MedEdPORTAL
PEER
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EDUCATOR PORTFOLIO: ABBREVIATED EXAMPLE

NAME: XXXXx

TITLE(S):   Instructor, Critical Care Medicine
XXXXX

STATEMENT OF EDUCATIONAL PHILOSOPHY

My approach to education emphasizes strategies believed to correlate with effective adult learning. For example, I have come to understand that acquisition and retention of knowledge occurs most efficiently when adult learners are engaged, or "activated" to the highest degree feasible during a given educational activity, and if they receive timely corrective feedback when they attempt to apply new knowledge. In the high-fidelity simulator laboratory, learner activation occurs when we create a true-to-life crisis atmosphere that reproduces feelings of stress in the learner that he or she is likely to encounter in professional practice.   Through use of this technique, the learner is more likely to successfully recall and apply at the bedside what is learned in the lab. In developing a computer screen-based simulator for advanced training in pediatric resuscitation, our group incorporated sensory elements such as a cardiac rhythm display with audible tones, and a video display of actions the learner directs the "virtual" assistants to perform, such as airway management or CPR.   Both our high-fidelity simulations and computer-screen simulations provide immediate and detailed performance feedback, to foster ongoing practice of correct medical crisis management procedure.

In my role as clinician-educator in critical care medicine, I am responsible for giving educational presentations to audiences of varying size and professional background: small-group sessions for critical care fellows, nurses, or respiratory therapists, and larger more formal didactic sessions in venues such as hospital-wide Grand Rounds. Although most audiences expect a formal didactic lecture, I attempt where possible to teach certain concepts, such as pathophysiology for critical care fellows, in a small group discussion format. The fellows are given a reading one week in advance, and are expected to come prepared to discuss key concepts covered in the article. After the session, one of the participants writes a brief summary of the session for those who could not attend. This feature allows me to assess the degree to which the learners have understood the material covered. In venues such as Grand Rounds, interactive features are much more challenging to incorporate into a lecture. However, I have found that audience response systems and video clips can be effective ways to engage an audience in a large lecture hall.

DOMAIN I: TEACHING

I.1. Description of Your Teaching Activities

*In addition to lectures, include teaching that encourages active learning, e.g. interactive lectures, small group sessions, workshops, and clinical precepting. PLEASE FOLLOW THE EXAMPLE BELOW IN COMPLETING THIS GRID. ACCURATE NUMBERS FOR **LEARNERS** AND **HOURS** ARE IMPORTANT.*

Activ #	Year(s) Taught*	Title or topic of activity	Teaching strategy and context	Total teaching hours/yr for this activity	Type of learner	Total # learners/yr for this activity
1		Physiology Course	Small-group discussion format	12	Critical Care Fellows	72
2		Lecture: Intro to Mechanical	Small-group lecture/discussion	1	Critical Care Fellows	6

		Ventilation				
3		Lecture: High Frequency Ventilation	Lecture repeated 2x/year for ICU nurses	2	Critical Care Nurses	30-40
4		Interactive Lecture: Management of ALI/ARDS	1-2x/year for Respiratory Therapists	2	Respiratory Therapists	30-40
5		Hospital-wide Shock Workshop	Lecture with simulation exercise 2-3x/year	6	Nurses, respiratory therapists, housestaff	60-90
6		Intranet-based Virtual Curriculum in Pediatric Critical Care	Virtual library containing ICU treatment protocols, core ICU lecture slides, and key articles in critical care medicine	12	Fellows, housestaff, nurses, respiratory therapists, other physicians	300-500
7		Clinical Simulation Program Director	Design and run mannequin-based simulation exercises for health care professionals	300	Fellows, housestaff, nurses, respiratory therapists, EMT's, other physicians	400-600 High fidelity sim program~ 1,000 students/year
			Design computer screen-based interactive PALS scenarios for pediatric staff	100	Physician, nursing, and allied health care staff who are expected to maintain PALS certification	>500
			Validate a scoring algorithm to assess performance in computer screen-based interactive PALS scenarios	50	Physician, nursing, and allied health care staff who are expected to maintain PALS certification	>500
8		Lecture: Contemporary Strategies for ALI/ARDS Management	Interactive lecture for pediatric pulmonary and critical care fellows across the US.	1	Pediatric pulmonary and critical care fellows	20
GRAND TOTAL				486		2368

*If your institution requires specific dates, add these.

