KPMG

2020 CIO Survey

Healthcare industry insights

IT in the New Reality for Healthcare

Operating through an unprecedented global pandemic, there has been ongoing demands for urgent healthcare services around the world while non-urgent services have scaled back. Many healthcare providers have been stretched to the limit – balancing a surge in COVID-19 cases with ongoing demand for other patient care. With a number of vaccines now offering the hope that the pandemic will be brought under control during 2021, healthcare providers will be looking to adjust to a different way of delivering their services and re-establishing more settled patterns of working. Recovery shapes for the sector will vary – digital health (virtual delivery of health and care services) will represent a surge pattern, while elective healthcare may not be expected to return to pre-pandemic volumes for quite some time, even when the coronavirus outbreak has been contained. It is perhaps no surprise that 39 percent of respondents in this sector view 'surge' as their economic recovery pattern, 10 percent higher than the cross-sector average (29 percent).

Consumer-centricity and the omni-channel approach that consumers have grown accustomed to in other industries has led to a greater expectation for personalization from healthcare providers to help consumers meet health goals. There is a fundamental shift that healthcare providers must take in understanding individuals as people rather than patients – who they are, what they want, how they behave and factors that motivate them to change. While the goals of each consumer segment may differ across prevention or treatment (ex. millennials staying healthy and baby boomers managing chronic illness), technology has a role to play for healthcare's shared vision of personalized services, liberation of patient data across the lifespan, and integration of medicine and technology disruption – with the underlying commitment to improve clinical outcomes.

Focus areas in the new reality for healthcare providers will include: digital acceleration, care system redesign, insight-led decisions, consumer-centricity, enterprise-wide innovation and workforce transformation. Technology will sit at the heart of these. The redesign of care pathways that are more patient-centered and integrated means that many legacy systems and architecture must be modernized to leverage real-time data and enable predictive modeling capabilities. To meet modern business demands, healthcare organizations must transform their back office systems to cloud-based ERP platforms and systems. Healthcare providers will need to adjust their ways of operating and contingency planning to handle future risks to business continuity and impacts to the care delivery model. The to-do-lists of CIOs in healthcare organizations are long and pressing.

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Board priorities & investment

Healthcare services already faced record demand even before COVID-19 due to lengthening life expectancies and changing demographics. But with public sector spending and borrowing levels at an all-time high after governments pumped funds into healthcare systems and stimulus/support programs, the need to more effectively enable service delivery and costs has only grown. As baby boomers reach retirement and with longer life expectancies, there will be revenue increases driven by the treatment of chronic illnesses. To avoid a revenue cliff in 2030, healthcare providers must start aligning delivery models with preferences and behaviors of millennials and younger patient cohorts who will continually exert more influence over healthcare delivery models. The changing patterns in the consumption of healthcare opens the door to lower costs, convenient care delivery, consumer tools (such as wearables or symptom monitoring), and early intervention/prevention. Consumer centricity is a huge focus for healthcare organizations but requires overcoming challenges due to the large degree of interfaces in the middle and back offices. Improving consumer engagement means enabling healthcare providers to provide patients access to information and simplify the way they deliver services. It is no surprise therefore that the number one priority Boards are looking to IT teams to deliver is greater operational efficiency, followed by enabling the workforce and improving patient engagement.

Top three business issues that management boards are looking for the IT function to address:
Healthcare vs. overall

