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| A black and white logo  Description automatically generated with low confidence | INTERNATIONAL TELECOMMUNICATION UNION  **TELECOMMUNICATION STANDARDIZATION SECTOR**  STUDY PERIOD 2022-2024 | | | FG-AI4H-O-101-R1 |
| **ITU-T Focus Group on AI for Health** |
| **Original: English** |
| **WG(s):** | | N/A | | Berlin, 31 May – 2 June 2022 |
| **DOCUMENT** | | | | |
| **Source:** | | FG-AI4H | | |
| **Title:** | | Report of the 15th meeting (Meeting O) of the Focus Group on Artificial Intelligence for Health (Berlin, 31 May – 2 June 2022) | | |
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| **Abstract:** | This document contains the report of the 15th meeting of the ITU-T Focus Group on Artificial Intelligence for Health (FG-AI4H), held in Berlin, 31 May – 2 June 2022. Revision 1 contains corrections to the list of documents and mention to the AI4H workshop on 30 May 2022. |

Executive Summary

The 15th meeting of the FG-AI4H took place in Berlin, 31 May – 2 June 2022 to review updates to its ten deliverables and sub-deliverables, and review progress by the existing 24 topic groups. The meeting was preceded by a workshop on 30 May that explored the new guidance on ethics, cooperation and outreach activities, and an overview of the work and challenges for the TG-PoC and TG-Histo.

One important topic of discussion was the ITU/WHO Global Initiative on AI for Health, as the platform to continue and scale up the work developed by the FG-AI4H. Initial views were exchanged and a refined proposal will be reviewed at the next FG-AI4H meeting.

Another important agreement was the adoption of the Ethics and governance of artificial intelligence for health prepared by the WHO ethics experts group with input from FG experts as FG-AI4H DEL01.

**FG-AI4H** **leadership**: there were no further changes at this meeting.

**Topic groups:**

* **TG-Neuro:** created a new sub-topic group on *scalable digital platform for proactive brain health*, led by [Seyed Khaligh-Razavi](mailto:seyed@cognetivity.com) and [Tom Sawyer](mailto:tom@cognetivity.com) (Cognetivity, UK). Reference: [O-037](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-037.docx).
* **TG-Sanitation:** The TG was merged into TG-Outbreaks, due to identified synergies on the areas of study.
* **TG-Outbreaks** (Outbreak detection): The TG was merged with TG-Sanitation with the following drivers: [Auss Abbood](mailto:abbooda@rki.de) and [Alexander Ullrich](mailto:UllrichA@rki.de) (Robert Koch Institute, Germany), [Khahlil Louisy](mailto:klouisy@hks.harvard.edu) [Alexander Radunsky](mailto:aradunsky@mail.harvard.edu) and (Institute for Technology & Global Health, US). An updated work plan and TDD will be prepared for the next meeting.
* **TG-Symptom** (Symptom assessment): [Martin Cansdale](mailto:martin@your.md) (Healthily, UK) joins [Henry Hoffmann](mailto:henry.hoffmann@ada.com) (Ada Health, Germany) as co-driver.

**Deliverables update:**

* All available deliverables were reviewed, their latest version is found in the [FG-AI4H collaboration site](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/SitePages/Deliverables.aspx).

The following updated **output documents** were agreed:

* [O-102](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-102.docx): Updated call for proposals: use cases, benchmarking, and data (to be issued when the dates of the next meeting are defined)
* [O-200](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-200.docx): Updated list of FG-AI4H deliverables
* [O-201](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-201.docx): DEL01 – Ethics and governance of artificial intelligence for health

The following documents were reconfirmed:

* [F-103](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-F-103.docx): Updated FG-AI4H data acceptance and handling policy
* [C-104](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-C-104.docx): Thematic classification scheme
* [F-105](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-F-105.docx): ToRs for the WG-Experts and call for experts
* [F-106](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-F-106.docx): Guidelines on FG-AI4H online collaboration tools
* [M-107](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-M-107.docx): FG-AI4H onboarding document
* [FG-AI4H Whitepaper](https://www.itu.int/en/ITU-T/focusgroups/ai4h/Documents/FG-AI4H_Whitepaper.pdf) ([K-002](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-K-002.docx))
* [J-105](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-J-105.docx): TDD Template
* [J-103](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-J-103.docx): CfTGP template

The meeting had 84 participants over the various days and reviewed 60 documents (not counting attachments).

Two outgoing reply LSs were prepared: one on the AI standardization roadmap being prepared by ITU-T SG13 and another nominating FG-AI4H representatives in the JCA on digital COVID-19 certificates (JCA-DCC) newly created by TSAG.

A list of the decisions taken at the meeting is found in [Annex E](#AnnexE) of the report.

The next meeting of the FG-AI4H is planned to be held in Helsinki, September 2022. Details will be communicated in the FG-AI4H webpage and mailing list.

**CONTENTS**

[1 Opening 6](#_Toc113565320)

[2 Approval of agenda 6](#_Toc113565321)

[3 Documentation and allocation 6](#_Toc113565322)

[4 IPR 6](#_Toc113565323)

[5 Management updates 6](#_Toc113565324)

[6 Approval of Meeting N outcomes and updates 6](#_Toc113565325)

[7 Review of incoming liaison statements 6](#_Toc113565326)

[7.1 FG-TBFxG 6](#_Toc113565327)

[8 Information on AI-related activities 7](#_Toc113565328)

[9 Horizontal and strategic topics 7](#_Toc113565329)

[9.1 Discussion on transition to ITU/WHO Global Initiative on AI for Health 7](#_Toc113565330)

[10 Working Group updates 7](#_Toc113565331)

[10.1 Data and AI solution assessment methods (WG-DAISAM) 7](#_Toc113565332)

[10.2 Data and AI solution handling (WG-DASH) 7](#_Toc113565333)

[10.3 Operations (WG-O) 8](#_Toc113565334)

[10.4 Ethical considerations on AI for health (WG-Ethics) 8](#_Toc113565335)

[10.5 Regulatory considerations on AI for health (WG-RC) 9](#_Toc113565336)

[10.6 Clinical Evaluation (WG-CE) 9](#_Toc113565337)

[10.7 Collaborations and Outreach (WG-CO) 9](#_Toc113565338)

[10.8 Ad-hoc group on digital technologies for COVID health emergency (AHG-DT4HE) 10](#_Toc113565339)

[11 FG-AI4H Open Code Initiative 10](#_Toc113565340)

[12 FG-AI4H deliverables 11](#_Toc113565341)

[12.1 Process for assessing quality of draft FG-AI4H deliverables 11](#_Toc113565342)

[12.2 List of deliverables 11](#_Toc113565343)

[12.3 New deliverable proposals 13](#_Toc113565344)

[12.4 DEL00: Overview of the FG-AI4H deliverables 13](#_Toc113565345)

[12.5 DEL0.1: Common unified terms 13](#_Toc113565346)

[12.6 DEL01: AI4H ethics considerations 13](#_Toc113565347)

[12.7 DEL02: AI4H regulatory best practices 13](#_Toc113565348)

