



HEALTH CARE

TOP TRENDS 2022

Drivers, opportunities, and risks
shaping Financial Services



TABLE OF CONTENTS

EXECUTIVE SUMMARY	4
TREND 1 COVID-19 FAST-TRACKED DIGITAL HEALTH FOR A SEAMLESS PATIENT EXPERIENCE ACROSS CARE JOURNEYS	6
TREND 2 PATIENT-CENTRIC, PERSONALIZED CARE, AND A SHOPPABLE EXPERIENCE WILL SIGNIFICANTLY ENHANCE PATIENT ENGAGEMENT	8
TREND 3 HEALTHCARE SECTOR IS NOW FOCUSED ON INTEGRATED HEALTH VIA A WHOLE-PATIENT APPROACH AND UNDERSTANDING SDOH	10
TREND 4 REAL-TIME HEALTHCARE DATA AND INTERNET OF MEDICAL THINGS (IOMT) ARE DRIVING AGILITY IN THE MEDICAL MANAGEMENT	13
TREND 5 NON-TRADITIONAL PLAYERS ARE INTRODUCING SIGNIFICANT BIGTECH PLAY IN HEALTHCARE ECOSYSTEM	16
TREND 6 HEALTHCARE PLAYERS ARE ON A MASSIVE SPREE OF MODERNIZATION AND CLOUD ADOPTION	18
TREND 7 PRIORITIZING PRICING TRANSPARENCY ENABLES PAYERS AND PROVIDERS TO EARN MEMBER TRUST AND ENABLE SHOPPABLE HEALTH CARE	20
TREND 8 HEALTHCARE ECOSYSTEM PLAYERS ARE STEPPING UP MEASURES TO COMBAT PRIVACY AND SECURITY RISKS	23
TREND 9 MARGIN PRESSURES AND THE TRANSFORMATION OF CARE DELIVERY MODELS HAVE TRIGGERED CONSOLIDATION	26
TREND 10 INTEROPERABILITY CONTINUES TO OUTPACE INNOVATIONS IN THE CONNECTED CARE SPACE	28
CONCLUSION	31
ASK THE EXPERTS	32
FOR MORE INFORMATION	34
ACKNOWLEDGMENTS	35

EXECUTIVE SUMMARY

The pandemic changed the rules of healthcare delivery and engagement forever!



COVID-19 exacerbated chronic challenges within the global healthcare industry. It became a catalyst amid fierce competition and tight regulations for health providers and payers to focus on digital health, cybersecurity, patient data transparency, and a variety of customer-centric and operational enhancements. As a result, we found the 2022 trendline pointing to improvements in access and quality of care.

Healthcare challenges such as optimizing the cost of care while simultaneously enabling personalized interventions and consumer-friendly shoppable services are long-standing – but, historically, the industry has been slow to react.

Our Top Trends 2022 report examines the lingering ramifications of the pandemic, heightened patient-focus, and the worldwide impact of ever-changing regulatory environment. Given the United States health care market is the largest and most complex in the world, our report has an additional focus on the US healthcare industry.

When quantifiably transforming clinical experience and outcomes, technology such as AI-powered predictive analytics and machine learning is pivotal. However, providers and payers face numerous decisions about which solutions and HealthTech partners can best help to resolve their technology debt while enabling agility, innovation, and relevance in the years to come.

Not surprisingly, a wave of **industry consolidations** is cresting as mergers and acquisitions enable horizontal and vertical integrations between ecosystem players that support cost efficiencies and extend patient care.

As **virtual delivery** of healthcare services becomes increasingly urgent, value chain participants are coming together to build the modern infrastructure necessary for effective **patient engagement**. Access to real-time patient data is driving better health outcomes and efficient **medical management**. Today's imperative is to prioritize **whole-patient healthcare** through preventive care solutions.

The shift to virtual healthcare delivery and seamless, coordinated care requires **data interoperability** and migration to the **cloud**. Therefore, healthcare providers and insurers are exploring ways to manage, store, and leverage the enormous patient data they generate – cost-effectively.

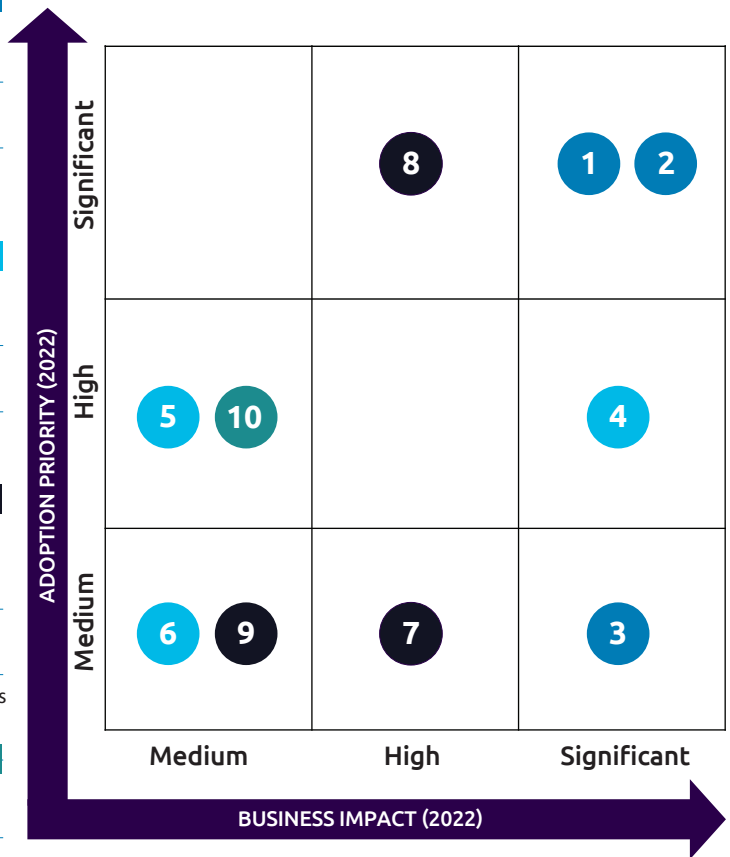
While digitalization is a critical enabler, it also raises potential cyber-attack vulnerability. Therefore, robust security strategies are high on the agenda for 2022 to protect sensitive patient data and avoid organizational losses.

Strategic **collaboration** with hyperscalers, HealthTechs, and **non-traditional players** can help industry leaders agilely incorporate requisite new capabilities and operational efficiencies.

Leading healthcare ecosystem players are preparing for imminent and full-scale industry transformation. They understand that agile and strategic responses to global dynamics and patient expectations will directly affect patient-focused care delivery and consistently positive health outcomes.

Exhibit 1: Top healthcare trends 2022 – Priority matrix

- Customer centricity**
- 1 COVID-19 fast-tracked **digital health for a seamless patient experience** across care journeys
- 2 Patient-centric, personalized care, and a shoppable experience will significantly **enhance patient engagement**
- 3 Healthcare sector is now **focused on integrated health** via a whole-patient approach and understanding of Social Determinants of Health (SDoH)
- Intelligent enterprises**
- 4 Real-time healthcare data and Internet of Medical Things (IOMT) are driving **agility in the medical management**
- 5 Non-traditional players are introducing significant **BigTech play in healthcare ecosystem**
- 6 Healthcare players are on a massive spree of **modernization and cloud adoption**
- Business resilience**
- 7 **Prioritizing pricing transparency** enables payers and providers to earn member trust and enable shoppable healthcare
- 8 Healthcare ecosystem players are stepping up measures to **combat privacy and security risks**
- 9 Margin pressures and the transformation of care delivery models have triggered **consolidation**
- Collaboration-at-scale**
- 10 **Interoperability** continues to outpace innovations in the connected care space



Sources: Capgemini Financial Analysis, 2021.

Adoption priority refers to the urgency of adopting a particular trend to create maximum value in 2022. Ratings are based on identified trends for healthcare players operating in the current environment.

Business impact represents the influence of an identified trend on a firm’s 2022 business, including impact on member experience, operational excellence, regulatory compliance, or profitability.

This matrix represents the view of Capgemini analysts for a healthcare player working within the current operating environment.

- Remote healthcare delivery due to COVID-19
- Changing regulatory environment
- Technology advancements
- Highly competitive environment and increased focus on patient centricity due to new-age players
- Emerging member preferences.

The factors above will vary by healthcare providers depending on business priorities, geographic location, and several other factors. For specific requirements, contact insurance@capgemini.com.



TREND 1

COVID-19 FAST-TRACKED DIGITAL HEALTH FOR A SEAMLESS PATIENT EXPERIENCE ACROSS CARE JOURNEYS

As we reimagine post-pandemic business practices, providers and payers are adopting a digital-first approach to integrated healthcare experiences.

Context

- The pandemic fueled an urgent need to implement digital health practices – virtual care, telehealth, telemedicine, remote patient monitoring, and omnichannel-enabled member care.
- It exposed cracks in the healthcare system globally, and the industry now faces a massive provider shortage. The situation was exacerbated by the lack of coordination as patients passed through various stages of care, from acute to chronic and vice versa.