Healthcare

1. Improving operational efficiency
2. Enabling the workforce
3. Improving patient engagement

Overall

1. Improving operational efficiency
2. Improving customer engagement
3. Enabling the workforce

Source: 2020 Harvey Nash/KPMG CIO Survey, KPMG International

Three most important technology investments:
Healthcare vs. overall

Healthcare

1. Security and privacy
2. Patient experience and engagement
3. Automation

Overall

1. Security and privacy
2. Customer experience and engagement
3. Infrastructure/Cloud

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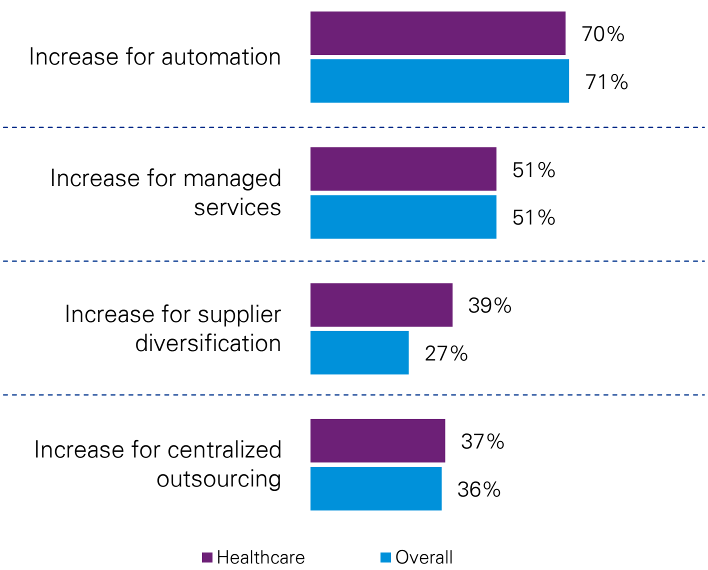
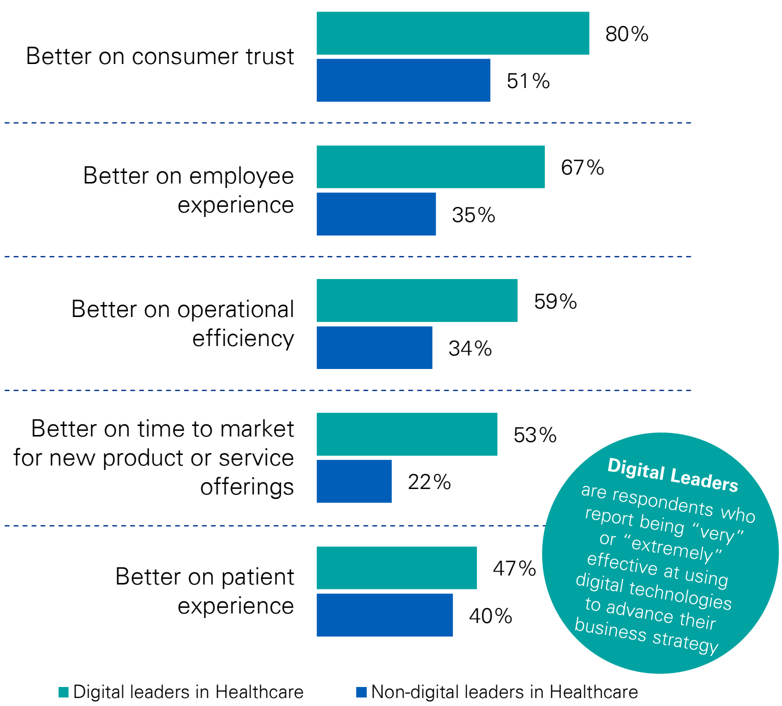
Changes to the healthcare operating model will be needed as innovations in digital care scale. Healthcare providers must continue to own the patient relationship and partner with innovative technology companies to provide the physical and digital experience that consumers want while delivering on improvements in personalized healthcare that consumers need. Tech disruptors with established data architectures and deep understanding of consumer behavior will play a crucial role in the consumerization of healthcare. Advanced technologies -- such as genetics tools, risk stratification calculators, rare disease detection algorithms, machine learning, natural language processing and predictive analytics – can improve patient outcomes. Out of necessity, the pandemic spurred greater adoption of telemedicine. Some research suggests that over 70 percent of the population will continue to use telemedicine as the primary channel for first contact into the future. But even with an increased willingness to engage, healthcare providers need to develop clearer, integrated journey maps across the patient experience. The increased use of virtual care and diagnostics can increase capacity, avoid unnecessary contact, reduce hospital and emergency department readmissions, and satisfy new patient preferences for more digital interactions. This will create opportunities for new start-ups, partnerships and technology solutions to fill existing voids and improve the patient healthcare experience. New partnership models that enable risk-sharing with vendors are likely to be developed. CIOs in healthcare are therefore expecting an increase in the use of managed services (51 percent), while automation (70 percent) is widely seen as the route to overhauling service delivery. Digital Leaders are significantly better placed for the future than their peers in several key respects, including superior operational efficiency (59 percent vs 34 percent), consumer trust (80 percent vs 51 percent) and time to market for new products and offerings (53 percent vs 22 percent).