[12.7.1 DEL02.1: Mapping of IMDRF essential principles to AI for health software 15](#_Toc113565349)

[12.7.2 DEL02.2: Good practices for health applications of machine learning: Considerations for manufacturers and regulators 15](#_Toc113565350)

[12.8 DEL03: AI4H requirements specifications 15](#_Toc113565351)

[12.9 DEL04: AI software life cycle specification 15](#_Toc113565352)

[12.10 DEL05: Data specification 16](#_Toc113565353)

[12.11 DEL05.1: Data requirements 16](#_Toc113565354)

[12.11.1 DEL05.2: Data acquisition 16](#_Toc113565355)

[12.11.2 DEL05.3: Data annotation specification 16](#_Toc113565356)

[12.11.3 DEL05.4: Training and test data specification 16](#_Toc113565357)

[12.11.4 DEL05.5: Data handling 17](#_Toc113565358)

[12.11.5 DEL05.6: Data sharing practices 17](#_Toc113565359)

[12.12 DEL06: AI Training best practices specification 17](#_Toc113565360)

[12.13 DEL07: AI for health evaluation considerations 17](#_Toc113565361)

[12.13.1 DEL07.1: AI4H evaluation process description 17](#_Toc113565362)

[12.13.2 DEL07.2: AI technical test specification 17](#_Toc113565363)

[12.13.3 DEL07.3: Data and artificial intelligence assessment methods (DAISAM) reference 18](#_Toc113565364)

[12.13.4 DEL07.4: Clinical evaluation of AI for health 18](#_Toc113565365)

[12.13.5 DEL07.5: Assessment Platform 18](#_Toc113565366)

[12.14 DEL08: AI4H scale-up and adoption 19](#_Toc113565367)

[12.15 DEL09: AI4H applications and platforms 19](#_Toc113565368)

[12.15.1 DEL09.1: Mobile Applications 19](#_Toc113565369)

[12.15.2 DEL09.2: Cloud-based AI applications 19](#_Toc113565370)

[12.16 DEL10: AI4H use cases: Topic Description Documents 19](#_Toc113565371)

[13 Updates and new proposals for existing TGs 20](#_Toc113565372)

[13.1 Template updates: TDD, CfTGP 20](#_Toc113565373)

[13.2 TG-Cardio (Use of AI in Cardiovascular Disease Management) 23](#_Toc113565374)

[13.3 TG-Derma (Dermatology) 23](#_Toc113565375)

[13.4 TG-Bacteria (Diagnoses of bacterial infection and anti-microbial resistance, AMR) 24](#_Toc113565376)

[13.5 TG-Diagnostic CT (Volumetric chest computed tomography) 24](#_Toc113565377)

[13.6 TG-Dental (Dental diagnostics and digital dentistry) 24](#_Toc113565378)

[13.7 TG-FakeMed: AI-based detection of falsified medicine 24](#_Toc113565379)

[13.8 TG-Falls (Falls amongst the elderly) 25](#_Toc113565380)

[13.9 TG-Histo (Histopathology) 25](#_Toc113565381)

[13.10 TG-Malaria: Malaria detection 25](#_Toc113565382)

[13.11 TG-MCH: Maternal and child health 25](#_Toc113565383)

[13.12 TG-Neuro: Neurological disorders 26](#_Toc113565384)

[13.13 TG-Ophthalmo (Ophthalmology) 26](#_Toc113565385)

[13.14 TG-Outbreaks (AI for Outbreak Detection) 26](#_Toc113565386)

[13.15 TG-Sanitation 27](#_Toc113565387)

[13.16 TG-Psy (Psychiatry) 27](#_Toc113565388)

[13.17 TG-Snake (Snakebite and snake identification) 27](#_Toc113565389)

[13.18 TG-Symptom (Symptom assessment) 27](#_Toc113565390)

[13.19 TG-TB (Tuberculosis) 28](#_Toc113565391)

[13.20 TG-Radiology (Radiology) 28](#_Toc113565392)

[13.21 TG-Diabetes (Primary and secondary diabetes prediction) 29](#_Toc113565393)

[13.22 TG-Endoscopy (AI for endoscopy) 29](#_Toc113565394)

[13.23 TG-MSK (AI for musculoskeletal medicine) 29](#_Toc113565395)

[13.24 TG-Fertility (AI for human reproduction and fertility) 29](#_Toc113565396)

[13.25 TG-POC (AI for point-of care diagnostics) 30](#_Toc113565397)

[14 Proposals for new topic areas 30](#_Toc113565398)

[14.1 Proposed new TG on Nephrology 30](#_Toc113565399)

[15 Review / reconfirmation of previous output documents 30](#_Toc113565400)

[16 Working methods 30](#_Toc113565401)

[17 Outcomes of this meeting 31](#_Toc113565402)

[17.1 WG updates 31](#_Toc113565403)

[17.2 TG updates 31](#_Toc113565404)

[17.3 Output liaison statements 31](#_Toc113565405)

[17.4 Output documents 31](#_Toc113565406)

[17.5 Deliverables and parent group reporting 31](#_Toc113565407)

[18 Future work 31](#_Toc113565408)

[18.1 Schedule of future FG meetings and workshops 31](#_Toc113565409)

[18.2 Work plan and timeline 32](#_Toc113565410)

[18.3 Interim activities (online) 32](#_Toc113565411)

[19 Promotion and outreach 32](#_Toc113565412)

[20 A.O.B. 32](#_Toc113565413)

[21 Closing 32](#_Toc113565414)

[Annex A: Agenda [to be replaced with the final version] 34](#_Toc113565415)

[Annex B: Documentation 40](#_Toc113565416)

[Annex C: List of participants 45](#_Toc113565417)

[Annex D: Summary of FG-AI4H resources and electronic working methods 49](#_Toc113565418)

[Annex E Summary of decisions 53](#_Toc113565419)

# Opening

The 15th meeting (N) of the FG-AI4H took place in Berlin, 31 May – 2 June 2022 chaired by the FG-AI4H Chairman, Mr Thomas Wiegand (Fraunhofer HHI, Germany). He welcomed the participants and presented an overview of the FG-AI4H work, as found in [O-002](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-002.pptx).as well as an introduction to Fraunhofer HHI, as found in [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-002-A01.pptx).

# Approval of agenda

T The agenda in [O-001](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-001.docx) (Agenda) was approved. Various updates were issued during the meeting, the final version being found in [O-001-R02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-001-R02.docx) (cf. [Annex A](https://euc-word-edit.officeapps.live.com/we/wordeditorframe.aspx?ui=en%2DUS&rs=en%2DUS&wopisrc=https%3A%2F%2Fituint-my.sharepoint.com%2Fpersonal%2Fkaoru_mizuno_itu_int%2F_vti_bin%2Fwopi.ashx%2Ffiles%2Fd210f6355cf34eafbdf49ced212da52b&wdenableroaming=1&mscc=1&wdodb=1&hid=1F2251F2-5F19-477A-9107-36722D590609&wdorigin=AuthPrompt&jsapi=1&jsapiver=v1&newsession=1&corrid=3f0a4ac7-4bcf-4d3b-aae7-7ce0843546b6&usid=3f0a4ac7-4bcf-4d3b-aae7-7ce0843546b6&sftc=1&cac=1&mtf=1&sfp=1&instantedit=1&wopicomplete=1&wdredirectionreason=Unified_SingleFlush&rct=Medium&ctp=LeastProtected#AnnexA)).

