AMS ANGLO MEDICAL SCHEME

MEDIBRIEF

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Where does new technology take us in terms of healthcare?

Compared to our grandparents, our lives have changed drastically when considering healthcare. We have access to more knowledge and more advanced medicine than before. We benefit from less strenuous working conditions and live longer. But still, our lifestyle diseases are increasing alarmingly. Diabetes, hypertension, hyperlipidaemia, asthma and cancer are our biggest threats. We are exposed to more stress, move less and eat more – although less nutritious food. We enjoy wonderful communication tools that allow us to talk to our friends and family worldwide, 24/7, but many people are getting lonelier and more depressed. It seems so obvious: eat better, move more, reduce alcohol intake, stop smoking and become involved in group activities to improve your health. Contrary to that, the world population just seems to get sicker.

So what can we do and how can medicine adapt to our new lifestyle?

There is hope on the horizon. The availability of new information and technology in medicine will enable us to make use of more self-managed preventive and personalised medicine. Healthcare data analysis, while still in its infancy, can already indicate who would be more likely to develop diabetes (as applied in our diabetes risk assessment). Soon, predictive tests will assist doctors in deciding on the most efficient preventive measures or disease treatments. Genetic tests will determine the success of a specific treatment option. Cancer treatment, for example, will be developed towards treating people based on their genetic profile, not just their tumour type.

Whilst scientists are collecting and analysing data to decode the genetic risks of specific patient groups, patients themselves can already collect and analyse their health data and share the results with their doctors. Lifestyle technology empowers us to keep on top of simple key health indicators. A device on your wrist can measure your movement, calories burnt and heart rate; other gadgets measure your sleep quantity and quality. Your blood pressure monitor can record and analyse your daily results and your bathroom scale records your weight, body fat, muscle and water in your body. Diabetes patients can use pocket glucose readers and asthma patients can use oxygen level monitors at home. Nowadays you can even connect all of these home devices to one single app on your cell phone and create a valuable health record for your healthcare provider.

How can we keep up with the digital future?

It is quite obvious that over the next decade healthcare will change and might even be disrupted by technology, just as the taxi industry experienced with the introduction of Uber. The collection and evaluation of healthcare data by individual patients, the analysis of patients' medical records by healthcare providers and global research will be fed into Artificial Intelligence to be used for prediction, diagnosis and treatment of conditions.

The goal is not to replace physicians or healthcare professionals, but to give them better tools to manage their patients' health. While many people fear that artificial intelligence could remove human intervention, we should look at it as an opportunity to fill critical gaps in existing healthcare services.

Instagram and Facebook can already analyse posts and photos to predict if a user has suicidal tendencies and has implemented a suicide prevention tool. A team at Northeastern University in the US developed a new model to predict the spread of the flu, in real time, using key words collected on Twitter.

Established in many countries, and in its infancy in South Africa, websites using Artificial Intelligence can provide simple diagnoses, a search function to find the appropriate doctor and facilitate online consultations for the patient via messaging apps and video chat services. This is a valuable tool if one lives in a remote area or does not have transport. Simple home robots with Artificial Intelligence can already remind us to take our medicine, notify our doctors of changes in our condition or contact our loved ones if we have not followed our normal routine.

According to Moore's law (the founder of Intel) the capability of technology doubles every 18 months. Technology and Artificial Intelligence will be part of our lives and healthcare, whether we want it or not. We are often scared of things we don't understand, but the more we learn about how technology works and how to use it, the more comfortable we will be, and the more it will be able to help us to live a healthier life.

Did you receive your tax certificate?

If you have not received your AMS tax certificate, sent to you in the middle of June, please update your contact details with the call centre or in the member log-in. You can download the tax certificate from the member log-in or contact the call centre on 0860 222 633.

Robotic surgery – is this still science fiction?

Imagine robots operating on humans, controlled from a distance, for example in space, in a war zone or in a remote area where there aren't any specialists available. One of the biggest challenges might still be the lack of secure and fast data transmission – but robotic surgery is not a 'science-fiction scenario' any longer. In first world countries Da Vinci® robotic surgery has been in use since 1999/2000. Today, there are over 3 800 units worldwide, performing hundreds of thousands of operations per year. Robotic surgery in South Africa is mainly used for operations to remove the prostate gland or bladder in patients with cancer.

How does 'Dr Robot Da Vinci®' work?

The robot has a camera arm as well as mechanical arms with surgical instruments attached. The arms are positioned over the patient and through small incisions, the instruments are placed into the body, similar to laparoscopic surgery. The surgeon sits at a console, manipulating the levers – similar to joysticks – to control the arms of the robot, while looking at a high-definition 3D picture for a clear and magnified view inside the patient's body.

The knowledge and intelligence needed to give the commands is still the surgeon's; the robotic arms are simply an extension of the surgeon's fingers. While this might sound a bit scary, the robot actually improves the surgeon's fine motor skills by giving him more balanced hand control. A centimetre in the surgeon's hand movement can be set to be a millimetre performed by the robotic arm, resulting in increased precision.

The pros and cons

The disadvantages are the high costs for the acquisition of the equipment (around R20 million) and maintenance costs, as well as the specialised training needed for the surgeon. The advantage is that patients can benefit from minimally invasive procedures with smaller incision wounds and, as a result, less loss of blood, less post-operative pain and less risk of wound infection, improved functional outcome and faster healing times. This might also decrease the length of stay in hospital.

Who can have robotic surgery?

Every year, Anglo Medical Scheme sets aside a certain budget for healthcare improvements, so that members, where possible, can benefit from the latest technology available.

Members of the Anglo Medical Scheme, meeting certain clinical criteria, might be offered the option to have Da Vinci® robotic surgery, subject to agreed and applicable limits. Talk to your doctor to find out if you are a suitable candidate and what the best available treatments are in your case.

References
http://www.pinnaclesurgical.co.za
http://www.davincisurgery.com/da-vinci-surgery/da-vinci-surgical-system

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