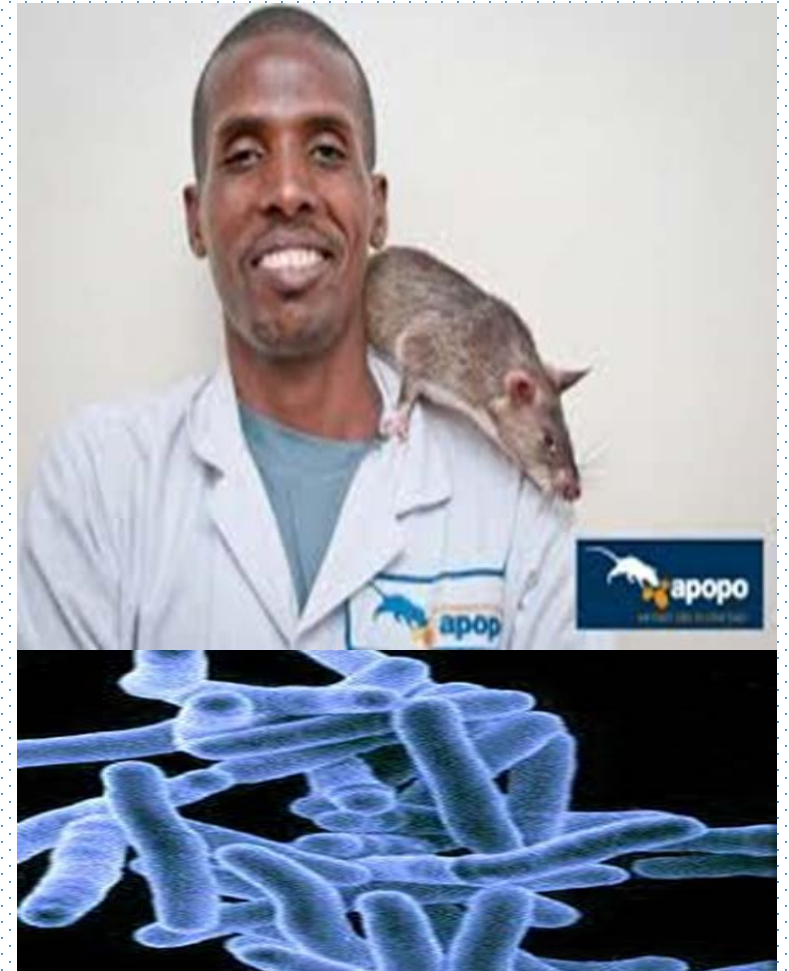


# Digital innovations to improve management of ill health

**Prof Peter Nyasulu, PhD MScMed MACE  
Africa Centre for Health Excellence &  
Stellenbosch University, South Africa**

# Apopo

- Is an Organic artificial intelligence, for TB diagnosis.
- Uses Pavlovian conditioning to train African Giant Pouched Rats.
- Training takes 9 months, can screen thousands of sputum samples a month. Over 58 rats trained.
- Efficient and low cost suitable testing TB in high risk population the developing world.



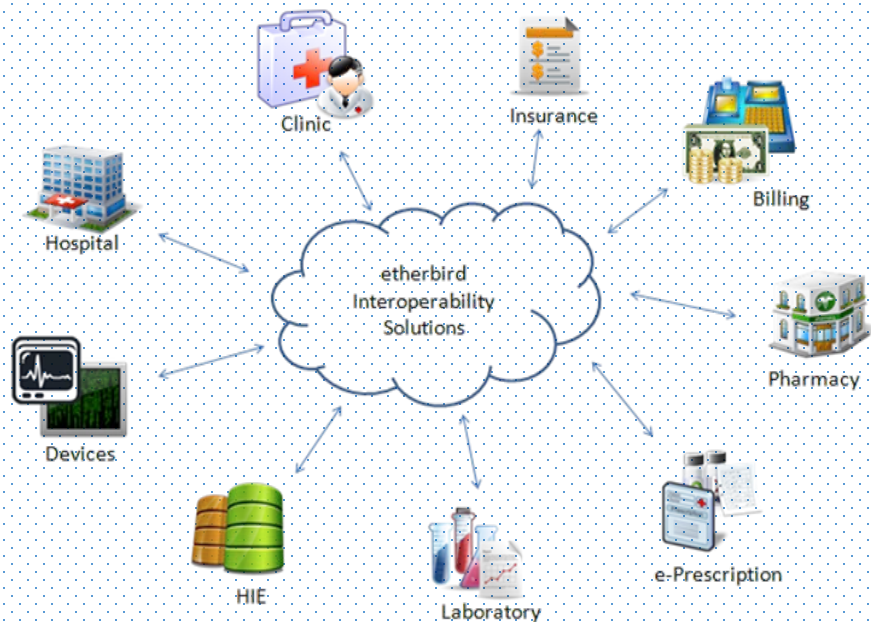
# Digital pill

- For monitoring treatment adherence .
- Paving the way for future 'digestibles'.
- Drugs with sensors that allows physicians to remotely monitor whether a medication has been taken and how it is being digested.

