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TRANSCRIPT

Hi Everyone…This is Miss. Jennifer John, III Year Medical student studying in Sri Manakula Vinyagar Medical College and Hospital articulating about The Potential for Artificial Intelligence in Health care.

AI is getting steadily sophisticated not only at what humans can do but also cannot do, in a more systematic, more efficient, more quickly and at a lower cost. The potential for both AI and robotics is vast in healthcare. No longer science is a fiction, AI and robotics are already transforming healthcare.

Here's my 7 highlighted statements that showcase how this transformation is currently paving way through Healthcare.

1. One of AI's biggest potential benefits is to help people stay healthy so they don't need a doctor, or at least not very often. The use of AI and the Internet of Medical Things (IoMT) in consumer health applications is already helping a lot of people. For example, personal emergency response systems in the home, alert a hospital when the patient experiences an emergency. Technology applications and apps encourage healthier behaviour in individuals say, Healthifyme help with the dynamic management of a healthy lifestyle at the consumer level itself and also puts themselves in the control of their own health and well-being.
Additionally, AI increases the ability for healthcare professionals to understand the day-to-day patterns and requisites of the people in a much more better way, and with that understanding they are able to provide better feedback, treatment, guidance and support for staying healthy.

2. AI is already being used to detect diseases, such as cancer, more accurately and in their early stages. According to the American Cancer Society, a high proportion of mammograms yield false results, resulting it to 1 in 2 healthy women being told they have cancer. The use of AI is enabling review and translation of mammograms 30 times faster with 99% accuracy, reducing the need for unnecessary biopsies. The proliferation of consumer wearables and other medical devices combined with AI is also being applied to oversee early-stage heart disease, enabling doctors to better monitor and detect potentially life-threatening episodes at much more earlier, more treatable stages which will definitely save a huge number of lives in future.

3.IBM’s Watson for Health is helping healthcare organizations apply cognitive technology to unlock vast amounts of health data and power diagnosis. Watson can review and store far more medical information – every medical journal, symptom, and case study of treatment and response around the world – exponentially faster than any human. Google’s DeepMind Health is working in partnership with clinicians, researchers and patients to solve real-world healthcare problems. The technology combines machine learning and system neuroscience to build powerful general-purpose learning algorithms into neural networks that mimic the human brain.

4. Advanced care requires the alignment of huge health data with appropriate and timely decisions, and predictive analytics which can support clinical decision-making and actions as well as prioritise organisational tasks.Using pattern recognition to identify patients at the risk of developing a condition – or seeing it deteriorate due to lifestyle, environmental, genomic, or other factors – is another area where AI is beginning to take hold in healthcare.

5. AI can now help doctors take a more comprehensive step for disease management with well coordinated care plans and help patients to better comply with their long-term treatment programmes.

6. Robots have been used in medicine for more than 30 years.We are living much longer than previous generations, and as we approach the end of life, we are dying in a different and slower way, from conditions like dementia, heart failure and osteoporosis. It is also a phase of life that is often plagued by loneliness and fear. These Robots have the potential to revolutionise end of life care, helping geriatric population or population suffering from very critical immunosuppressive conditions to remain independent for longer, reducing the need for hospitalisation, care homes and after all a sympathy free environment. AI combined with the advancements in humanoid design are enabling robots to go even further and have ‘conversations’ and other social interactions with people to keep aging minds sharp and entertained.

7.The path from research lab to patient is a long and costly one. According to the California Biomedical Research Association, it takes only an average of 12 years for a drug to travel from the research lab to the patient. Only five in 5,000 of the drugs that begin preclinical testing ever make it to human testing and just one of these five is ever approved for human usage. Furthermore, on average, it will cost a company US $359 million to develop a new drug from the research lab to the patient.

By directing the latest advances in AI to streamline the drug discovery and drug refining processes there is the potential to significantly cut both the time to market for new drugs and their costs.

So, as artificial intelligence in healthcare has grown in its capabilities, using it to improve medical practices has become increasingly viable. With the development of AI-powered medical tools and intelligent algorithms the potential for using AI in healthcare is limitless.

The future of using artificial intelligence in healthcare is undoubtedly bright and filled with possibilities for further innovation. As we move forward into a more connected digital world, using AI in the healthcare industry will become an extremely crucial asset that could potentially refine how clinicians treat patients and deliver healthcare.

The greatest challenge to AI in healthcare is not whether the technologies will be capable enough to be useful, but rather ensuring its adoption in daily clinical practice. In time, medical professionals may migrate toward tasks that require unique human skills, tasks that require the highest level of cognitive function.

With such great potential, it is clear that using artificial intelligence in healthcare holds the promise of a future filled with advancements and improved health outcomes.

Thank you.

Signature of the Resource Person

Signature of the HOD