67.85% (95% CI 75.12-90.18). The following are the test characteristics for ocular POCUS: sensitivity 87.21% (95% CI 78.27-93.44); specificity 100% (95% CI 81.47-100); and accuracy 95.08% (95% CI 88.98-98.35).

Conclusion: Point-of-care ocular ultrasound was more sensitive and specific than EP-performed ophthalmoscopic examination for the diagnosis of acute ocular pathology in the emergency department.

4 (O-E1) Food Insecurity and Housing Instability Screening and Follow-up in a Pediatric Emergency Department

Kellie Bacon, MPH; Shelby K. Shelton, MPH, CCRC; Soheil Saadat, MD, PhD; Jason Douglas, PhD; Theodore Heyming, MD; Rammy Assaf, MD

Oral Presenter: Victor M. Cisneros, MD, MPH, CPH

Objectives: This pilot study examines the impact of screening and referral services for food insecurity (FI) and housing instability (HI) in a pediatric emergency department (PED) serving a large community.

Background: FI and HI disproportionally impact children within underserved communities. Pediatric EDs are uniquely positioned to address FI and HI in communities with inequitable access to food and housing resources. This study examines the impact of FI and HI screening and referral systems in a PED serving a large community.

Methods: From March 2021–February 2022, 1,981 PED patients participated in a 16-question cross-sectional survey addressing FI and HI and child/caregiver health status. All participants received passive referrals to food and housing resources. Research assistants contacted participants who screened positive for FI/HI at three and six weeks to readminister the survey. Summary statistics describe FI and HI outcomes.

Results: Of 218 patients (11.0% surveyed) who screened positive for FI/HI, 149 (68.3%) were contacted at three and six weeks. Of these 149, 60.5% were food insecure, and 77.2% were housing insecure at the index ED visit. After administration of passive referrals, 50.7% and 45.3% of baseline-positive patients reported FI at three and six weeks, respectively. Additionally, 47.3% and 42.7% reported HI at three and six weeks, respectively. Participants who self-reported good health had a lower rate of FI compared to those who reported poor health status.

Conclusion: While we observed encouraging FI reductions among PED patients, no significant change was noted in HI, and both generally persisted. FI was associated with lower overall health status compared to HI. EDs are ideal environments for detecting FI and HI; however, additional research is necessary to examine resource uptake among FI and HI patients.

5 (O-C2) The Association of Image Gain Intensity to the Accuracy of Point-of-care Ocular Ultrasound

Albert Lee, MD; Megan E. Guy, MD; Edmund Hsu, MD; Ryan Gibney, MD; Brenda Nash, RDMS; Nora Perez-Moreno, RDMS; Matthew Whited, MD; Jessa Baker, MD; Melissa Chang, MD; Nicole Finney, MD; Shreya Gupta, MD; Reem Sarsour, MD; Jonathan Rowland, MD

Oral Presenter: Soheil Saadat, MD, PhD

Objectives: To determine the effect on sensitivity, specificity, positive predictive value, and negative predictive value of detecting ocular pathology by stratifying gain settings on ocular point-of-care ultrasound (POCUS).

Background: POCUS plays a pivotal role in evaluating ocular complaints in the emergency department (ED). The rapid and non-invasive nature of ocular POCUS makes it a safe and informative imaging modality. Previous studies have investigated using ocular POCUS to diagnose posterior vitreous detachment (PVD), vitreous hemorrhage (VH), and retinal detachment (RD); however, little is known about the sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) of detecting ocular pathology at stratified gain levels.

Methods: We performed a retrospective review of ED patients who received ocular POCUS examinations and ophthalmology consultations as part of their evaluation for eye complaints at our urban Level I trauma center ED from November 2017–January 2021; 383 of 706 exams qualified for the study. The primary analysis looked at the ability of emergency physicians to recognize any posterior chamber abnormality on ocular POCUS.

Results: The images were found to have an overall sensitivity of 81% (95% confidence interval [CI] 76-86%); specificity of 82% (95% CI 76-88%); PPV of 86% (95% CI 81-91%); and NPV of 77% (95% CI 70-83%). Images acquired with a gain of (25, 50] had a sensitivity of 71% (95% CI 61-80%), specificity of 95% (95% CI 85-99%); PPV of 96% (95% CI 88-99%); and NPV of 68% (95% CI 56-78%). Images acquired with a gain of (50, 75] had a sensitivity of 85% (95% CI 73-93%); specificity of 85% (95% CI 72-93%); PPV of 86% (95% CI 75-94%); and NPV of 83% (95% CI 70-92%). Images acquired with a gain of (75, 100] had a sensitivity of 91% (95% CI 82-97%); specificity of 67% (95% CI 53-79%); PPV of 78% (95% CI 68-86%); and NPV of 86% (95% CI 72-95%). Secondary analysis looked at each gain range further stratified by specific pathology (PVD, VH, and RD).

Conclusions: High (75, 100] gain on ocular POCUS has a high degree of sensitivity for detecting any posterior chamber abnormality, as compared to intermediate (50, 75] and low

(25, 50] gain levels. All gain levels are highly sensitive and specific for RD. Overall, we recommend incorporating the use of high gain for ocular POCUS to maximize sensitivity without sacrificing specificity. High gain is an effective screening tool for ocular pathologies in acute care settings and may be particularly valuable in resource-limited settings.