Catalysts

- Healthcare delivery turned to remote/virtual alternatives as hospitals, clinics, and practices reduced non-emergency visits because of contagion fears, lockdowns, and social distancing.
- COVID-19 prioritized digital transformation for healthcare establishments to enable safety, next-generation care, and outcomes.
 - Investors funded the digital health industry with a record USD21.6 billion in 2020, according to market and consumer data specialist Statista.¹
 - The global digital therapeutic consumer base was projected to grow to 44 million users by 2021 – a 288% increase from pre-pandemic levels. Digital therapeutics are technology-driven, evidence-based interventions to prevent, manage, or treat a medical disorder or disease.²

In a nutshell

- Healthcare players are expanding digital health by offering a combination of digital and physical care delivery models. This shift is increasing among providers and payers, and the sector has become a hotbed for investors and startups.
 - United Healthcare partnered with telehealth provider **Amwell** to provide a platform for virtual care and clinical services with low or no copay for routine care. The program kicked off in early 2021 for employers in 11 US states, including Colorado, Texas, and Maryland, as well as the District of Columbia.³

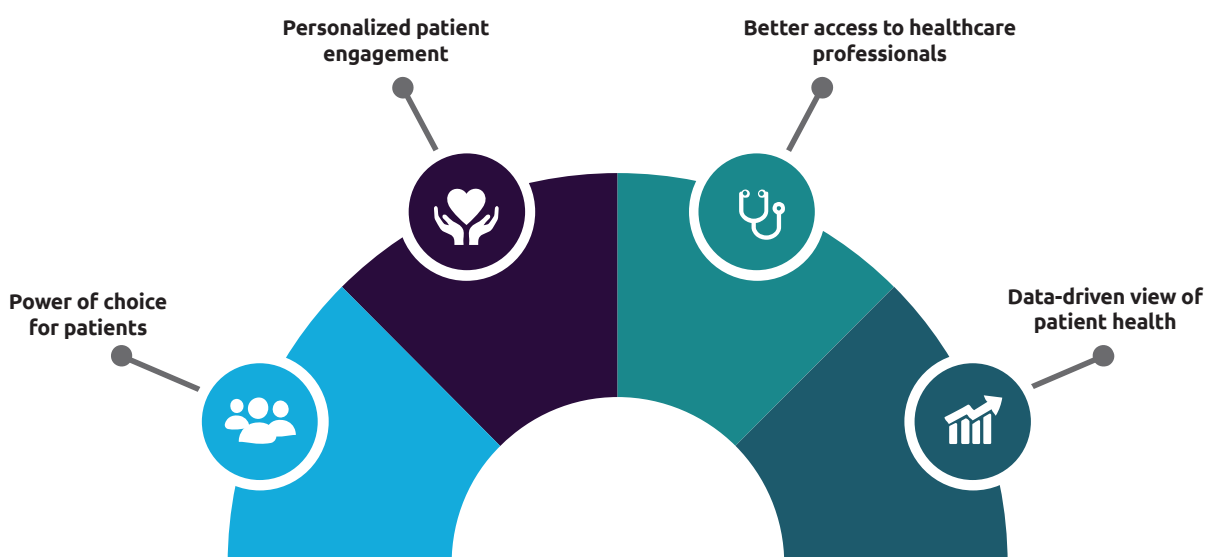
¹ [Statista](#), “Total digital health industry funding worldwide from 2010 to 2020,” June 4, 2021.

² [Juniper Research](#), “HAS COVID-19 HELPED TO MAKE THE DIGITAL THERAPEUTICS MARKET HEALTHIER,?” accessed October 4, 2021.

³ [CNBC](#), “UnitedHealth launches employer virtual primary care service,” January 15, 2021.

- Swiss telemedicine specialist **Medi24**, an Allianz Partners subsidiary, launched a symptom triage tool that deploys a conversational AI chat function featuring a unique character-based interface designed by San Francisco HealthTech **Sensely**.⁴
- Singapore telehealth startup **Doctor Anywhere** launched an online mental health video consultation service that allows users to choose from a panel of registered psychologists and counselors and book therapy sessions over video consultation on the Doctor Anywhere app.⁵
- The healthcare ecosystem players are coming up with innovative solutions to offer virtual primary care.
 - CVS Health launched *Aetna Virtual Primary Care*, an innovative insurer-backed virtual primary care solution, so that members can establish a continuous relationship with a virtual care physician. Backed by Teladoc Health’s physician-led care team model, the program harnesses Aetna’s provider network and a slate of CVS Health services.⁶
 - American insurers Cigna and Oscar Health partnered to launch Oscar virtual primary care for small businesses that offer unlimited virtual visits to primary care providers with \$0 copays and access to lab and specialist visits when recommended by a primary care physician.⁷

Figure 1: The adoption of virtual healthcare has led to a data-driven view of patient health



Sources: Capgemini Financial Services Analysis, 2021.

Impact

- Virtual primary care gives patients the power of choice and convenience and provides the flexibility needed for better health outcomes.
- Digital health offers patients and health insurance members better access to healthcare professionals. A significant percentage of likely inpatient admissions have shifted to outpatient or virtual care settings in the post-pandemic era.
- Digital tools give providers a more holistic, data-driven view of patient health, enabling personalized engagement and superior member experience.

⁴ [PR Newswire](#), “Medi24 to launch comprehensive multi-lingual symptom assessment tool in partnership with Sensely,” December 20, 2020.

⁵ [MobiHealth News](#), “Doctor Anywhere launches online mental health consultation service,” October 20, 2021.

⁶ [eMarketer](#), “CVS-Aetna launches first-of-its-kind insurer-backed virtual primary care service nationwide,” August 11, 2021

⁷ [Beckers Hospital](#), “Cigna, Oscar Health launch virtual primary care plan,” July 22, 2021.

TREND 2

PATIENT-CENTRIC, PERSONALIZED CARE, AND A SHOPPABLE EXPERIENCE WILL SIGNIFICANTLY ENHANCE PATIENT ENGAGEMENT

The Affordable Care Act's value-based model transformed the US healthcare system from a B2C to a B2B sector with consequent patient experience and engagement demands.

Context

- The double whammy of a shifting population mix and unprecedented consumer acceptance and desire for digital engagement during the pandemic boosted demand for *Amazon-like* experiences in the healthcare sector.

Catalysts

- Heightened participation of patients in their healthcare journeys is driving the personalization of care interventions and focus on overarching population health.
- Patients expect their healthcare service experiences to match those they receive from tech giants such as Amazon, Google, and Facebook.
- US regulations such as the Interoperability and Patient Access Final Rules offer providers unprecedented and timely access to patient data and give patients access to their personal health information. These rules mandate that electronic health records data and ambulatory medical records data are shared seamlessly through to claims systems.

In a nutshell

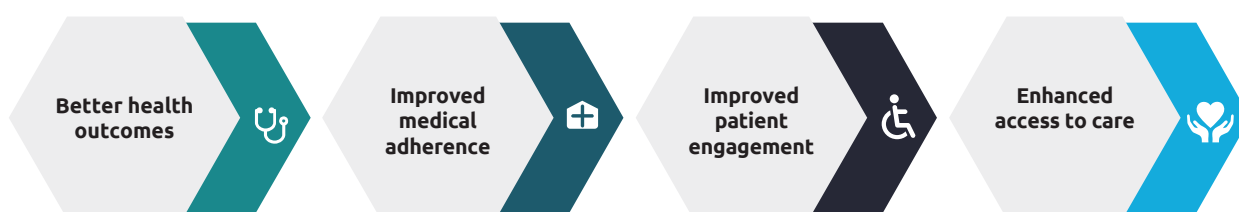
- Increasingly, digital marketing strategies are being used to enhance patient engagement.
 - WebMD partnered with healthcare software firm Symplr and, in mid-2021, launched a solution that leverages search engine optimization and trusted content to drive consumers to health system digital front doors for real-time provider searches and appointment scheduling.⁸
 - Previously, WebMD introduced the feature-rich *PracticePro* platform to enable medical practices to attract, retain, and engage more patients and help patients find doctors online.⁹
- Healthcare players are introducing solutions to cater to patients' growing interest in finding health information online and through social media.

⁸ [Simplr](#), "WebMD and simplr Partner to Offer Healthcare Organizations Integrated Content, Search, and Scheduling for Consumers," August 24, 2021.

⁹ [PRNewswire](#), "WebMD launches WebMD PracticePro, the most comprehensive patient engagement solution for medical practices," April 7, 2021.

- **Sharecare**, an Atlanta provider of a data-driven virtual health platform, recently expanded its suite of patient education tools to include a chatbot where users can ask condition-specific questions and a virtual assistant that guides patients through research and treatment plans.¹⁰
- German digital HealthTech **Ada Health** and Egypt AXA subsidiary AXA OneHealth collaborated to provide AXA policyholders on-demand health guidance and the ability to navigate to the most appropriate care provider within the OneHealth care ecosystem.¹¹
- In Nigeria, telemedicine platform **BetaCare** launched a chatbot on WhatsApp that provides patients a seamless consultation experience virtually, with access to expert doctors of various specialties. BetaCare chose WhatsApp because it is the leading messaging platform in the country.¹²
- Healthcare players are prioritizing patient/member engagement strategies.
 - The **Panda Health** marketplace, formed in 2020, offers automated, digital, and self-service strategies to help ease patients' financial burden of care. The tools empower healthcare organizations to proactively deliver price estimates to patients before service, offer customized self-service payment plans and flexible digital payments.¹³
- Insight-driven AI is increasingly becoming a centerpiece for effective patient engagement.
 - AdventHealth and patient-centered health intelligence company **Sema4** (a spinoff of US-based Mount Sinai Health System) worked together to expand the AdventHealth Genomics and Personalized Health Program. The results included new research insights to prevent, detect, and treat disease by leveraging artificial intelligence and machine learning.¹⁴
 - Los Angeles-based HealthTech **Caligenix**, a genetic wellness company, launched personalized skincare and nutrition brands that offer solutions that match patients' genomic DNA by leveraging real-time RNA.¹⁵
- Non-traditional players are bringing consumer engagement strategies to healthcare.
 - Mastercard partnered with US-based HealthTech **b.well Connected Health** to launch a mobile-based digital ID solution that enables patients to quickly prove their identity during healthcare visits, eliminating the need for unnecessary paperwork. The company uses longitudinal aggregated data to create a holistic health picture for each patient and enable population health management.¹⁶
 - Adobe partnered with leading healthcare companies to develop *Adobe Experience Cloud* that delivers personalized digital healthcare services in real time at scale and individualized service to patients. With solutions for customer journey management, data insights and audiences, content personalization, and commerce and marketing workflows, the solution powers Customer Experience Management (CXM) across B2B and B2C users.¹⁷

Figure 2: Patient-centric treatment delivers win-win benefits



Sources: Capgemini Financial Services Analysis, 2021.

