Interprofessional Simulation Scenario Development for Primary Care -

Debra Bakerjian, PhD, APRN, FAAN, FAANP
Jennifer Edwards, MS, RN
Ana Marin, MPH

Betty Irene Moore School of Nursing
University of California, Davis

Developed for NEXUS 2018




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Debra Bakerjian, Jennifer Edwards, and Ana Marin

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All workshop participants:

- Scan your badge barcode or sign in to each workshop
- Complete workshop evaluations (paper) and end-of-Summit evaluation (electronic)

Those who purchase CE credit:

- MUST sign in to receive credit
- Will be sent a certificate after the Summit

****If you would like CE credit but have not purchased it, see Registration

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Agenda

Time	Topic	Activity
1300-1305	Welcome and introductions	
1305-1315	An overview of the simulation process and literature	*Presentation/Discussion*
1315-1330	Selecting your simulation and pre-planning	*Small group activity*
1330-1340	Considerations in simulation scenarios	*Presentation/Discussion*
1340-1410	Develop/adapt your simulation storyline	*Small group activity*
1410-1415	The big day: structuring your simulation day	*Presentation/Discussion*
1415-1430	Wrap-up	*Q&A*

Workshop Leads

Debra Bakerjian, PhD, APRN, FAAN, FAANP

SPLICE Primary Investigator

Deb Bakerjian is an associate adjunct professor at the Betty Irene Moore School of Nursing at UC Davis. Her research focuses on patient safety and quality improvement practices in long-term care, particularly nursing homes; and interprofessional education and collaborative practice in primary care. One area of interest is the roles of nurse practitioners and physician assistants as members of the interprofessional team.

Jennifer Edwards, MS, RN

SPLICE Education Coordinator

Jennifer Edwards currently serves as the clinical education coordinator for the SPLICE program. In this role, she supports the development and implementation of interdisciplinary, team-based education to a wide variety of learners including students, clinic staff and faculty from multiple health professions.

Ana Marin, MPH

SPLICE Evaluator

Ana Marin works with the SPLICE program, and is responsible for data acquisition, data management and data analysis. She collaborates with various team members, including external clinical agencies to create systems for data collection and management.

Simulation Overview

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What is Simulation?

"Simulation is the imitation or representation of one act or system by another."

-Society for Simulation in Healthcare

Why do we use simulation?

Gaba and DeAnda (1988) identify six benefits of simulation:

1. There is no risk of patient harm
2. Replication of uncommon situations
3. Reproducible for redistribution, testing, mastery
4. Can safely allow mistakes and demonstrate consequences
5. Time compression and “breaks”
6. Allows recording and reproduction, reevaluation and distribution

Source: Wang, E. 2011. Simulation and adult learning

Evidence and Effectiveness

Simulation has a demonstrated impact on both novice and experienced learners (Cook et al., 2013).

- Simulation may support deductive reasoning, clinical judgment (Hagler & Morris, 2018), and improve decision making (Chauvin et al., 2017).
- Effective in enhancing technical skills, leadership and teamwork (Chauvin et al., 2017).
- Interprofessional experiences have improved understanding of roles, responsibilities, and communication (Cunningham et al., 2017; Leclair et al., 2017).

Types of Simulation

- Skills (or Task) Training: For specific tasks
  - E.g. Intermuscular injection, IV insertion
- Simulated Patient Encounter: For non-technical skills or complex situations
  - E.g. Assess and care for an opiate dependent patient as part of a care team
- Table top and/or role play: For non-technical skills without significant patient interaction
  - E.g. Team huddle and care planning for a patient at end-of-life

Simulation Locations

	Simulation Center	Other Sites
Description	• Often a longer experience • Away from the practice environment • Can use more advanced simulation technology (i.e. high fidelity mannequins)	• Conducted in a clinical work environment • Typically during a regular work day
Advantages	• Allows for more in-depth and complex experiences • Limits workplace distractions	• Less disruptive to workflow • Less costly
Disadvantages	• More costly in staff time and potentially site rental	• More workplace distractions as the experience is onsite

Simulation Technologies

Task Trainers	Manikins	Standardized patients
• Offer focused training for specific tasks • Realistic for the task, but not necessarily the experience	• High or low fidelity • Offer a more realistic experience than task trainers • Allow learners to make fatal errors • Responsiveness is limited by programing • Can be costly	• Adaptable to the responses of the learner, and realistic in their interactions • Limited usefulness for invasive or dangerous procedures • Moderately priced

Phases of Simulation

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Phases of Simulation

Consists of four phases:

1. Pre-planning
2. Simulation scenario development
3. Running the simulation scenario (including pilot testing)
4. Evaluation and improvement

Pre-planning for your simulation

Active learning activity

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Pre-planning

- Who
  - Who are your learners?
- Why
  - What are their learning needs and objectives?
- Where, When & How
  - Where will you run this simulation? When will it run? How much do you have to spend?
- What
  - Considering your responses to the above questions, which simulation format would be most appropriate?

