Point-of-Care-Ultrasound (POCUS) is widely employed at many institutions for a growing number of clinical applications. Lung Ultrasound (LUS) is particularly useful in pediatrics given the frequency of respiratory illnesses and evidence demonstrating its ability to diagnose pneumonia (PNA). Recently, CHCO Pediatric Emergency Medicine (PEM) began training PEM faculty to use LUS, with a goal of routinely using LUS to evaluate patients for PNA. However, CHCO Pediatric Hospital Medicine (PHM) providers do not routinely employ POCUS, and most PHM providers can neither interpret nor acquire LUS images. If PHM providers are not equipped to use PEM LUS exam findings to inform management decisions, they may be more likely to order additional imaging on admitted patients to confirm or refute diagnoses made with LUS. Additionally, this knowledge gap will lead to poor communication between PHM and PEM providers regarding the clinical importance of LUS results, and to PHM providers being ill-equipped to discuss the significance of results with patients.

To address these concerns, we piloted a novel LUS curriculum for PHM hospitalists which aimed to improve their ability to interpret LUS findings and perform LUS exams. 11 PHM hospitalists were first taught to interpret LUS images via a 40-minute online video. Approximately two weeks later these hospitalists participated in a 4-hour hands-on LUS training workshop, where they were taught to perform LUS. Hospitalists were surveyed prior to the video intervention, prior to the hands-on training intervention, and after the hands-on training intervention.

Prior to the first intervention, 91% of hospitalists reported being “not at all able” to identify consolidations on LUS. The same percentage reported feeling “not at all comfortable” using POCUS to manage a patient, and also disagreed or strongly disagreed that they had the knowledge needed to discuss POCUS findings with PEM colleagues or patients. Finally, when given three hypothetical clinical scenarios in which a PEM provider used LUS to evaluate for PNA, hospitalists reported that they would obtain a CXR to further evaluate the patient 39% of the time.

After the first video intervention, 91% of providers reported feeling “somewhat” or “fairly able” to identify consolidations on LUS, and 64% reported feeling “somewhat” or “fairly comfortable” using POCUS to manage a patient. 55% agreed that they had the knowledge needed to discuss LUS findings with colleagues and patients. Finally, when given the same clinical scenarios, providers reported that they would obtain a CXR only 21% of the time.

After the hands-on intervention, 100% of providers were “somewhat”, “fairly”, or “very able” to identify consolidations on LUS. 100% felt “somewhat” or “fairly comfortable” using POCUS to manage a patient, and 91% agreed or strongly agreed that they had the knowledge needed to discuss POCUS findings with PEM colleagues and patients. Finally, when given the same clinical scenarios, providers reported that they would obtain a CXR only 3% of the time.

Based on our data, we believe expanding this pilot to all PHM members will improve patient care by decreasing unnecessary CXR use and by improving communication between providers and patients.