Probus Talk 24 September 2026

AI in Medicine

Dr Richard Petty

This talk was given by Dr. Richard Petty, who is a retired Consultant Neurologist from what was the Southern General Hospital. During his period as Consultant in Glasgow he established with colleagues, services for Motor Neurone Disease for the west of Scotland and adult Muscle Disease service for the whole of Scotland.

The worldwide healthcare industry is undergoing a profound transformation driven by escalating costs, workforce shortages, and increasing demands from aging populations. Artificial Intelligence (AI) is the use of computers to solve problems using symbolic language, and medicine, pharmaceutics and healthcare are areas among many that have benefited from its development.

Dr. Petty suggested that the word is 'prevention'. The use of AI in medicine, using retrospective statistics to establish patterns, should enable clinicians to make decisions, by which people may live longer.

Use of AI in electronic health records represents a pivotal advancement in the management of patient data, AI can detect diseases earlier and more accurately than traditional methods. Dr. Petty admitted that doctors are currently rubbish when it comes to dementia and other hard to diagnosis diseases. AI can improve this by reviewing different patterns of impairment. A question may exist, however, - would every patient want to know that they are forecast to suffer from dementia etc. years in advance?

AI's capacity to design personalised medicine and treatment regimens signifies a critical shift from traditional procedures. Studying such things as genetic contribution could define who might benefit from certain drugs, for example, in treating MND.

Predictive analytics using AI offer a proactive approach to disease prevention, using blood tests, lifestyle surveys etc. It is able to analyse vast numbers of parameters in samples, far quicker than traditional methods, and can for example, diagnose problems by studying a patient's gait analysis. AI can provide drugs by design, rather than serendipity or trial and error. It can be used in the analysis of DNA, examining possibly 3,000,000,000 chemicals!

AI significantly enhances medical imaging in X-rays, CT scans and MRIs, assisting with the detection and treatment of fractures and tumours. Patient outcomes for those with critical conditions such as stroke and cancer are improved. AI is useful in psychological health management, eliminating false positives in diagnoses. It can be used in social and nursing care, offering, for example, chatbots for the lonely, and may check psychological assessments, replacing the GP.

In the future, AI could be used to record the DNA of the entire population, but this could raise difficulties, such as, who gets your results, would the information appear on your CV, and who pays for this? Some NHS systems have already been hacked into … Numerous

other questions still linger – is AI unquestionable, can errors be found, who will or be able to correct those errors. Only time will tell, but by and large, we should consider that AI in medicine will be proved to be a most valuable tool in healthcare.

John Walker