Template developed by the Ambulatory Pediatrics Association for the PAS Educational Scholars Program REV 12-21-07

I.2. Evaluation of Your Teaching

Provide information below for each course/setting in which you teach, referring to the Activity Numbers from the Teaching Activities Grid, if appropriate.

Activity number	Who was the evaluator? (e.g., learners, peers, educational experts)	Describe the process for evaluating your teaching	List evaluations/ evaluation summaries in Appendix XX:
5	Learners	Written evaluation at end of Team Training sessions	See Appendix III
5	Peer debriefers	Plan to implement evaluation of all debriefing staff using "Debriefing Assessment Battery"	TBA—to begin in 2008
A	Learners	Written evaluation after exposure to PALS simulator	See Appendix III

Summarize this teaching evaluation data:

If available, provide data on how your teaching evaluations compare to those of your peers (e.g. personal mean score vs means scores of other departmental faculty).

Difficult to determine as evaluations are not publicized or distributed for "traditional" educational formats (lectures, etc.)

What do you do to collect formative feedback on your teaching?

Every simulation program-related activity is evaluated by participants using a written evaluation that participants complete and submit anonymously at the end of each session. Time is built in to each simulation session to allow for this. We summarize and review evaluations quarterly (sometimes more frequently if we perceive that participants were not comfortable with the session) and adjust our content accordingly.

What did you learn from evaluation and feedback on your teaching?

I have come to regard the evaluation process as essential to understand learner's perceptions of the material, and it also provides a time period for participants to reflect on what they have learned during the session. I hope that the latter serves to solidify concepts in the participants' minds.

How did this information change your educational practice?

I tend not to plan a new educational activity without considering the evaluation process. I used to regard evaluation as an optional administrative exercise.

I.4. Overview of Section I

Describe evidence that your teaching or your learner evaluations have been developed using a scholarly approach (For ideas, review Glassick's article, Acad. Med. 2000;75:877–880).

Each evaluation the Clinical Simulation Program issues to collect learners' feedback include questions targeting Boyer's standards of scholarship (Acad Med 2000;75;877-880). We ask course participants to state what they learned from our courses that will make a difference in their practice (reflective critique), whether a course met the stated objectives, and whether a course content was organized and the educational techniques effective. Course evaluations are reviewed daily and quarterly so courses can be improved in a timely fashion.

*Describe any scholarly products that were presented or published, or adopted for use in other programs, as a result of your teaching or learner assessments: (see **Standardized Template For Reporting Educational Scholarship**)*

1. Following its use for a hospital-wide shock workshop in 2005, the Computer Screen-Based PALS Simulator (developed along with Dr. XXX) was incorporated into yearly competency workshops for ICU nurses, as well as a similar workshop for nurse practitioner students at the University of XXXX School of Nursing. In each case, the learners requested incorporation of simulation into their pediatric advanced resuscitation courses.

2. Invited Workshop: "Assessing and Documenting Competency in Advanced Resuscitation Skills Using Screen-Based Simulation". International Meeting in Medical Simulation, San Diego, CA. *Collaborator: xxxx*

3. xxxx. Consensus-based Scoring Algorithm for Simulated Pediatric Advanced Life Support. University of xxxx Research Foundation, Copyright 2007 *(submitted August 22, 2007)*.