Impact

- Enhanced patient engagement through personalized care experiences will boost health outcomes.
- Insights-driven personalized care will likely transform the care experience, drive down costs, and enhance access to care.
- Personalized member engagement will drive medication adherence, enhance clinical outcomes and overall population health throughout 2022 and the years ahead.

¹⁰ [Mobihealth News](#), "Sharecare builds out patient education platform with new tools," August 18, 2021.

¹¹ [Mobihealth News](#), "Ada Health signs new global partners as demand for AI health assessments rise," June 15, 2021.

¹² [Martech Series](#), "BetaCare Launches WhatsApp Chatbot for Virtual Patient Consultation," September 23, 2021.

¹³ [Panda Health](#), "Panda Health launches Patient Financial Engagement solutions category with Cedar and Flywire," August 21, 2021.

¹⁴ [Sema4](#), "AdventHealth and Sema4 Launch a Data-driven Precision Medicine Program to Optimize Patient Care and Outcomes," May 25, 2021.

¹⁵ [PR Web](#), "Genetic Wellness Company, Caligenix to Launch Personalized Skincare and Nutrition Brands Leveraging Real-Time RNA," May 3, 2021.

¹⁶ [PR Newswire](#), "b.well and Mastercard Partner to Give Consumers Secure, Mobile Control Over Their Digital Health Information," April 1, 2021.

¹⁷ [Business Wire](#), "Adobe Powers Digital Healthcare Innovation," April 26, 2021.



TREND 3

HEALTHCARE SECTOR IS NOW FOCUSED ON INTEGRATED HEALTH VIA A WHOLE-PATIENT APPROACH AND UNDERSTANDING SDOH

The care spectrum has shifted from episodic to encounter-based care. Now, interventions consider the patient's holistic history, including past and present encounters and social determinants of health (SDoH).

Context

- Technology is playing a significant role in making the longitudinal patient record available to caregivers at each encounter. The longitudinal record is a single patient record based on comprehensive patient matching logic wrapped in a consent management model. Longitudinal records deliver timely data in a usable, actionable format so providers can deliver effective patient care.
- Beyond symptoms that lead to a single encounter, technology makes it possible to construct whole-patient data encompassing past episodes, prescriptions, mental health, and other social determinants so providers can create personalized care management programs.
- Proactive interventions, wellness programs, and care management programs for targeted patient outreach are becoming more prevalent.

Catalysts

- Social determinants of health (SDoH) paint a composite patient picture that extends beyond clinical symptoms. SDoH include data around living conditions, marital status, and political, socioeconomic, emotional, and cultural factors that may significantly affect health.
- Polychronic patients (those with three or more chronic diseases) represent 5% of the US population yet account for 45% of national healthcare costs.¹⁸ Moreover, estimates say that by 2030 the polychronic population will triple 2015 levels.¹⁹
- The economic fallout, social isolation, and unpredictability of COVID-19 led to systemic inequity that fueled the behavioral health crisis.

¹⁸ [Vera Whole Health](#), "Caring For The "Apparently Healthy": The Key To Controlling Healthcare Costs Long-Term," February 23, 2021.

¹⁹ [Bloomberg Live](#) "The Future of Health Care: Caring for Polychronic Populations – Event Highlights," October 27, 2020.

- As part of the US Census Bureau’s Household Pulse Survey, 41% of American adults reported anxiety and/or depressive disorder symptoms.²⁰ Even before the pandemic, mental health disorders were on track to trigger an estimated USD16 trillion hit to the global economy between 2010–30.²¹
- Preventive medical techniques and technology adoption can proactively detect diseases, focusing on early discovery and prevention instead of mitigation and treatments.
- Scarce community resources and support drive the overutilization of high-cost services, crisis contacts, and emergency room visits.

In a nutshell

- Healthcare companies are investing in and sponsoring initiatives to foster whole patient healthcare.
 - Chinese medical instrumentation developer **Mindray** launched M-Connect, a platform that integrates data from all medical devices to comprehensively analyze patient information and personalize treatment strategies throughout the patient journey.²²
 - Non-profit US healthcare system Advocate Aurora Health directed its investment arm to advance whole-person health. Advocate kicked off the initiative with a +USD25 million investment in tele-nutrition platform *Foodsmart* and acquired *Senior Helpers*, a home-care and wellness specialist for seniors.²³
 - Morgan Health, a JPMorganChase subsidiary focused on employee healthcare quality, cost, and equity, invested USD50 million in Seattle, Washington-based **Vera Whole Health**, known for its team of primary care physicians, nurses, and health coaches. It is supported by clinics and an integrated technology platform that optimizes whole person healthcare.²⁴
 - US health insurer **Humana** is expanding member healthcare screenings to collect and assess a comprehensive set of their social needs. In 2020, Humana conducted more than six million screening events.²⁵
- Preventive care technology enables providers to identify and address health risks before they become severe.
 - Nigerian HealthTech **MdaaS Global** introduced an annual subscription digital health member program *Sentine1X* in 2021 to foster preventive, personalized, continuous care and critical diagnostic services for underserved and geographically challenged communities. Sentine1X democratizes access to technology-enabled primary care and comprehensive preventive care that helps members identify and address health risks before they become problems.²⁶
- As demand for mental health services burgeons, care providers explore new technologies, make strategic investments, and disrupt behavioral health care. A LexisNexis report said mental-health telehealth visits increased 6,500% during the height of the pandemic (January 2020 to February 2021).²⁷
- The mental health market is booming, and investors are pouring major cash into the sector. Globally, mental health startups raised a record high of \$2 billion in equity funding in 2020, according to CB Insights.²⁸
 - World Health Organization (WHO) European Region member states recently endorsed the European Framework for Action on Mental Health 2021–2025 to promote mental health as a critical area for public health systems.²⁹

²⁰ [CDC](#), “Anxiety and Depression Household Pulse Survey,” accessed October 4, 2021.

²¹ [The Lancet](#), “The Lancet Commission on global mental health and sustainable development,” October 9, 2018.

²² [PR Newswire](#) “Mindray Unlocks Vast Patient Monitoring Potential with M-Connect Universally Connected Platform,” April 20, 2021.

²³ [Healthcare innovation](#), “Advocate Aurora’s New Investment Arm Focuses on Whole-Person Health,” April 12, 2021.

²⁴ [Vera Whole Health](#), “Morgan Health Makes \$50 Million Investment in Vera Whole Health,” August 5, 2021.

²⁵ [Humana](#) “Humana 2021 Bold Gold progress report, 2021,” accessed October 2021.

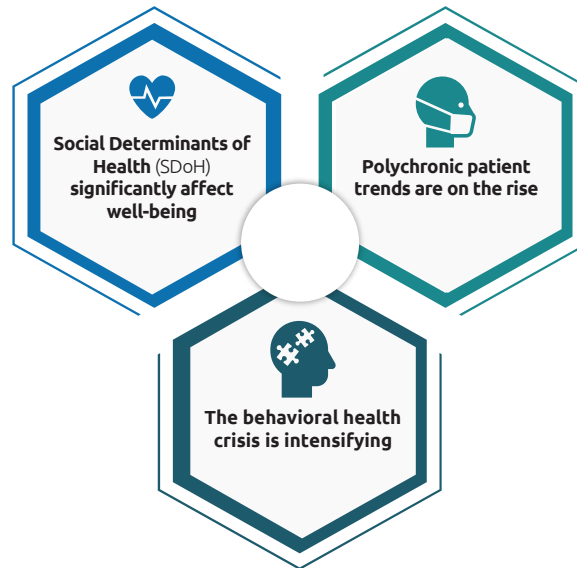
²⁶ [Business Insider Africa](#), “MdaaS Global raises \$2.3m to launch digital health solution Sentine1X and expand across Nigeria,” June 30, 2021.

²⁷ [LexisNexis](#), “2021 COVID-19 Mental Health Services Impact Report,” accessed October 4, 2021.

²⁸ [Fierce Healthcare](#), “Spring Health snags \$190M to build out family mental health services, ramp up health plan partnerships,” September 17, 2021.

²⁹ [WHO Europe](#) “Member States commit to stronger mental health services,” September 14, 2021.

Figure 3: Why has whole-patient healthcare taken center stage?



Sources: Capgemini Financial Services Analysis, 2021.

Impact

- We expect digital health service adoption sparked by COVID-19 will continue throughout 2022+ and will accelerate the collection and dissemination of patient information to care provider constituencies to bolster relevant information at the point of care.
- US regulations around fast health interoperability and price transparency will encourage a free flow of health information leading to better clinical outcomes.
- As more community organizations and healthcare practices collaborate, expect more scalable and financially sustainable solutions in 2022 that improve local population health.

TREND 4

REAL-TIME HEALTHCARE DATA AND INTERNET OF MEDICAL THINGS (IOMT) ARE DRIVING AGILITY IN THE MEDICAL MANAGEMENT

For real-time clinical decision making, AI-powered predictive analytics and big data support real-time medical alerts and flag catastrophic health events.

Context

- Analytics, data, insights, and Internet of Medical Things (IoMT) tools are moving healthcare frontiers from treating a condition to predicting it.
- Patient stratification – the ongoing data-based process of assigning patient risk status based on vital health indicators, lifestyle, and medical history – now makes it possible to identify high-cost, high-need patients and tailor care management efforts to urgent-need populations.
- Analytics make it possible to construct a complete, individualized patient view that enables a holistic look at each patient's health journey, including past encounters and other data, including social determinants of health (SDoH).

