

Design and Validation of Simulation-Based Educational Tools and a Novel Assessment of Spiritual Care Competency (ASCC) Tool for Teaching Spiritual Care Skills

**Specific Educational Aims:**

1. Design and pilot educational tools (simulation scenarios and training videos) that will be used to teach pediatric critical care providers how to address the spiritual needs of patients and their families.
2. Develop and study the validity evidence behind a novel Assessment of Spiritual Care Competency (ASCC) tool that can be used to assess clinicians' spiritual care skills.

**Project Rationale:** A multitude of studies have highlighted the role of spirituality in helping patients cope with medical illness.<sup>1</sup> Additionally, appropriately addressing spiritual beliefs is an important aspect of supporting diversity in our healthcare environment and delivering culturally sensitive and equitable healthcare. Addressing the spiritual needs of patients from diverse backgrounds becomes increasingly important in critical situations and end-of-life care.<sup>2</sup> Clinical practice guidelines from the American College of Critical Care Medicine encourage clinicians to incorporate spiritual care.<sup>3</sup> However, studies have shown that adult ICU physicians rarely initiate conversations about the spiritual needs of patients and families<sup>4</sup> and cite lack of training as a significant barrier.<sup>5</sup> A recent national needs assessment of pediatric fellows training in critical care environments<sup>6</sup> revealed that 97% of respondents felt that spiritual beliefs are quite important or extremely important to patients and their families during life-threatening situations or near the end of life, yet 91% reported rarely or never taking a spiritual history. Additionally, 83% have never received prior spiritual care training, but 72% indicated that they would be somewhat likely or very likely to incorporate spiritual care into their practice if they received training.

There is currently no spiritual care curriculum designed to teach providers how to address the unique and diverse needs of pediatric patients and their families in critical care settings. Based on Kern's conceptual model for curriculum development,<sup>7</sup> the creation of educational strategies and assessment tools is a crucial step prior to the implementation and evaluation of a spiritual care curriculum. Guided by Kolb's theory of experiential learning,<sup>8</sup> this project aims to develop educational tools including simulation scenarios and training videos that engage learners in "reflective observation" and "active experimentation." These simulation scenarios and training videos will then be used to provide validity evidence for a novel Assessment of Spiritual Care Competency (ASCC) tool that can be used to assess clinicians' spiritual care skills. These educational tools and the ASCC tool can then be used in a future study focused on the implementation and assessment of a spiritual care curriculum for pediatric critical care providers.

**Approach:** This will be an IRB approved, multi-center validation study conducted with faculty from four tertiary children's hospitals between October 2021-October 2022. The purpose of this study is to design simulation-based educational tools for teaching spiritual care and create and validate an assessment tool that will be used to assess clinician's spiritual care skills.

Content experts from medical education, simulation, spiritual care, and palliative care from four institutions will collaborate to create simulated standardized patient scenarios. Scenarios will be designed to immerse clinicians in clinical encounters in which spirituality is integral to the care of a standardized patient. The clinician's objective will be to take a spiritual history of the patient and their family and refer them to appropriate spiritual care services. The scenarios will highlight a diversity of cultural and spiritual beliefs and will include a Catholic patient, a Jewish patient, and a Muslim patient. Scripts and improvisation guidelines will be created. Standardized patients will undergo in-depth training in how to act out the cases. The principal investigator (PI) will be video recorded going through each simulation scenario three times, with the intent of performing at the novice, competent, and master level in order to create standardized training videos.

The content experts who participated in developing the simulation scenarios will also collaborate to develop a novel Assessment of Spiritual Care Competency (ASCC) tool, which will be used to assess the performance of clinicians in the standardized scenarios. Messick's theoretical framework<sup>9</sup>

will be used to evaluate the validity of this ASCC tool. This tool will be modeled after a previously published tool used to assess provider’s skills in de-escalating angry caregivers.<sup>10</sup> It will include a similar global performance rating and fundamental communication skills rating.<sup>10</sup> The tool will also include a novel spiritual care skills rating scale based on established spiritual care frameworks.<sup>11,12</sup> Content validity will be achieved in three ways: 1) Use of content experts in tool design, 2) Modeling the tool after previously published work,<sup>10</sup> 3) Utilizing themes prevalent in the literature<sup>11,12</sup> to develop the spiritual care skills rating scale.

The simulation scenarios will be piloted on four pediatric residents of varying PGY levels, four pediatric critical care fellows of varying PGY levels, four pediatric critical care attendings, and two providers from the palliative care team at Stanford University. Each participant will perform all three scenarios for a total of 42 performances. Every performance will be video recorded to facilitate video-review scoring using the ASCC tool. Collaborators with expertise in medical education and simulation from three institutions outside of Stanford will undergo in-depth training in how to use the ASCC tool. The novice, competent, and master performance video recordings of the PI will be used in the training process to ground scoring and ensure response process validity. Each collaborator will review 14 recordings (one of each clinician performing one of each scenario) and will be blinded to the clinician’s learning level. The collaborators will score each performance using the ASCC tool. Internal structure of the tool will be evaluated in three ways: 1) Interrater reliability will be calculated for scores given by each collaborator, 2) Cronbach’s alpha will be calculated for scores of each clinician across all three scenarios, 3) Cronbach’s alpha will be calculated for each of the spiritual care skills rated in the tool. The tool’s relationship to other variables will be evaluated in two ways: 1) Scores from the global performance rating and fundamental communication skills rating will be compared to scores from the spiritual care skills rating, 2) Scores from clinicians of varying degrees of clinical experience will be compared.