6 (O-F1) Remote Learner as Team Leader: A High-fidelity Telesimulation Experience for Global Emergency Medicine Trainees

Katelyn Latuska, MD; Rayal Jhagru, MD; Kristen Dettorre, MD, DTMH; Charles Lei, MD

Oral Presenter: Sean M. Boaglio, DO, MAS, DTMH

Objectives: Telesimulation is a feasible and effective education tool capable of connecting resource-limited training programs with experienced educators and high-fidelity simulators for remote, simulation-based education (SBE) to hone team leadership, communication, and clinical reasoning skills.

Background: Global medical training programs can face significant barriers to SBE, including high learner-to-instructor ratios and limited access to simulation equipment and available space. Telesimulation uses communication technology to connect distanced learners with simulation instructors for SBE. We developed a novel telesimulation modality that enables a remote learner to practice team leadership and communication skills through a high-fidelity, mannequin-based simulation experience.

Methods: Using six Zoom-enabled devices, a team of Vanderbilt University educators facilitated a telesimulation experience for 10 Guyanese emergency medicine resident learners. Each participant individually led the resuscitation of a critically ill simulated patient with aortic dissection. Over Zoom, learners could visualize three real-time audiovisual inputs: foot-of-bed patient view; clinical data; and vital sign monitor. Participants completed anonymous surveys rating aspects of the simulation experience on a five-point Likert scale.

Results: Participants rated the clinical scenario and simulated environment as highly realistic (mean 4.2, SD 0.63; mean 4.2, SD 0.79), finding the virtual format comparable to an in-person simulation (mean 3.8, SD 1.03). The teleconferencing platform was easy to use (mean 4.3, SD 0.67) and did not detract from their experience (mean 4.2, SD 0.79). Learners reported greater confidence in resuscitating critically ill patients (mean 4.2, SD 0.63) and managing aortic dissections (mean 4.7, SD 0.48). Learners wished to participate in more telesimulation sessions (mean 4.6, SD 0.52), describing telesimulation as a valuable educational experience (mean 4.5, SD 0.53) that will improve their team leadership and communication skills (mean 4.6, SD 0.52; mean 4.6, SD 0.52), as well as their performance in an actual clinical environment (mean 4.7, SD 0.48).

Conclusion: Our novel telesimulation modality is a feasible and effective educational tool. Participants found the virtual platform comparable to in-person simulation, providing a realistic environment for training team leadership, communication, and clinical reasoning skills. Telesimulation may be broadly applicable to the global medical education community, connecting resource-limited training programs with experienced educators and simulators for remote simulation-based education.

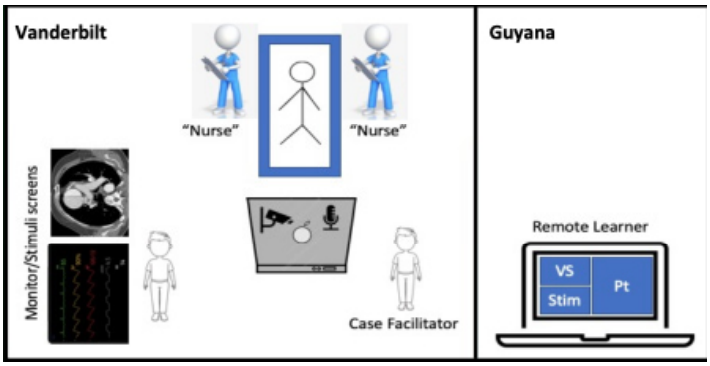

Figure 1. Schematic of telesimulation modality personnel and equipment layout

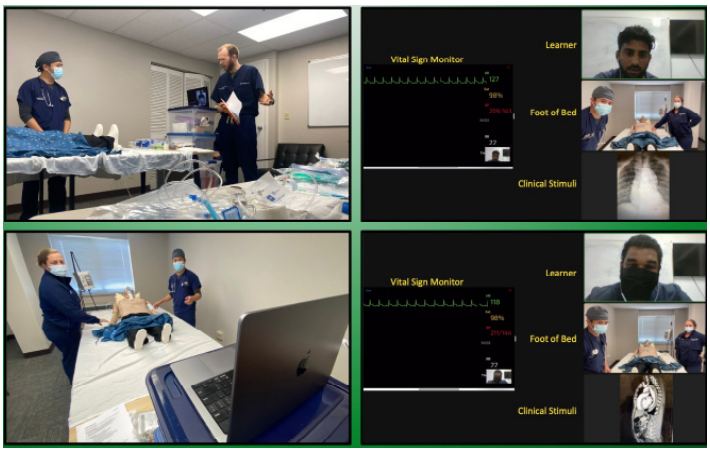

Figure 2. Education faculty facilitate mannequin-based telesimulation for remote Guyanese emergency medicine trainees (left). Remote learners individually lead the simulated resuscitation of a critically ill aortic dissection patient, with real time view of foot-of-bed, the vital sign monitor, and clinical stimuli (right)

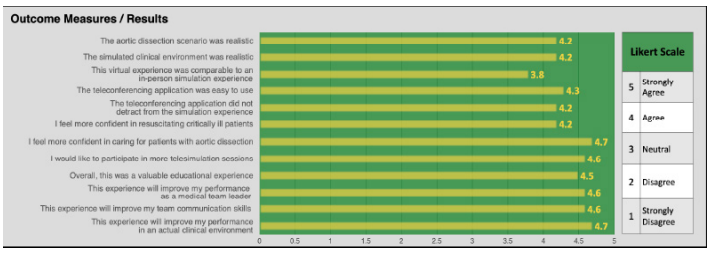

Figure 3. Participants completed anonymous surveys rating aspects of the simulation experience on a five-point Likert scale (1 Strongly Disagree, 5 Strongly Agree), cohort mean scores for each queried element were calculated for analysis.