Catalysts

- The global healthcare analytics market is on track to a 31% CAGR (2021–2027) to reach USD118 billion.³⁰ Additionally, the big data medical services market is expected to reach USD34.27 billion globally in 2022.³¹
- An aging population, unhealthy lifestyles, and obesity are spurring chronic illnesses such as diabetes. Therefore, medical service utilization and costs are up, and worldwide healthcare spending is increasing rapidly. Not surprisingly, patients are demanding data-driven, accurately diagnosed value-based healthcare outcomes.
 - Per capita, global healthcare spending is projected to reach USD1,200 by 2030.³² Meanwhile, the Journal of the American Medical Association (JAMA) reports that 25% of US healthcare spending is wasteful – translating to USD760–935 billion.³³

³⁰ [PR Newswire](#) "Healthcare Analytics Market to Reach US\$118.2B by 2027 Globally |CAGR: 31%| UnivDatos Market Insight," January 21, 2021.

³¹ [Analytics Insight](#) "Big data analytics in healthcare: the 21st century revolution," August 4, 2021.

³² [Statista](#) "Global health spending per capita in 2018 and projections for 2030 and 2050," accessed October 26, 2021.

³³ [Fierce healthcare](#) "Industry Voices—We need to fight fraud the right way," November 18, 2019.

In a nutshell

- Healthcare providers are collecting real-time data from IoMT devices and other sources, using AI-powered predictive analytics to tailor treatment and efficiently identify at-risk patients. Providers that encourage patients to adopt healthier lifestyles can lower the cost of care and health risks.
 - In California, Anchor Health adopted machine learning technology from **Muse** to provide more tailored patient treatment. Muse technology assesses and models clinical evaluations, medicines, vital signs, and other pertinent data. It then helps identify patients in critical condition and visibly informs the clinical team.³⁴
 - Dutch conglomerate Phillips launched a *Clinical Command Centre* solution in Australia’s Royal Perth Hospital through a partnership with the facility’s healthcare network. The Command Centre is the cornerstone of the network’s *Hospital in A Virtual Environment* (HIVE) program. The hub-and-spoke model of care utilizes machine learning and predictive analytics to reduce days of admittance, complications, avoidable transfers, and mortality to enhance patient experience and lower the cost of care.³⁵
 - Google Cloud developed *Healthcare Data Engine*, a tool currently in private preview, to help healthcare and life sciences organizations collect and leverage data from various sources. The resulting insights will enable organizations to allocate resources efficiently, optimize clinical trials, accelerate research, and identify high-risk patients.³⁶
- More insurers use data analytics to assess claims and prescriptions, target prevalent health disorders, and compare pricing data with quality metrics to identify high-value, low-cost health providers. Then, if they spot potentially fraudulent claims, they notify providers.
 - UAE-based healthcare financing platform **KLAIM** released an advanced analytics solution for the Middle East and North Africa that allows healthcare providers to receive claims payments within 48 hours, minimizing insurance delays.³⁷
- Providers that can analyze historical and real-time data can forecast clinical, operational, and financial needs in staffing, resources, patient outcomes, and high-risk patient groups.
 - A solution from California business intelligence specialist **Intellicus** enables a single dashboard view of all hospital operations that integrates data (from the supply chain, finance, clinical procedures, and administration) to enhance patient care, streamline processes, and reduce waste. The solution empowers staff and physician demand forecasting, minimizes patient wasted time, supports workforce planning, and efficiently optimizes hospital resources.³⁸
- Real-time data-driven solutions provide visibility around needs, foster efficient resource allocation, and unlock precise insights.
 - San Francisco HealthTech **Komodo Health** launched software solutions *Prism* and *Sentinel* to offer real-time intelligence covering 325 million real-world patient journeys. The tools allow healthcare and life sciences stakeholders to leverage databases of deidentified, real-world patient data – together with proprietary Komodo data – to develop insights and algorithms based on complex patient behaviors and treatment patterns.³⁹

³⁴ [PR Newswire](#) “Anchor Health LLC Embraces Muse Healthcare’s Predictive Modeling Tool to Provide Personalized Care,” March 30, 2021.

³⁵ [Philips](#) “Philips delivers leading virtual hospital services to East Metropolitan Health Service,” December 16, 2020..

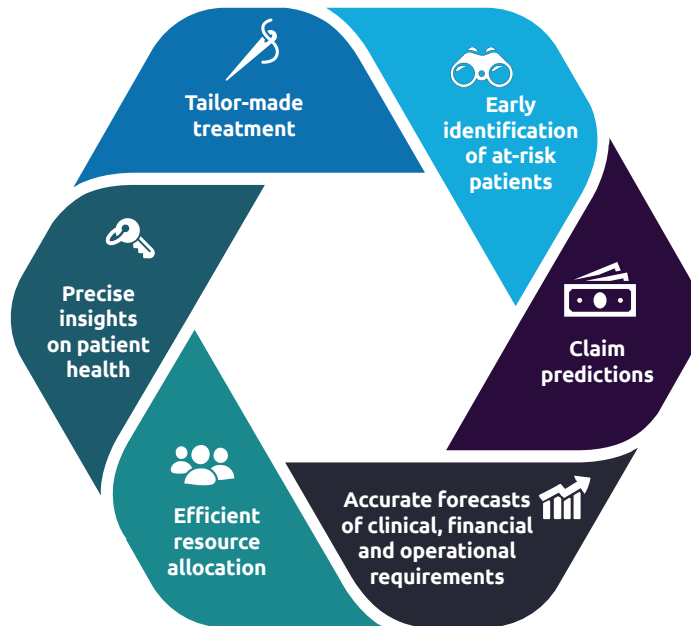
³⁶ [ZD Net](#) “Google Cloud unveils Healthcare Data Engine for a holistic view of health data,” July 22, 2021.

³⁷ [Zawya](#) “KLAIM announces first of its kind financing solution for medical claims in the UAE,” August 1, 2021.

³⁸ [Intellicus](#) “Analytics for Healthcare Optimize Expenses, Improve Patient Care & Stay Compliant,” accessed October 7, 2021.

³⁹ [Komodo Health](#) “Komodo Health Launches Prism and Sentinel, Setting the New Standard for Healthcare Intelligence,” April 14, 2021.

Figure 4: Real-time healthcare data and predictive modeling yield a variety of benefits



Sources: Capgemini Financial Services Analysis, 2021.

Impact

- The increased use of data and analytics in 2022 and beyond will significantly shift the needle toward predictive and proactive population health.
- In the United States, the Affordable Care Act prioritized value-based care and will continue to incentivize healthcare providers to keep patients healthy rather than increasing interventions and procedures.
- Real-time data monitoring and analytics will optimize resource planning and operations, predict disease outcomes, forecast patient loads, and proactively detect fraud risks.

TREND 5

NON-TRADITIONAL PLAYERS ARE INTRODUCING SIGNIFICANT BIGTECH PLAY IN HEALTHCARE ECOSYSTEM

Non-traditional players and hyperscalers are transforming healthcare services delivery.⁴⁰ Tech-driven companies have the capabilities to launch consumer-focused health plans that comply with industry regulations.

Context

- Non-traditional health system players use their technical expertise and access to vast customer data to build innovative healthcare models.
- Opportunistic BigTechs are making substantial investments in modernizing healthcare as the industry becomes increasingly consumer-centric.

Catalysts

- Competition from new entrants is a catalyst for traditional players to bolster patient engagement strategies.
- Equipped with robust technical capabilities and access to comprehensive customer data empowers non-traditional players to enter the healthcare space.
- Hyperscalers can leverage their cloud capabilities to design platforms compliant with healthcare standards – such as the international protocol Fast Healthcare Interoperability Resources (FHIR) and HIPAA in the United States – to support multi-disciplinary care coordination processes.

In a nutshell

- BigTechs are tapping into the direct-to-consumer telehealth market to raise their profile in the virtual care space.
 - Amazon launched a telehealth platform, *Amazon Care Service*, to Amazon employees and other companies throughout the United States. The solution enables employers to provide high-quality medical care to employees, including 24/7 options through messaging or video and access to a range of urgent and primary care services. Amazon says it will offer a complete hybrid virtual/in-person care package to companies in Philadelphia, Chicago, Dallas, and Boston, with more expansion in 2022.^{41,42}
- Hyperscalers extend cloud capabilities to enable providers to coordinate and deliver seamless care management and create secure health data monitoring for patients.

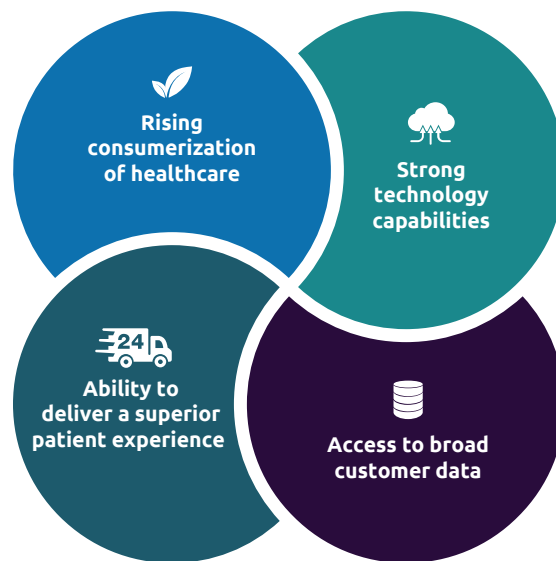
⁴⁰ Examples of hyperscalers include Amazon AWS, Microsoft Azure, Google GCP, Alibaba AliCloud, IBM, and Oracle.

⁴¹ [mHealth Intelligence](#), "Amazon Announces Nationwide Telehealth Platform, Open to Other Businesses," March 17, 2021.

⁴² [Healthcare IT News](#), "Amazon looks to bring telehealth, in-person care to 20 more cities," September 7, 2021.