Change to IT service delivery model:
Healthcare vs. overall



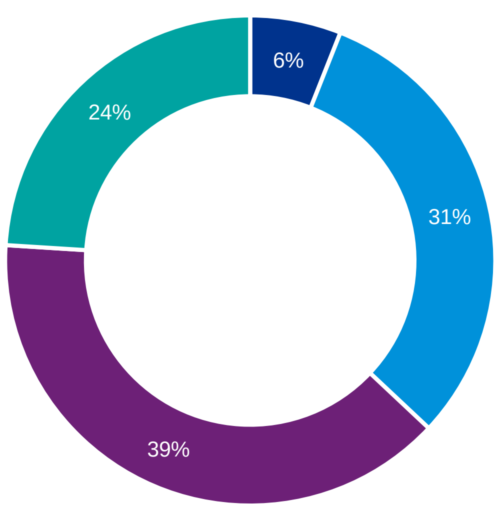
Source: 2020 Harvey Nash/KPMG CIO Survey, KPMG International

Organizations performing 'better' or 'significantly better' than competitors on the following metrics:
Digital leaders vs non-digital leaders in Healthcare



Source: 2020 Harvey Nash/KPMG CIO Survey, KPMG International

Four economic recovery paths that best describe organizations' business technology strategy:
Healthcare



- **Hard Reset** — organizations that struggle to recover from COVID-19 due to 'permanently' lowered demand for offerings, insufficient capital to ride out extended recession, and/or poor execution of digital transformation.
- **Transform to Re-emerge** — organizations that will recover but along a protracted path requiring reserves of capital to endure and transform operating models to emerge stronger and more in line with changed patient priorities.
- **Surge** — organizations that scale post-COVID-19 as patient behavior that was altered during the crisis is sustained in their favor. Government provides capital to scale aggressively during recovery.
- **Modified Business-as-usual** — organizations seen as daily essentials will suffer effects of the consumer shutdown recession but are expected to recover more quickly as patient demand returns in similar volumes.

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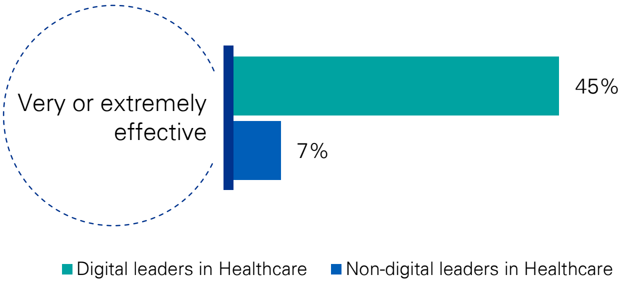
Delivering value at speed

