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Sonographer Educator in the Emergency Department: Evaluation of a Novel Education Intervention

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**Table 1.** Summary of World Health Organization and The Canadian of Health Research Sex and/or Gender Responsive Assessment Scale.

WHO Gender Responsive Assessment Scale: criteria for assessing program and policies		Sex/Gender Responsive Assessment Scale: criteria for assessing for health research	
Gender-Unaqual	Perpetuates gender inequality by reinforcing unbalanced norms, roles and relations	-	-
Gender-Blind	Ignores gender norms, roles and relations	Sex/Gender-Blind	Ignores sex & gender trends and needs. Sex and gender are included as a variable in research design and methodology
Gender-Sensitive	Considers gender norms, roles and relations	Sex/Gender-Sensitive	Acknowledges the differences in sex & gender trends and needs without the inclusion of sex/gender in the research design
Gender-Specific	Intentionally targets and benefits a specific group of women or men to achieve certain policy in program goals or meet certain needs	Sex/Gender-Specific	Acknowledges the differences in sex & gender trends and needs with the inclusion of sex/gender in the research design
Gender-Transformative	Considers gender norms, roles and relations for women and men and that these affect access to and control over resources Considers women's and men's specific needs Addresses the causes of gender-based health inequities Includes ways to transform harmful gender norms, roles and relations The objective is often to promote gender equality Includes strategies to foster progressive changes in power relationships between women and men	Sex/Gender - Transformative	Considers gender norms, roles and relations for people of all genders Considers the specific needs of people of all genders Addresses the causes of gender-based health inequities Includes ways to transform harmful gender norms, roles and relations The objective is often to promote gender equality Includes strategies to foster progressive changes in power relationships between people of all genders

educational content, identifies the gaps and provides guidance on steps toward a more sex and gender-responsive curriculum.

**Curricular Design:** At Alpert Medical School, we trained faculty on how to assess sex and gender responsiveness of their educational content using our 5-level assessment scale. Listed below are descriptions of the levels with examples in Table 2. Sex/gender-biased: Reinforces stereotypes. limits the discussion of disease presentations to those that are predominant in one gender or sex or include incorrect use of terminologies. Sex/ gender-blind: Does not mention any sex and gender differences. Sex/gender-sensitive: Acknowledges the differences without mentioning the mechanisms or contributing factors. Sex/gender-specific: Acknowledges the differences and discusses the possible contributing factors to the observed differences including sex hormones, environmental or genetic factors or highlights the knowledge gap. Sex/ gender-transformative: In addition to the previous level, includes knowledge translation strategies that can be used in clinical settings to improve patient care.

**Table 2.** Sex/Gender Responsiveness Assessment Scale: examples for health education.

	Example	Explanation
Sex/Gender-Biased	An illustration of a man with a large body habitus, placing his fist on his chest to speak about symptoms of a MI on a PowerPoint slide.	Using this picture to talk about MI presentation reinforces the stereotype that heart attacks only present with midchest chest pain. Whereas evidence shows that MI symptoms typical for women include fatigue, chest sensations other than pain, nausea, SOB, weakness, and indigestion. <sup>7</sup>
Sex/Gender-Blind	Family history is a strong risk factor for alcohol use disorder. <sup>8</sup>	This statement is blind because it fails to discuss any sex and gender differences. When discussing the risk factors for alcohol use disorder it's important to mention stress and negative mood states as risk factors in women. Smoking is an important risk factor for men. <sup>8</sup>
Sex/Gender-Sensitive	Women develop COPD earlier and with less smoking exposure than men. <sup>9</sup>	This statement is sensitive because it mentions a difference between men and women. However, it does not explain the mechanism for the observed difference or alternatively highlights the existing knowledge gap.
Sex/Gender-Specific	There is a large disparity between men and women in the prevalence of BPH; the exact mechanisms for hormonal progression of, or progression to BPH have yet to be determined. <sup>1</sup>	This statement is highlighting a difference between men and women and makes an attempt to explain the contributing factor to the observed difference. Since the evidence is not very strong it highlights the knowledge gap.

**Impact:** This assessment scale could be applied to a wide range of educational materials, including slideshows, clinical vignettes, and curriculum in general. It can increase faculty competency and provide a roadmap for modifying educational content to be gender and sex-responsive. Based on interviews conducted after the training sessions, using this scale could address some of the barriers to integrating sex and gender into educational activities.

## 66 Sonographer Educator in the Emergency Department: Evaluation of a Novel Education Intervention

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**Introduction/Background:** Point-of-care ultrasound (POCUS) is considered standard of care for evaluation of Emergency Department (ED) patients. There is a wide range of provider comfort and competency. Physicians who completed Emergency Medicine (EM) residency training greater than 10 years ago may lack POCUS proficiency unless they have pursued additional focused training. This project sought to address this potential skills deficiency by evaluating the impact of a dedicated sonographer educator on provider ultrasound competency.

**Educational Objective:** Our objective was to provide hands-on training sessions for faculty to learn from a dedicated sonographer educator, a non-physician registered diagnostic medical sonographer (RDMS) who functions as a sonographer educator in the ED.

**Curricular Design:** Study participants were board certified EM faculty within a single large academic ED. Prior to the first session with the sonographer educator, each participant provided informed consent and completed a survey. Participants completed the same survey after the educational session. During the intervention, the faculty worked with the ultrasound educator in the clinical environment and received one-on-one, real-time feedback and coaching. This included operational logistics of the ultrasound, documentation, and hands-on scanning for numerous ultrasound indications.

**Impact/Effectiveness:** Twenty-six participants completed at least one session with the sonographer educator. The median years post-residency training for all trainees who completed the survey was 20. Three participants reported that POCUS was an integral part of their residency/ fellowship training. Among those completing the post-survey, the most frequently performed POCUS exams were FAST, Echo, and Gallbladder. All study subjects either agreed or strongly agreed that they would participate in additional sessions with the sonographer educator.