



PHILIPS

Echocardiography

Helping to advance
and shape the future
of echocardiography

See the benefits of integrated solutions for echocardiography

The need for change is great. The time for change is now.

Question: How can cardiologists provide the highest-quality care for their patients with accuracy and efficiency?

Answer: By getting the insights and answers they need to see the full picture of their patient's condition clearly and quickly to enable precise and personalized care decisions.

It sounds so simple, but we know what clinicians are dealing with every day – wanting quality time with their patients, yet are burdened and burned out by inefficiencies and administrative tasks. Even before the global pandemic, the healthcare sector was considered one of the most hazardous to work in, partially due to high levels of burnout.¹

A lack of human-centered technology and complex workflows are contributing factors to burnout. For example, clinicians must constantly work with, and learn, different systems and applications to accomplish their tasks, even for simpler diagnostic cases. Managing different applications only becomes more difficult with complex diagnostic cases.

Beyond the clinicians themselves, the consequences of burnout can have a ripple effect, impacting patient care, the healthcare system, particularly in regards to retention and staffing, and the community at large, who may

experience worsening health outcomes and increased health disparities.²

Providing clinicians with needed support to improve quality of care

Investing in the right technology can alleviate many of the burdens placed on clinicians. A survey of over 500 healthcare professionals younger than 40 years of age revealed that those who worked in 'smarter' hospitals were more likely to experience job satisfaction than their peers.³

With Philips integrated solutions for echocardiography, we are bringing the future forward and hastening change that can improve satisfaction and health outcomes. Because now is the time for:

- The highest image quality and advanced tools to increase clinical confidence for even the most complex cases, empowering clinicians to focus their time more effectively
- Access to information, efficiency and automation for clear, quick and consistent answers
- Scalability and interoperability that enable greater staff access and efficiency – including the flexibility to work from multiple locations

Clinicians are currently facing many challenges in cardiac care

25%

More than one-fourth of cardiologists reported feeling burnout.⁴



~18M

Almost 18 million people died from cardiovascular disease in 2019.⁵



32%

32% of all global deaths in 2019 were related to cardiovascular disease.⁵





Integrated solutions help address the echocardiography needs of today and tomorrow.

Consider this: the purchase decisions made today can help ensure the right foundation to take advantage of all the benefits that integrated solutions can offer.

Philips is there to help you take the next step and stay with you on the journey.



Unsurpassed ultrasound image quality and quantification tools



Attuned to the current and future needs of echocardiography as part of our innovation process



Deeply familiar with the challenges and pain points cardiology departments encounter



Able to customize solutions that can grow based on specific customer needs

#1

Philips is the recognized leader in the cardiology space with the #1 cardiac ultrasound system and a holistic, scalable cardiovascular viewing, analysis and reporting solution.⁶

Our commitment to echocardiography is unwavering. Together, we can transform cardiology care to better meet clinicians' desire to provide higher-quality care.





Three opportunities for transformative change

In order to achieve change that truly benefits clinicians and the patients they serve, we believe solutions must focus on three key areas:

1

Diagnoses

made smarter, faster, more consistent, standardized and accurate

2

Workflows

made more seamless and flexible

3

Operations

made more streamlined, accessible and scalable

1

Fast, accurate diagnoses

Philips integrated solutions enable clinicians to acquire, access and analyze robust data sets within AI-driven diagnostic tools, helping pave the way for faster, consistent, more accurate diagnoses. Plus, with the full suite of Philips integrated echo solutions, clinicians can take advantage of higher-level insights that may lead to confident decision-making and better outcomes. Looking ahead, clinicians would no longer have to work around data that is incomplete, siloed or unstructured.

Philips delivers data that is precise.



High-quality images combined with the most advanced technologies can help provide the exact insights you need to strengthen clinical confidence and improve patient outcomes. [Philips EPIQ CVx ultrasound](#) provides industry-leading 3D image quality combined with photorealistic echo imaging with an adjustable light source, illuminating tissue detail and creating depth perception not previously achievable.⁷

Precise data is reproducible to help further strengthen clinical confidence and inform next steps. Additionally, the automation that comes with AI and machine learning can also reduce operator discrepancies. [Philips Dynamic HeartModelA](#)¹ is an intuitive and validated 3D tool that provides robust, reproducible ejection fraction (EF) in mere seconds.⁸

Philips delivers data that is smart.