**Timeline:** July-Aug 2021 - Multi-site IRB; Oct 2021 - Training of standardized patients; Nov-Dec 2021 - Filming of novice, competent, and master performances; Feb-April 2022 - Resident, fellow, attending participation in standardized scenarios; April-June 2022 - Training of multi-center collaborators and multi-site video review of all performances, July-Oct 2022 - Analysis of data and manuscript completion.

**Anticipated work products:** Work products will include: 3 simulation scenarios, 9 training videos, and the validated ASCC tool. These tools will then be used in a future study designed to implement and evaluate the efficacy of a spiritual care curriculum for pediatric critical care trainees. These tools can also be readily used by other training programs looking to incorporate spiritual care training into both undergraduate and graduate medical education.

**Evaluation Plan:** Validity evidence for the standardized patient scenarios and ASCC tool will be presented according to Messick’s framework with plan for analysis included below.

<b>Content validity</b>	Expert consensus; Tool modeled after previously published tool; Literature review
<b>Response Process</b>	Training of raters; Example videos of novice, competent, and master performance
<b>Internal Structure</b>	Blinded interrater reliability; Cronbach’s alpha
<b>Relationship to other variables</b>	Comparison of spiritual care skills ratings to global assessment rating and fundamental communication skills rating; Comparison of scores from providers of varying degrees of clinical experience (resident, fellow, attending)
<b>Consequences</b>	Will not be addressed in this study

**Financial Support Requested:** Financial support is requested for payment of standardized patients, incentives for clinician participation, statistical support, and payment of Stanford’s Educational Technology department for creation of video-recorded simulations and high-quality training videos.

**Dissemination of Results:** Results will be presented at the Association of Pediatric Program Director’s Conference and the Society of Critical Care Medicine Conference. The educational tools will be

submitted to MedEdPortal for publication and a separate manuscript describing the development and validation of the ASCC tool will be submitted to Academic Medicine or Pediatric Critical Care Medicine.

## Appendix

### References

1. Koenig HG. Religion, Spirituality, and Health: The Research and Clinical Implications. *ISRN Psychiatry*. 2012;2012. doi:10.5402/2012/278730
2. Ho JQ, Nguyen CD, Lopes R, Ezeji-Okoye SC, Kuschner WG. Spiritual Care in the Intensive Care Unit: A Narrative Review. *J Intensive Care Med*. 2018;33(5):279-287. doi:10.1177/0885066617712677
3. Davidson JE, Powers K, Hedayat KM, et al. Clinical practice guidelines for support of the family in the patient-centered intensive care unit: American College of Critical Care Medicine Task Force 2004–2005: *Crit Care Med*. 2007;35(2):605-622. doi:10.1097/01.CCM.0000254067.14607.EB
4. Ernecoff NC, Curlin FA, Buddadhumaruk P, White DB. Health Care Professionals' Responses to Religious or Spiritual Statements by Surrogate Decision Makers During Goals-of-Care Discussions. *JAMA Intern Med*. 2015;175(10):1662-1669. doi:10.1001/jamainternmed.2015.4124
5. Best M, Butow P, Olver I. Doctors discussing religion and spirituality: A systematic literature review. *Palliat Med*. 2016;30(4):327-337. doi:10.1177/0269216315600912
6. Stevens P, Rassbach C, Kuo K. Addressing the Spiritual Needs of Critically Ill Children and Their Families: A National Needs Assessment of Pediatric Fellows. Presented at the: Stanford Innovations in Medical Education Conference; June 2, 2021.
7. Thomas PA, Kern DE, Hughes MT, Chen BY. *Curriculum Development for Medical Education: A Six-Step Approach*. JHU Press; 2016.
8. Kolb D. *Experiential Learning: Experience As The Source Of Learning And Development*. Vol 1.; 1984.
9. Messick S. THE PSYCHOLOGY OF EDUCATIONAL MEASUREMENT. *ETS Res Rep Ser*. 1984;1984(1):i-55. doi:10.1002/j.2330-8516.1984.tb00046.x
10. Hilgenberg SL, Bogetz AL, Leibold C, Gaba D, Blankenburg RL. De-escalating Angry Caregivers: A Randomized Controlled Trial of a Novel Communication Curriculum for Pediatric Residents. *Acad Pediatr*. 2019;19(3):283-290. doi:10.1016/j.acap.2018.10.005
11. Lucchetti G, Bassi RM, Lucchetti ALG. Taking Spiritual History in Clinical Practice: A Systematic Review of Instruments. *EXPLORE*. 2013;9(3):159-170. doi:10.1016/j.explore.2013.02.004

12. Anandarajah G, Hight E. Spirituality and medical practice: using the HOPE questions as a practical tool for spiritual assessment. *Am Fam Physician*. 2001;63(1):81-89.