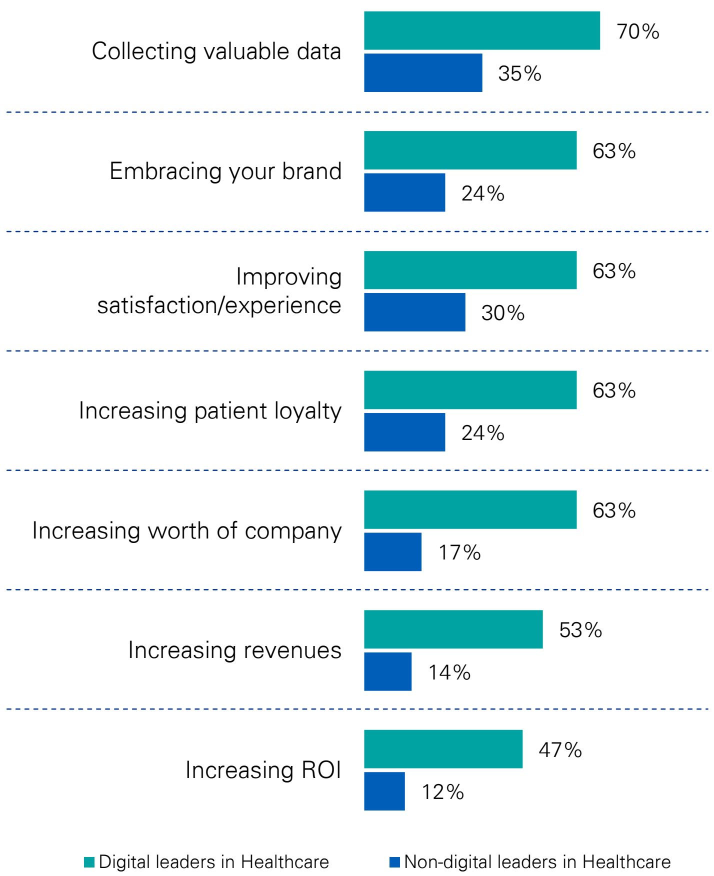
Healthcare providers with agility built into their IT operating model will more successfully respond to patient feedback and iterate more new digital service releases than organizations that have not pivoted beyond more traditional, less agile practices. Patients increasingly want to access and contribute to their own health records, and are looking for ways to proactively drive their own health behaviors – making digital solutions and channels essential. The sector will increasingly rely on extending their ecosystems via partnerships, alliances, and targeted acquisitions to increase the breadth of their offerings. Virtual care, remote monitoring, e-prescribing – all of these become pre-requisites to delivering greater patient value, faster. Digital Leaders in the sector are much further down the road than their counterparts in these respects, with 45 percent very effective at pivoting and scaling digital channels compared to just 7 percent of others. Their most successful digital offerings are reaping far greater returns across key metrics, from increasing revenues (53 percent vs 14 percent) to increasing patient loyalty (63 percent vs 24 percent), improving patient satisfaction (63 percent vs 30 percent) and collecting valuable data (70 percent vs 35 percent).

Organizations that are 'very effective' or 'extremely effective' at pivoting and scaling digital channels to meet new consumer demands and expectations:
Digital leaders vs non-digital leaders in Healthcare



Source: 2020 Harvey Nash/KPMG CIO Survey, KPMG International

Digital offerings to consumers that were 'very effective' or 'extremely effective' at the following:
Digital leaders vs non-digital leaders in Healthcare