- Microsoft launched *Microsoft Cloud for Healthcare* to offer trusted and integrated capabilities that deliver automation and efficiency on workflows and deep data analytics for structured and unstructured clinical, financial, and administrative data. The solution aims to boost patient engagement, health team collaboration and improve clinical and operational insights.⁴³
- Amazon introduced cloud services platform *AWS for Health* to enable healthcare and life science organizations to address clinical systems, analytics and AI/ML, patient and clinician experience, medical research, finance and operations, and core health IT.⁴⁴
- Microsoft collaborated with Seattle-based HealthTech startup **Truveta** to build a clinical data platform on the Microsoft cloud, leveraging Azure and artificial intelligence to provide insights from billions of data points.⁴⁵
- Non-traditional players are actively extending wellness solutions through health-data-sharing features.
 - Apple introduced a health data-sharing feature in the latest version of its mobile operating system, iOS, to allow users to share information from their phone’s health app to their clinicians’ electronic health records.⁴⁶
 - Companies such as Oscar Health that started as a technology play, are establishing themselves as health plans, with a differentiated offering around accessible and concierge healthcare services.

Figure 5: Why is healthcare an attractive market for non-traditional players?



Sources: Capgemini Financial Services Analysis, 2021.

Impact

- Watch for non-traditional players to extend their edge over traditional healthcare players in 2022 while delivering a superior patient experience and agility to serve emerging healthcare needs.
- BigTech and hyperscalers will target whole patient strategies across wellbeing and mental health supported by extensive advancements in healthcare workflows.
- We expect that BigTechs will seek partnerships with traditional providers to handle the inherent complexities of healthcare processes.

⁴³ [HIT Infrastructure](#), “Microsoft Officially Launches Microsoft Cloud for Healthcare,” November 5, 2020.

⁴⁴ [Healthcare IT News](#), “Amazon Web Services introduces AWS for Health,” July 16, 2021.

⁴⁵ [Healthcare IT News](#), “Truveta, Microsoft form cloud AI partnership with strategic investment,” September 30, 2021.

⁴⁶ [Healthcare IT News](#), “Apple’s health data sharing feature now live,” September 21, 2021.

TREND 6

HEALTHCARE PLAYERS ARE ON A MASSIVE SPREE OF MODERNIZATION AND CLOUD ADOPTION

Healthcare players are now pushing digital health boundaries and embracing cloud, automation, and artificial intelligence. Realizing the value of collaboration, interoperability, and data availability at the point of care has led to a push for scale and an on-demand tech-based ecosystem.

Context

- Health systems turned to technology to swiftly meet pandemic-based challenges of virtual care, coordinated communication, and remote working.
- Electronic Health Records (EHRs) had to be enhanced to include interoperability with voice assistants, ambient listening, and conversational AI to drive patient interactions.
- In the United States, the Centers for Medicare & Medicaid (CMS) pushed monolithic applications to become amenable to interoperability, standardization, and more accessible data.
- *Digital Front Door*, an omnichannel customer engagement strategy using technology to improve patient experience at every touchpoint in the consumer journey, became a critical social distancing component.

Catalysts

- Telehealth adoption skyrocketed during the pandemic and continues to show robust growth, leading to increased digital relevance.
- Continuity of care, especially for aging and frail members, required extensive digital and Internet of Medical Things (IoMT) support. Therefore, modern IT infrastructure and cloud adoption became necessary in the previously manually driven healthcare ecosystem.
- Additionally, burdens on the healthcare ecosystem such as slow prior authorization processes, physician/staff burnout, and siloed workflows forced administrators to consider automation and technology enhancements.

In a nutshell

- Now, industry players automate EHR access for streamlined patient care, quality monitoring, regulatory compliance, and fewer redundant expenses.
 - San Jose, California developer of robotic process automation software, **Automation Anywhere**, launched a cloud-based API bot to automate access to electronic health records. As connectivity within and between health organizations becomes standardized, care coordination is expedited and simplified.⁴⁷

⁴⁷ [PRNewswire](#), "Automation Anywhere Launches Industry's First Cloud-Native Bot to Automate Electronic Health Records," May 11, 2021.

- Healthcare ecosystem players collaborate to streamline administrative processes – such as prior authorizations – and deliver providers real-time patient data.
 - Health insurer Humana and EHR specialist **Epic Systems** expanded their partnership to streamline prior authorizations for providers by connecting their software to manage prior permissions electronically and provide Humana member information at the point of care. Insights into medication adherence, past-due medical services, and care coordination for chronic conditions will help providers make medical decisions in real time.⁴⁸
- Healthcare players are rolling out real-time data solutions to provide insights into hospital preparedness and resource utilization.
 - Global medical technology innovator **GE Healthcare** partnered with hospital data and analytics company **Apprise Health Insights** to launch an automated hospital bed management solution throughout the US state of Oregon. The solution actively manages hospital data and provides near-real-time occupancy information to enable hospitals to maximize resources.⁴⁹
- Cloud solutions across the healthcare ecosystem are setting an example for operational, functional, and economic benefits.
 - In India, business process management firm **Firstsource Solutions** recently launched cloud-based *Firstsource Healthcare* to enable healthcare clients across the United States to enhance customer engagement and loyalty while improving operational efficiency and financial performance. The solution addresses data extraction challenges, shortens implementation meetings and contract negotiations, and reduces IT staff workloads.⁵⁰
 - In the UK, the County Durham and Darlington NHS Foundation Trust partnered with US HealthTech **Cerner** to replace multiple clinical systems, remove information silos, and provide clinicians with data needed to deliver effective care quickly and in one place through electronic patient records.⁵¹

Figure 6: Benefits of technology adoption and modernization



Sources: Capgemini Financial Services Analysis, 2021.

Impact

- Cloud-based data storage services administered and maintained by HealthTech firms will enable healthcare providers to reduce IT infrastructure costs.
- Seamless access to real-time data through modern systems can allow clinicians to derive better insights and facilitate collaboration across patient health journeys.
- Patient portals, centralized health records, and mobile health (m-Health) apps will boost patient engagement and improve the care experience.
- Conversational AI, enhanced data capabilities, device integration, and interoperability will foster industry collaboration, leading to a heightened focus on member centricity, personalization, and connected care.

⁴⁸ [Fierce Healthcare](#), "Epic, Humana ramp up partnership to focus on streamlining prior authorizations," March 30, 2021.

⁴⁹ [Business Wire](#), "GE Healthcare Partners with Apprise Health Insights to Launch Nation's First Automated Statewide Hospital Bed Management Solution in Oregon," October 13, 2021.

⁵⁰ [Firstsource](#), "Firstsource Launches Strategic Transition to Cloud for all Healthcare Solutions, Accelerating Innovation, Access, Security and Flexibility for Clients," September 9, 2021.

⁵¹ [Health Tech Digital](#), "County Durham and Darlington NHS Foundation Trust selects Cerner to implement integrated electronic patient record," January 25, 2021.



TREND 7

PRIORITIZING PRICING TRANSPARENCY ENABLES PAYERS AND PROVIDERS TO EARN MEMBER TRUST AND ENABLE SHOPPABLE HEALTH CARE

Transparent pricing strategies and proactive cost disclosure for bundled healthcare services put consumers and clients first by tailoring the cost and quality of care to individual situations, attitudes, and behaviors.

Context

- In the United States, the Centers for Medicare & Medicaid Services (CMS) is working to:⁵²
 - Ensure consumers have the necessary information to make fully informed decisions regarding their healthcare
 - Improve access to emergency care in rural communities
 - Use lessons learned from the COVID-19 pandemic to inform patient care and quality measurements.
- CMS mandated that as of January 1, 2021, all US hospitals must offer clear, accessible pricing information online.⁵³
- Healthcare administrators can develop consumer-centric products that encourage patient engagement with competitive intelligence and in-depth insights into internal costs.

Catalysts

- A review of historical pricing via hospital chargemaster lists indicates widespread national and regional price differentials for similar services.⁵⁴
 - Crowe Revenue Cycle Analytics data analysis revealed a 297% average price differential between the lowest and highest gross charges per procedure.⁵⁵ However, CMS regulations now require that patients have access to easy-to-use online cost estimators.
- Pricing has been a long-time pain point that directly impacts patient/member experience. Therefore, more providers/payers are improving patient awareness and member literacy about possible prepayment discounts by publicizing details on their price estimate webpage.

⁵² [CMS.gov](https://www.cms.gov), "CMS Proposes Rule to Increase Price Transparency, Access to Care, Safety & Health Equity," July 19, 2021.

⁵³ Ibid.

⁵⁴ In the United States, the **chargemaster**, or charge description master (CDM), is a comprehensive listing of items billable to a hospital patient or a patient's health insurance provider.

⁵⁵ [Managed Healthcare Executive](#), "How the New Price Transparency Rules are Affecting Stakeholders," May 13, 2021.

- A January 2021 CMS mandate requires American hospitals to post online the rates they have agreed upon with insurers along with a consumer-friendly list of 300 shoppable services.⁵⁶
- Regulators are coming up with new mandates for pricing transparency.
 - A CMS regulation that goes into effect in 2023 requires US health insurers to offer an online shopping tool for consumers that includes a cost estimate for out-of-pocket fees and negotiated prices for 500 of the most shoppable items and services encompassing 70 specific government-mandated services.⁵⁷

In a nutshell

- Innovative solutions enable providers to share relevant information in real time, empowering patients to make informed choices.
 - Denver-based RxRevu's Medical Benefits Data Exchange, *SwiftMx*, provides physicians and patients information about in-network care sites, covered providers, and affordable, high-quality options. RxRevu technology lets prescribers view prior authorizations and real-time, patient-specific cost and drug options aligned with formulary and benefit data. This information is provided directly from the payer/PBM to inform the prescriber before selecting a medication. The platform also offers prescription health analytics to help organizations understand prescribing behavior and drive consistent best practices.⁵⁸
- Transparent pricing models improve patient experience while optimizing net revenue and creating innovative care delivery mix models.
 - Dallas-based Baylor Scott & White Health (BSWH) implemented an automated, machine learning-based price estimation tool from HealthTech **Waystar**. The solution estimates patients' out-of-pocket costs before care is administered by gathering and analyzing historical insurance claims data. BSWH has garnered 60–100% improvements in point-of-service collections across various clinics and hospital departments thanks to the price estimation tool.⁵⁹
- Providers want to bundle pricing accurately and with optimum care levels. Therefore, they are forging care delivery partnerships that offer a mix of inpatient, outpatient, telehealth, and community care services.
 - Hospital price transparency policies can save between USD8.7 billion to USD26.6 billion a year, according to a Rand Corporation study of data from CMS' Hospital Cost Report Information System.⁶⁰
 - However, setting or capping prices for all commercial payers could reduce hospital spending by USD61.9 billion to USD236.6 billion when rates are 100–150% of Medicare rates, the Rand study found.⁶¹
- HealthTech firms are developing solutions to help patients become active in their care process. By enabling multiple options and collaboration with the care team, patients participate in a shoppable experience.
 - E-commerce HealthTech **MDSave** launched a price transparency product that displays shoppable procedure prices and insurance rates side by side on a patient-friendly e-commerce webpage. The solution lets patients shop for care the same way they purchase other items online with upfront pricing and no billing surprises.⁶²
 - Walmart Health collaborated with **Zoetec Partners** to empower patients to make informed healthcare decisions and control their financial experiences from the first interaction to the final bill. Zoetec technology provides friction-free appointments, registration, health service, check-in, and check-out through a patient-driven platform.⁶³

⁵⁶ [Waystar](#), "Price Transparency, Automated patient-tailored estimate summaries," accessed October 6, 2021.