DOMAIN II. Assessment of Learner Outcomes:

*In the grid below, provide information related to **how you assessed your learners** or **provided them with feedback** in each teaching activity listed above, if appropriate. Refer by Activity number to the Teaching Activities Grid, and skip columns 2 and 3 on this grid. Add other activities if you evaluate learners in a setting where you do not teach (e.g. OSCEs).*

Activity Number	Title or topic of activity	Evaluation context (e.g., # and type of learners, frequency of activity)	Your role in learner evaluation: development implementation analysis/synthesis	Evaluation methods and process	In what category of Miller's Triangle does this evaluation fall?	How learner assessment results provide evidence of teaching effectiveness
1	Physiology Course	Avg critical care fellows/session, 1 meeting per month	implementation analysis/synthesis	One participant writes a summary of the covered topics (2006) Each participant answers 4-6 relevant board-style questions at the end of the session (2007—present)	Knows (examination questions) Knows how/shows how (discussion of mathematical relationships in physiology, etc)	
4, 8	Interactive lectures on respiratory topics	15-30 learners/lecture, 1-3 x/year	Develop "audience response system" (ARS) questions to assess learner knowledge of concepts covered in lecture	Assess spectrum of learners' answers to ARS questions	Knows	
5	Clinical Simulation Program Director: High fidelity simulations	Avg 6 learners/simulation. Each group of learners forms an interdisciplinary team.	development implementation analysis/synthesis	-Video based debrief -Written evaluation verifying "realism" of experience and acquisition of knowledge of crisis resource management techniques	Shows how	See Appendix III
6B	Computer screen-based PALS simulation exercises	Computer-based trainer in advanced pediatric resuscitation skills. Learner forwards caselog to evaluator	development implementation analysis/synthesis	-Automated record-keeping system -Error classification scheme -Score for overall performance	Knows how	See Appendix III
6C		Validate a scoring algorithm to assess	development implementation	Score for overall performance	Knows how	ESP Project (in process)

		performance in computer screen-based interactive PALS scenarios	analysis/synthesis			

*

Referring by Activity number to the grid above, describe below the process, method, and category (Miller) of evaluation you employed.

For activity number 1, the learners' comprehension of key physiology concepts is assessed by the accuracy of their written summary. According to Miller's Triangle, the summary would indicate "knows".

For activity number 5, the learners' clinical performance (crisis management behaviors and performance of key skills such as airway and cardiovascular management) is evaluated, as is their understanding of which crisis resource management behaviors were covered in the simulated scenario. According to Miller's Triangle, these evaluations demonstrate "knows", "knows how", "shows how", and "does" (via video-based analysis).

For activity 6B, the learners' performance on the computer screen-based simulator is evaluated by a score reflecting the appropriateness of the interventions that the learner directed the virtual assistants to do during the case. According to Miller's Triangle, this kind of evaluation demonstrates "knows" and "knows how".

Referring by Activity number to the grid above, describe below your role in learner evaluation (development, implementation, analysis/synthesis):

For high (i.e. mannequin-based) and low-fidelity (i.e. computer screen-based) simulation exercises listed above, I developed a learner evaluation tool, and I am involved in its implementation and analysis. In the high fidelity, mannequin-based simulations, the learners undergo a video-based debriefing according to the predetermined objectives of the scenario. In addition, the learners complete a written evaluation of the simulation sessions in which they indicate the principles of crisis resource management that they have learned. For the lower fidelity computer screen-based exercises, I wrote an automated debriefing that the learner sees after the case is completed. This debrief contains a timeline of the learner's actions during the simulation, with corrective comments attached, and point assignment or deduction for each action. Analysis of the scores achieved by the learners in these scenarios are used to guide curriculum development for our hospital-wide and regional Pediatric Advanced Life Support (PALS) program.

DOMAIN III: CURRICULUM DEVELOPMENT

1. **Simulation-based PALS Training for General Surgery Residents, Primary Children's Medical Center:**
   Along with my associate Ms. XXX (Director, Pediatric Education Services, Primary Children's Medical Center), I developed a curriculum to provide rotating General Surgery residents a simulation-based educational experience in pediatric advanced life support (PALS). This curriculum was developed to address a need for efficient acquisition (and maintenance) of competency in PALS skills among rotating non-pediatric residents. The need for such training became apparent during several root cause analyses of critical incidents that occurred in our facility. Our objective was to provide the general surgery residents with opportunities for deliberate practice of PALS skills, using a format that is accessible "on demand", and that provides automatic debriefing and a commentary on the student's performance. Therefore, each rotating resident is expected to complete three 4-5 minute computer screen-based PALS scenarios and forward the detailed case log to the Clinical Simulation Program staff for record keeping and performance analysis. These scenarios are accessible on computers in the Simulation Program Conference and Debriefing Room, and will ultimately be available on the hospital intranet, which will allow for access to the program from remote locations. In addition, each general surgery resident will participate in team-based training in crisis resource management in the high-fidelity simulation laboratory once during their rotation at PCMC.