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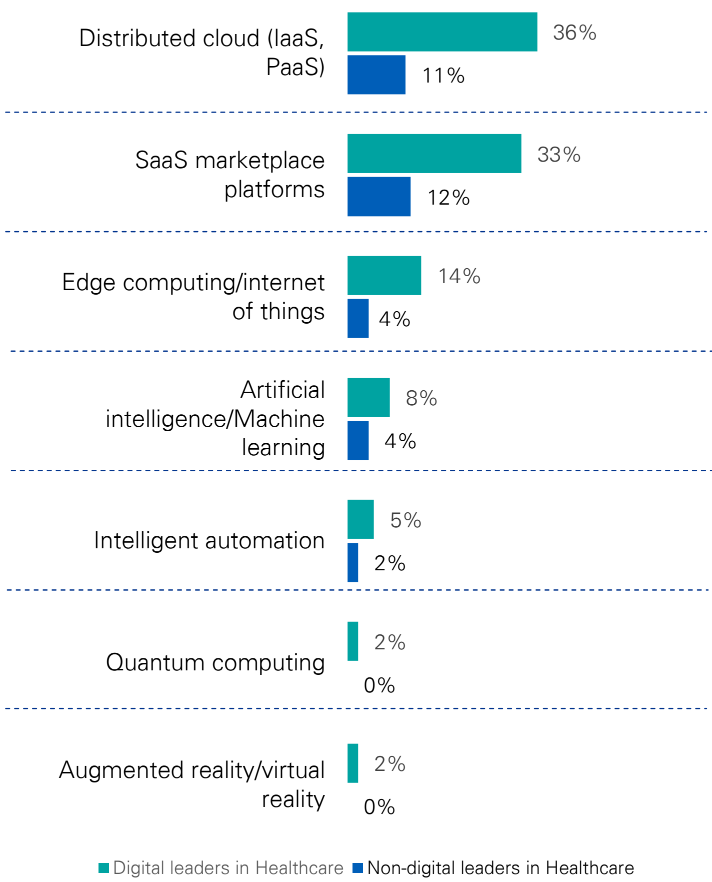
Large-scale implementations of emerging tech:
Digital leaders vs non-digital leaders in Healthcare



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People & culture

With so much resting on technology, addressing skills shortages in the IT team must be a key priority in imagining healthcare of the future. In common with other sectors, individuals with cyber security skills are in the highest demand, as protecting patient data and maintaining the security of systems remains a critical requirement. With clinical care outcomes and the consumer central to the sector, healthcare providers continue to place more focus on the end-to-end patient journey. As many organizations seek to strengthen their ability to deliver a cohesive patient experience, it is not surprising that competencies such as advanced analytics and technical architecture rank high as in-demand skills, as these will help organizations formulate insights across data sources to develop more robust patient profiles and personalized healthcare needs through coordinated, automated and integrated care. The patient-provider relationship remains key to healthcare success with technology as a key workforce enabler. IT teams could also have an increasingly important role to play in developing platforms for remote learning that enable staff to quickly reskill and upskill for the new reality, as well as tools that support staff more holistically with mental health & wellbeing and prevent burnout and attrition.

Most in demand skills:
Healthcare vs. overall

Healthcare

- Cyber Security
- Advanced analytics
- Organizational change management
- Technical architecture
- Business analysis

Overall

- Cyber security
- Organizational change management
- Enterprise architecture
- Technical architecture
- Advanced analytics

Source: 2020 Harvey Nash/KPMG CIO Survey, KPMG International

Top factors in engaging and retaining key technology talent in the new reality:
Healthcare vs. overall

Healthcare

1. Strong culture & leadership
2. Good remuneration
3. Career progression opportunities
4. Training, development, & reskilling opportunities
5. The purpose of the organization

Overall

1. Strong culture & leadership
2. Good remuneration
3. Career progression opportunities
4. Work location and remote work opportunities
5. Training, development, & reskilling opportunities

52% in healthcare believe **COVID-19 created a culture** of inclusivity in the **technology team.**

More than half in healthcare believe **promoting diversity** improves **trust and collaboration and engagement with the business.**

Source: 2020 Harvey Nash/KPMG CIO Survey, KPMG International

Proportion of enterprise that will remain predominantly working from home post COVID-19:
Healthcare vs. overall

Healthcare
30% Say half or more

Overall
43% Say half or more

Source: 2020 Harvey Nash/KPMG CIO Survey, KPMG International

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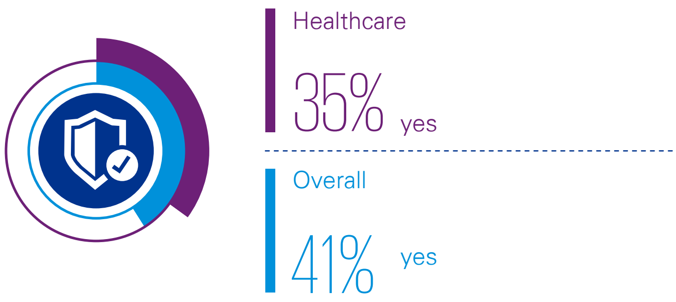
The rise of cyber

