen, & Daly, 2012)

Review of Evidence

- Simulation
  - Safe learning environment, repetition, and feedback (Merchant, 2012)
  - Learn from realistic situations (Wong, Wing, Weiss, & Gang, 2015)
  - Teamwork (Merchant, 2012)
  - Communication (Hsu, Chang, & Hsieh, 2015; Merchant, 2012; Wong et al., 2015)
  - Self-efficacy (Hsu et al., 2015; Merchant, 2012)
  - Barriers
    - Resource intensive (Wong et al., 2015)

Review of Evidence

- Interprofessional education
  - Communication, critical thinking, problem solving, and conflict resolution (Payler, Meyer, & Humphris, 2008)
  - Collaboration and teamwork (Shoemaker, Voest, Booth, Meny, & Victor, 2015; Wong et al., 2015)
    - Change attitudes towards the team (Bain, Kennedy, Archibald, LePage, & Thorne, 2014; Heath et al., 2015)
    - Role clarification (Heath et al., 2015; Mager & Lange, 2014; Payler et al., 2008; Shoemaker et al., 2015)
  - Barriers
    - Time, coordination, and medical hierarchy (Payler et al., 2008)

THEORETICAL GUIDANCE AND FRAMEWORK

Theoretical Basis

- Knowles' Adult Learning Theory (McEwen & Wills, 2014)
  - Safe environment
  - Content important to participants
  - Self-directed learning
  - Build on past experiences
  - Reflects real life
  - Immediate application
  - Problem solving

Theoretical Basis

- Chickering and Gamson's Seven Principles for Good Practice in Undergraduate Education (Chickering & Gamson, 1987)
    - Learning is a group process
    - Diverse learning methods
    - Active learning techniques
    - Feedback
    - High expectations

Implementation Framework

- The Iowa Model Revised (2017)
    - Identify the issue/opportunity
    - State the question/purpose
    - Priority
    - Form a team
    - Review evidence
    - Design pilot/practice change
    - Integrate and sustain in practice
    - Disseminate results

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METHODS

General Educational Objectives

- To improve staff knowledge, skills, abilities, confidence, and preparedness in de-escalation techniques and restraint application when working with potentially violent patients
- To promote effective communication and teamwork, while delineating and reinforcing team member roles and responsibilities

Project Development – Project Team

Project Development

- Interprofessional considerations
- Acedemic and industry collaboration
- National League for Nursing Simulation Design Template (2015)
- Simulation scenario design
  - Three 60-minute meetings
  - One 3-hour rehearsal

Individual Computer-Based Training

- Workplace violence
- Simulation as a learning method
  - Simulation objectives
  - Expectations
- Verbal de-escalation techniques
- Restraint application
- Institutional polices and procedure review

Interprofessional Simulation Training

- 60 minute sessions
  - 10 minutes pre-brief, consents, tour, pre-surveys
  - 20 minutes in scenario
  - 25 minutes in debriefing
  - 5 minutes wrap-up
- Scenario description
  - Standardized patient actors (x4)
  - Verbal de-escalation techniques
  - Restraint application

Debriefing Room

Simulation Room View from Control Room

Standardized Patient Actors

EVALUATION TOOLS AND RESULTS

Evaluation Tools

Developed Pre/Post-survey tool

- Learners' Perception of Knowledge, Skills, Ability, Confidence, and Preparedness
  - Pre-survey ($\alpha = 0.9648$)
  - Post-survey ($\alpha = 0.9737$)

National League for Nursing (2017)

- Satisfaction and Self-Confidence in Learning ($\alpha = 0.9644$)
- Simulation Design Scale ($\alpha = 0.9747$)

Demographic Information

Learners' Perception of Knowledge, Skills, Ability, Confidence, and Preparedness

Knowledge	SD	D	UD	A	SA
1. I have the knowledge needed to manage aggressive or violent patient behaviors.					
Skills					
2. I have the skills needed to manage aggressive or violent patient behaviors.					
Ability					
3. I have the ability manage aggressive or violent patient behaviors.					
Confidence					
4. I feel confident I can manage aggressive or violent patient behaviors.					
Preparedness					
5. I feel prepared to manage aggressive or violent patient behaviors.					

