HealthManagement
Promoting Management and Leadership

Breaking Down the Barriers to Clinical Connectivity in Cardiology

The COVID-19 pandemic didn't create the universe of clinical connectivity across healthcare or cardiology specifically, but it sure helped to speed things along.

Recognizing these trends, major associations—including the European Society of Cardiology (ESC) and American College of Cardiology (ACC)—are voicing their ongoing advocacy and support for modernized technologies.[3,4] The 2020 launch of the European Heart Journal Digital Health is just one example of the momentum in this area, as is a recent perspective piece from the ACC about the "tech-celeration in cardiovascular care." [5,6]

Despite the dialogue, however, barriers to clinical connectivity remain. Some are attributed to a lack of awareness, while others point to deeper concerns inherent in connected systems and technologies. In an ESC survey of 559 physicians, 57% of respondents self-rated their digital health knowledge as "fair," while 16% expressed they'd done no reading on the topic. Roughly 4 in 10 respondents worried about technologies' more sinister impacts on data transparency and ethics.[7]

As experts think through what a clinically connected world might look like, it's important to sort myth from fact. Tackling some of the most common barriers to clinical connectivity in cardiology, here's what cardiologists practicing in this changing environment should know.

Resistance to Tech Adoption

The adage "if it's not broken, don't fix it" has merit across healthcare, but when applied as an excuse not to embrace connected systems known to improve care quality and efficiency, this tendency can do a disservice to a health system's patient populations.

As one example, digitized cardiology workflow solutions like Centricity Cardio Enterprise have improved catheterization turnaround times by as much as 92%. Healthcare organizations not adopting these advancements risk experiencing costly impacts associated with delayed interventions.

Even so, a prevailing myth that holds practitioners back from interconnected systems is that new-age platforms are cumbersome and difficult to access and use. Often, technologies are seen as complicated when they're configured for many functions, resulting in users being afraid to use those solutions, despite their promise, out of concern that they'll break or damage those investments.

Recognizing these concerns, manufacturers have prioritized more intentional equipment design to promote improved usability, functionality, and simplicity. As one iteration of these user-friendly platforms, the cardiology information system MUSE NX was engineered with the explicit goal of having a simple user interface that would offer users easy access to the most commonly needed functions from the platform.

With a more straightforward interface, clinicians can take advantage of the full scope of the connected system. In MUSE's case, for example, instantly transmitting raw ECG data without the risks associated with the low-tech workaround of emailing or texting pictures of ECG tape. With richer data, transferred instantly and securely, teams can work together better and more quickly inform diagnostic and care pathways.

Budgetary Concerns

If connectivity isn't prioritized in clinical practice, it won't be prioritized in budgets. This can limit many health systems from making the infrastructure and equipment investments needed to support a digitized culture.

Obviously, austerity has been the rallying cry amid healthcare's financial pressures stemming from COVID-19. But at the same time, making care more efficient—a key objective of connected technologies—is the *other* elephant in the room concerning cost control.

Importantly, failure of care coordination and overtreatment/low-value care account for up to $78.2 billion and $101.2 billion, respectively, of wasted costs in healthcare.8 These values represent a large opportunity to root out unnecessary spending with automation, intelligent diagnostics, streamlined coordination, and other known benefits of connected systems.

Missed and incorrect diagnoses, after all, are costly. One study valued readmission associated with an overlooked NSTEMI at $12,000 (Canadian Dollars), while mistakenly diagnosing a person with STEMI risks expensive overtreatments like angioplasty. Moreover, both concerns risk malpractice.

Now think back to the example of doctors sending each other iPhone pictures of ECG readouts. What are the risks and costs of that workflow? Investing in technologies designed to enable easier and more accurate care coordination can make a substantial difference, but it will likely take a champion in the clinic to advocate for their inclusion in the budget.

Internal Politics

Health systems are behemoth things, especially considering the waves of mergers and acquisitions over the past several years. In these large corporate bodies with several decision-makers across sites and departments, it can be challenging to sort through the internal politics necessary to compare, select, and ultimately pay for connected infrastructure.

Solutions to these preexisting problems start with collaboration—as difficult as that can be to come by in complex supersystems. Involving both operational and clinical decision-makers and champions is essential to maintain dual perspectives: that of efficiencies and costs associated with new equipment, and that of clinician and patient impact.

In the current environment of financial concerns, an initial reaction might be *not* to spend money right away on new technology, going back to the "if it's not broken, don't fix it" mentality. But for many hospitals, the question isn't "Can we afford this?" Instead, it's "Can we afford not to?"

