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Artificial Intelligence in Healthcare – Do the Benefits Outweigh the Challenges?

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As healthcare professionals, it seems we can't escape the buzz and hype of artificial intelligence (AI) today. However, unlike other industries, healthcare's adoption of AI is still in its infancy, in part, due to many providers still updating their tools and processes for the digital age. According to an Accenture analysis, growth in the AI health market is expected to reach $6.6 billion by 2021 and key clinical health AI applications can potentially create $150 billion in annual savings for the US healthcare economy by 2026.

AI provides industry players with a unique opportunity to not only offer tools and insights that can vastly improve patient care, but that also improve their bottom line. However, despite all the benefits and advantages of AI that we hear about, some remain skeptical and hesitant to jump on board, and quite frankly, are concerned about the challenges of AI in healthcare and just how much it will impact the industry.

Addressing and Overcoming AI Concerns

One concern among some healthcare providers and professionals is related to AI's data collection and accuracy, as we are keenly aware that AI is only as good as the data it collects. Not to mention, AI must be implemented correctly, in order to reach its full potential. The concern here is that since AI is built on deep learning, a technique in which computers learn through example and work to better understand and process complex forms of data, there is no real

way to determine its inner workings – so providers have to rely on trust. Some providers on the other side of the fence, however, argue that AI is actually much faster and more accurate than humans.

Other AI fears are related to providers losing their jobs, especially radiologists. However, radiologists actually have more job duties and responsibilities than what they are utilizing AI for, and many argue that AI solutions are simply just a supplement to their workflow. Embracing the technology which supports a patient's outcome is the benefit.

AI's Aim to Improve Patients Lives

In the medical field, AI has the potential to diagnose diseases and illnesses through deep learning. According to Breastcancer.org, about one in eight U.S. women will develop invasive breast cancer during her lifetime; however, two-thirds of women have the potential to be saved through early detection and progressive treatments. In response, many medical facilities are turning to Digital Breast Tomosynthesis (DBT) technology solutions as their preferred method for screening and diagnostic mammography in order to do just that – detect and diagnose women with early-stage breast cancer.

While there are many advantages to utilizing DBT, there are also some considerable challenges for radiologists. For example, detection of breast cancer using DBT involves interpretation of massive data sets, which can be time consuming and daunting for radiologists. A typical 2D digital mammography exam (once considered the gold standard for detection of breast cancer) produces four images, while a 3D mammogram – or DBT – can produce hundreds of images. While DBT provides greater clarity and detail and can improve breast cancer detection, radiologists are finding that they must spend significantly more time reviewing and interpreting each exam. However, with innovative technologies available today, radiologists can leverage these AI and deep learning tools to help reduce their DBT interpretation time and improve reading workflow, as these solutions automatically highlight areas that might be concerning. These capabilities are imperative as we continue to learn more about the increase in radiologist burnout.

While there is much more to be understood about AI in healthcare and medical imaging, one thing is for sure – AI is no doubt fundamentally changing the way radiologists and other healthcare providers do their jobs. To overcome the fears and concerns associated with AI, it's imperative providers work to implement these new, innovative technologies effectively by first carefully considering and researching the right solution. Then, providers should invest time considering and understanding how their system is capturing and collecting data in order to analyze it and check for errors. As the healthcare industry as a whole continues to turn to a value-based care model, it's easy to believe that providers who utilize and fully understand the unique capabilities of AI solutions will perform above the rest.

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