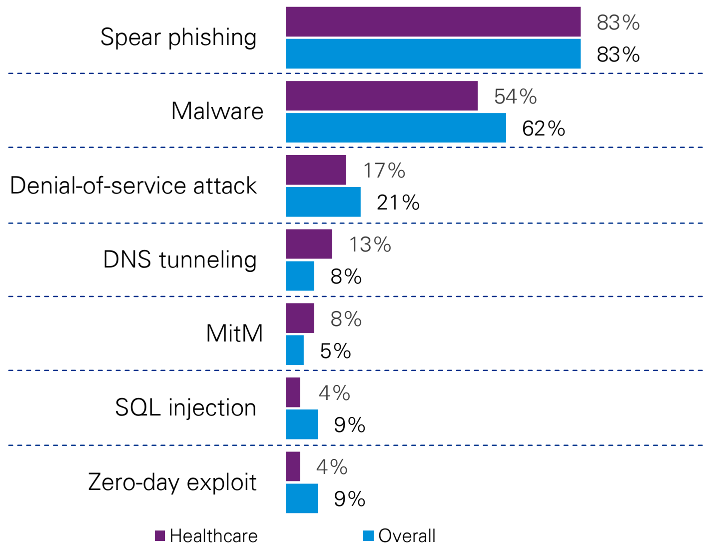
With COVID-19 causing the mass relocation of staff from corporate networks to home offices, bedrooms and kitchen tables around the world, organizations' attack surfaces also dramatically grew. Even in healthcare – where such a high proportion of the workforce has to be physically present – cyber attacks spiked significantly, showing a 35 percent rise. Spear phishing attacks have been particularly prominent, surging by 83 percent. Clearly, protecting patient and other medical data is of the highest priority and must be a constant focus for CIOs in the sector. The increased adoption of digital care modalities will only heighten its importance, as will the potential growth in the exchange of health data with partner organizations and platforms.

Organizations that experienced an increase in security or cyber incidents due to remote working:
Healthcare vs. overall