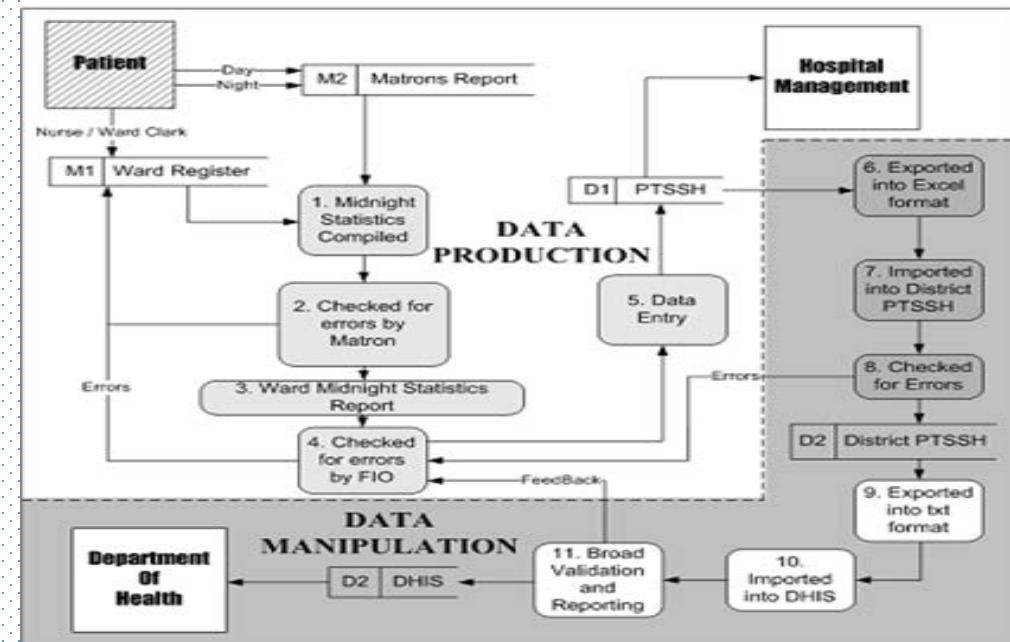


# Health Information Management

- [HL7® FHIR®](#) APIs healthcare apps is one of the Fast Healthcare Interoperability Resources (FHIR)
- Aim to improve access to health information and electronic health records

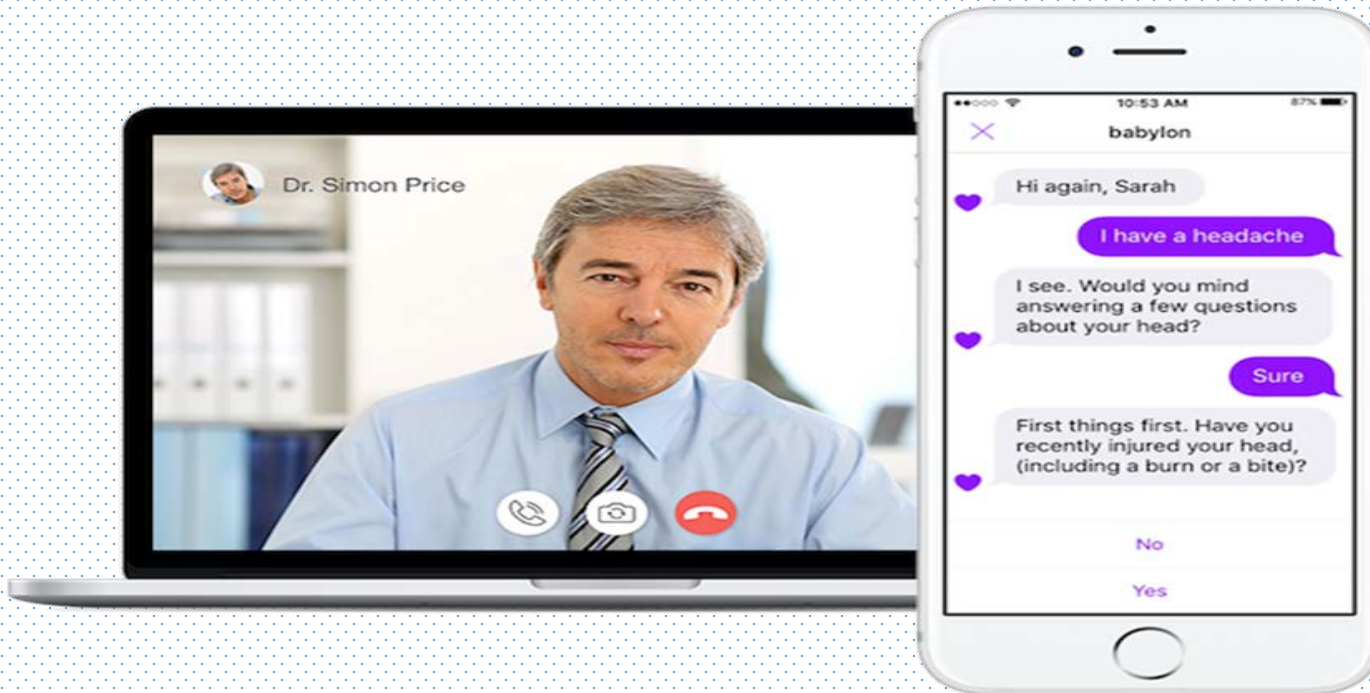


Data production and data flow in Hospitals of KwaZulu-Natal, South Africa



# Dr-Patient Relationship

- The [chatbots](#) are improving efficiency and enhancing productivity.
- Using machine learning and artificial intelligence, chatbots can answer simple medical questions..



# Key points

- Digital health has a critical role in improving patient management through disease diagnosis, treatment monitoring and tracking disease burden in a population.