Keep in mind that potential savings can come from all angles, including labor, a particularly challenging issue recently. Centricity Cardio Enterprise, for example, was found to trim hours from nursing workloads in one hospital. Similar findings have been observed with connected technologies that integrate EMRs with medical devices.

When shortages and burnout affect everyone, all stakeholders—no matter the internal politics—are likely to respond to data that points to new possibilities and meaningful change.

Data Security

Cybersecurity is a top concern for clinicians and administrators, given the patient impact and privacy risks associated with breaches. These issues are becoming even more problematic throughout the cardiovascular care continuum and beyond, as cybercrime hit an all-time high in 2020. With hospital security breaches becoming more widely publicized and FDA officials frequently noting that "everything is hackable," it's only natural to worry about the vulnerabilities of connected technologies.[9]

But cybercriminals have formidable foes: The engineers behind today's machines are building with protection in mind. GE Healthcare's MUSE NX, for example, provides multiple layers of security features while integrating with health systems' existing security infrastructure. Such features also have advanced tracking, allowing administrators to know when and by whom records are searched, accessed, viewed, and changed.

Moreover, clinicians can be better stewards of security measures by assiduously observing best practices such as logging out when not using connective devices, enabling two-factor authentication when available, using antivirus software, and accessing an encrypted virtual private network (VPN) when working remotely.

Facilitating Clinical Connectivity With Data Organization

While momentum for clinical connectivity in cardiology is high, some cardiologists still have valid concerns. However, letting concerns get in the way of more efficient and quality care can do a disservice to patients and organizations alike.

By understanding the facts and building a culture that can support digitization, practitioners can take advantage of a technology's promise while safeguarding against the risks. This will likely take considerable effort on the part of clinicians and hospital administrators, who will have to follow cybersecurity protection measures consistently and create the underlying organization system (including patient identifiers) necessary to ensure data is easily accessible.

Technology is clearly here to stay, so it falls to clinicians and administrators to use it responsibly. With that as the North Star, the future of cardiology technology indeed looks bright.

Source: GE Healthcare

References:

---

1. Beck D. Cardiology's digital transformation: telehealth, remote monitoring and AI. ACC.org. https://www.acc.org/latest-in-cardiology/articles/2021/11/01/01/42/cover-story-cardiologys-digital-transformation-teleheath-remote-monitoring-and-ai-technology-enabled-collaboration-across-the-entire-health-care-ecosystem. Accessed March 10, 2022.

2. Itchhaporia D. Navigating the path to digital transformation: Journal of the American College of Cardiology. 2021 Jul, 78 (4) 412–414. https://www.jacc.org/doi/full/10.1016/j.jacc.2021.06.018

3. Bruining N. How e-Health is going to improve daily clinical cardiology practice. *E-Journal of Cardiology Practice.* 2020;18(34). https://www.escardio.org/Journals/E-Journal-of-Cardiology-Practice/Volume-18/how-e-health-is-going-to-improve-daily-clinical-cardiology-practice

4. American College of Cardiology. Digital health. ACC.org. https://www.acc.org/tools-and-practice-support/advocacy-at-the-acc/acc-health-care-principles/digital-health. Accessed March 10, 2022.

5. European Society of Cardiology. European Heart Journal - Digital Health. Escardio.org. https://www.escardio.org/Journals/ESC-Journal-Family/European-Heart-Journal-Digital-Health. Accessed March 10, 2022.

6. Jain S. The evolving roles of digital Health, big data and AI: "tech-celeration" in CV. ACC.org. https://www.acc.org/Latest-in-Cardiology/Articles/2021/12/01/01/42/For-the-FITs-The-Evolving-Roles-of-Digital-Health-Big-Data-and-AI-Tech-celeration-in-CV-Care. Accessed March 10, 2022.

7. Asteggiano R, Cowie MR, Richter D, et al. Survey on e-health knowledge and usage in general cardiology of the Council of Cardiology Practice and the Digital Health Committee. *European Heart Journal - Digital Health*. 2021;2(2):342-347. https://academic.oup.com/ehjdh/article/2/2/342/6214526?login=true

8. Shrank WH, Rogstad TL, Parekh N. Waste in the US Health Care System. *JAMA*. 2019;322(15):1501. https://jamanetwork.com/journals/jama/article-abstract/2752664

9. Slabodkin G. Ransomware, other cyber threats mount as medtech industry tries to adapt. MedTech Dive. https://www.medtechdive.com/news/ransomware-other-cyber-threats-mount-as-medtech-industry-FDA-Kevin-Fu/600737/. Accessed March 11, 2022.

Published on : Wed, 27 Apr 2022