Rich data powers AI analytics, which makes way for enhanced diagnostics and the ability to triage so clinicians can focus more time on the complex cases. Smart data helps clinicians work more effectively. For example:

- Sending alerts when a measurement is out of range or if not all the measurements needed have been captured so a clinician can focus more on the task at hand and minimize the need for rescans
- Autopopulating reports if all the measurements are within a normal range
- Proposing a diagnosis based on existing guidelines to help support clinical decision-making

[AutoStrain LV](#) measurements were found to be feasible in 98% of studies, and the average analysis time was about eight seconds per patient.⁹

Philips delivers data that is structured and shareable.



Data from multiple systems and devices can be standardized to inform fast, accurate diagnoses. Structured data makes up the backbone of interoperability by ensuring clinicians use the same language and approach to share, store and interpret information.

[Philips IntelliSpace Cardiovascular](#) aggregates data from vendor-agnostic systems and devices into a single cardiovascular workspace so clinicians can turn findings into a decisive, actionable plan.

And for data to work as hard as it needs to, clinicians must be able to securely access it wherever they are and keep work moving even while remote. Research teams also benefit from shareable data to look at different patient populations, outcomes and much more. [Philips Collaboration Live](#) allows a clinician to share images in real time and gain insight or diagnostic expertise from a colleague, whether they are in another part of the hospital or world, while a patient is still in the ultrasound exam room.

100% of clinicians surveyed agreed that the echo workflow offerings have led to **increased report and measurement consistency and/or reproducibility.**¹⁰

Findings from a two-step Delphi study.



2

Seamless workflows

So what do seamless workflows look like, not just on paper but in day-to-day operations? They are workflows that are consistent, flexible and frictionless so clinicians have what they need when they need it, saving time and providing efficiencies. They allow for greater freedom such as the ability to start an analysis on cart and finish it off cart. This frees up a system so more patients can be seen while also enabling clinicians to work when and where it makes the most sense for them. The flexibility to work where and when it's needed can help bolster clinical confidence and diagnostic accuracy as well.

Consistent care from anywhere

In streamlined workflows, applications are standardized to look and run the same way regardless of device. When you combine this consistency with the ability to access data from any vendor's device and from multiple locations, your workflows truly become seamless.

Philips integrated solutions for echocardiography connect patients, care teams and data securely across the cardiovascular continuum. And, with remote, browser-based accessibility, the first advanced, vendor-agnostic 2D/3D echocardiography viewing, analysis and reporting system extends the user experience of Philips cardiac ultrasound systems into multiple connected environments.¹¹

100% of clinicians surveyed agreed that Philips integrated solutions could **benefit overall clinical daily work.**¹⁰

Findings from a two-step Delphi study.



3

Streamlined, scalable operations

Adopting the latest technologies and tools can help clinicians and cardiology departments operate more effectively and efficiently. However, a large-scale adoption may not be practical due to timing or budget, so it's important to consider solutions that can grow based on your needs, whether you're part of a small private practice or an integrated delivery network (IDN).

Further advantages of streamlined and scalable operations include:

- Simplified fleet management with one vendor and integrated data management from Philips
- Faster access to the latest features as centralized management makes for more seamless upgrades and rollouts so clinicians have the latest and greatest tools they need
- An increasingly interconnected platform due to cloud capabilities continuing to expand

AI-enabled solutions rely on access to high-quality, properly curated data, and the cloud is the lynchpin to obtaining the highest-quality data available for more accurate diagnoses. That's why Philips works with health systems to unleash the cloud's full potential, helping you take advantage of all that it can offer. The reality, however, is that today's healthcare data is managed with disparate and disconnected systems, posing a barrier that needs to be addressed for AI innovation to scale.

In the Philips Future Health Index 2021 report, healthcare leaders cited [difficulties with data management \(44%\)](#) and [lack of interoperability and data standards \(37%\)](#) as the biggest obstacles to adoption of digital health technology.¹²

These challenges can also make it difficult to compile the necessary high-quality data for training AI models, particularly if those models rely on multimodal data from different sources. To overcome these challenges, robust and interconnected platform infrastructures are needed for collecting, combining and analyzing data at scale. This is also why we designed the Ultrasound Workspace system and IntelliSpace Cardiovascular platform for interoperability, enabling studies from multi-vendor equipment.

[Philips HealthSuite](#) platform helps healthcare providers collect, compile and analyze data from multiple sources, including medical records, imaging and monitoring data, as well as personal devices and technologies.

Few vendors offer end-to-end integrated solutions, and none offer them in combination with the rich clinical data, AI-informed diagnostic capabilities, level of service, training and clinical application support of Philips.

