Bioethical reflections
on the right to benefit from
the advancement of science and its applications

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AI and medicine – historical context

- Medicine traditionally hermetically closed to ‘outsiders’
- MDs as sole decision-makers
  - vis-a-vis their patients (paternalism)
  - vis-a-vis society (professionalism)
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- Ex: resistance to the emergence of bioethics in the 1960s
AI and medicine – historical context

- Perception of medicine as blending science and *art*
- Requiring skills that must be learned through *practice*
- Machines as “encroaching on realms of decision-making revered as the province of expert professionals” (London)
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- Professionals routinely overestimate their performance
- Even in the face of evidence that machines often outperform them
AI in the clinic

- Diagnosis, prediction and prognosis, treatment decisions
- ...matter of life and death
AI in the clinic

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- The challenge of ‘black-box decisions’
  - Performance versus capacity to explain
- Long-standing tradition of clinical judgement as combining empirical and theoretical knowledge
- Machine learning as relying on big-data and being ‘theory-agnostic’
AI in medicine – ethical perspective

- Medicine ought to embrace the power of AI for the benefit of patients
- Imperative to responsibly adopt what AI has to offer
- Neglecting to rely on highly accurate algorithmic decision tools is “potentially lethal hubris” (London)
- Overcome aversion to innovation that may threaten the prerogative of clinical judgement
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Ethical foundations:
- principles of beneficence and do-no-harm
- a human rights approach
“Right to benefit from the advancement of science and its applications” as promulgated in:

- article 27 of the Universal Declaration of Human Rights. and
- article 15(b) of the International Covenant on Economic, Social and Cultural Rights signed and ratified by many countries, including Canada
AI in medicine – a human rights approach

- This right has recently been applied in the context of genomics other technological innovation

- It is important to also apply it to advancements in AI

- Call for openness to the integration of human and artificial intelligence in medicine
Thank you