The time allocation for the presentation of meeting documents was maintained live though the link: <https://docs.google.com/spreadsheets/d/1smOSiyEqZqsuKp27-ryba-7uNAYGiKDbPJttqvU78Pg>.

# Documentation and allocation

The initial list of documents and allocation in [O-001](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-001.docx) were adopted. The final list is found in [Annex B](#AnnexB).

# IPR

The text in [O-001](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-001.docx) Annex A was read and no declarations were made at the meeting.

It was highlighted that the IPR question should be asked periodically under the various TG (e‑)meetings, since many of participants in those may not be attending the FG-AI4H Plenary meetings.

# Management updates

There were no updates to the FG-AI4H leadership team at this meeting.

# Approval of Meeting N outcomes and updates

The report of virtual Meeting N (online, 15 – 17 February 2022) in [N-101](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-101.docx) was **approved** without comments.

The following documents from Meeting N were **noted** by the meeting:

* [N-102](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-102.docx): Updated call for proposals: use cases, benchmarking, and data
* [N-200](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-200.docx): Updated list of FG-AI4H deliverables

No comments were made.

1. The report of the virtual meeting held online, 15 – 17 February 2022 found in [N-101](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-101.docx) was approved without comments and its two output documents were noted ([N-102](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-102.docx) and [N-200](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-200.docx)).

# Review of incoming liaison statements

## FG-TBFxG

[O-030](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-030.pptx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-030-A01.pptx) + [A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-030-A02.pptx) – LS on the outcomes of the first meeting of the ITU-T Focus Group on Testbed Federations for IMT-2020 and beyond [from FG-TBFxG]

**Abstract:** This outgoing liaison statement aims to inform all relevant groups about the outcomes of the first meeting of the ITU-T Focus Group on Testbed Federations for IMT-2020 and beyond (FG-TBFxG) which held fully virtual from 4 to 7 April 2022.

The LS was noted. As FG-AI4H has a similarity in accessing federated data, it was suggested to have a look at the LS and to follow the discussion in this new FG.

# Information on AI-related activities

Meeting O was preceded by a workshop on 30 May, the programme and recordings are available at <https://itu.int/en/ITU-T/Workshops-and-Seminars/ai4h/20220530/Pages/programme.aspx> and the presentations to the workshop were issued as documents of the meeting, FGAI4H-O-040 to FGAI4H-O-050.

The meeting was reminded that a series of webinars took place and ITU AI4H challenge is in preparation. The idea is that the webinars on horizontal and vertical themes would happen every two weeks and be organized within the context of the AI for Good online events, <https://aiforgood.itu.int/eventcat/discovery-ai-and-health/>. Mathias encouraged more FG AI4H experts to be involved in the webinars, either as speakers or moderators.

# Horizontal and strategic topics

No horizontal topics were discussed at this meeting. One important strategic topic discussed at this meeting was the follow up platform to continue the work of the FG-AI4H after its termination, as follows.

## Discussion on transition to ITU/WHO Global Initiative on AI for Health

Three sessions were dedicated to discuss the ITU/WHO Global Initiative on AI for Health, that is though to be the successor platform for the FG-AI4H.

The slides in [O-058](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-058.pptx) were presented by Sameer Pujari (WHO) and used as a basis for discussions. They summarized the discussions about the transition from FG-AI4H to an ITU/WHO Global Initiative on Artificial Intelligence for Health (GI-AI4H).

Also, a questionnaire found at: [https://docs.google.com/spreadsheets/d/1AEhJN9LgTUkA‌ShupHm7NZsprih3UAz0wIiXaMfz0vE4/edit?usp=sharing](https://docs.google.com/spreadsheets/d/1AEhJN9LgTUkAShupHm7NZsprih3UAz0wIiXaMfz0vE4/edit?usp=sharing) and participants were invited to rate their expectations for a sample of future activities under the GI-AI4H.

There was overall support for the idea of a platform that would do more than the current benchmarking scope of FG-AI4H, e.g. to assist in further the availability and adoption of AI-based health solutions. The FG management would refine the proposal and share at the next meeting, for further discussions.

# Working Group updates

## Data and AI solution assessment methods (WG-DAISAM)

The WG is chaired by [Pat Baird](mailto:pat.baird@philips.com) (Philips, USA), assisted by vice-chair, [Luis Oala](mailto:luis.oala@hhi.fraunhofer.de) (Fraunhofer HHI, Germany) and [Pradeep Balachandran](mailto:pbn.tvm@gmail.com) (Technical e-health consultant, India).

[***O-051***](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-051.pptx)***: ML4H Trial Audits–Iteration 2.0***

Pradeep briefed the overview and the current status of the work of ML4H Trial Audits using the slides in [O-051](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-051.pptx).

Twelve topic groups enrolled for the collaboration with the ML4H Trial Audit project, and 2 of them are currently pending. Four TGs have completed the generation of Audit Report. TG-Dental is now preparing the publication in the Journal-of-Medical Systems (JoMS) special issue. Audit Challenge is visible on the Assessment Platform (health.aiaudit.org) and reports can be accessible.

King's College London: How did each group decide ML metrics and NHS guidelines. Pradipta: NHS guidelines and other widely accepted regulations and standards are followed, details are described in the WG's document.

Related discussion was made on Open Code Initiative, see §‎11.

## Data and AI solution handling (WG-DASH)

WG-DASH has [Marc Lecoultre](mailto:ml@mllab.ai) (ML Lab, Switzerland) as chair and [Ferath Kherif](mailto:Ferath.kherif@chuv.ch) (CHUV, Switzerland) as Vice-chair.

No particular reports were provided specifically for WG-DASH. All the focus of the work has been in the Open Code Initiative, see §‎11.

## Operations (WG-O)

The WG on operations (WG-O) is co-chaired by [Markus Wenzel](mailto:markus.wenzel@hhi.fraunhofer.de) and [Eva Weicken](mailto:eva.weicken@hhi.fraunhofer.de) (Fraunhofer HHI, Germany).

No particular reports were provided specifically for WG-O. All the focus of the work has been in progressing DEL0.1 and DEL7, see §‎12.

## Ethical considerations on AI for health (WG-Ethics)

The chair of the FG-AI4H WG-Ethics, [Andreas Reis](mailto:reisa@who.int) (WHO).

