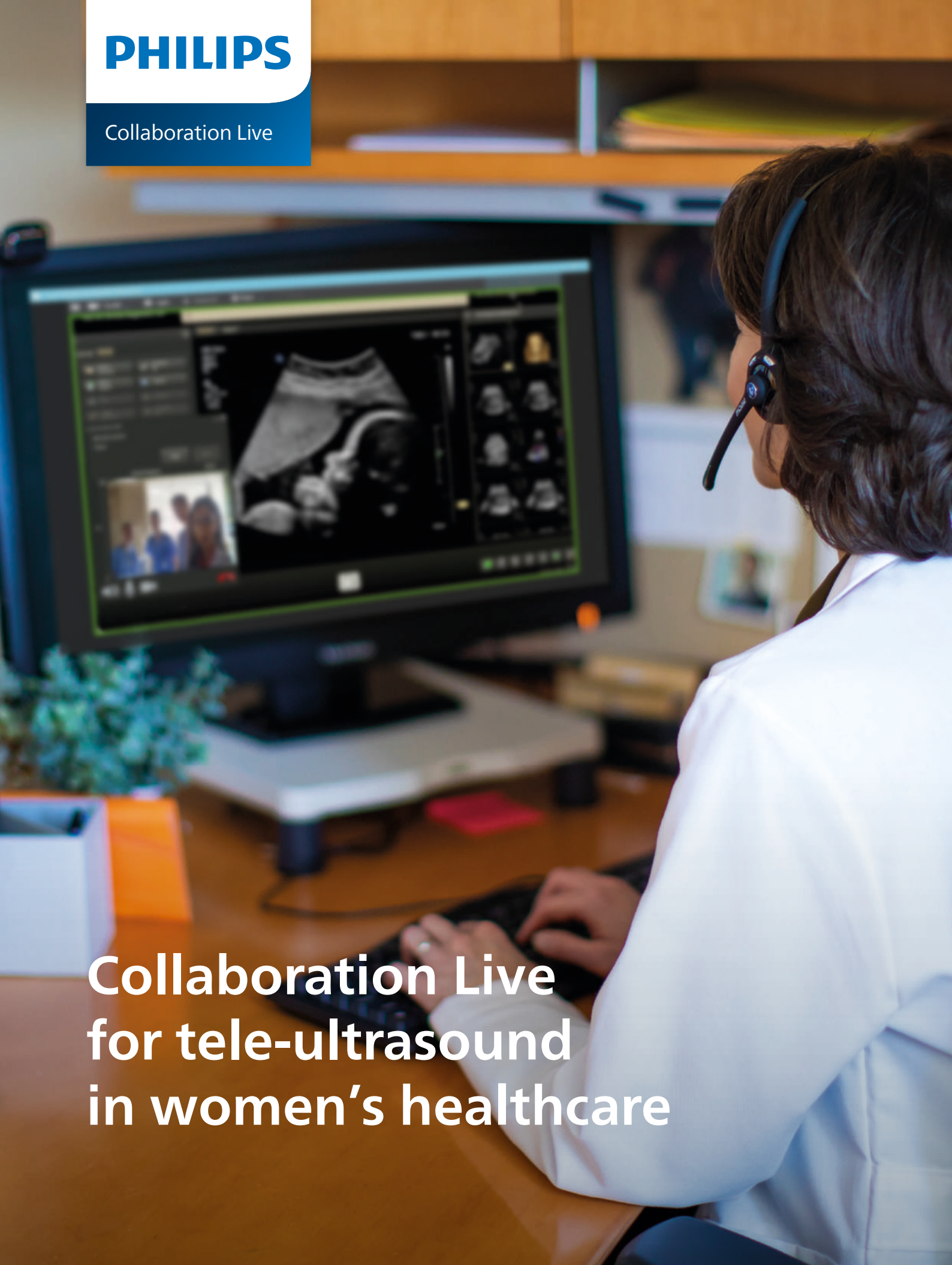
PHILIPS

Collaboration Live



Collaboration Live for tele-ultrasound in women's healthcare

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Enhancing and expanding women's healthcare and service

While telehealth has long been a recognized possibility, in 2020 it exceeded every anticipation in how quickly it expanded. With an expected 200 million remote consultations that year[1], the COVID-19 pandemic has significantly pushed this past the original forecast of 36 million. Within this expansion, there is important potential for the use of telehealth to support the delivery of obstetric and women's healthcare, and for increasing the reach of obstetric and women's healthcare expertise to wider patient populations.

"Philips Collaboration Live has significantly changed our approach to our practice. The tool allows us remote, immediate, efficient access to our ultrasound systems to see patients in real-time."

