

Evaluating a novel ultrasound system in a growing Ob/Gyn practice

Philips VISIQ ultrasound system

Michael C. Bartfield, MD

PrimeOBGYN, Orlando, Florida

Summary

The Philips VISIQ ultrasound system is a high-quality, portable, transducer-based ultrasound system. This article discusses observations from the general perspective of a general obstetrician/gynecologist, along with observations of a certified ultrasonographer and impressions from patients during an evaluation comparing the Philips VISIQ ultrasound system with a traditional cart-based ultrasound system in a growing general Ob/Gyn practice. We found VISIQ to offer high-quality images and the interface to be simple, easy to understand, and more intuitive than traditional cart-based devices. In our opinion, the system could help us differentiate our practice through an enhanced experience for patients and staff.



Background

The inclusion of in-office ultrasonography has become commonplace in the United States and is even considered the standard-of-care in certain population-dense markets. Sonography has become a daily extension of a general obstetrician/gynecologist's ability to provide state-of-the-art care to patients.

Traditional high-quality ultrasound machines require dedicated office space for operation and also generate an enormous amount of heat, making ultrasound exam rooms uncomfortable for patients and staff. We evaluated the performance of the compact, portable VISIQ ultrasound system in our practice.

Challenge

We are interested in unique offerings and services that can help us differentiate our practice and enhance the ultrasound experience for patients, providers, and staff.

Study objectives

The practice evaluated the VISIQ ultrasound system, with its abdominal transducer, in regard to image quality, capabilities, wireless connectivity, and workflow.

Study methods

We evaluated VISIQ across a range of exams, including obstetric and gynecologic studies (excluding those that required a transvaginal transducer). We compared similar images from each patient as well as the interface technology used to gather those images, first with our cart-based system and then with the VISIQ ultrasound system. A patient questionnaire administered at the end of each exam assessed how use of the VISIQ ultrasound system might affect patient satisfaction with the care provided by her doctor.

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Understanding and enhancing the patient experience in a busy practice

PrimeOBGYN is an independent Ob/Gyn practice located in Orlando, Florida, near the Winnie Palmer Hospital for Women and Babies, which is the second-busiest obstetric hospital in the United States. The practice is focused on evidence-based medicine with an emphasis on enhancing the patient experience, and provides services such as general obstetrics, co-management of high-risk obstetrics, annual preventive maintenance exams, gynecologic care, and office- and hospital-based gynecologic procedures. The growing practice, founded in 2013, currently sees approximately 120-140 patients weekly.

Dr. Michael C. Bartfield, the author of this paper, is a founder of the practice and is also Assistant Professor at the University of Central Florida College of Medicine. Dr. Bartfield is a board-certified general obstetrician/gynecologist in practice for 16 years whose residency training provided a thorough curriculum in ultrasound physics, instruction on use of the technology, and extensive practical experience with multiple ultrasound machines. The use of ultrasound technology was key in evaluating for fetal harm in his resident research project. Following residency, he was the director of the ultrasound department for a practice with 19 providers and four sonographers before co-founding his current practice.

Study findings

We found the unit to be easily configured to our office wireless network and used it for nearly all types of noninvasive exams that we perform, including obstetric nuchal translucency, obstetric first/second/third trimester, and gynecologic studies. VISIQ creates the opportunity to enhance the office experience for patients, office staff, and providers. We had a positive experience with regard to its image quality, overall capabilities, and effect on workflow.

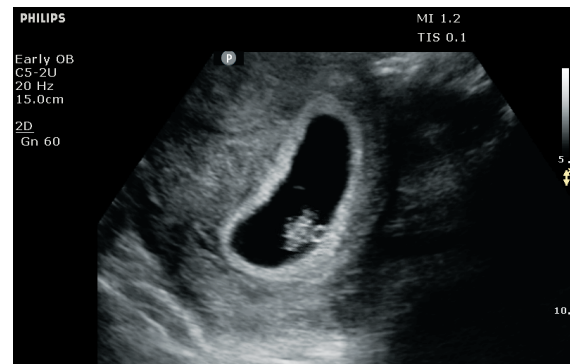


Lower limb of 18-week fetus.

Image quality

In our opinion, image quality for the vast majority of studies was equal to or enhanced when compared to our current cart-based system, which we've had for approximately nine months. There was possibly some decrease in image quality for first-trimester obstetric studies, although there was disagreement about that judgment among the providers at our facility.

We were impressed with the system's programmed ability to auto-focus on a given subject, making image capture for the provider easy and of high quality. We also noticed that the penetration of the VISIQ abdominal transducer/system settings was enhanced when it came to scans on patients with moderate to morbid obesity.



Yolk sac in early pregnancy.

Capabilities

In comparison to our experience with cart-based units, we felt that the VISIQ system was programmed with a very adequate amount of features, which will likely allow practitioners to efficiently navigate the screen interface.

With its portability and tablet/smartphone-like interface, VISIQ appears to be an easy choice for qualified ultrasound users. In our opinion, VISIQ would also make an excellent teaching tool for Ob/Gyn residents as it affords the opportunity to focus on the technical aspect of gathering study images rather than having to decipher the software and seemingly endless buttons and switches of traditional cart-based systems.