(SD = strongly disagree, D = disagree, UD = undecided, A = agree, SA = strongly agree)

Statistical Analysis

- Bowker's Test of Symmetry
- One-way Analysis of Variance (ANOVA)
- JMP Statistical Analysis Software (SAS)

Response Rates

- Attendance
  - 98 attended; 129 invited (76%)

- Surveys
  - 96 completed; 98 possible (98%)

- Individual Computer-Based Learning
  - 81 completed; 90 possible (90%)

Participants

Characteristic	N (%)
Discipline	
HUC (Health Unit Coordinator)	1 (1%)
Physician (MD/DO)	5 (5%)
Nurse Practitioner	3 (3%)
Physician Assistant	1 (1%)
Patient Care Assistant	17 (18%)
Registered Nurse	52 (55%)
Hospital Security	11 (12%)
Social Services	5 (5%)
Gender	
Female	67 (74%)
Male	23 (26%)
Years in Current Role	
0–1 year	14 (15%)
2–5 years	31 (33%)
6-10 years	20 (21%)
11-15 years	12 (13%)
16-20 years	6 (6%)
21-25 years	7 (7%)
More than 25 years	5 (5%)

Group Comparison Contingency Table

Self-Perception of:	Pre-test Rating				Post-test Rating				p value		Change in Rating (%)	
	1,2,3		4,5		1,2,3		4,5					
	All	RN	All	RN	All	RN	All	RN	All	RN	All	RN
Knowledge	26	17	68	34	6	3	88	48	<0.0001	0.0018	20/94 (21%)	14/51 (27%)
Skills	29	21	65	30	10	7	84	44	<0.0001	0.0016	19/94 (20%)	14/51 (27%)
Abilities	30	20	63	31	12	7	81	44	<0.0001	0.0097	18/93 (19%)	13/51 (25%)
Confidence	33	21	59	28	14	10	78	39	<0.0001	0.0054	19/93 (20%)	11/49 (22%)
Preparedness	38	23	55	27	10	6	83	44	<0.0001	0.0003	28/93 (30%)	17/50 (34%)

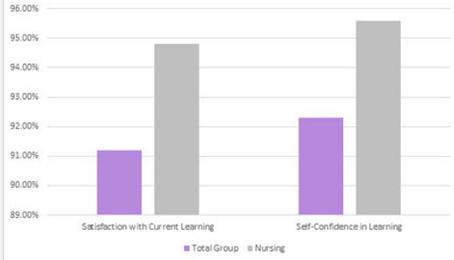(1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, 5 = strongly agree)

Satisfaction and Self-Confidence in Learning – Revised. Agreement Ratings

Simulation Design Scale – Revised. Satisfaction Agreement Ratings
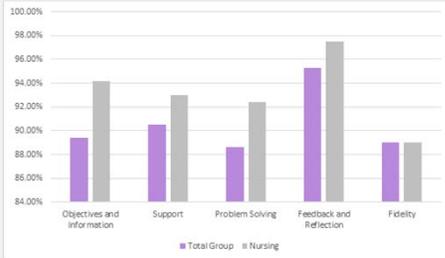
DISCUSSION

Practice Implications

- Desensitization
- Contingency safety care plans
  - Elopement
  - Reaction plans
  - Environmental considerations
- Call for help early
- Leadership Role
- Restraint Application Training

Gaps & Limitations

- Gaps in literature
- Limitations
  - Disciplines unequal in size
  - Sharing of objectives
  - Measurements
    - No long term measurements collected
    - No measurements of application to daily practice

Key Resources

Key Resources

- Personnel
  - Project team
  - Participants
- Space
- Information Technology
- Simulation supplies
- Office supplies
- Refreshments

Key Planning Considerations

- Parking
- Signs
- Transition time
  - 15 minutes between sessions
- Breakroom for actors
- Timeliness
- Lack of buy in
- Learn technology system

Key Planning Considerations (cont.)

- Preparation for Simulation Implementation
  - Sign-up sheets
    - Encompassed all disciplines
    - Slots designated to specific disciplines
  - Flyers
  - Staff meetings
  - Pre-learning individual computer-based training
  - Pre-brief safety and expectations video
  - Map/Directions emailed to staff

Timeline

- February – May
  - Literature Review
  - Project proposal to key stakeholders
- May
  - IRB Submission
- June
  - Computer-based training development
- July
  - Project team meetings
  - Staff meetings
- August
  - Rehearsal at simulation center
  - Simulation training 7, 8, 15, 16, & 17
- Fall
  - Data analysis
  - Dissemination

Key Guidance

- Key stakeholder support
- Set agendas for project team meetings
- Rehearsal
- Schedule development
- Traffic control
- Observation checklist
- Distraction

Lessons Learned

- Multiple back up cues
- Best practice video
- Actor schedule
- Survey confusion

Summary

- Workplace violence is on the rise within healthcare settings
- Theory and Evidence Based Practice were important guiding factors for project development and implementation
- Interprofessional simulation
  - Increases staff perception of knowledge, skills, ability, confidence, and preparedness when managing violent patient behaviors
  - Promotes effective communication and teamwork, while delineating and reinforcing team member roles and responsibilities
  - Staff satisfaction with training
- Meticulous planning efforts are essential for creating a successful and meaningful interprofessional simulation training for healthcare professionals in the practice setting

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QUESTIONS

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