Dr. Michael S. Ruma,
Maternal-Fetal Medicine specialist, Perinatal Associates of New Mexico

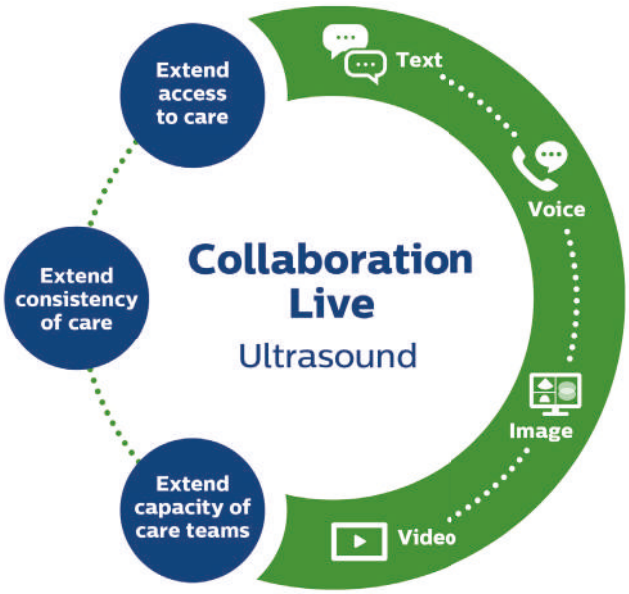
"Philips Collaboration Live helps me remotely work with my staff sonographers on challenging examinations. It is an invaluable training tool on complex or difficult procedures, which I can do right from my office."

Anna M. Holstrom,
Ultrasound Manager, Perinatal Associates of New Mexico

Telehealth: achieving potential beyond expectations

With the critical need to reduce physical contact to minimize the risk of exposure to infectious diseases, telehealth technology is changing the landscape of how healthcare services can be delivered. In this context, the U.S. Department of Health and Human Services (HHS) encourages healthcare providers to adopt telehealth, to provide care to patients in situations such as routine healthcare, wellness visits, medication consultation, dermatology, eye exams, nutrition counseling, and mental health counseling.[2]

Having already foreseen the increasing need for remote solutions, Philips introduced Collaboration Live in 2020. Collaboration Live works between Philips ultrasound systems and an application on Windows-based PCs or laptops. It can transmit live images from the ultrasound system to a remote user, and allow the remote user to control the ultrasound system. To support live communication between the users of the ultrasound system and their remote colleagues, Collaboration Live also provides possibilities to exchange text messages, as well as make voice or video calls. This makes it possible to explore new ways of collaboration within the clinical team, as well as simplifying consultation with remote experts. It also opens possibilities for remotely accessing Philips application and clinical support.



The real-time collaboration can enhance the patient's healthcare experience by making it possible to accomplish more during their scan.[3] It can also simplify communication, boost training opportunities, and support the sharing of best practices within the medical team. Additionally, it can ease the challenges posed by infectious diseases, by allowing remote clinical specialists to provide their expertise with the support of colleagues who are already with the infectious patient.

Challenges to maternal care: telehealth as a solution

Women from all over the world face a variety of challenges in receiving obstetrical care. Worldwide, an estimated 830 women die from pregnancy or childbirth-related related deaths are preventable every day in 2017; maternal mortality is highest among women living in rural areas and poorer communities.[5]

Tele-ultrasound consultations, with the support of Collaboration Live, can help caregivers overcome the obstacles to delivering care.

Helping women in remote or underserved locations

Patients in remote and low-resource locations struggle to access services. According to the World Health Organization (WHO), there are still obstacles in physical accessibility and financial affordability that slow the improvement of women's health.[6]

For many of these women there is a lack of healthcare specialists in their vicinity. This means getting the care they need involves considerable time and economic costs, whether this is associated with travel or being away from their homes and families. In some countries, such out-of-pocket costs account for 50% of overall health expenditure.[7]

Making ultrasound available locally – with the use of remote support – can expand affordability and access.[8] In this way, Collaboration Live can help lower the threshold to the uptake of maternal healthcare.

Coping with limited healthcare resources

There are an estimated 483,000 obstetricians registered worldwide. Low-income and lower-middle-income countries have access to only 29% of these obstetricians. Africa and Southeast Asia are particularly underserved.[9] But this is not just an issue in developing countries. The shortage of physicians in obstetrics and gynecology is also acute in the U.S. In 2011, there were fewer than 1,400 maternal-fetal medicine specialists in the United States, and 98% resided in urban areas.[10] Rural areas are vastly underserved due to recruitment challenges and cost.[11] There is a projected shortfall of up to 22,000 obstetricians and gynecologists by 2050.[12]

Collaboration Live helps overcome such challenges by offering live access to expert opinions during ultrasound examinations, regardless of geographic location. Local caregivers can engage in a virtual consultation with a specialist from elsewhere: The need to be together with a specialist in the same consulting room is no longer a requirement for women who live in remote areas.