Wireless connectivity

Thermal imaging paper is not only expensive but is also susceptible to damage after printing. In addition, thermal images generally do not scan reliably for purposes of sharing with colleagues and patients, use in legal cases, or for practice ultrasound certification. When our practice purchased a first-generation PACS system, we did so to save money compared with thermal paper printed images.



Nuchal translucency in a 13-week fetus.

Testing VISIQ and its ability to interact with our current PACS was extremely important to our practice. Our PACS system is both easy to configure and simple in the manner in which it accepts exported images. VISIQ was easily configured to our office wireless network and we had no trouble sending images through our wireless network to the PACS.

We believe the portability and ease with which VISIQ is linked to wireless networks should allow it to be an excellent imaging device for outlying areas that have critical healthcare service shortages.

Enhancing workflow

A sonographer using VISIQ would be freed from the “dungeon” of an ultrasound room (usually a very dimly lit and closed-off space) and would be able to interact more freely with office colleagues, becoming a more productive part of any office team. We would anticipate high employee satisfaction with enhanced performance reviews as sonographers become more mobile in the workplace.

Thoughts on the patient experience

How our patients perceived the VISIQ system was as important to us as provider impressions. Because the vast majority of high-resolution, high-quality ultrasound devices are large, bulky, and usually placed in a dedicated ultrasound room, patients are nearly always inconvenienced in the process of having an office-based ultrasound.

If the ultrasound exam is prescheduled, the patient is escorted to the ultrasound room, possibly asked to disrobe (depending on the type of exam), has her exam, gets dressed, and is then escorted to the exam room to discuss results with her medical provider. If the ultrasound exam is added during a visit, the patient is first seen in an exam room (dressed or disrobed), has to sit either in an exam room or lobby area while she waits for the ultrasound room to become available, is then escorted to the ultrasound room, possibly disrobes (again), has her exam, dresses (again), and is then returned to an exam room for the discussion of her study. This can be time-consuming and inconvenient for patients and staff alike.

The high-resolution, high-quality portable VISIQ system could enhance the patient experience in a general Ob/Gyn office because the ultrasound exam comes directly to her, rather than her having to go to it.

Based on patient surveys following our VISIQ system study, there was unanimous consensus that the experience was positive. All patients responded that they would discuss the experience with friends and family members. In that regard, there is a possibility that new business to a practice could be created on word-of-mouth advertising alone. That new business would likely be driven by patients who either have not established care, are new to a particular locale, or are dissatisfied with their current care. Among our survey respondents, 19% reported that they would be likely to change practices based upon the ability to access VISIQ for their ultrasound needs during pregnancy.

Patients queried also felt that the inclusion of newer, more innovative ultrasound technology may draw an expectant father deeper into the bonding aspect of a pregnancy.

Discussion

Over the past 20 years of training and private practice, Dr. Bartfield had used many different ultrasound units with a wide range of capabilities. He personally evaluated and purchased six ultrasound units for the practice over the years, including large cart-based units and small portable units. Any skepticism felt regarding the capabilities of small portable units was erased with our VISIQ experience.

While there is a slight learning curve with the VISIQ touchscreen interface, we found the screen intuitive after several patients. Our sonographer described the screen as being like a smartphone with similar icon touching and screen “pinching” to enlarge and shrink images. Moving between exam types was simple and without any complications.

Potential cost savings for our practice include the need for fewer disposable drapes as patients use one drape instead of two, lower electrical costs realized by decreased cooling needs when using the VISIQ system (large systems generally generate increased amount of heat for a room), and a slower attrition of employees realized through higher employee satisfaction rates.

We believe that VISIQ will be used as an adjunct to the traditional Doppler device when fetal heart tones cannot be heard or if an arrhythmia is detected.

Traditional, viral, and corporate product website referral marketing strategies are key to driving new business to today’s medical practices. Our current practice-building activities include word-of-mouth referrals, directory listings, print advertising, health fairs, charity events, local lectures, and social media. Our patients are still talking about their VISIQ experiences during follow-up office visits.

Our practice also has a social media presence that at times has gathered 2,000 to 4,000 unique views to a given post. Although that has not necessarily directly led to increased business, it has been effective in dispersing information to our current and prospective patients.

In our opinion, the VISIQ system would be an incredible adjunct for outpatient triage, labor and delivery, and antepartum units in hospitals. These units require reliable and easily portable ultrasound technology for many uses, including evaluating fetal heart tones, determining fetal presentation, performing bedside amniocenteses, and interval fetal growth evaluations.

Conclusion

In summarizing our experience with Philips VISIQ, we would say that all members of our practice were impressed with the look and feel of the system and its potential for enhanced workflow, productivity, and patient and employee satisfaction. Those of us who worked with VISIQ firsthand were equally fascinated with the easy-to-navigate interface, as well as the quality of the images generated by the system.

Please visit www.philips.com/VISIQ



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www.philips.com/healthcare
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