

COMMENTARY

Training Family Physicians in Point-of-Care Ultrasound (POCUS): A Turkish Perspective

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Point-of-care ultrasound (POCUS) is a portable, bedside instrument enabling doctors to rapidly evaluate patients in real-time. Its application is expanding across multiple medical specialties due to its capacity to deliver prompt diagnostic information. Family medicine residents have exhibited significant interest in integrating POCUS into their training. POCUS's potential to improve patient care and outcomes is what is driving this interest, which raises the issue of whether or not primary care training should incorporate this technology. The purpose of this article is to emphasize the importance of incorporating POCUS training into family medicine residency programs globally. (J Am Board Fam Med 2025;38:955–957.)

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World Organization of National Colleges, Academies, and Academic Associations of General Practitioners/Family Physicians (WONCA) encourages primary care physicians to integrate POCUS into their practice to improve diagnostic precision and patient care. Integrating POCUS into primary care training programs enables residents to acquire the skills essential for optimal use of this device in their future practice.¹ The largest advancement in bedside diagnosis since the invention of the stethoscope is POCUS, according to the curriculum guideline released by the American Academy of Family Physicians (AAFP)². Capizzano et al. demonstrated that the use of POCUS is increasingly common among family medicine clinics, and training across several departments has substantially expanded in the United States.³

Physicians in emergency medicine were the ones who first popularized POCUS, but as technology has advanced and made pocket-sized ultrasound machines more affordable, family physicians are now more likely to use it.³ It is helpful in the

differential diagnosis of respiratory diseases such as pneumonia, pleural effusion, and pneumothorax,⁴ and it has a 95% sensitivity and 96% specificity for the detection of deep venous thrombosis.⁵ By lowering the number of referrals to secondary care facilities, it can therefore lessen the burden on these clinics and potentially improve patient care.⁶

Research on POCUS in Turkey is limited, with its predominant application in emergency medicine departments rather than in primary care settings. Barriers identified in Turkish studies include insufficient training, inadequate equipment, and deficient infrastructure.⁷ Research on the application of ultrasound imaging in primary care indicated that Turkish family physicians mostly require ultrasound for screening purposes (65.6%), followed by gynecological examinations (8.3%) and gastrointestinal issues (4.8%).⁸

The residency training in family medicine in Turkey is a 3-year program that necessitates the completion of an entrance examination for admission. It has been available at Education and Research State Hospitals since 1985 and within the academic Family Medicine departments of medical institutions since 1993.⁹ There are currently 101 family medicine residency programs in Turkey.¹⁰ As per the guidelines established by the Turkish Family Physicians' Association, the requirements for a residency in family medicine encompass rotations in the following specialties: internal medicine (6 months), pediatrics (6 months), obstetrics and

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gynecology (5 months), general surgery (2 months), psychiatry (3 months), and 2 elective rotations (2 months). The remaining portion of the training, which spans a duration of 12 months, is conducted in primary care centers.¹¹ In the United States, while the standard duration for family medicine residency is 3 years, certain institutions provide a 4-year training program. In addition, pursuing a combined specialty, such as psychiatry, necessitates a commitment of 5 years.¹²

A research study examining the perspectives of Turkish family medicine residents on their training program indicated that they suggested extra rotations. The radiology rotation ranked among the top 3 at 52.4%.⁹ A review of the literature on the implementation of POCUS in family medicine residency programs reveals that numerous institutions in the US and Canada provide this training.¹³ A survey that was sent out to the program directors of accredited family medicine residency programs in the United States showed that 53% reported having a structured curriculum for POCUS training. Lack of trained faculty, restricted access to equipment, and nervousness in interpreting images without a radiologist were recognized as the 3 major obstacles.¹³ Identical obstacles were noted by the Canadian family medicine residency directors, despite the different health care systems in the US and Canada.¹⁴

There is an increasing acknowledgment of the advantages of integrating POCUS into primary care practice in Turkey, especially for enhancing diagnostic precision and patient outcomes. With the advancement of research and the allocation of resources to overcome globally recognized obstacles, the application of POCUS in primary care environments is anticipated to rise. However, the use of POCUS in primary health care is not free of limitations. Its being user-dependent and inadequate training could generate risks like misdiagnosis and inaccurate treatment. The primary goal of POCUS training is not to convert family physicians into radiologists; rather, it aims to improve primary health care by facilitating specific clinical decision making processes, such as the identification of an aortic aneurysm, the estimation of cardiac ejection fraction, and the management of vascular issues.¹³ In addition, ongoing efforts to standardize training and ensure competency among family physicians using POCUS may assist in alleviating certain previously mentioned risks and obstacles. Although Turkey lacks established curricula for POCUS training, a university in Saudi Arabia has made efforts to

introduce an undergraduate training program specifically for their final-year medical students (interns). Their data suggested that it is best to defer the training in POCUS until residency programs because of the limited time of the students who are responsible for passing the licensing examination, but it was perceived as important.¹⁵ The integration of POCUS curricula in residency programs has demonstrated enhancements in knowledge, confidence, and clinical applicability. The research conducted at Dalhousie University in Canada, involving internal medicine residents trained in POCUS, demonstrated high scores on assessments of knowledge in their postgraduate year and significant confidence in lung imaging and pleural effusions.¹⁶

Imaging is essential in the management of patients with intrauterine devices (IUDs). Ultrasonography is the primary initial evaluation approach because of its cost-effectiveness, absence of ionizing radiation, and superior detail of pelvic anatomy.¹⁷ In comparison to the gold standard transvaginal ultrasonography for determining the position of IUDs, abdominal POCUS demonstrated exceptional efficacy in verifying the location of the IUD within the uterine cavity.¹⁷ During my time at a family planning center in Turkey, I noted positive results from using ultrasonography in gynecological evaluations and IUD assessments, which enhanced patient satisfaction by decreasing referrals to secondary care hospitals and lowering the burden on the nearby gynecological department at the public hospital. Prior examples of POCUS curriculum may provide a framework for establishing new training programs in primary care. When positive outcomes are considered, incorporating POCUS in family medicine residency programs may reduce the burden on health care services at higher levels with fewer referrals, and its cost-effectiveness may lead to improved patient outcomes and increased efficiency in primary care settings.

International collaboration and the training of family physicians by radiologists in the basic principles of POCUS may enhance practice consistency and improve the quality of care delivered to patients globally. By sharing best practices and guidelines, family physicians can enhance their skills and knowledge in using POCUS effectively, ultimately benefiting both patients and health care systems on a global scale.

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