Integrated Case Based Learning (ICBL)

Case-based learning - teaching method using clinical cases to teach/evaluate students' content knowledge, clinical skills,

ICBL - adds understanding of patient, family, & environmental contexts

Cases are often discussed in small groups, or used in simulated learning environments, with faculty facilitation and guidance

Purpose of ICBL at UC Davis?

- Goal - to more substantially prepare graduates to step into practice fully functional in the real world
- Enhance and facilitate the development of trainee clinical decision-making and problem solving skills
- Involves cases that *integrate* clinical medicine and nursing approaches with both basic science and population health
- Puts focus on more person-centered care
- Students understand the environment and context

How we use ICBL

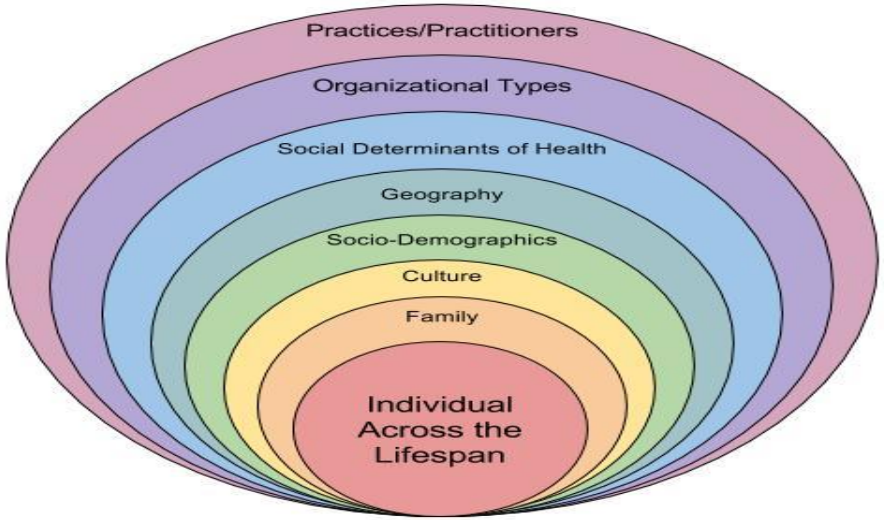
Repository of > 100 cases

NP/PA graduates prepared to step into practice fully functional in the real world

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8/9
Academic Core	NRS 243A	NRS 201	NRS 243B NRS 210Y		NRS 204A NRS 290	NRS 204B NRS 242A	NRS 242B NRS299	NRS 242C NRS243C NRS 299
Didactic Core	NRS 250 NRS260 NRS270	NRS 251A NRS271A	NRS251B NRS 271B	NRS251C NRS271C	NRS 251D			
Clinical	NRS 400A	NRS 410A	NRS 410B	NRS 410C NRS 440	NRS 410D NRE 450/451 SERIES	NRS 410E NRS 450/451 SERIES	NRS 410F NRE 450/451 SERIES	NRS 410G NRE 450/451 SERIES

Sacramento
Yolo
Tahoe Forest
Modesto
Kern County
Redding
Trinity County

Integrative Cases



MEET JIM -

https://prezi.com/mpcs3fztfvqo/meet-jim/?utm_campaign=share&utm_medium=email

Steps

- Get together in groups of 3-5. Between you, select one simulation to modify today.

- If no one in your group has a simulation they would like to focus on, we'll bring some options around to your table.

Considerations in Simulation Development

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Simulation Formats

- Standard simulation experience
  - Learners interact with either a standardized patient or mannequin to role play a clinical situation
- Tabletop Experience
  - Learners are presented with clinical information either through written descriptions or video vignettes and proceed through a scenario
- Hybrid Tabletop Experience
  - Combines a standardized patient (SP) interaction with a tabletop experience.
  - Allows the use of one SP to a large group of students who watch vignettes of one to two students interacting with the SP
  - Can be developed as an evolving case study where students choices impact the outcome

IPE Considerations

- When multiple professions are involved
- When there are different skill mixes or levels of learner
- When there are different learning objectives & outcomes
- When there is a target group of learners

Multiple Professions

- Students may need to play a role different than their own

Challenges	Facilitators	Possible Solutions
• Inaccurate portrayal of role due to lack of knowledge • Acting out of professional role perception or stereotypes	• Offers the perspective of interactions from the other role	• Provide a role description to the learner in advance • Bring the learner along as a scripted actor • Re-structure the simulation so the non-represented role is not required.

Different Skills Levels

- Mixed skill level learner simulations can be different levels within one profession, or among different professions.