Overcoming reluctance in a pandemic

A significant lesson from the West Africa Ebola outbreak of 2014–2016 is that thousands of lives were lost not just because of Ebola, but also because the outbreak interrupted the safe delivery of other medical services. For neonatal and family planning services, this was often through women's fear of going to health facilities where they might get infected.[13] For the COVID-19 pandemic, this is amplified by the increased risk for severe illness compared to non-pregnant women, and the increased risk of adverse pregnancy outcomes such as preterm births.[14]

Collaboration Live creates an opportunity to provide ultrasound examinations and consultations for women in their home communities; thus reducing the number of hospital visits and the exposure risk to the virus.

Women's health challenges

- Limited access to affordable comprehensive care in rural area
- Additional costs and inconvenience involved in travelling to specialist care centers
- Reluctance to increase risk of exposure to infectious disease
- Lack of available caregivers

Collaboration Live

- Enable standardized care across locations
- Remotely connect with staff in real time during an exam
- Provide consultation for locally delivered scans
- Reimbursement of remote consultation is available for Collaboration Live application in the U.S.[15]

A practical solution for healthcare providers

Apart from helping expand the level of care that a clinic can deliver, Collaboration Live can also enhance the satisfaction of the care giving team, through efficient, consistent workflows and helping them reach caregiving and personal development goals.[16]

Easy, live collaboration

Collaboration Live is the first teleconsultation platform to be integrated on-cart. This means, it does not require additional hardware for the sonographer. And once installed on the computer or tablet of the remote consultant, the intuitive user interface requires only three steps to start a remote live scan.

Expanded capabilities through remote clinical guidance

With features like the webcam feed, screen sharing, voice calling, and remote control, Collaboration Live is an intuitive, practical, and effective solution, for example, so new ultrasound users can get any answers or clarifications they might need from more experienced colleagues. Similarly, it can make it easy to support examinations during the night shift, or at locations without sufficient sonographers for the demand. Ultimately, this means satisfaction in enhancing the services provided to patients, while simplifying the involvement of various members of the care team.

Enhanced convenience through remote support and training

Users can also access application and clinical support remotely. The same communications tools that are part of Collaboration Live, including asset sharing, pointers, and two-way live video feed also enhances health providers' access to remote interactive education and training.[17]

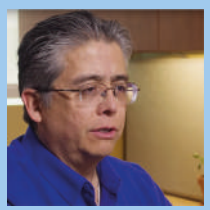
Voice of the patient

- 100% of study subjects indicated strong agreement: Overall, I am satisfied with the quality of service being provided via telemedicine.
- 100% of study subjects indicated strong agreement with better access to healthcare through telemedicine and time savings and reduction in travel. "I obtain better access to healthcare services by use of telemedicine." "Telemedicine saves me time travelling to hospital or a specialist clinic"
- 100% of patients said they were satisfied with the quality of their care and would use Collaboration Live for telemedicine again.
- 100% of patients felt Collaboration Live met their healthcare needs.[18]

Voice of the clinician

- 51% of healthcare providers surveyed believed Collaboration Live would support clinician-to-clinician consultation during an exam
- 68% of healthcare providers surveyed believed Collaboration Live would support remotely delivered application support and training.
- 66% of healthcare providers surveyed believed Collaboration Live would support remotely delivered ongoing clinical education course.[19]

"Collaboration Live is a great tool for both clinical and IT support. Thanks to Collaboration Live, my team can remotely access the system, and kick it into support mode to troubleshoot and make adjustments."



Vince R. Gonzales
Director for Healthcare IT, Perinatal Associates of New Mexico

Security

Audio/video communications are established via WebRTC protocol and utilize the DTLS-SRTP security context to encrypt and decrypt streams from end to end. This context uses a separate channel for signaling that runs only under TLS security, increasing the security of the key exchange. Key exchange is kept separate from the reading of streams.

Conclusion

With Collaboration Live, clinicians can work together using their Philips ultrasound systems[20] to support the delivery of exceptional maternal health and wellbeing.

Where there are thresholds to accessing specialist expertise, patients can reach out from their local healthcare providers for remote consultations, and have the confidence that they are receiving expert information and care.

Clinicians can use remote collaboration to streamline workflows, enhance efficiencies, and expand access to expertise.

Philips, as a leading global health provider, continues to advance healthcare technologies that enhance patient and staff results and experiences. Remote ultrasound diagnosis expanded possibilities for both clinicians and patients. For women and unborn babies, Collaboration Live strengthens our commitment to enabling access to health services on Philips ultrasound platforms.

Visit the Collaboration Live web page for a comprehensive overview, and the experiences of various clinical users.
https://www.usa.philips.com/healthcare/resources/landing/collaboration-live

Notes

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15 Reimbursement is subject to local regulations.

16 Ruma, M et al., "The Use of a Novel Telemedicine Tool," October 2020

17 The features available depend on client and device type.

18 Ruma, M et al., "The Use of a Novel Telemedicine Tool," October 2020

19 Ibid

20 Collaboration Live works on Philips EPIQ and Affiniti systems release 6.0 or later.

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