Exploring the Bidirectoral Relationship between Artificial Intelligence and Neuroscience:A Workshop

Session 5: Regulatory & Policy Advocacy and Engagement

National Academies of Science, Engineering, Medicine Keck Center, Washington D.C., 25-26 March 2024

WHO-ITU Global Initiative on Alfor Health

Eva Weicken, Fraunhofer Heinrich Hertz Institute (HHI), Berlin, Germany



Global Initiative on Al for Health (GI-AI4H)

UN Organizations: World Health Organization (WHO) - International Telecommunication Union (ITU)











Al for Health ITU-WHO Focus Group

- Predecessor: <u>ITU-WHO Focus Group AI</u> for Health (May 2018 - Sept 2023)
- Launch Gl-Al4H, July 2023 @ Al for Good Global Summit, Geneva
- Initiative towards global standardization & assessment of AI in health in line with UN's Sustainable Development Goals



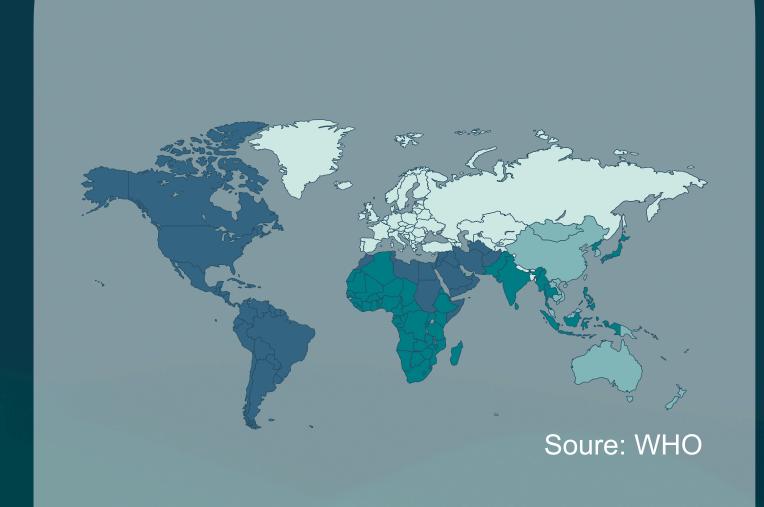


Challenges of Al as a Digital Health Technology

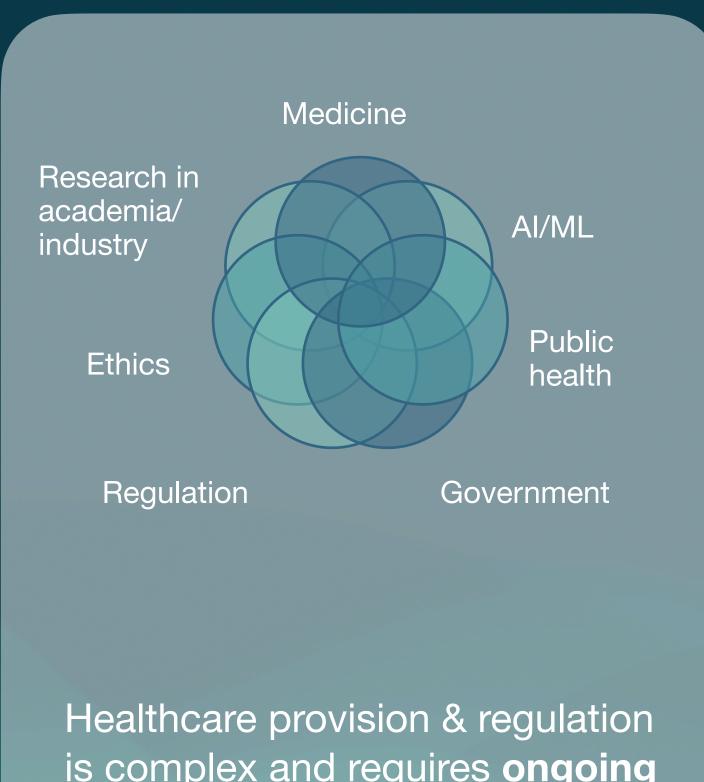
Require a multidisciplinary approach



Quality assurance through quality assessment, ongoing monitoring & evaluation.



