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Congress Chairman, SA Heart® 2017

## The future is here! Are you ready for technological revolution in medicine?

I am humbled and most honoured to have chaired the Scientific Organising Committee for SA Heart® 2017. I look forward to welcome you all to the Sandton Convention Centre on 9 November.

Our congress theme is "Fundamentals to Innovation", which will showcase important new developments in cardiovascular medicine. Our scientific programme has it all. You will be fascinated by all the latest updates in the innovation sessions, as well as revascularisation, prevention and structural interventions. You will be amazed at the new technologies in our digital health and imaging symposia.

We just don't like change. It is not any different in healthcare. Medicine has always had a complicated relationship with technology, embracing some aspects, while resisting others. The tools of our trade are also decades old – consider the 150 year-old stethoscope and the 135 year-old baumanometer. Are they not almost obsolete?

Whether we are ready, or not, technological and digital disruption will occur. The entire structure, as well as the role of doctors and patients, will shift from the current status quo.

Patients commonly use Google to do research and then make their own medical decisions. This is only going to become more commonplace. We are currently also in the era of portable diagnostics, with health sensors and wearables. This will leverage insight into one's own self, but without our supervision, our patients could fall prey to misinformation.

We will have to embrace the exponential rise of artificial intelligence (AI), robotics, virtual reality, telemedicine and 3D printing, genomics and nanotechnology. Cognitive computers will help in unimaginable ways and will augment our expertise. Biomedical literature has exploded to the extent that it is impossible to just keep up to date. Information overload is the problem. Patients expect us to have all the facts at our fingertips. They do not want their doctor to guess, but expect confident answers before a treatment is prescribed. AI has the ability to reason through massive amounts of data. Consider a person who could read an unlimited number of documents and, not only understand the contents, but also completely retain every bit of information. Imagine you could ask that person an intuitive question. It represents a way to look at all data and then extract the needle from the haystack.

South Africa, unfortunately, has 2 disparate health systems, with the vast majority of our people not enjoying easy access to expert tertiary care. National Health Insurance is looming, but what standards will be guaranteed? Healthcare depends on 3 factors: cost, availability and quality. This is a zero-sum equation. Simply reducing costs will reduce access and quality. Novel technological advances will be the only way to break this deadlock. Our regulators and funders now have a responsibility to ensure that all medical innovations will be available to the entire people of our beautiful country.

**I wish you all a stimulating and enjoyable meeting.**