The learners' knowledge of key cognitive elements of PALS will be evaluated by analysis of their overall performance as recorded in the computer program's case log ("knows", "knows how" on Miller's Triangle), and their crisis management behaviors will be evaluated in a video-based debriefing following the high fidelity simulation experience ("knows how", "shows how" on Miller's Triangle). In addition, they will complete a written test available from the American Heart Association ("knows", on Miller's Triangle). Finally, they will complete a brief written evaluation of the curriculum.

In 2007, the simulation-based curriculum for General Surgery residents has been adapted for use with the Pediatric Dentistry residents and the Pediatric Anesthesia residents. Each group has found this to be a useful addition to their traditional curriculum, and have evaluated the experience highly. On a recent site visit, the American Dental Association scored the Dental Residency Program at XXX Medical Center very highly, in part because of their affiliation with the Clinical Simulation Program.

DOMAIN IV: MENTORING/ADVISING

Mentoring and Advising Grid

Name of mentee or advisee	Dates of mentoring	Their role	Your role and what you taught them	Their current position	Their significant achievements
XXX RN, MSNEd	July 2006-present	MSNEd candidate, XXX	Served as mentor for research project: "Factors Influencing Nurses' Attitudes toward Simulation-Based Education" Assisted with development and refinement of interactive workshops for national nursing meetings	Coordinator, XXX Clinical Simulation Program	Completed master's thesis
					Completed manuscript for peer-reviewed publication
					Invited Workshop: "It's Not a Dream, it's Simulation" (NNSDO National Conference July 2007)
					Invited Workshop: "Simulation: Bridging Education and Practice" (Pediatric Nurse Educators' Group National Meeting October 2007)
XXX BSN, MBA	January 2005-present	Core Debriefing Staff, XXXClinical Simulation Program	Assisted with development and refinement of interactive workshops for national nursing meetings	Director, Pediatric Education Services (Primary Children's Medical Center)	Invited Workshop: "It's Not a Dream, it's Simulation" (NNSDO National Conference July 2007)
					Invited Workshop: "Simulation:

					Bridging Education and Practice" (Pediatric Nurse Educators' Group National Meeting October 2007)

* E.g., papers, awards, grants, promotions, leadership positions. Attach a list if needed.

*Describe any scholarly products which were presented or published, or adopted for use in other programs, as a result of your mentoring and advising activities: (see **Standardized Template For Reporting Educational Scholarship**)*

[authors] *. Factors Influencing Nurses' Attitudes toward Simulation-Based Education. *Simulation in Healthcare*, xxx: 2008.
*Mentored project for XXX

DOMAIN V: EDUCATIONAL LEADERSHIP/ADMINISTRATION

V.1. Description of Educational Leadership and Administrative Activities

Answer the questions separately for each program you lead or have led. You may refer to previous sections of the EP if appropriate. Examples of leadership roles in education include fellowship/residency/clerkship director or associate director, site director, continuity clinic director, leader of an education subcommittee/curriculum committee, project director on a training grant, director of a faculty development program.

LEADERSHIP AND MEMBERSHIP ROLES				
Title of program/course(s) that you direct	**Dept/ Instit'l**	**Regional**	**National/ Internat'l**	**Duration in years**
1. XXX Clinical Simulation Program	√			2004-present
2.				
3.				
Name of educational committee(s) that you lead				
4. Code Committee	√			2007-present

Narrative description of the program and its impact (refer to table by activity number):

Program 1: As medical director of the simulation program I am responsible for overall supervision of administrative aspects and the research enterprise of the program.   This program provides interdisciplinary team training in medical crisis resource management through use of high fidelity simulation scenarios, as well as individual training in key cognitive skills for successful resuscitation through use of lower-fidelity screen-based simulation scenarios. The Clinical Simulation Program is the only program offering simulation-based training in pediatrics in the Intermountain West.