⁵⁷ [Experian](#), "What Is Price Transparency in Health Care?," December 16, 2020.

⁵⁸ [PR Newswire](#), "RxRevu Launches SwiftMx - Healthcare's First and Only Complete Price Transparency Solution," February 23, 2021.

⁵⁹ [Forbes](#), "Improving The Healthcare Revenue Cycle With AI And RPA," June 14, 2021.

⁶⁰ [Revcycle Intelligence](#), "Hospital Price Transparency to Save Just \$8.7B to \$26.6B a Year," February 23, 2021.

⁶¹ Ibid.

⁶² [MDSave](#), "MDSave launches transparency product as cms begins enforcing price transparency final rule," January 5, 2021.

⁶³ [Zoetec](#), "A Peek Behind the Curtain: Zoetec's Partnership with Walmart Health," April 22, 2021.

Figure 7: How do transparent pricing models benefit patients, payers, and providers?



Sources: Capgemini Financial Services Analysis, 2021.

Impact

- The trend in 2022 and beyond is price transparency that drives member engagement and allows patient healthcare choices and oversight.
- Pricing information will spark healthcare ecosystem competition and innovative ways to deliver care, focusing on continuity and coordination beyond hospital settings.
- A transparent pricing model will enable seamless collaboration between providers and payers, improving manual and complex processes such as prior authorization.
- Healthcare providers can better assess their competitive positioning through market assessment of comparative pricing data.

TREND 8

HEALTHCARE ECOSYSTEM PLAYERS ARE STEPPING UP MEASURES TO COMBAT PRIVACY AND SECURITY RISKS

As the healthcare industry leverages vast data to innovate personalized patient solutions and enhance operational efficiency, it also faces concerns from members and regulators around data security, privacy, and the ethical use of patient information.

Context

- The move to healthcare services delivered through digital platforms – coupled with extensive data exchange made possible by interoperability – providers, payers, and patients are worried about privacy and storage of sensitive healthcare data.

Catalysts

- The frequency and severity of healthcare cyberattacks are up.
 - In the US, healthcare data breaches totaled nearly 600 in 2020, up more than 55% from 2019, according to the Healthcare Breach Report 2021.⁶⁴
 - Between November 2020 and May 2021, there was a +45% increase in attacks against healthcare organizations globally, compared to an average 22% increase against other industry sectors.⁶⁵
- The healthcare industry is an attractive target for hackers seeking to monetize sensitive health information in several ways.
- Cyberattacks and data breaches can put healthcare organizations at risk and vulnerable to steep penalties that significantly impact business operations.
 - Ransomware attacks cost the US healthcare industry USD20.8 billion in downtime in 2020, which is double the number from 2019, according to an annual report by pro-consumer website Comparitech. The attacks impacted >18 million patient records.⁶⁶
- In the United States, HIPAA privacy rules, security rules, and breach notification rules enforce healthcare provider compliance around health data in transit and at rest to ensure member privacy and control over their data. In addition, since the pandemic, HIPAA rules are being embedded as part of pre-set workflow automation to ensure privacy in remote settings.
- In newer healthcare data platforms, consent management applications and APIs are natively supported. The Fast Healthcare Interoperability Resources (FHIR) standard for exchanging healthcare information promotes global awareness of how users consume patient data within and outside a healthcare enterprise.

⁶⁴ [Bitglass](#), "Healthcare Breach Report 2021," accessed October 6, 2021.

⁶⁵ [Check Point](#), "Check Point Cyber Security Report," accessed October 6, 2021.

⁶⁶ [Comparitech](#), "Ransomware attacks on US healthcare organizations cost \$20.8bn in 2020," March 10, 2021.

- FHIR offers a common set of APIs, so healthcare platforms can communicate and safely share data. The process is similar to how open banking and PSD2 enable sharing within financial services.⁶⁷ FHIR is suitable for use in a wide variety of contexts – mobile phone apps, cloud communications, EHR-based data sharing, server communication in large institutional healthcare providers

In a nutshell

- Healthcare players are introducing integrated cybersecurity solutions to provide end-to-end cyber safety.
 - Global health technology provider Royal Philips launched *Philips Cybersecurity Services* to integrate and enhance strategic security solutions seamlessly. The Dutch firm partnered with New York HealthTech startup **CyberMDX** to offer vendor-neutral solutions that safeguard medical systems, devices, and related software solutions. CyberMDX offers clients risk assessment, detection, threat intelligence, and prevention capabilities.⁶⁸
- Healthcare ecosystem players are collaborating with tech companies to manage and share patient data securely.
 - Toronto-based **Switch Health** integrated its *AuraPass* privacy-first solution with IBM's *Digital Health Pass* to expand Switch capabilities to generate and verify COVID-19 health credentials. AuraPass is a three-step medical record created to provide a secure patient-centric verification that confirms a user's vaccine status and COVID-19 test results.⁶⁹
- Blockchain technology is helping to bolster healthcare data privacy and security.
 - Seattle-based **Indicio** and FinTech **Liquid Avatar Technologies** launched Canada's first blockchain-powered decentralized identity solution to issue and verify COVID-19 test results without requiring individuals to share private or personal data.⁷⁰
 - Shanghai's Renji Hospital launched *MyBaby*, a blockchain-based in-vitro fertilization service application, in partnership with global blockchain platform **VeChain** and Norway-based accredited registrar and classification society **DNV**. All information, imagery, and data trails are securely uploaded on the *VeChainThor* blockchain and are only accessible to authorized MyBaby app users.⁷¹

Impact

- Patient centricity and trust are central to healthcare services, and data security concerns can severely impact patient relationships with the payers or providers.
- Expect more healthcare organizations to adopt a robust security strategy in 2022 to mitigate potentially huge losses spurred by data breaches, penalties, and ransomware demands.
- With a robust security infrastructure, healthcare providers can enable seamless and secure data sharing.

⁶⁷ [Akana](#), "What is FHIR? Overview of FHIR APIs," January 31, 2020.

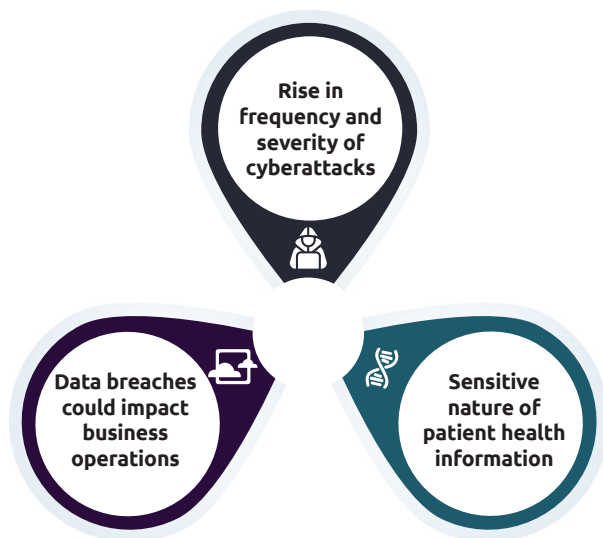
⁶⁸ [Philips](#), "Philips expands its healthcare customer services portfolio with the introduction of integrated Cybersecurity Services," November 30, 2021.

⁶⁹ [News Wire](#), "Switch Health joins with IBM to launch AuraPass, a privacy-first vaccine and testing verification system," September 10, 2021.

⁷⁰ [Indicio](#), "Indicio and Liquid Avatar Technologies Launch Canada's First Privacy-Preserving Decentralized Technology for Sharing Health Data," August 11, 2021.

⁷¹ [Healthcare IT News](#), "Renji Hospital launches blockchain-based IVF service app in China," June 7, 2021.

Figure 8: Data security has become a healthcare priority



Sources: Capgemini Financial Services Analysis, 2021.

TREND 9

MARGIN PRESSURES AND THE TRANSFORMATION OF CARE DELIVERY MODELS HAVE TRIGGERED CONSOLIDATION

As more and more providers deliver care from alternative settings, horizontal and vertical health system integration is becoming commonplace.

Context

- As large US health systems add hospitals and expand their market share, smaller systems are forced to consolidate because of rising healthcare costs and pandemic-driven resource shortages.
- Low-margin providers are vulnerable to acquisition by prominent, more profitable players.

Catalysts

- The transition from volume-based to more complex value-based care necessitates cost optimization, diversification, and new revenue-generating avenues.
- COVID-19 accelerated outpatient and virtual delivery care models and spurred a gradual transition away from inpatient care. Now, health systems are focused on asset portfolio innovation.