Source: 2020 Harvey Nash/KPMG CIO Survey, KPMG International

Increase in types of attacks due to remote working:
Healthcare vs. overall

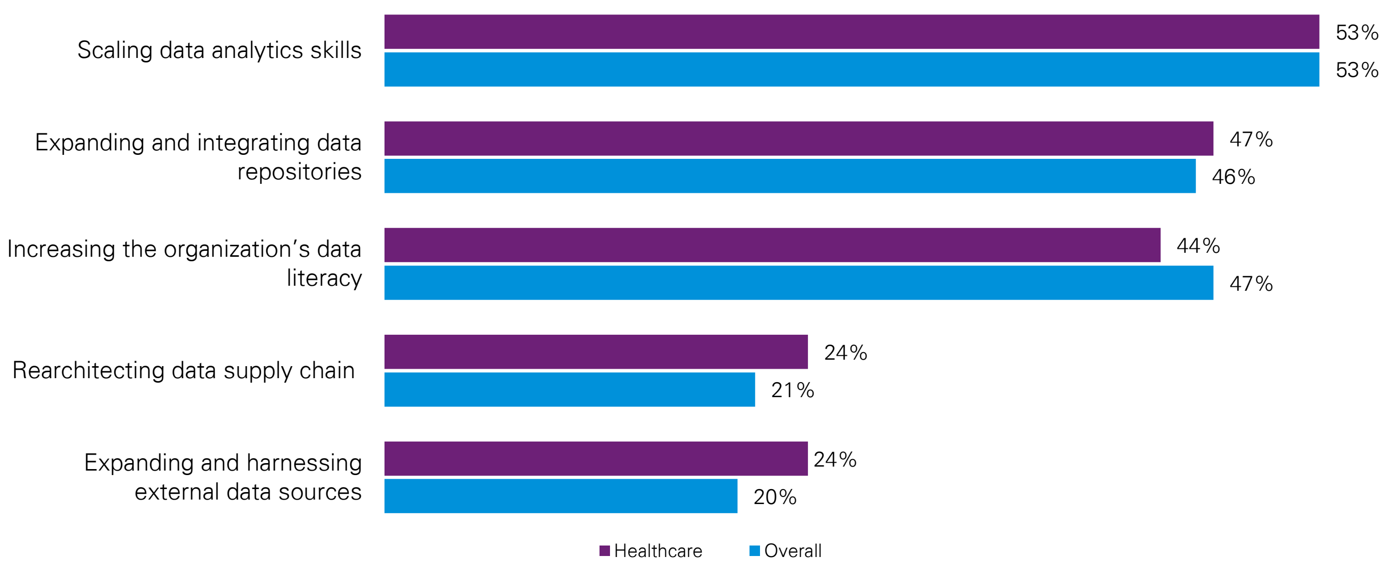


Source: 2020 Harvey Nash/KPMG CIO Survey, KPMG International

Analytics & insight

Data and insights will be at the heart of the healthcare organizations of the future. AI and predictive analytics will increasingly inform clinical decision making and more personalized care, while more sharing of health information between providers will be needed to facilitate care planning and better patient journeys. Data-driven platforms and the availability, mobility, and interoperability of health data will therefore be key – organizations will need to develop clear D&A strategies and align them with their business and clinical strategies; while effective data and technology architectures, standards and governance will be pre-requisites. For CIOs in healthcare, scaling data analytics skills (53 percent) is the uppermost analytics related priority, while expanding and integrating data repositories (47 percent) is not far behind.

Top priorities for organizations' data strategy:
Healthcare vs. overall



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What now?

COVID-19 has changed the landscape. With technology more important than ever to organizations' ability to survive and thrive, the opportunity has never been greater for CIOs to work as strategic partners with their clinical and business counterparts. More than seven in ten IT leaders report increased collaboration between the technology teams and their business counterparts – this relationship is something that CIOs must build on to ensure their organization's digital transformation success.

For CIOs in healthcare, the focus must continue on patient centricity, driving digitization across the enterprise, putting real-time information at the fingertips of clinicians and colleagues, and enabling the delivery of more digital care pathways and journeys to patients. Transforming the back office through ERP platforms will be a key enabler in this, while technologies that unlock healthcare's vast stores of data and open them up to sophisticated analytics and targeted sharing will be another key driver in creating tomorrow's modernized healthcare organizations.

How KPMG can help

While KPMG firms are some of the largest providers of services to healthcare organizations globally, we take a boutique approach to client issues with a focus on flexibility, adaptability, and innovation. We recognize that there are many on-ramps to supporting digital transformation and we've tailored our services accordingly:

Transform the business of IT

— Strategy and operating model
— Organizational design
— Modern architecture
— Portfolio planning
— Merger and acquisition

Run the business

— Scaling agile
— Product management
— DevOps tooling
— IT financial management
— IT service management
— IT asset management

Modernize and protect

— Cloud strategy
— Data center strategy
— Continuity and resiliency
— Workplace transformation
— Network modernization
— Cyber, risk, and compliance

Contact us

Anna van Poucke
Global Head of Healthcare
KPMG International
T: +31 6 50263965
E: vanpoucke.anna@kpmg.nl

Lydia Lee
Partner and National Leader,
CIO Advisory Services and
Digital Health
KPMG in Canada
T: +1 303 295 5524
E: lydialee1@kpmg.ca

Evan Rawstron
Partner in Charge, Policy,
Programs & Evaluation and
Global Lead, Health Analytics
KPMG in Australia
T: +61 2 9455 9586
E: erawstron@kpmg.com.au

Steve Bates
Global Leader,
CIO Center of Excellence
KPMG International
T: +1 303 295 5524
E: sjbates@kpmg.com

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