*Results of evaluation of **your ROLE** by outside agencies (e.g., ACGME, LCME, NBME, funding agencies)*

- Site visit for Pediatric Dentistry Residency (September 2007): ADA visits Clinical Simulation Program and cites Dentistry residents' participation in our program as a particularly strong feature of the residency curriculum

List of stakeholders for whom letters are appended (e.g., institutional/departmental leaders, learners, peers, community partners):
1 XXXX, RN: RN educator, Same Day Surgery and Post Anesthesia Care, PCMC
2

SECTION VI: OTHER INFORMATION

VI. 1. Professional Reviewer/Moderator Activities at the National Level

Activity number	What was reviewed/moderated (Grants, papers, abstracts)	Year/s of review or moderating	Sponsoring organization/institution/agency
1	Manuscript	2008	Pediatric Critical Care Medicine (Society of Critical Care Medicine)
2	Workshop proposals	2007	Pediatric Academic Societies' 2008 Annual Meeting

Describe the impact of these activities on your philosophy or practice as an educator (identify by activity number).

VI. 2. Educational grants funded

I. Title: Impact of Simulator-Based Training on Arrest Management

Your role: Principal Investigator
Funding source (name): Primary Children's Medical Center Foundation Innovative Research Grant
❑ National/international   ❑ Regional   √ Dept/institutional
Total direct costs (all years) $13, 125
Dates of funding: 1 January 2008-1 January 2010
Description of project

This is a two-year pilot study to determine whether exposing multidisciplinary Pediatric Intensive Care Unit (PICU) teams to a simulation-based course produces a change in the number of key tasks completed and key behaviors demonstrated during management of cardiac arrests in both laboratory and clinical settings.

II. Title: Evaluation of Simulation-Based Learning and Scripted Debriefing to Improve PALS Educational Outcomes for Learners and Novice Instructors: A Multi-Center Trial

Role: Co-investigator
Funding source: American Heart Association
√ National/international   ❑ Regional   □ Dept/institutional
Total direct costs (all years): 124, 770
Dates of funding: January 2008-January 2009

VI. 3. Education Awards and Honorable Mentions

Educational Scholars Program (Pediatric Academic Societies)   2006-2009
Pediatric Clinical and Translational Research Scholar (University of Utah Pediatrics)   2007-2009

V. 4. Publications Related to Education

[authors]*. Factors Influencing Nurses' Attitudes toward Simulation-Based Education. Simulation in Healthcare, 3(2): 2008.

*Mentored project for XXXX, MSN(Ed)

XXX . Consensus-based Scoring Algorithm for Simulated Pediatric Advanced Life Support. University of XXXX Research Foundation, Copyright 2007 (submitted August 22, 2007).

[authors]. PALS Simulator, version 7. Issaquah, WA: Anesoft Corporation, 2006.

VI. 5. Professional Development in Education

*List in the grid below any conferences, certification or degree programs, or other educational professional development activities that you have attended as a learner (not a teacher). **Include ONLY those which have made a significant impact on your philosophy or practice as an educator**. [A more comprehensive list should be included in your curriculum vitae.]*

Activity Number	Name and Description	Dates and Location	Sponsoring organization/institution
1	Institute for Medical Simulation: Comprehensive Workshop	June 2005 Cambridge, MA	Center for Medical Simulation/Cambridge, MA
2	Educational Scholars Program Annual Meeting	May 2006 San Francisco, CA	Pediatric Academic Societies
3	Educational Scholars Program Annual Meeting	May 2007 Toronto, Canada	Pediatric Academic Societies
4	University of XXXX/Pediatrics Grant Writing Workshop	November 2007 xxxx	University of xxxx Pediatric Research Enterprise