In a nutshell

- Healthcare ecosystem players are integrating to fend off competitors, increase market share, tamp down healthcare costs, and extend member care.
 - UnitedHealth Group is a diversified US healthcare company offering health coverage and benefits services. It is on track to acquire Nashville HealthTech **Change Healthcare** to expand its Optum division health services business. Through Optum, UnitedHealth goes beyond health insurance and delivers medical care directly to patients. It also sells consulting, technology, and data to other healthcare entities.⁷²
 - German medical technology giant Siemens Healthineers acquired Varian Medical Systems to strengthen its position as a holistic healthcare partner, creating value with a more comprehensive portfolio of imaging, laboratory diagnostics, AI, and cancer treatment.⁷³
- Horizontal integration by healthcare players is broadening service portfolios and capabilities
 - Nashville-based HCA Healthcare announced its intention in Q-3 2021 to acquire five Utah hospitals from Steward Health Care to improve healthcare network options for patients and enable investment in services.⁷⁴ Previously, HCA purchased a majority stake in Brookdale Senior Living's home health for USD400 million.⁷⁵

⁷² [Bloomberg Quint](#), "Through its Optum division, the company increasingly delivers medical care directly to patients and sells consulting, technology, and data to other health-care entities," January 7, 2021.

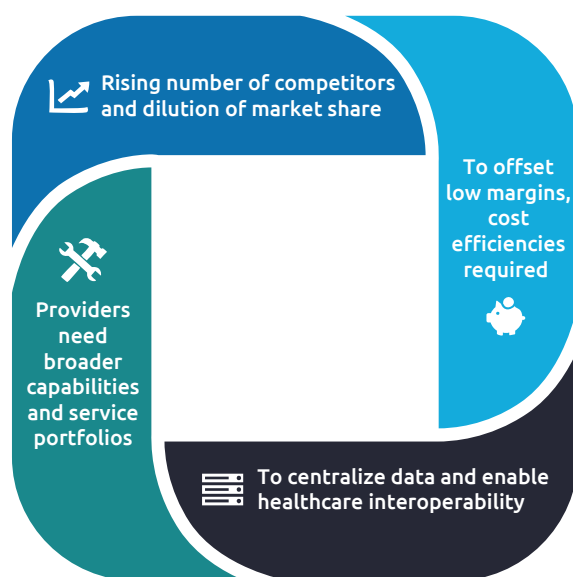
⁷³ [Varian](#), "Siemens Healthineers completes acquisition of Varian, strengthening its position as a holistic partner in healthcare," April 15, 2021.

⁷⁴ [HCA](#), "HCA Healthcare Agrees to Purchase Five Utah Hospitals from Steward Health Care," September 20, 2021.

⁷⁵ [Fierce Healthcare](#), "HCA completes \$400M purchase of majority stake in Brookdale Senior Living healthcare services," July 6, 2021.

- SOC Telemed acquired acute-care telemedicine provider **Access Physicians** in 2021, aiming to reach 1,000 facilities (more than 700 hospitals) across 47 US states while broadening combined capabilities.⁷⁶
- UK-based telehealth firm **Doctor Care Anywhere** acquired Australian telehealth provider **GP2U** to expand mental health and telehealth services in Australia, particularly in rural and remote areas.⁷⁷
- Payer consolidation reduces insurance costs and member premiums
 - According to the American Medical Association (AMA), in 46% of US markets, a single-payer occupies a market share of at least 50%.⁷⁸
 - In the US, UnitedHealthcare acquired health insurer **PreferredOne** to strengthen its presence in the Minnesota health plan market.⁷⁹
- Thanks to strategic consolidation, data exchange becomes seamless, and the quality of shared combined data is enhanced.
 - US Health information exchanges CORHIO and Health Current have affiliated under non-profit regional organization Contexture, which offers strategic, technical, and administrative support to communities committed to advancing health through information sharing. Together, CORHIO and Health Current serve 1,800 healthcare organizations across Colorado and Arizona.⁸⁰

Figure 9: Why are healthcare organizations consolidating?



Sources: Capgemini Financial Services Analysis, 2021.

Impact

- Throughout 2022 we expect US outpatient healthcare and innovative care delivery models to proliferate with optimized asset portfolios across hospitals, virtual health, community care, post-acute, and behavioral health facilities.
- Hospitals and healthcare providers will gain more specializations, capabilities, resources, and relationships via consolidation, increasing care quality.
- Highly concentrated healthcare markets that exert their leverage to negotiate higher fees from health insurance providers increase healthcare costs for members and patients. As a result, watch for trends that see regulatory bodies working to curb these practices.

⁷⁶ [Mobihealth news](#), "SOC Telemed acquires Access Physicians to solidify its acute care telemedicine services," March 31, 2021.

⁷⁷ [The Market Herald](#) "Doctor Care Anywhere (ASX:DOC) acquires GP2U Telehealth for \$11m," September 9, 2021.

⁷⁸ [Fierce Healthcare](#) "AMA: 73% of health insurance markets are highly concentrated," September 28, 2021.

⁷⁹ [Star Tribune](#) "UnitedHealthcare acquires Golden Valley-based health plan PreferredOne," August 16, 2021.

⁸⁰ [Corhio](#) "Moving Forward: CORHIO Board Approves Merger with Arizona HIE," April 27, 2021.

TREND 10

INTEROPERABILITY CONTINUES TO OUTPACE INNOVATIONS IN THE CONNECTED CARE SPACE

Fast Healthcare Interoperability Resources (FHIR) interoperability standards enable dissimilar systems to connect, which can improve patient access and facilitate coordinated care

Context

- A lack of interoperability and coordination among healthcare ecosystem participants led to inefficiency, high operational costs, and suboptimal patient care.
- Recently, more US providers are adopting Fast Healthcare Interoperability Resources (FHIR) protocols.
 - 67% of providers and 61% of payers expect their respective organizations to utilize FHIR-based APIs at scale by 2023, according to a study commissioned by Nashville-based **Change Healthcare**, a provider of revenue cycle management, payment management, and health information exchange solutions.⁸¹
- Deep interoperability is on the rise, and Electronic Medical Record (EMR) solution suppliers are investing in enhanced compliance with FHIR standards to support patient-facing apps, clinician enabling tools, and other EMR solutions.

Catalysts

- Today's providers have better insight into a patient's drug history and previous drug interactions, enabling them to transition across the care lifecycle seamlessly.
 - Sponsored by the United States Department of Health and Human Services (HHS), the ONC Cures Act Final Rule will become effective and enforceable by the end of 2022. It offers patients choices and free access to their electronic medical records. It also enables providers to choose IT tools that provide the best care for patients without high costs or technical barriers.⁸²
 - However, some payer-to-payer data exchanges and price transparency have disrupted FHIR compliance initiatives, and CMS has postponed the January 1, 2022 deadline enforcing the payer-to-payer data exchange rule. The agency cited payer concern about the policy's impact on administrative burden and data quality.⁸³
- Insights about member health and wellbeing from new data sources, such as wearables data and lab observations, can now be integrated within patient/member records.
- Medical providers and device developers are promoting patient data access using third-party apps and APIs.

⁸¹ [EHR Intelligence](#), "Widespread FHIR Uptake Expected by 2024," April 6, 2021.

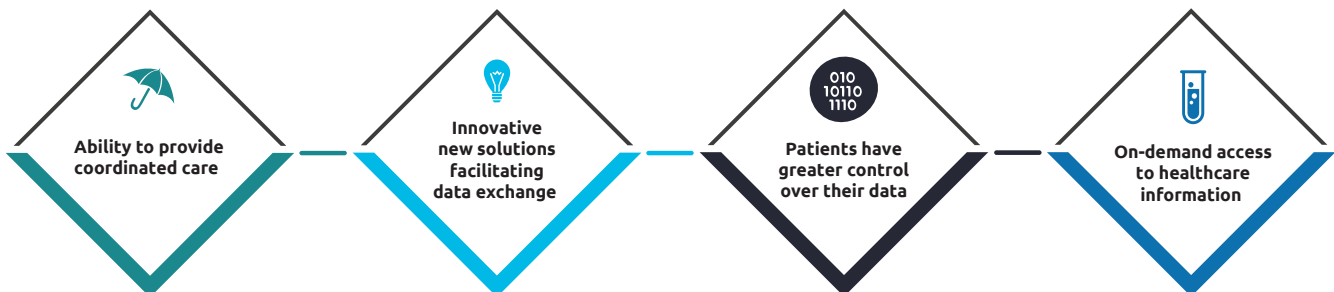
⁸² [Insider Intelligence](#), "Most digital health apps don't comply with interoperability standards – and it's a costly problem," October 8, 2021.

⁸³ [HealthPayer Intelligence](#), "CMS Retreats from 2022 Payer-to-Payer Data Exchange Enforcement," September 20, 2021.

In a nutshell

- FHIR-compliant portals offer on-demand access to healthcare information.
 - HealthTech **Mpowered Health** introduced a FHIR-compliant member portal providing 24/7 on-demand access to medical, financial, and care-related information. The portal also enables payers and providers to streamline member engagement activities such as treatments and visits, record sharing, and patient onboarding.⁸⁴
- FHIR APIs enable firms to bring a variety of data sets together, secure nuanced insights using advanced analytics, and provide better member care.
 - Microsoft’s Azure Healthcare APIs enable firms to bring disparate sets of Patient Health Information (PHI) together and connect it end-to-end with machine learning, analytics, and AI tools.⁸⁵
 - Mayo Clinic is working with Google Cloud to integrate data from disparate sources, harmonize it to FHIR format, and secure insights using advanced analytical tools.⁸⁶
- FHIR-based APIs enable solutions giving patients easy access to and greater control of their healthcare data.
 - Apple rolled out an iPhone feature that enables consumers to share health data directly to their provider’s EHR system through the FHIR API-based Apple Health app. Members can share only relevant information rather than their entire medical history.⁸⁷
- HealthTechs are navigating the complexities in FHIR implementation by developing collaborative solutions that give service providers easy access to the tools and resources required to serve patients better.
 - Cloud software solutions provider **Infor** released an FHIR-based interoperable solution for healthcare to make data easily accessible at the point of care. In addition, it can help organizations extend their EHRs, improve clinical system FHIR compliance, and expand API capabilities.⁸⁸

Figure 10: Interoperability standards improve patient/member experience across the care continuum



Sources: Capgemini Financial Services Analysis, 2021.