Lack of internationally accepted standards that ensure safe, effective and equitable application of Al.



is complex and requires ongoing conversation & a multidisciplinary approach.

Global Dialogue on Digital Health & Al

Predecessor FG-Al4H: Workshops & Meetings





5/2018 Al for Good Geneva

11/2018 Columbia University NYC

10/2018

WHO HQ

Geneva

4/2019 World Expo Shanghai

1/2019

Lausanne

EPFL

5/2019

Geneva

Al for Good

9/2019 **UCSAF** Zanzibar

01/2020 PAHO/ WHO Brasilia

11/2019

ICMR & NICF

New Delhi

05/2020 Online

01/2021 Online

09/2021 Online

05/2022 Berlin

12/2022 Douala

07/2023 Al for Good Geneva

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02/2022 09/2022 Helsinki

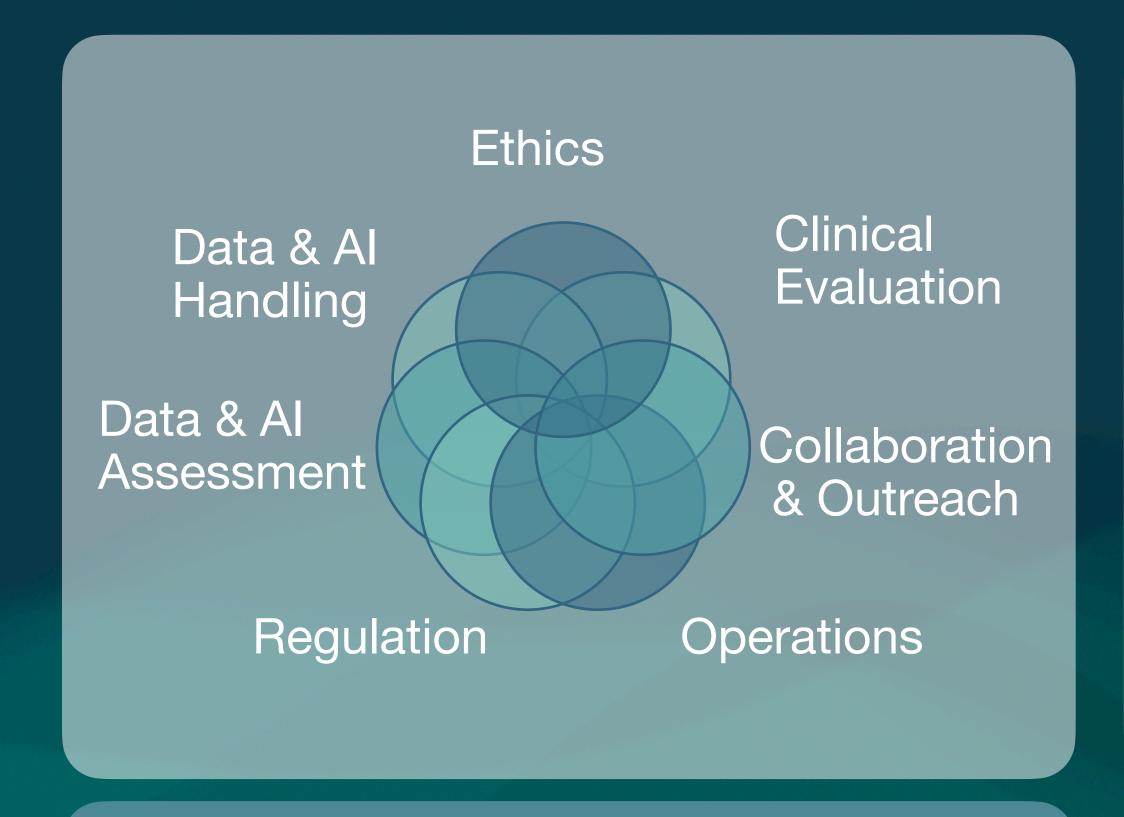
Online

03/2023 Harvard/MIT 10/2023 **KACST**

fondation **BOTNAR**



Working Groups



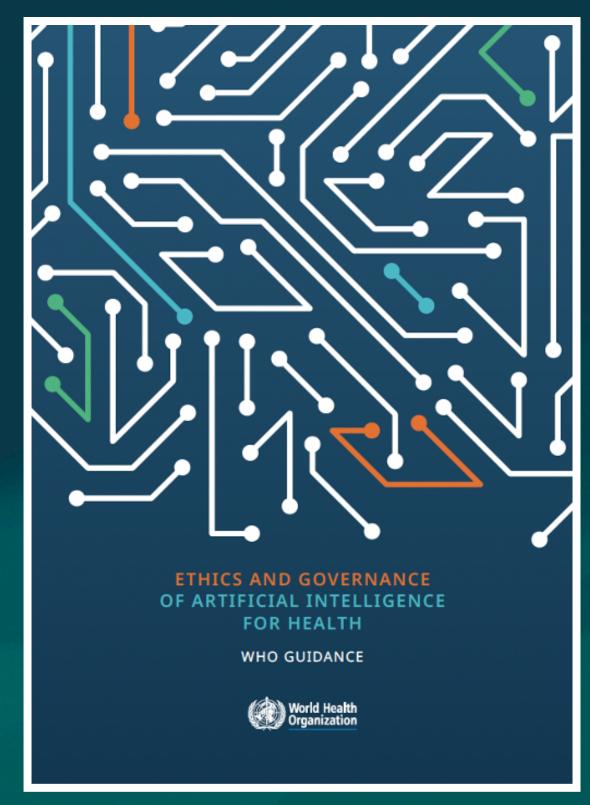
TU-T FG-Al4H Deliverable
Headward Control Cont

Created best practices & reference documentation

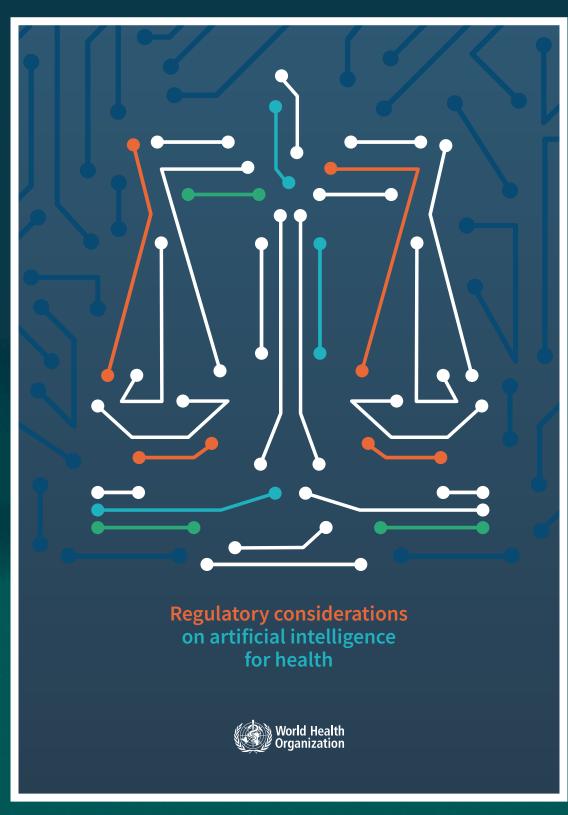
Established processes & related policies