[O-053](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-053.pptx): Update WG on AI4H ethics considerations – Seminars

Andreas presented the updates on the recent activities on Ethics and Governance of Artificial Intelligence for Health. He highlighted:

* Collaboration / Coordination with other International Organizations working on ethical issues in AI, including ITU, UNESCO, OECD and the Council of Europe (focus on patient-provider relationship).
* A new WHO publication on "Ageism in artificial intelligence for health", that can be found at <https://www.who.int/publications/i/item/9789240040793>
* The Ethics experts group in WHO is starting to draft a policy brief on Ethics & AI-based development of medicines/vaccines. He invited FGAI4H experts working on this to contact him for collaboration.
* WHO is assisting its Member States by analysing the existing legal landscape in digital health/AI and developing model legislation for the use of AI for health.
* An online training course on Ethics & Governance of AI is being developed, see the Open WHO platform at <https://openwho.org/courses/ethics-ai>.
* WHO is planning a series of regional workshops in the next six months to disseminate the guidance documents. Collaboration with FGAI4H will be important during these implementation activities.
* Andreas also reminded the meeting that the WG-Ethics worked with various TGs to provide feedback in TDDs in ethics activity, in addition to the development of the WHO guidance on Ethics for AI in health.
* The WHO *Ethics and governance of artificial intelligence for health* guidance document was launched in June 2021 and it is currently in implementation and dissemination phase. Andreas clarified that this WHO guidance document could also be seen as the product of collaboration within the FG-AI4H and also considered as a deliverable, DEL01.

Andreas was followed by Ursula Zhao (WHO) with a presentation on a series of workshops and training activities that are being organized. See the slides in [O-042](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-042.pptx). Officially launched at this meeting, with the intro course workshop the day preceding this meeting. Sameer provided complementary comments. Workshops with a goal not only to inform, but to help countries in the various regions to start applying the guidelines in their national contexts.

Comments:

* Metrics to measure adoption, impact? Process indicators, how many countries are interested in the product? Language is incorporated in national legislation/‌regulations/‌guidance. Sameer, a module of WHO digital health platform, on maturity assessment. Activities on the online digital health platform.
* Adoption in national guidelines and included in institutional review. Encourage going beyond domestic guidelines to see adoption in institutions by the committees doing ethical review of research projects. E.g., to touch patient data a student in the US needs prior HIPA training. It would be useful to make it to that level.
* Alignment of the work of the FG work with the IMDRF guidelines/principles is very important.
* There is a need for practical level guidance. The current guidance document includes checklists for designers, which were developed with input from the FG, and the ethics experts are planning to develop course modules for developers on "Ethics by Design".

## Regulatory considerations on AI for health (WG-RC)

The chair of the WG-RC is [Naomi Lee](mailto:naomi.lee@lancet.com) (Lancet, UK), assisted by [Shada Alsalamah](mailto:alsalamahs@who.int) (WHO).

No specific report was made for the WG-RC, as the focus of the work has been in the preparation of DEL2. See §‎12.7.

## Clinical Evaluation (WG-CE)

The co-chairs of the WG-CE are [Naomi Lee](mailto:naomi.lee@lancet.com) (The Lancet, UK), [Shubhanan Upadhyay](mailto:shubs.upadhyay@ada.com) (ADA Health, Germany), and [Eva Weicken](mailto:eva.weicken@hhi.fraunhofer.de) (Fraunhofer HHI, Germany).

The objectives of the WG-CE are to:

* Build a **community of collaboration** around clinical evaluation of AI for health
* Guidance for current **best practice evaluation**, **principles of evaluation** to ensure it is generally relevant across all countries
* Used by **researchers, clinicians, patients, developers, civil-society, policy-makers**
* Give special consideration of clinical evaluation in **LMIC settings**
* Take tasks that are applicable for **FG-AI4H**

Eva presented [O-038](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-038.docx) on the overview of the WG-CE and DEL7.4 which is the focus of the WG. See §‎12.13.4.

## Collaborations and Outreach (WG-CO)

The chair of the WG-CO is Andrew Farlow (University of Oxford, UK), who introduced a progress report in the slides in [O-054](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-054.docx). [Matthias Groeschel](mailto:matthias.groeschel@itu.int) complemented the information with various AI4G related events.

WG-CO also organized a workshop on 30 May 2020, prior to the Meeting O of the FG. The presentations are found in [O-043](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-043.pptx), [O-044](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-044.pptx), [O-045](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-045.pptx) and [O-046.](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-046.pptx)

[O-054](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-054.docx): WG-CO: Working group on Collaborations and Outreach

Andrew Farlow (Nuffield Department of Medicine, Oxford) and Matthias Groeschel (ITU) introduced [O-054](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-054.docx) about the new ITU/WHO Working Group: Collaborations and Outreach, the recent and future seminar series, and proposed activities including Digital/AI for Health Challenges. Three reports are planned to be developed within the next 6 months. The webinar series by FG-AI4H has been a success. Since its inception May 2021, 18,929 viewers from 103 countries have followed one of the 22 webinars. Further, WG-CO has been writing a paper detailing their plans of a venture building structure

Comments:

* Alex Radunsky: Hackathons can be a tool to fill gaps in knowledge. Andrew agrees, looking for sources of funding (e.g., Rockefeller, Ramsay Foundation, Botnar).
* Shubs: Hackathons are quick activities, focused scope, with specific assumptions, more complicated if trying to address larger scope problems.
* Alex: What to do next, it depends on the scale of what we are trying to do. Different activities listed fall under different "buckets".
* Stephen Gilbert suggested not to underestimate on the effort and expertise required to reach market authorization of a medical device.

## Ad-hoc group on digital technologies for COVID health emergency (AHG-DT4HE)

The cochairs of the FG-AI4H ad hoc group on AHG on digital technologies for COVID health emergency (AHG-DT4HE) are [Shan Xu](mailto:xushan@caict.ac.cn) (CAICT, China) and [Ana Rivière-Cinnamond](mailto:rivierea@paho.org) (PAHO/‌WHO).

No particular reports were provided specifically for AHG-DT4HE at this meeting.

# FG-AI4H Open Code Initiative

The FG-AI4H open code initiative is chaired by [Marc Lecoultre](mailto:ml@mllab.ai) (ML Lab, Switzerland).

[O-052](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-052.pptx): Open Code Initiative – Status update [Chair]

Marc Lecoultre introduced the slides in [O-052](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-052.pptx) with overview.

* Develop software tools (e.g., data acquisition, data storage, annotation, prediction, evaluation, and reporting packages)
* Involve 40+ developers, regulators, and medical professionals from five continents
* Targeted towards a universal tool applicable across borders
* Usable by multiple stakeholders such as notified bodies and doctors

The platform is an end-to-end solution that focusses on the assessment of AI for health. It is not software to be used in a product, but rather to develop and assess it, and to provide guidance to implementers developing their own applications. The platform prototype is being tested in different proof-of concepts and the whitepaper for assessment platform is developed. The OCI contains various packages:

