TECHNOLOGY AND MEDICAL REGULATION IN THE 21ST CENTURY

21 - 25 August 2017
The Spier Wine Estate
Western Cape, South Africa
INTRODUCTION

We will reflect on the advancements of technology in medicine with specific reference to Africa.

Then, further explore how these advancements have changed over the time, their effect on public society, practitioners, patients, regulation and ethics.
HISTORY OF TECHNOLOGY IN MEDICINE

• Dates back from Ancient Egypt in 2000-1750 B.C.

• It transitioned from traditional medicine to deity healing, anatomical, physiological and surgery.

• Surgeons had to simplify their work and this culminated to the number of tools being innovated.

• Assortments ranged from hooks, cauterization instruments, pincers, forceps, spoons, straight and bent tweezers, saws, and a range of knives and scissors of diverse types.

• These innovations were a prelude to innovations such as contact lenses, wheelchairs, stethoscopes, prosthetic limbs, microscopes e.t.c. which changed the sector massively and are currently in place.
ADVANCEMENTS IN MEDICAL TECHNOLOGY

• Discovery of a treatment to bilharzia or schistosomiasis by Professor Aklilu Lemma (Ethiopia) (1964).

• World’s first successful human heart transplant performed Dr Christiaan Barnard (South Africa) (1967).

• Hospital In Box in Nigeria by Dr. Seyi Oyesola (2005).

• VULA App (Specialist referral Application) by Dylan Edwards and Dr William Mapham (2013).

• The Cardiopad in Cameroon by young IT specialist Arthur Zang (2014).
PROMISES AND PERILS OF MODERN TECHNOLOGIES IN MEDICINE

(a) Public society

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<td>• Simplicity / accessibility</td>
<td>• Costly</td>
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<td>• interconnectedness</td>
<td>• Environmental degradation</td>
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• **(b) Practitioners**

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(c) Patients

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(d) Medical Regulatory Authorities

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<td>• Efficacy</td>
<td>• Regulation complexities</td>
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(e) Medical Ethics

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<tr>
<td>• Altruism</td>
<td>• Patient confidentiality</td>
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<td>• Trial-and-error catastrophes</td>
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NEXT-GENERATION MEDICINE

• It’s a generation of digital medicine.

• A transition from “science of medicine” to “application of medicine.”

• “data-driven deduction” and less about “trial-and-error” application of medicine
NUTS AND BOLTS OF NEXT-GENERATION MEDICINE - KEY PLAYERS AND ENABLERS

(a) Key players

- State Governments
- Healthcare Practitioners
- Regulatory Authorities
- Institutions of Higher Learning
- Innovators / ICT Solutions Providers
NUTS AND BOLTS OF NEXT-GENERATION MEDICINE – KEY PLAYERS AND ENABLERS

(b) Key enablers

• Public-Private Partnership
• Ground-Breaking Research
• Rigorous Regulation
• Patriotism
CONCLUDING REMARKS

• Africa has been a global player in the discipline of medicine, and it has taken a pledge that it will continue to do so.

• Benchmarking with the best is the right step towards the provision of quality healthcare for our citizens.

• The fruition of this needs a collective effort, hence, we are calling for all the stakeholders to join hands to defend this universal human right.
THANK YOU

Q & A session