Challenges	Facilitators	Possible Solutions
• More experienced learners can feel the simulation is too easy • Less experienced learners may be 'left behind'	• Reminds experienced learners of how much they have learned • Offers mentorship opportunities	• Facilitate in such a way that each person contributes • Create different objectives for each group, with the more experienced learners facilitating.

Learner outcomes

- Learner outcomes can vary based on learner professions and skill level

Challenges	Facilitators	Possible Solutions
• Increased complication in simulation design	• Teaches roles and responsibilities of multiple professions	• Recruit facilitators from all professions represented

Simulation Development Activity

Active Learning Activity

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Develop a scenario

- You can choose to work alone or to work in groups
- Use a scenario your brought or use the one we brought to share
- Remember the steps

1. **Pre-planning**
2. **Simulation scenario development**
3. Running the simulation scenario (including pilot testing)
4. Evaluation and improvement

Basic Process

- Purpose & objectives
- Target learners; actors, staff, & other participants
- Learner objectives, activities, desired outcomes
  - Knowledge, skills
  - Competencies
- Setting
- Patient Profile including PMH, previous visits, diagnostics
- Support materials including pre-learning
- Simulation flow & script

Answer the following questions:

- Who
  - Who are my learners?
  - What are their health professions?
  - What is their experience level?
- Why
  - What are the learning objectives of each group of learners?
  - Consider using IPEC or QSEN competencies to guide these objectives
- Where, when and how
  - Where will I run this simulation? What are my options?
  - When will I run this simulation? How much time do I have?
  - How will I finance this? What physical resources and financial resources are available to me?

Select a Simulation Topic & Format

- Topic & content
- Standard simulation experience
  - Learners interact with either a standardized patient or mannequin to role play a clinical situation
- Tabletop Experience
  - Learners are presented with clinical information either through written descriptions or video vignettes and proceed through a scenario
- Hybrid Tabletop Experience
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Scenario Script & Flow

Case Summary
Key Contextual Details
Scenario Cast
Patient/Client Profile
Baseline patient/client simulator state
Environment / equipment / essential props
Case flow /triggers / scenario development

Simulation Development

- Use the template we provided
- Consider how you might structure your scenario to meet your interprofessional learner goals
- You have 20-30 minutes to work on this, and we'll be walking around to help you in your groups.

Lessons Learned

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Our Experiences

- Simulation development work sessions
  - 47 participants from 3 professions including
- Interprofessional primary care simulations
  - Developed 11 simulations including those on opioid abuse disorder, dementia and end-of-life care, hypertension, pregnancy and diabetes
  - 115 learners from 3 programs including medical students, family nurse practitioner, pharmacy, and physician assistant programs
  - 9 faculty facilitators from 3 health professions and specialties including pharmacy, nursing, and medicine

Support Materials

These might include:

- Organizational tools
- Learner resources
- Facilitator resources
- Admin support
- Evaluation

Organizational Tools

- Materials to facilitators at least 72 hours in advance
- Use binders with tabs to organize all the materials required for one simulation experience - facilitators appreciate a well organized binder
- Post the scenario timeline in the scenario space for reference
- If you have a computer in your scenario spaces, consider using them for the patient chart or reference materials.

Learner Resources

- Pre-scenario learning materials
  - What knowledge gaps might need to be filled?
  - If learners may be asked to fill an unfamiliar role, provide them with information on the scope of practice in advance
- Simulation scenario materials
  - Consider a “handouts” folder that contains patient materials applicable to the simulation
  - Are there assessment or diagnostic tools needed?
  - Will these materials be in print or on a computer?
  - Will you need one copy for each learner, or will they be able to view them together on a screen?

Facilitator Resources

- Pre-scenario learning materials
  - Not all facilitators may be experts on the subject matter – provide necessary references in advance.
  - Facilitators may be working with learners from other professions whose scope they may not be familiar with – provide applicable scope of practice information, as well as a list of health professions participating in advance
- Faculty Guide - During simulation
  - Provide all materials in a well organized binder. Include a table of contents.
  - Provide a one-page simulation flow document

Admin Support

- Timekeeper
  - Responsible for keeping the groups on time
- Operational/Tech support
  - Resets the rooms between simulations, sets up and troubleshoots technology
- Staff support
  - Supports SP's and facilitators between simulations
- Degree of freedom
  - Has no assigned duties and exists to fill any needs that arise
- Documentarian
  - Photographer/videographer

Tips

- Snacks and beverages for SP's and facilitators
- If the focus is not on a clinical skill, consider the SP handing the learner assessment or diagnostic results
- Have a back-up for any computer based activity, and extra copies of all documents

Conclusion

- Simulation development is time consuming up front
- Using a template and consistent process helps
- Involve others in the development
- IPE requires consideration for multiple learners and learner outcomes
- IPE requires scenario to focus on dual processes
  - The clinical learning process
  - The “Team” learning process
- Think about the variety of ways the simulation can be developed & used
- Have Fun!

Thank you!

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