Delivering on the quadruple aim

As you strive to improve efficiencies and outcomes to deliver on the quadruple aim, Philips is your partner to provide the integrated solutions that best serve cardiology departments and clinicians. Together we can do more to enable clinical teams to focus on patient care – efficiently and effectively.

 Improved staff experience	 Improved patient experience	 Lower cost of care	 Improved health outcomes
✓ Freedom for clinicians to complete reports when and where it works best for them	✓ More time with their physicians who are freed from 'the weeds' of inefficient workflows and overwhelming data	✓ Reduced need for rescans, and the potential reimbursement issues, with high-quality data and measurement	✓ More accurate, confident diagnoses
✓ Increased opportunities for training, education and collaboration	✓ Less burden on patients to manage their own records	✓ Lower expenditures with subscription model purchasing and unified app licensing	✓ Less time to reach a diagnosis and subsequent treatment for patients
✓ Decreased cognitive load, streamlined workflows that enable clinicians to focus on clinical work	✓ Less time waiting for a diagnosis and treatment plan	✓ Less time and money spent on training for different systems and applications	✓ Improved ability to triage so more time can be spent on complex patient cases



The future is what we make it

The time has come for cardiologists to be able to refocus their time on patient care. And we can help make that happen. Philips integrated echocardiography solutions can provide clinicians with timely, actionable insights in order to see the clearest picture of their patient's condition and enable precise and personalized care decisions.

Philips is here to help you turn this vision into a reality. Let's start a conversation.

Contact us



References

1. New WHO/ILO guide urges greater safeguards to protect health workers. Joint news release. World Health Organization/International Labour Organization. February 21, 2022. Accessed July 13, 2022. <https://www.who.int/news/item/21-02-2022-new-who-ilo-guide-urges-greater-safeguards-to-protect-health-workers>
2. Office of the US Surgeon General. Addressing health worker burnout: the US Surgeon General's advisory on building a thriving health workforce. US Department of Health and Human Services. 2022. Accessed June 13, 2022. <https://www.hhs.gov/surgeongeneral/priorities/health-worker-burnout/index.html>
3. The Future Health Index 2020. The age of opportunity: empowering the next generation to transform healthcare. Philips. 2020. Accessed June 28, 2022. <https://www.philips.com/a-w/about/news/future-health-index/reports/2020/covid-and-younger-healthcare-professionals>
4. Mehta LS, Lewis SJ, Duvernoy CS, et al. Burnout and career satisfaction among US cardiologists. *J Am Coll Cardiol*. 2019;73(25):3345-3348. doi:10.1016/j.jacc.2019.04.031
5. Cardiovascular diseases (CVDs). World Health Organization. June 11, 2021. Accessed July 13, 2022. [https://www.who.int/en/news-room/fact-sheets/detail/cardiovascular-diseases-\(cvds\)](https://www.who.int/en/news-room/fact-sheets/detail/cardiovascular-diseases-(cvds))
6. Data on file.
7. EPIQ CVx. Philips. Accessed June 14, 2022. <https://www.usa.philips.com/healthcare/product/HC795231/epiq-cvx-premium-cardiology-ultrasound-system>
8. Cardiac 3D chamber quantifications driven by advanced automation. Philips. Accessed June 14, 2022. <https://www.usa.philips.com/healthcare/resources/feature-detail/ultrasound-heartmodel>
9. Knackstedt C, Bekkers S, Schummers G, et al. Fully automated versus standard tracking of left ventricular affection fraction and longitudinal study. *J Am Coll Cardiol*. 2015;66(13):1456-1466. doi:10.1016/j.jacc.2015.07.052
10. Boonyaratavej S, Riccobene F, Falahi F, Franke J, Solis J, Lang RM. Assessment of benefits of Echo Workflow Solution: findings from a two-step Delphi study. medRxiv. June 2, 2022. Accessed June 29, 2022. <https://www.medrxiv.org/content/10.1101/2022.06.01.22275807v1>
11. Philips enables seamless echocardiography workflows with the launch of Ultrasound Workspace at ACC 2022. News release. Philips. March 31, 2022. Accessed June 14, 2022. <https://www.philips.com/a-w/about/news/archive/standard/news/press/2022/20220331-philips-enables-seamless-echocardiography-workflows-with-the-launch-of-ultrasound-workspace-at-acc-2022.html>
12. The Future Health Index 2021. A resilient future: healthcare leaders look beyond the crisis. Philips. 2021. Accessed June 30, 2022. <https://www.philips.com/a-w/about/news/future-health-index/reports/2021/healthcare-leaders-look-beyond-the-crisis.html>