Impact

- Seamless data sharing will facilitate faster healthcare innovation, enabling operational efficiency, frictionless prior authorization, and similar processes that previously were slowed by information and process silos.
- APIs enable real-time control over data (rather than periodic feeds) and sharing of relevant information rather than complete medical histories.
- Large health systems that adopt FHIR in 2022 will harmonize application landscapes and foster coordinated care through FHIR-led effective data exchange and collaboration workflows.

⁸⁴ [Yahoo Finance](#), "Mpowered Health launches healthcare's next-generation 'digital front door' with industry's first FHIR®-compliant member portal" October 8, 2021.

⁸⁵ [Redmond](#), "Microsoft Cloud for Healthcare Announces 'Azure Healthcare APIs,'" August 6, 2021.

⁸⁶ [FIERCE Healthcare](#), "Google Cloud rolls out technology to map medical records data to FHIR standard," July 22, 2021.

⁸⁷ Ibid.

⁸⁸ [Solutions Review](#), "Infor Announces FHIR Server, a New Solution for the Healthcare Industry," July 28, 2021.





CONCLUSION

Throughout 2022 and the years ahead, dynamic external factors will motivate healthcare providers and insurers to continuously evaluate fundamental value propositions. Expect inalterable industry transformation due to cybercrime vulnerability, regulatory compliance mandates, high-impact alternative care-delivery channels, increased use of predictive analytics to support wellbeing and disease prevention, and the growing importance of stellar patient experience.

Overall, the healthcare system spotlight will shine less on insurance and more brightly on improved care, outcomes, and constituent experience. Increasing retailization of healthcare services, patient/member quests for convenient, accessible shoppable experiences, and value-based care delivery are on track to change the industry forever.

Paradoxically, COVID-19 forced the health system and regulators to recognize the need for innovation and begin meaningful and widespread implementation.

ASK THE EXPERTS



Elias Ghanem

Global Head of FS Market Intelligence
elias.ghanem@capgemini.com

Elias Ghanem is responsible for Capgemini's global portfolio of FS thought leadership. Elias oversees a team of consultants and analysts who deliver strategic research to address complex issues related to the future of banking and insurance.



Shane Cassidy

Insurance Business Unit (BU) Leader
shane.cassidy@capgemini.com

Shane Cassidy is the head of Capgemini's Global Insurance Business Unit. Shane has been at the forefront of digital disruption and innovation for two decades, identifying and developing solutions to address market disruptions.



Ian Campos

Global Domain Practice Leader – Banking Capital Markets & Insurance
ian.campos@capgemini.com

Ian Campos is executive vice president and head of capgemini's Global Insurance Services team. Ian is an expert in core Insurance transformation. He has worked across the entire FS consulting continuum from strategy development to operational management.



Dr. Christina Remediakis

Vice President, Market Leader (Health Care)
becky.remEDIakis@capgemini.com

Becky heads Capgemini's Health business and oversees the continued evolution of its Health specific innovation, solutions, and GTM strategies. Her two+ decades of experience working with Commercial/State/ National Health Plans and Health Systems has equipped Becky with deep insights on healthcare industry imperatives, competitive context, regulatory changes and best practices.



Shyamsree Nandi

Healthcare Solutions Leader
shyamsree.nandi@capgemini.com

Shyamsree heads Capgemini's Healthcare Solutions Group and has over two decades of experience working with Health Plans, Providers, Life Sciences, and Medical Devices companies. She owns a dedicated center of excellence for healthcare leading innovations in the space of FHIR Interoperability, AI-driven Treatment Effectiveness, Care Gap Closure, Connected Digital Health, Member Experience, and other Value-Based Care solutions



Thierry Loras

Vice President Insurance, France
thierry.loras@capgemini.com

Thierry has + 23 years of experience in the P&C, Life & Savings, and health business lines. He is passionate about innovation and ecosystem development around insurance offerings, digital and IT transformations, building new capabilities, and defining IT strategic vision.



Dipanjana De

Senior Director, Insurance Practice
dipanjana.de@capgemini.com

Dipanjana has 20+ years of experience across business consulting, strategy planning, and delivery management, focusing on innovation and automation. Her expertise spans insurance, healthcare, and Lifesciences verticals, and she has led large-scale transformation programs in key markets across the globe.



Luca Russignan

Insurance domain leader, Global FS Market Intelligence
luca.russignan@capgemini.com

Luca Russignan is an insurance expert and has +12 years of experience, shaping insurance business strategy, working closely with C-suite executive and senior business leaders across the UK, the US, Italy, and APAC.

FOR MORE INFORMATION

Global

Shane Cassidy

shane.cassidy@capgemini.com

Dr. Christina Remediakis

becky.remediakis@capgemini.com

Stanislas De Roys

stanislas.deroy@capgemini.com

APAC

Dr. Christina Remediakis

becky.remediakis@capgemini.com

Shyamsree Nandi

shyamsree.nandi@capgemini.com

Dr. Ramesh Darbha

ramesh.darbha@capgemini.com

Australia

Manoj Khera

manoj.khera@capgemini.com

Susan Beeston

susan.beeston@capgemini.com

Switzerland

Daniel Diederichs

daniel.diederichs@capgemini.com

Italy

Monia Ferrari

monia.ferrari@capgemini.com

Michele Inglese

michele.inglese@capgemini.com

Lorenzo Busca

lorenzo.busca@capgemini.com

Spain

Javier de la Lama

javier.delalama@altran.com

Christopher Stevens Diez

christopher.stevens@capgemini.com

Molina Cabellos Belen

belen.molina-cabellos@capgemini.com

Belgium

Jan Verlinden

jan.verlinden@capgemini.com

Alain Swolfs

alain.swolfs@capgemini.com

Japan

Hiroyasu Hozumi

hiroyasu.hozumi@capgemini.com

Masayuki Imazu

masayuki.imazu@capgemini.com

Shunichi Watanabe

shunichi.watanabe@capgemini.com

The Netherlands

Jimut Basa

jimut.basa@capgemini.com

Cuno van Diepen

cuno.van.diepen@capgemini.com

France

Thierry Loras

thierry.loras@capgemini.com

Olivier Hoarau

olivier.hoarau@capgemini.com

LatAM

Roberto Ciccone

roberto.ciccone@capgemini.com

Geovanni Alfonso Millan

geovanni.millan@capgemini.com

United Kingdom

Shane Cassidy

shane.cassidy@capgemini.com

Dr. Christina Remediakis

becky.remediakis@capgemini.com

Max Bocchini

max.bocchini@capgemini.com

Germany

Dr. Joachim Rawolle

joachim.rawolle@capgemini.com

Gunnar Tacke

gunnar.tacke@capgemini.com

Thomas Hillar

thomas.hillar@capgemini.com

Nordics

Stefan Grimfors (Sweden)

stefan.grimfors@capgemini.com

Jarmo Kortelahti (Finland)

jarmo.kortelahti@capgemini.com

Cecilie Vatn (Norway)

cecilie.vatn@capgemini.com

USA and Canada

Shane Cassidy

shane.cassidy@capgemini.com

Dr. Christina Remediakis

becky.remediakis@capgemini.com

Keith Gage

keith.gage@capgemini.com

ACKNOWLEDGMENTS

Market Intelligence core analyst team



Soumya Nath
Industry Analyst, Insurance
Financial Services – Market Intelligence



Vipul Mehta
Industry Analyst, Insurance
Financial Services – Market Intelligence

We would also like to thank the following teams and individuals for helping to compile this report:

Elias Ghanem, Chirag Thakral, Luca Russignan and Kumaresan for their overall leadership for this year's report. Debraj Nag, Deepak Pawar, Kumaresan Ramasamy, Monika Singh, Shweta Choubey, Sumanta Satpati, and Vicky Bhalerao, Sumanta Satpati, Monika Singh for their inputs in the report development. Tamara Berry for editorial support and content leadership. Dinesh Dhandapani Dhesigan for graphical interpretation and design.

Marion Lecorbeiller, Pranoti Kulkarni, Swathi Raghavarapu, Sai Bobba, and Anirudh Malyala for their overall marketing leadership for the report, and the Creative Services Team for producing the report: Sushmitha Kunaparaju, and Suresh Chedarada, Balaswamy Lingeshwar, Kalasunder Dadi.

DISCLAIMER

The information contained herein is general in nature and is not intended and should not be construed as professional advice or opinion provided to the user. This document does not purport to be a complete statement of the approaches or steps, which may vary according to individual factors and circumstances necessary for a business to accomplish any particular business goal. This document is provided for informational purposes only; it is meant solely to provide helpful information to the user. This document is not a recommendation of any particular approach and should not be relied upon to address or solve any particular matter. The text of this document was originally written in English. Translation to languages other than English is provided as a convenience to our users. Capgemini disclaims any responsibility for translation inaccuracies. The information provided herein is on an "as-is" basis. Capgemini disclaims any and all representations and warranties of any kind concerning any information provided in this report and will not be liable for any direct, indirect, special, incidental, consequential loss or loss of profits arising in any way from the information contained herein.

This message contains information that may be privileged or confidential and is the property of the Capgemini Group.
Copyright © 2021 Capgemini. All rights reserved.



About Capgemini

Capgemini is a global leader in partnering with companies to transform and manage their business by harnessing the power of technology. The Group is guided everyday by its purpose of unleashing human energy through technology for an inclusive and sustainable future. It is a responsible and diverse organization of 300,000 team members in nearly 50 countries. With its strong 50 year heritage and deep industry expertise, Capgemini is trusted by its clients to address the entire breadth of their business needs, from strategy and design to operations, fuelled by the fast evolving and innovative world of cloud, data, AI, connectivity, software, digital engineering and platforms. The Group reported in 2020 global revenues of €16 billion.

Get the Future You Want | www.capgemini.com

