KPMG

Living in an AI World 2020 Report:

Healthcare insiders

Taking the temperature of artificial intelligence in healthcare

Contents

Methodology

The KPMG Living in an AI World 2020: Achievements and Challenges of Artificial Intelligence across Five Industries survey was conducted by Ketchum Analytics to support KPMG's thought leadership efforts on AI. The findings in this report are based on the results from a survey of 751 U.S. business decision-makers with at least a moderate knowledge of AI in their industry.
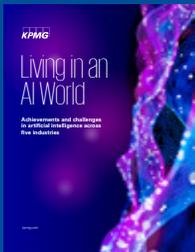
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This study was designed and conducted to assess the perception of AI as it relates to five specific industries: healthcare, financial services, transportation, technology, and retail. The survey serves to uncover the pain points, perceived risks and challenges of U.S. companies related to AI. This report is focused solely on the healthcare industry.

Artificial intelligence (AI) is already transforming the healthcare industry.

And its impact—both good, in terms of patient care and operational efficiencies; and bad, as some believe it is contributing to higher healthcare costs—is only just beginning.

Those were among the key findings revealed from KPMG's new study, "Living in an AI World 2020: Achievements and Challenges of Artificial Intelligence Across Five Industries," with respect to how 751 insiders representing five industries—including healthcare—view the future of AI in their sectors, and the steps they are taking to maximize its benefits and mitigate its challenges.

AI in healthcare

While just over half—53 percent—of respondents say that the industry is ahead of most others in AI adoption, they nevertheless believe it needs to happen much faster.

Just more than one-third of healthcare industry executives (37 percent) believe the pace at which they are implementing AI is too slow, due to countervailing factors around training, cost and privacy, among others. But their impatience is a clear sign that they appreciate the current impact of AI, as well as its vast potential for transforming many facets of healthcare.

"The pace with which hospital systems have adopted AI and automation programs has dramatically increased since 2017," said Melissa Edwards, Managing Director, Digital Enablement, KPMG. "Virtually all major healthcare providers are moving ahead with pilots or programs in these areas. The medical literature is showing support of AI's power as a tool to help clinicians."

According to an overwhelming majority of healthcare respondents (89 percent), AI is already creating efficiencies in their systems, and 91 percent believe it is increasing patient access to care. According to Edwards, "My general observation is that more of the AI-related services and solutions being advanced in healthcare today are largely in the clinical, patient-facing space. Basic forms of automation are proving to be the 'gateway drug' to advanced forms of AI – such as scanning documents to determine the urgency of a referral. Applying AI to make earlier diagnoses of critical illnesses is a key area."

Survey respondents feel likewise. More than two-thirds (68 percent) are confident AI will eventually be effective in diagnosing patient illnesses and conditions, with 47 percent believing that diagnostics will have a significant impact soon – within the next two years.

They also anticipate gains in process automation, with 40 percent seeing x-rays and CT scans being handled robotically. And recent findings indicate that function may be close to reality. Google Health reported that an AI model developed and deployed by its DeepMind subsidiary was more effective in screening patients for breast cancer than human doctors using recent x-rays only - despite having access to patients' previous records.[1]

Further, given the industry's significant investment in electronic health records in the last decade, many observers believe AI will further the impact of digitization. While 41 percent see further enhancements in records management from AI, even more (48 percent) believe the greatest impact will be in biometric-related applications and 47 percent see machine learning as the key AI enabler. ●

[1] Nature.com, International evaluation of an AI system for breast cancer screening, January 1, 2020

The challenges of AI adoption in healthcare

Still, healthcare insiders have also identified significant challenges or barriers that may hamper or further slow the integration of AI technologies in their organizations.

One is in the area of talent. To date, only 47 percent of healthcare insiders say their organizations offer AI training courses to employees, which is substantially lower than some of the other industries surveyed. Perhaps as a result, just 67 percent of healthcare insiders say their employees support AI adoption, the lowest ranking of any industry.

Edwards believes that many healthcare institutions lack a breadth of individuals who "speak" the language of AI: "Comprehending the full range of AI technology, and how best to apply it in a healthcare setting, is a learned skill that grows out of pilots and tests. Building an AI-ready workforce requires a wholesale change in the approach to training and how to acquire talent. Having people who understand how AI can solve big, complex problems is critical."

Another major barrier is cost. Not long ago, healthcare systems were required to make significant capital investments to meet electronic health records requirements. Adding further to the IT budget to get AI off the ground requires even more of an investment, and insiders who may already feel budget-burdened may be slower to allocate full funding for AI.

Perhaps this explains why more than half of executives – 54 percent – believe that AI to date has actually *increased* rather than decreased the overall cost of healthcare. As Edwards explains, healthcare decision-makers are still struggling to determine where to place their AI best bets: "The question is, 'Where do I put my AI efforts to get the greatest gain for the business? Trying to assess what ROI will look like is a very relevant point as they embark on their AI journey."

Further, given the highly sensitive nature of patient medical records, a large number of insiders – 75 percent – have concerns that AI could threaten the security and privacy of patient data. Relatedly, 86 percent say their organizations are taking care to protect patient privacy as it implements AI. ●

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What healthcare companies need to know before using AI

Nevertheless, all agree that the future looks quite bright for AI in healthcare. Ninety percent of healthcare respondents believe AI technology will improve the patient experience and anticipate seeing the greatest impact on diagnostics (47 percent), electronic records management (41 percent) and various robotic tasks (40 percent).

While healthcare companies are not traditionally early adopters of technology, the investment and focus on the patient mission is drawing a tremendous amount of attention and interest to this area. Doing so will further empower clinicians and the patients they serve to get the best care possible.

"While AI has already made some inroads in the back or middle office, patient access and care will ultimately see the biggest impact from AI by better diagnosing, treating, serving and helping patients at every point of engagement," Edwards of KPMG noted. "Applying AI to unstructured data will also be quite useful in solving bigger problems, especially for patients." ●

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