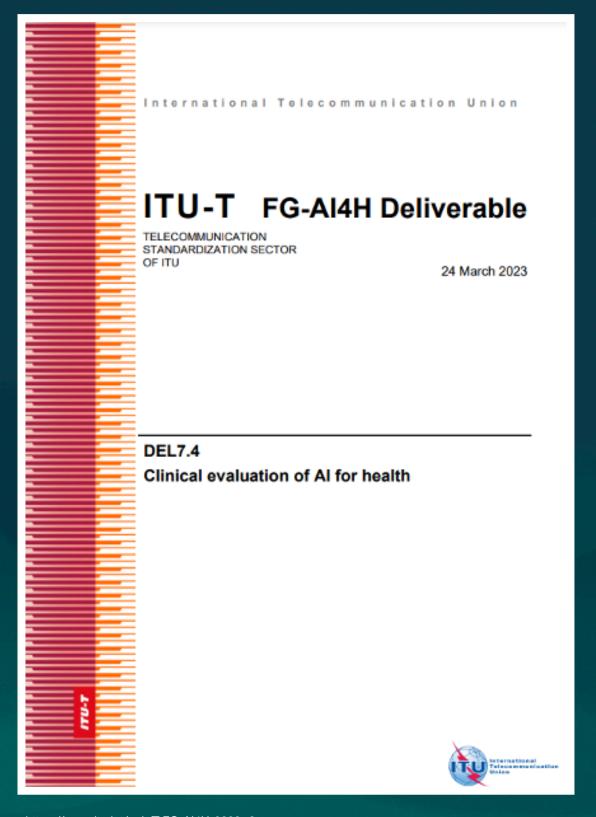
+ 2000 pages of guidance documentation produced by FG-AI4H







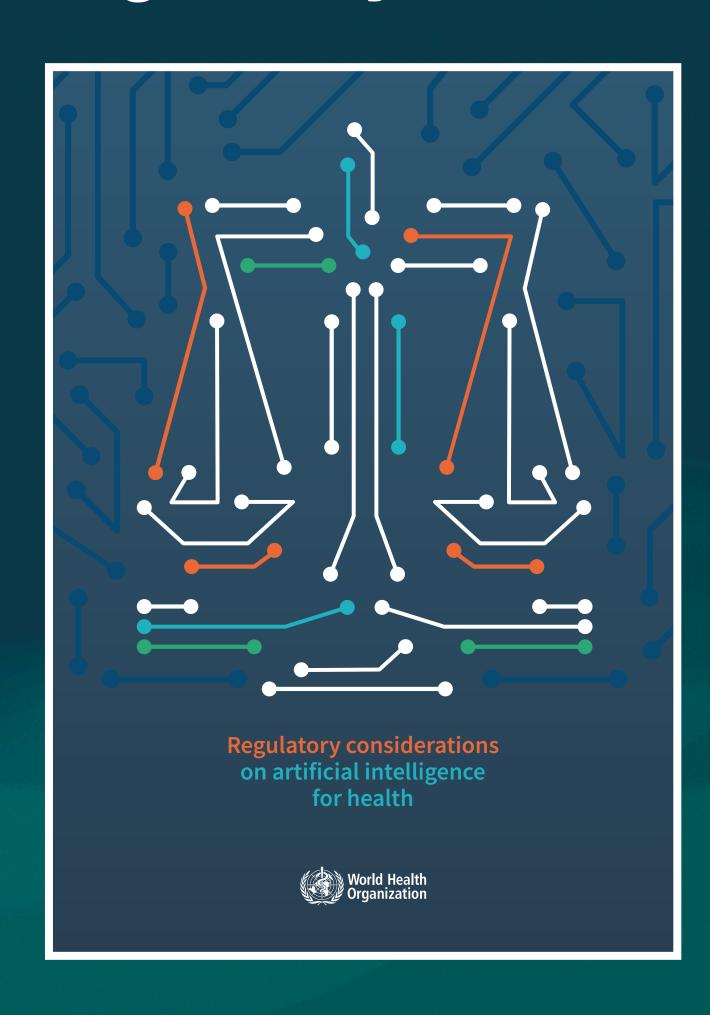
https://iris.who.int/bitstream/handle/10665/373421/9789240078871-eng.pdf?sequence=1&isAllowed=y