* Core package – Marc Lecoultre presented. This package provisions the common services to all packages: Authentication and authorization to access resources, storage. FHIR used in the implementation to facilitate secure patient data transfer. Next steps: Integrate all packages; uniformize SSO usage; implement additional user management features. A demo on the Platform was presented by Marc. VISIAN tool is being integrated to the Platform (see Data Annotation Package below)
* DAS (Data Acquisition and Storage) package – Ferath Kherif presented. This package is responsible for data ingestion, storage and management. Three new members joined since the last meeting. Data is organized in principled way using TOML hierarchical concept. Details minimum metadata and context requirements. Next steps include data sourcing across different locations, and federated model implementation.
* Data annotation package – Marc resented on behalf of Joachim Krois. The package delivers data annotation capabilities, good annotation practices, review of annotations. Different roles (annotator, reviewer, supervisor) were implemented with corresponding edit rights. This package is currently working with VISIAN project (visian.org) which is developing the annotation tool for the platform. Clara Uktar provided an update of demo on the VISIAN tool, and this is being integrated in the platform. All annotations are tracked in the backend to maximize transparency
* Evaluation (audit) package (based on eval.ai) – Luis Oala (Fraunhofer HHI, Germany) and Steffen Vogler (Bayer AG) presented. The work reached an important point, a proof point for Docker-based evaluation one month earlier. An achievement is community building: <https://aiaudit.org/contributors/>. Another achievement is integration of ML flow tool in the AWS environment, including shared storage buckets and *jupyter* notebooks for code and documentation  
  The evaluation using the diabetic retinopathy use case was successfully conducted, and nearly ten other topic groups are working towards establishing the audit teams. Docker-based evaluation for reproducibility, control over s/w dependencies, easy scaling, future-proof and versatile, secure and isolated test environment. Challenges are seen: need to increase the AWS environment capacity; modified legacy platform code; added feature enhancements to EvalAI CLI. Next steps: where/how to make test data available to Docker container?; Develop example benchmark; Push code and write documentation. Stefan showed a demo on the evaluation package via the Platform.
* Reporting package – Pradeep Balachandran (Technical e-health consultant, India) is leading this package. Two types of reports will be created: Basic Report and Custom Report. X The team will customize TG-specific questionnaire from the current common set of questions, with feedback from TGs. The regulatory guidelines will be integrated into the platform, as Regulatory Checklist Manager.

The group acknowledged the excellent progress of the FG-AI4H Open Code Initiative and thanked Marc Lecoultre leading efficiently the work. The FG-AI4H looks forward to the next planned steps and reporting at the next FG-AI4H meeting.

# FG-AI4H deliverables

## Process for assessing quality of draft FG-AI4H deliverables

To ensure that the WHO/ITU FG-AI4H deliverables – a key contribution of our activities – achieve the maximum level of quality and offer value for stakeholders, a draft description of the peer review process for FG-AI4H deliverables was prepared and presented during Meeting K (see [K-029](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-K-029.docx" \t "_blank)). At this meeting, no updates were provided. The FG-AI4H management will continue to review the matter and report in a future meeting.

[***O-004***](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-004.docx) ***+*** [***A01***](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-004-A01.pptx)***: Publication of Focus Group Deliverables-Follow-up [TSB]***

Simao presented [O-004](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-004.docx) and [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-004-A01.xlsx). As explained during the last meeting (Meeting N), it was decided that the first set of Deliverables will be published in July 2022 in light of September 2023 as the Focus Group transition point, and the second set in July 2023. The result of the survey conducted in November 2021 was presented. It was discussed how to conduct a peer-review process. In addition to the internal peer-review within the FG community, possibilities will be further discussed. [O-004-R1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-004-R01.docx) contains an update reflecting the discussions and decisions taken at the meeting.

## List of deliverables

[O-005](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-005.docx): Updated list of FG-AI4H deliverables (as of 2022-5-31) [TSB]

**Abstract**: This document summarizes the current status of the planned deliverables for the ITU-T Focus Group on AI for health (FG-AI4H), based on the output list from the virtual meeting on 15-17 February 2022 and subsequent updates by the secretariat, as found in [N-200](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-200.docx).

The document was noted, and it would be updated after the meeting according to the discussions affecting deliverables as shown in Table 1 hereinafter, also issued as [O-200](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-200.docx) out of this meeting.

The meeting reviewed progress for the various deliverables and highlights are provided in the next sub-sections of this report.

A progress report was presented for the following deliverables, but an updated deliverable document was not provided:

* DEL4: AI software life cycle specification
* DEL7.1: AI4H evaluation process description
* DEL7.2: AI technical test specification
* DEL7.5: Assessment Platform

No updates nor progress reports were provided during the meeting for the following documents:

* DEL0: Overview of the FG-AI4H deliverables
* DEL2.1: Mapping of IMDRF essential principles to AI for health software
* DEL3: AI4H requirements specifications
* DEL5: Data specification
* DEL5.1: Data requirements
* DEL5.2: Data acquisition
* DEL5.3: Data annotation specification
* DEL5.4: Training and test data specification
* DEL5.5: Data handling
* DEL5.6: Data sharing practices
* DEL6: AI Training best practices specification
* DEL7.3: Data and artificial intelligence assessment methods (DAISAM) reference
* DEL8: AI4H scale-up and adoption (no initial draft)
* DEL9: AI4H applications and platforms
* DEL9.1: Mobile Applications
* DEL9.2: Cloud-based AI applications

The latest version of the deliverables can always be found in the FG-AI4H collaboration site at <https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/SitePages/Deliverables.aspx>.

Table 1 – Updated list of deliverables (O-005 plus updates)

