

Country Report from ABN Member States
***Emerging Ethical Challenges of
Healthcare Digitalisation***

Singapore

ABN Meeting, 4 September 2023

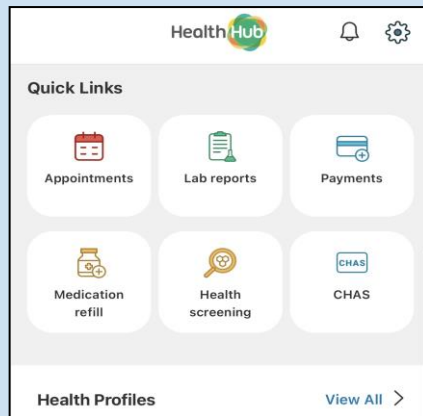
Outline

1. **Summary of Singapore's State of Healthcare Digitalisation and Emerging Technologies**
2. **Summary of Ethical Challenges Faced by Singapore**
3. **Existing Initiatives in Singapore and/or Plans and Recommendations to Address the Ethical Challenges**
4. **Other Major Achievements or Ongoing/Upcoming Bioethics Initiatives in Singapore**

1. Summary of Singapore's State of Healthcare Digitalisation and Emerging Technologies

- Increasing use of novel technologies in Singapore to address healthcare challenges, namely a rapidly ageing population, rising healthcare costs and shortage of healthcare professionals

1. Decentralised platforms



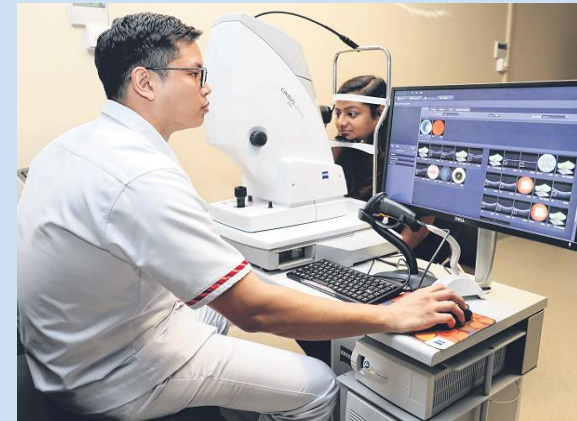
2. Wearables



3. Telemedicine



4. Healthcare technologies



2. Summary of Ethical Challenges Faced by Singapore

S/N	Ethical challenge(s) arising from healthcare digitalisation/emerging technologies
1	Privacy and confidentiality of personal data
2	Possible unethical use of genetic data
3	Medical negligence/malpractice from telemedicine
4	Ethical issues specific to AI



3. Existing Initiatives in Singapore and/or Plans and Recommendations to Address the Ethical Challenges

S/N	Plan/recommendation(s) to address ethical challenge (if any)
1	Data governance frameworks <ul style="list-style-type: none">• Personal Data Protection Act 2012• Health Information Bill (<i>upcoming</i>)
2	Safeguards against genetic discrimination <ul style="list-style-type: none">• [Insurance] Moratorium on Genetic Testing and Insurance (2021)• [Employment] Tripartite Guidelines for Fair Employment Practices
3	<ul style="list-style-type: none">• Licensing of telemedicine under the Healthcare Services Act in 2023• Consumer education to provide public guidance on safe use of telemedicine
4	<ul style="list-style-type: none">• Regulation of AI medical devices under the Health Sciences Authority• AI-specific guidelines• E.g. AI in Healthcare Guidelines (2021)• E.g. BAC's Big Data and AI in Human Biomedical Research Advisory Report (<i>upcoming</i>)

4. Other Major Achievements or Ongoing/Upcoming Bioethics Initiatives in Singapore

1. Human Nuclear Genome Editing (“HNGE”) Advisory Report

- To guide researchers in the ethical conduct of HNGE in Singapore

2. Casebook of Notable Medico-Legal Cases in Singapore

- A single resource for medical/legal fraternities and public to understand medico-legal and ethical issues & societal implications

3. Establishment of the ‘Bioethics Corner’ at the National Library in 2022

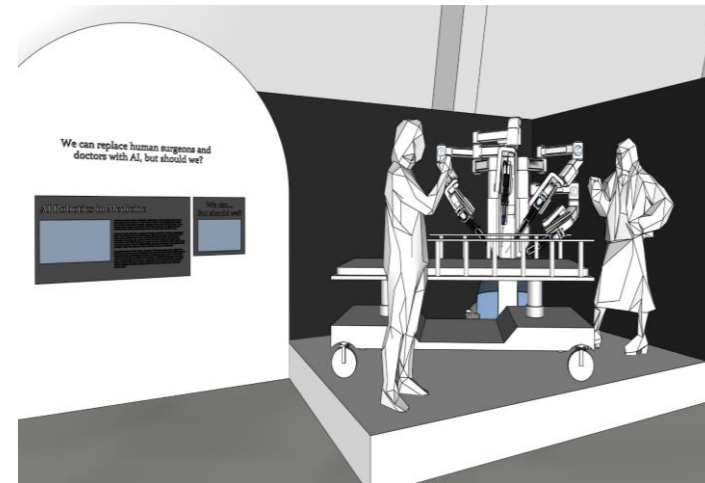
- To raise awareness and literacy on bioethics by enhancing public access to physical and digital bioethics collections

4. Revamp of Bioethics Exhibition at Science Centre Singapore

- To raise awareness of emerging ethical issues in biomedical science and research amongst the Singapore public



The BAC’s ‘Bioethics Corner’ at the Lee Kong Chian Reference Library in the National Library building



Mockup illustration of the ‘AI in Medicine’ exhibit at the revamped Bioethics Exhibition at the Science Centre Singapore