

### **Virtual Antenatal Encounter and Standardized Simulation Assessment (VANESSA): Pilot Study**

Patrick Motz<sup>1</sup>, DO; Megan Gray<sup>1</sup>, MD; Taylor Sawyer<sup>1</sup>, MD; Jennifer Kett<sup>2</sup>, MD; Douglas Danforth<sup>3</sup>, MD; Kellen Maicher<sup>3</sup>; Rachel Umoren<sup>1</sup>, MD

<sup>1</sup>Division of Neonatology, Department of Pediatrics, University of Washington, Seattle, WA, United States

<sup>2</sup>Division of Neonatology, Department of Pediatrics, Mary Bridge Children's Hospital, Tacoma, WA, United States

<sup>3</sup>Medical Simulation, Obstetrics and Gynecology, Ohio State University, Columbus, OH, United States

#### **Abstract (600 word limits)**

Background: Prenatal counseling at the limits of newborn viability involves sensitive interactions between neonatal providers and families. Empathetic discussions are currently learned through practice in times of high stress. Decision aids may help improve provider communication but have not been universally adopted. Virtual standardized patients are increasingly recognized as a modality for education, but prenatal counseling simulations have not been described. To be valuable as a tool, a virtual patient would need to accurately portray emotions and elicit a realistic response from the provider. Objective: To determine if neonatal providers can accurately identify a standardized virtual prenatal patient's emotional states and examine the frequency of empathic responses to statements made by the patient. Methods: A panel of Neonatologists, Simulation Specialists, and Ethicists developed a dialogue and identified empathic responses. Virtual Antenatal Encounter and Standardized Simulation Assessment (VANESSA), a screen-based simulation of a woman at 23 weeks gestation, was capable of displaying anger, fear, sadness, and happiness through animations. Twenty-four neonatal providers, including a subgroup with an ethics interest, were asked to identify VANESSA's emotions 28 times, respond to statements, and answer open-ended questions. The emotions were displayed in different formats: without dialogue, with text dialogue, and with audio dialogue. Participants completed a post-encounter survey describing demographics and experience. Data were reported using descriptive statistics. Qualitative data from open ended questions (eg, "What would you do?") were examined using thematic analysis

#### **Biography (200 word limit)**

Dr. Rachel Umoren is a Neonatologist at the University of Washington and Seattle Children's Hospital where she is the Director of the Neonatal Education and Simulation-Based Training Program. Her research focuses on improving neonatal outcomes globally through simulation-based education and global health partnerships. She has published and presented internationally on virtual simulations for health professional education.

## References

1. Frey H, Klebanoff N. [The epidemiology, etiology, and costs of preterm birth](#). *Semin Fetal Neonatal Med* 2016 Apr;21(2):68-73. [doi: 10.1016/j.siny.2015.12.011] [Medline: 26794420]
2. Payot A, Gendron S, Lefebvre F, Doucet H. [Deciding to resuscitate extremely premature babies: how do parents and neonatologists engage in the decision?](#) *Soc Sci Med* 2007 Apr;64(7):1487-1500. [doi: 10.1016/j.socscimed.2006.11.016] [Medline: 17196312]
3. Boss RD, Hutton N, Sulpar LJ, West AM, Donohue PK. [Values parents apply to decision-making regarding delivery room resuscitation for high-risk newborns](#). *Pediatrics* 2008 Sep;122(3):583-589. [doi: 10.1542/peds.2007-1972] [Medline: 18762529]
4. Stokes TA, Watson KL, Boss RD. [Teaching antenatal counseling skills to neonatal providers](#). *Semin Perinatol* 2014 Feb;38(1):47-51. [doi: 10.1053/j.semperi.2013.07.008] [Medline: 24468569]
5. Sobczak-Hoeft SM, Finer N. [Standardizing perinatal consults to improve trainee physician competency and decrease maternal anxiety](#). *J Neonatal Perinatal Med* 2008 Jul 23;1(3):181-187.

Organization / University Logo