| No. | Deliverable | Updated initial draft editor | Availability\* |
| --- | --- | --- | --- |
| 0 | Overview of the FG-AI4H deliverables | [Shan Xu](mailto:xushan@caict.ac.cn) (CAICT, China) | [M-044](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-M-044.docx) ([O-050](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-050.pptx)) |
| 0.1 | Common unified terms in artificial intelligence for health | [Markus Wenzel](mailto:markus.wenzel@hhi.fraunhofer.de) (Fraunhofer HHI, Germany) | [O-040](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-040.docx) |
| 1 | AI4H ethics considerations | [Andreas Reis](mailto:reisa@who.int) (WHO) | [O-201](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-201.docx) |
| 2 | Overview of regulatory considerations on artificial intelligence for health | [Shada Alsalamah](mailto:alsalamahs@who.int) (WHO) | [O-049](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-049.docx) |
| 2.1 | Mapping of IMDRF essential principles to AI for health software | [Luis Oala](mailto:luis.oala@hhi.fraunhofer.de) (Fraunhofer HHI, Germany), [Pradeep Balachandran](mailto:pbn.tvm@gmail.com) (Technical Consultant eHealth, India), [Pat Baird](mailto:pat.baird@philips.com) (Philips, USA), [Thomas Wiegand](mailto:thomas.wiegand@hhi.fraunhofer.de) (Fraunhofer HHI, Germany) | [G-038](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-G-038.docx),  [G-038-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-G-038-A01.xlsx) |
| 2.2 | Good practices for health applications of machine learning: Considerations for manufacturers and regulators | [Pradeep Balachandran](mailto:pbn.tvm@gmail.com) (India) and [Christian Johner](mailto:christian.johner@johner-institut.de) (Johner Institut, Germany) | [O-031](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-031.docx) |
| 3 | AI4H requirement specifications | [Pradeep Balachandran](mailto:pbn.tvm@gmail.com) (India) | [O-032](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-032.docx) |
| 4 | AI software life cycle specification | [Pat Baird](mailto:pat.baird@philips.com) (Philips, USA) | [J-033](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-J-033.docx) ([L-046](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-046.pptx)) |
| 5 | Data specification | [Marc Lecoultre](mailto:ml@mllab.ai) (MLlab.AI, Switzerland) | [G-205](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-G-205.docx" \t "_blank) |
| 5.1 | Data requirements | [[Marc Lecoultre](mailto:ml@mllab.ai) (MLlab.AI, Switzerland)]\*\* | [I-044](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-044.docx) |
| 5.2 | Data acquisition | [Rajaraman (Giri) Subramanian](mailto:kinnal@hotmail.com) (Calligo Tech, India), [Vishnu Ram](mailto:vishnu.n@ieee.org) (India) | [G-205-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-G-205-A02.docx) |
| 5.3 | Data annotation specification | [Shan Xu](mailto:xushan@caict.ac.cn) (CAICT, China), [Harpreet Singh](mailto:hsingh@bmi.icmr.org.in) (ICMR, India), [Sebastian Bosse](mailto:sebastian.bosse@hhi.fraunhofer.de) (Fraunhofer HHI, Germany) | [M-045](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-M-045.docx) |
| 5.4 | Training and test data specification | [Luis Oala](mailto:luis.oala@hhi.fraunhofer.de) (Fraunhofer HHI, Germany), [Pradeep Balachandran](mailto:pbn.tvm@gmail.com) (India) | [I-034](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-034.docx) ([L-045](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-045.pptx)) |
| 5.5 | Data handling | [Marc Lecoultre](mailto:ml@mllab.ai) (MLlab.AI, Switzerland) | [I-045](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-045.docx) |
| 5.6 | Data sharing practices | [Ferath Kherif](mailto:Ferath.Kherif@chuv.ch) (CHUV, Switzerland), [Banusri Velpandian](mailto:banusrir@gmail.com) (ICMR, India), WHO Data Team | [L-044](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-044.pptx) |
| 6 | AI training best practices specification | [Xin Ming Sim](mailto:xinming@aisingapore.org) and [Stefan Winkler](mailto:stefan@aisingapore.org) (AI Singapore) | [K-037](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-K-037.docx" \t "_blank) |
| 7 | AI for health evaluation considerations | [Markus Wenzel](mailto:markus.wenzel@hhi.fraunhofer.de) (Fraunhofer HHI, Germany) | [O-042](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-042.docx) |
| 7.1 | AI4H evaluation process description | Vacant | [G-207-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-G-207-A01.docx) |
| 7.2 | AI technical test specification | [Auss Abbood](mailto:abbooda@rki.de) (Robert Koch Institute, Germany) | [I-027](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-027.docx" \t "_blank) ([L-051](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-051.pptx)) |
| 7.3 | Data and artificial intelligence assessment methods (DAISAM) reference | [Luis Oala](mailto:luis.oala@hhi.fraunhofer.de) (Fraunhofer HHI, Germany) | [O-033](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-033.docx) ([L-052](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-052.pptx)) |
| 7.4 | Clinical evaluation of AI for health | [Naomi Lee](mailto:naomi.lee@lancet.com) (Lancet, UK), [Eva Weicken](mailto:eva.weicken@hhi.fraunhofer.de) (Fraunhofer HHI, Germany), [Shubhanan Upadhyay](mailto:shubs.upadhyay@ada.com) (ADA Health, Germany) | [O-048](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-048.docx) |
| 8 | AI4H scale-up and adoption | [Sameer Pujari](mailto:pujaris@who.int) (WHO), Yu ZHAO and Javier Elkin [Previously: Robyn Whittaker (New Zealand)] | – ([K-052](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-K-052.pptx)) |
| 9 | AI4H applications and platforms | [Manjeet Chalga](mailto:chalgams.hq@icmr.gov.in) (ICMR, India) | [L-050](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-050.docx) |
| 9.1 | Mobile applications | [Khondaker Mamun](mailto:mamun@cse.uiu.ac.bd) (UIU, Bangladesh), [Manjeet Chalga](mailto:chalgams.hq@icmr.gov.in) (ICMR, India) | [N-043](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-043.docx) |
| 9.2 | Cloud-based AI applications | [Khondaker Mamun](mailto:mamun@cse.uiu.ac.bd) (UIU, Bangladesh) | [I-049](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-049.docx) |
| 10 | AI4H use cases: Topic description documents | [Eva Weicken](mailto:eva.weicken@hhi.fraunhofer.de) (Fraunhofer HHI, Germany) | [O-041](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-041.docx) |
| 10.1 | Cardiovascular disease management (TG-Cardio) | [Benjamin Muthambi](mailto:brm5@caa.columbia.edu) (Watif Health, South Africa) | [O-006-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-006-A01.docx) |
| 10.2 | Dermatology (TG-Derma) | [Weihong Huang](mailto:whuangcn@qq.com) (Xiangya Hospital Central South University, China) NOTE – [Maria Vasconcelos](mailto:maria.vasconcelos@fraunhofer.pt) (Fraunhofer, Portugal) resigned from the role. | [O-007-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-007-A01.docx) |
| 10.3 | Diagnosis of bacterial infection and anti-microbial resistance (TG-Bacteria) | [Nada Malou](mailto:nada.malou@paris.msf.org,nada_malou@yahoo.fr) (MSF, France) | [O-008-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-008-A01.docx) |
| 10.4 | Falls among the elderly (TG-Falls) | [Pierpaolo Palumbo](mailto:pierpaolo.palumbo@unibo.it) (University of Bologna, Italy); [Inês Sousa](mailto:ines.sousa@fraunhofer.pt) (Fraunhofer Portugal) | [O-012-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-012-A01.docx) |
| 10.5 | Histopathology (TG-Histo) | [Frederick Klauschen](mailto:f.klauschen@lmu.de) (LMU Munich & Charité Berlin, Germany) | [O-013-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-013-A01.docx) |
| 10.6 | Malaria detection (TG-Malaria) | [Rose Nakasi](mailto:g.nakasi.rose@gmail.com) (Makerere University, Uganda) | [O-014-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-014-A01.docx) |
| 10.7 | Maternal and child health (TG-MCH) | [Raghu Dharmaraju](mailto:rdharmaraju@gmail.com) (Wadhwani AI, India) and [Alexandre Chiavegatto Filho](mailto:alexdiasporto@usp.br) (University of São Paulo, Brazil) | [O-015-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-015-A01.docx) |
| 10.8 | Neurological disorders (TG-Neuro) | [Marc Lecoultre](mailto:ml@mllab.ai) (MLlab.AI, Switzerland) and [Ferath Kherif](mailto:Ferath.kherif@chuv.ch) (CHUV, Switzerland) | [O-016-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-016-A01.docx) |
| 10.9 | Ophthalmology (TG-Ophthalmo) | [Arun Shroff](mailto:arunshroff@gmail.com) (MedIndia) | [O-017-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-017-A01.docx) |
| 10.10 | Outbreak detection (TG-Outbreaks) | [Auss Abbood](mailto:abbooda@rki.de) and [Alexander Ullrich](mailto:UllrichA@rki.de) (Robert Koch Institute, Germany); [Khahlil Louisy](mailto:klouisy@hks.harvard.edu) and [Alexander Radunsky](mailto:aradunsky@mail.harvard.edu) (Institute for Technology & Global Health, ITGH, US) | [O-018-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-018-A01.docx) & [O-028-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-028-A01.docx) (to be merged) |
| 10.11 | Psychiatry (TG-Psy) | [Nicolas Langer](mailto:n.langer@psychologie.uzh.ch) (ETH Zurich, Switzerland) | [O-019-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-019-A01.docx) |
| 10.12 | AI for radiology (TG-Radiology) | [Darlington Ahiale Akogo](mailto:darlington@gudra-studio.com) (minoHealth AI Labs, Ghana) | [O-023-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-023-A01.docx) |
| 10.13 | Snakebite and snake identification (TG-Snake) | [Rafael Ruiz de Castaneda](mailto:Rafael.RuizDeCastaneda@unige.ch) (UniGE, Switzerland) | [O-020-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-020-A01.docx) |
| 10.14 | Symptom assessment (TG-Symptom) | [Henry Hoffmann](mailto:henry.hoffmann@ada.com) (Ada Health, Germany) and [Martin Cansdale](mailto:martin@your.md) (Healthily, UK) | [O-021-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-021-A01.docx) |
| 10.15 | Tuberculosis (TG-TB) | [Manjula Singh](mailto:singhmanjula.hq@icmr.gov.in) (ICMR, India) | [O-022-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-022-A01.docx) |
| 10.16 | Volumetric chest CT (TG-DiagnosticCT) | [Kuan Chen](mailto:ckuan@infervision.com) (Infervision, China) | [O-009-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-009-A01.docx) |
| 10.17 | Dental diagnostics and digital dentistry (TG-Dental) | [Falk Schwendicke](mailto:falk.schwendicke@charite.de) and [Joachim Krois](mailto:Joachim.krois@charite.de) (Charité Berlin, Germany); [Tarry Singh](mailto:tarry.singh@deepkapha.ai) (deepkapha.ai, Netherlands) | [O-010-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-010-A01.docx) |
| 10.18 | Falsified Medicine (TG-FakeMed) | [Franck Verzefé](mailto:fverzefe@gmail.com) (TrueSpec-Africa, DRC) | [O-011-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-011-A01.docx) |
| 10.19 | Primary and secondary diabetes prediction (TG-Diabetes) | [Andrés Valdivieso](mailto:avaldivieso@anastasia.ai) (Anastasia.ai, Chile) | [O-024-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-024-A01.docx) |
| 10.20 | AI for endoscopy (TG-Endoscopy) | [Jianrong Wu](mailto:edwinjrwu@tencent.com) (Tencent Healthcare, China) | [O-025-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-025-A01.docx) |
| 10.21 | AI for musculoskeletal medicine (TG-MSK) | [Peter Grinbergs (EQL, UK), Yura Perov (UK)](mailto:tgmskorg@googlegroups.com) | [O-026-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-026-A01.docx) |
| 10.22 | AI for human reproduction and fertility (TG-Fertility) | [Susanna Brandi](mailto:susanna.brandi@merckgroup.com), [Eleonora Lippolis](mailto:eleonora.lippolis@merckgroup.com), (Merck KGaA, Darmstadt, Germany) | [O-027-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-027-A01.docx) |
| 10.23 | AI for point-of care diagnostics (TG-POC) | [Nina Linder](mailto:nina.linder@helsinki.fi), University of Helsinki, Finland | [O-029-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-029-A01.docx) |