https://www.itu.int/pub/T-FG-AI4H-2023



Regulatory Considerations

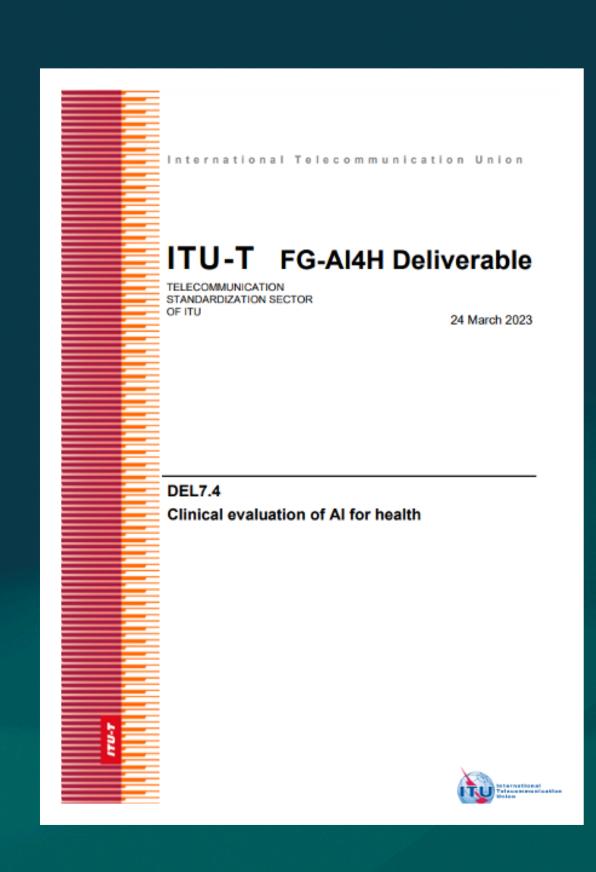


- Participation of international regulators
- Recommendations in 6 key areas: (not fully inclusive)
 - 1) Documentation & transparency
 - 2) Risk management & AI systems development lifecycle approaches
 - 3) Analytical & clinical evaluation
 - 4) Data quality
 - 5) Engagement & collaboration
 - 6) Privacy & data protection





Framework Clinical Evaluation of Al for Health



Validate for changes in model, setting or population

Design and Purpose

- Intended use
- Risks and benefits
- Interoperability
- Security
- User testing

Analytical Validation

- Training data
- External validation
- Performance metrics
- Benchmarking

Clinical Validation

- Prospective analysis plan
- Evaluates impact on pathway
- Meaningful endpoint
- Transparent report

Ongoing Monitoring

- Monitors safety and effectiveness
- Reports adverse events
- Algorithmic audits

