

Governance for Big Data & AI: some emerging issues

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"Artificial intelligence is a **new frontier for the health sector**. As so often happens, the speed of technological advances has outpaced our ability to reflect these advances in sound public policies and address a number of **ethical dilemmas**. Many questions do not yet have answers and we are not yet sure we know all the questions that need to be asked." (07 June 2017)

Where Artificial Intelligence Will Pay Off Most in Health Care

- **robot-assisted surgery**
- **‘virtual nursing assistant’**

Artificial Intelligence With Deep Learning Technology Looks Into Diabetic Retinopathy Screening

Tien Yin Wong, MD, PhD; Neil M. Bressler, MD

- **screening**

Precision global health in the digital age

Antoine Flahault, Antoine Geissbuhler, Idris Guessous, Philippe Guérin, Isabelle Bolon, Marcel Salathé, Gérard Escher

- **early intervention**
- **health equity**



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The Present and Future

Artificial Intelligence in Precision Cardiovascular Medicine

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- **diagnosis**
- **prediction**

AI for Global Disease Surveillance

Issue No. 06 - November/December (2009 vol. 24)

- **surveillance**
- **policy intervention**

Governance

- * “... determines who has power, who makes decisions, how other players make their voices heard and how account is rendered.” (Institute on Governance)
- * “... process through which state and non-state actors interact to design and implement policies within a given set of formal and informal rules that shape and are shaped by power.” (World Development Report 2017)



- * “... system of values, policies and institutions by which a society manages its economic, political and social affairs through interactions within and among the state, civil society and private sector”
(UN Development Programme)

- * UNDP Principles of Good Governance:

- * Participation and inclusion
- * Accountability and rule of law
- * Non-discrimination and equality
- * Effective and efficient



Accountability

Governance = actors + rules + processes

Who is accountable?

To whom?

For what?

By which mechanisms?

Disruptive Innovation



Some Disruptive Ideas

- * Horizontal not vertical
- * Asymmetries of power
- * Fail-safe failures



Implications for Governance

- * 'Interoperability' of governance systems
- * Asymmetric governance models
- * Governing for *resilience* not control

A Modest Proposal

- * Scope of WHO-CC contribution
 - * Opportunity: Governance for AI
- * Conceptual and empirical bioethics research
 - * Opportunity: Case studies – ‘governance failures’
 - * Opportunity: Ethics by Design
- * Partnerships