NOTES

\* The document numbers indicated reflect the status as of the end of Meeting O. Some links provided are to slide sets; these slide sets are not meant to be the deliverable documents, but rather a status update concerning progress of the respective deliverable. Documents in parenthesis are status updates, not a deliverable text. The draft deliverables for TG-Outbreaks and TG-Sanitation will be combined into a new TG-Outbreaks deliverable, following the decision to merge both TGs.

\*\* Acting editor

## New deliverable proposals

There were no new deliverable proposals at this meeting.

## DEL00: Overview of the FG-AI4H deliverables

This deliverable provides a summary of all planned deliverables in FG-AI4H, including nine generalized specifications on ethics, regulatory, requirement, data, training, evaluation, application, etc., and 24 topic description documents on specific use cases with corresponding AI/ML tasks. This document is to give a comprehensive overview on the structure, progress, corresponding scopes and relationship on those deliverables, to avoid conflict and facilitate collaborations.

No presentation was made on [DEL00](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL00.docx) at this meeting, the latest version was found in M-044 and also available in the [deliverables website](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/).

## DEL0.1: Common unified terms

The editor of this deliverable is Markus Wenzel, with contributions from Eva Weiken, Pat Baird, Shada Alsalamah, Stephanie Kuku, Rohit Malpani and Andreas Reis.

[O-032-R2](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-032-R2.docx): DEL0.1 Update: Common unified terms in artificial intelligence for health

Markus presented the updates to DEL0.1. Good progress has been achieved, keep sending terms and definitions. The updated document contained in [O-032-R1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-032-R01.docx) is uploaded to the [deliverables website](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/). The terms in this document are aligned with the other existing sources. Markus invited to contact the editors if there are any additional terms of definitions relevant to AI for health. The title of deliverable was changed to Common unified terms in artificial intelligence for health. A revision ([O-032-R2](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-032-R02.docx)) was issued at the end of the meeting, that added the definitions of specificity and sensitivity and it has been uploaded to the [deliverables website](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/). This is in good shape to launch for review towards 1st edition.

## DEL01: AI4H ethics considerations

The editor of this deliverable is [Andreas Reis](mailto:reisa@who.int) (WHO).

Following the points made by Andreas regarding DEL01 (see §‎10.4), that the guidelines from WHO could be co-branded as a FG-AI4H deliverable since it had input from FG-AI4H participants in the various checklists, it was agreed to issue the 2021 WHO *Ethics and governance of artificial intelligence for health* guidance document as Deliverable 01 at this meeting, as found in [O-060](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-060.docx). The document will be an output of this meeting as [O-201](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-201.docx).

1. [DEL01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL01.docx) is agreed at this meeting as an identical publication of the 2021 WHO Ethics and governance of artificial intelligence for health guidance document, as in [O-201](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-201.docx).

## DEL02: AI4H regulatory best practices

The current editor of [DEL2](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL02.docx) is [Shada Alsalamah](mailto:alsalamahs@who.int) (WHO).