Economic evaluation

Ethical considerations

Topic Groups: Created benchmarking standards for health Al









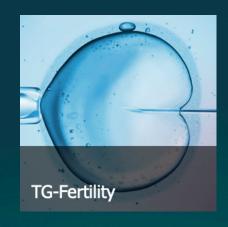












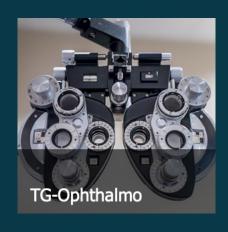
























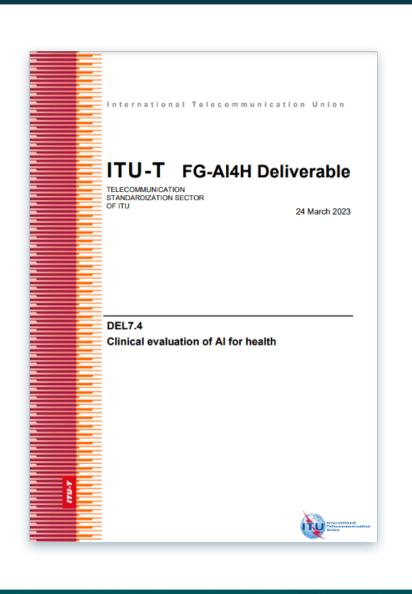


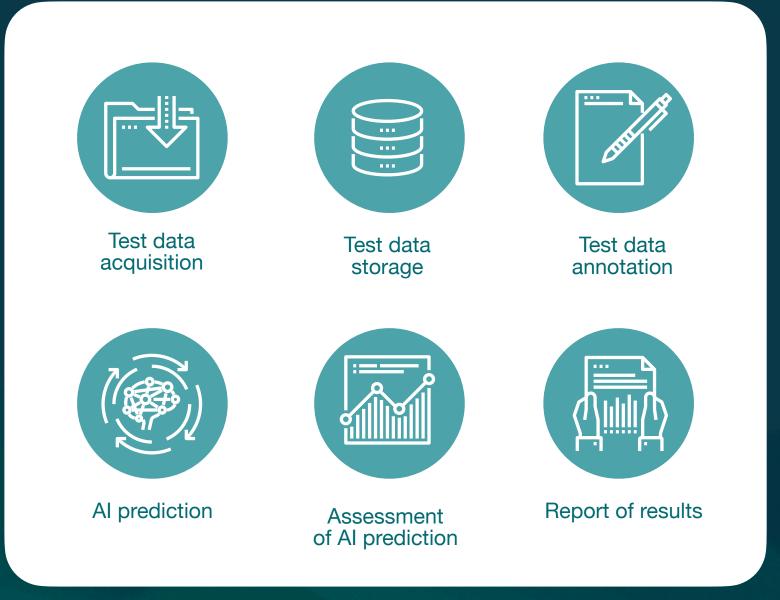


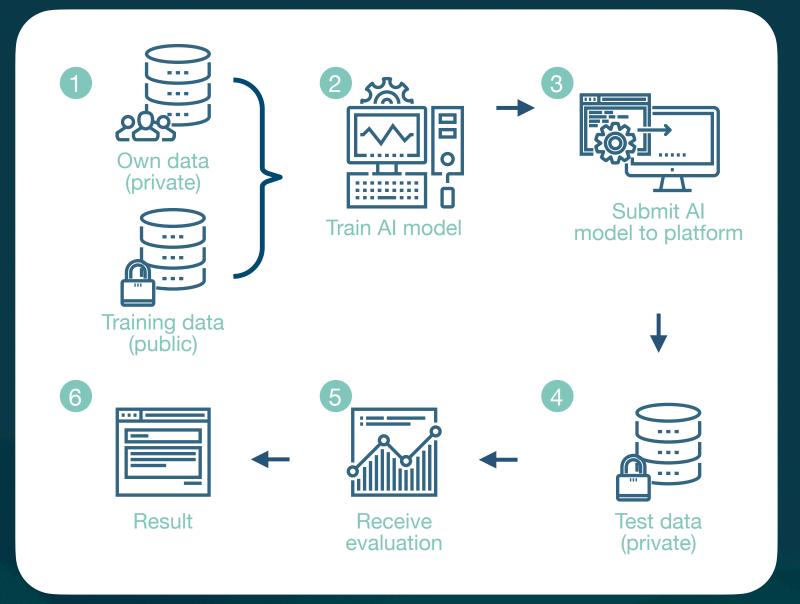
- 24 specific health use cases bringing together domain experts & data
- propose procedures to benchmark Al models for a given task within a health topic



Key Objectives Focus Group Al for Health







Guidance documentation: working & topic groups

Open source software https://github.com/fg-ai4h

Benchmarking & Al auditing





Global Initiative on Al for Health

Key Objectives



- Twee



Tedros Adhanom Ghebreyesus 🍪 @DrTedros

Al holds great promise for improving the delivery of healthcare and medicine, and helping countries achieve universal health coverage. I was pleased to launch the @WHO-@ITU-@WIPO Global Initiative on Al for Health, at the #AlforGood Summit today.



7:18 PM · Jul 6, 2023 · 26.8K Views



Enable

Standards, governance, policies, and guidance on evidence-based health Al



Facilitate

Global community & collaboration for self-sustained Al solutions tailored to local requirements



Implement

Support & sustainable funding for implementation of health AI at country level

Thank you very much!



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FG-Al4H website: https://itu.int/go/fgai4h