[O-034](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-034.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-034-A01.pptx): DEL02: Updated DEL2 [Editor]

Shada briefed the meeting on the purposes and contents of DEL2 in [O-034](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-034.docx) using the slides in [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-034-A01.pptx). The document is developed at the final stage. Since Meeting N, Version 5.2 has been produced based on feedback received from the WG-RC members including from US FDA and others, as well as other FG-AI4H participants, is going through WHO editorial review and it will be provided to the FG-AI4H for approval according to the following updated time frame:

Timelines:

| Timeline | Planned Milestones/ Deliverables |
| --- | --- |
| May | - Address reviewers' comments on DEL02 draft v5.0  - Present at FG AI4H Meeting O |
| June | - WHO Clearance  - FG Clearance |
| July | - Submit DEL02 draft to WHO editors with final recommendations  - Receive final approval from WG-RC contributors after an internal check with their organizations |

Target audience of this document is regulatory agencies and bodies, but many parts of this document should be considered by other stakeholders, such as solution developers. Such other stakeholders who reviewed the document are listed. The deliverable addresses high level overview of key regulatory considerations for the use of AI in health, covering:

1. Documentation and transparency
2. Risk management and lifecycle approach
   1. Medical devices developing and deployment process
   2. AI medical device product lifecycle
   3. Holistic risk management
3. Analytical and clinical validation
4. Data quality – key challenges
   1. Data set management
   2. Data inconsistency
   3. Dataset selection and curation
   4. Data set management
   5. Data inconsistency
   6. Dataset selection and curation
   7. Data usability
   8. Data integrity & data labelling
   9. Model training
   10. Documentation and transparency
   11. Human factors
5. Engagement and collaboration
6. Privacy and data protection

It is noted that the deliverable is not intended as guidance policy or regulations, but rather a resource that can be considered by *regulators*, *developers*, and other stakeholders.

Comments:

* James Kim (Data Design Engineering): lack of evaluation of the final model for data qualities. Sameer: focus is to foster and enable accuracy and appropriate application of AI, not stopping innovation. Countries to decide to accept the guidance documents. Shada: intention is to give a good foundation, covering the fundamentals to ensure solutions are safe.
* Andrew: what does risk mean? How is it measured? Trying to cover what exists in the documentation. Shada: About risks, there are different approaches; recognizes that there are various approaches possible, does not recommend one, but that needs to document, identify and deploy in a consistent manner. DEL2.2 complements with details on specific checks that need to be done.
* Gilbert Stephen (Else Kröner Fresenius Center for Digital): As it is a rapidly changing field, revisit the document and new aspects need to be considered after publication of the document.
* Marc: Data annotation is a process on its own. Shada: trying to cover basic aspect, what is the minimum / fundamental for ensuring good quality annotation, how to achieve, good practices at this stage.
* James Kim: Annotation for images is simpler, but for other elements may be more complicated, like NLP elements. All language dependent modules must be developed locally, by native speakers, specifically for each language. Shada, an important aspect to be considered. Sameer: the general guidance should be included in DEL2.

The update to DEL2 as found in [O-034](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-034.docx) was adopted to be uploaded to the [deliverables website](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/).

### DEL02.1: Mapping of IMDRF essential principles to AI for health software

The editors of [DEL2.1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL02_1.docx) are [Luis Oala](mailto:luis.oala@hhi.fraunhofer.de) (Fraunhofer HHI, Germany), [Pradeep Balachandran](mailto:pbn.tvm@gmail.com) (Technical e-health consultant, India), [Pat Baird](mailto:pat.baird@philips.com) (Philips, USA), [Thomas Wiegand](mailto:thomas.wiegand@hhi.fraunhofer.de) (Fraunhofer HHI, Germany)

Also at this meeting, there was no update to DEL2.1 and the most recent version (G-038 at Meeting G) is found in the [deliverables website](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/).

### DEL02.2: Good practices for health applications of machine learning: Considerations for manufacturers and regulators

The editors of [DEL2.2](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL02_2.docx) are [Pradeep Balachandran](mailto:pbn.tvm@gmail.com) (Technical e-health consultant, India) and [Christian Johner](mailto:christian.johner@johner-institut.de) (Johner Institut, Germany)

[O-036](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-036.docx) : Updated DEL2.2: Good practices for health applications of machine learning: Considerations for manufacturers and regulators [Editors]

O-036 contains the latest draft of the FG-AI4H deliverable DEL02.2 "Good practices for health applications of machine learning: Considerations for manufacturers and regulators". It defines a set of guidelines intended to serve the AI solution developers/manufacturers on how to do conduct a comprehensive requirements analysis and to streamline the conformity assessment procedures to ensure regulatory compliance for the AI based Medical Devices (AI/ML-MD).

This document was not presented due to a scheduling conflict. A subsequent update will be presented at the next meeting, however this update to DEL2.2 as found in [O-036](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-036.docx) was uploaded to the [deliverables website](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/).

## DEL03: AI4H requirements specifications

The editor of [DEL3](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL03.docx) is [Pradeep Balachandran](mailto:pbn.tvm@gmail.com) (Technical e-health consultant, India).

No updates were made to DEL3 at this meeting. The most recent version (N-032 at Meeting N) is found in the [deliverables website](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/).

## DEL04: AI software life cycle specification

The editor of [DEL4](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL04.docx) is [Pat Baird](mailto:pat.baird@philips.com) (Philips, USA).

There was no update to DEL04 at this Meeting, whose latest update was prepared for meeting J, as found in the [deliverables website](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/). However, the following document was introduced.

[***O-033***](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-033.pptx)***:(presentation) Cybersecurity and AI/ML Data Lifecycles Follow up [Editor]***

**Abstract:** This presentation contains a follow up from the summary of Cybersecurity and AI/ML Risk Management for members at the "O"-Meeting.

Pat and Catherine Lowe (medSec LLC) gave a talk about Cybersecurity and Risk Management in the context of AI software life cycle. Introduced ISO/IEC 14971 Risk Management Process and the National Institute Standards and Technology (NIST) Cybersecurity Framework 1.1. Cybersecurity Kill Chain is essentially a cybersecurity model created by Lockheed Martin that traces the stages of a cyber-attack, identifies vulnerabilities, and helps security teams to stop the attacks at every stage of the chain.

## DEL05: Data specification

The editor of [DEL05](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL05.docx) is [Marc Lecoultre](mailto:ml@mllab.ai) (MLlab.AI, Switzerland). The latest update was reviewed at Meeting G, as found in [G-205](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-G-205.docx). Discussions at this meeting focused on progressing the various sub-deliverables, as described next.

There was no update to DEL5 and the most recent version is found in the [deliverables website](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/).

## DEL05.1: Data requirements

The acting editor for [DEL5.1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL05_1.docx) deliverable is [Marc Lecoultre](mailto:ml@mllab.ai) (MLlab.AI, Switzerland).

There was no update to DEL5.1. The most recent draft was prepared by Marc Lecoultre (who oversees the parent Deliverable 5), as found in [I-044](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-044.docx) (Meeting I). We are still looking for new editors to take over this Deliverable.

### DEL05.2: Data acquisition

[Rajaraman (Giri) Subramanian](mailto:kinnal@hotmail.com) (Calligo Tech, India) and [Vishnu Ram](mailto:vishnu.n@ieee.org) (India) are the editors.

No updates were provided at this meeting and the editors did not join the meeting. The latest draft of [DEL05.2](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL05_2.docx) found in the deliverables folder was developed at meeting G ([G-205-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-G-205-A02.docx), New Delhi), which tries to address the lack of widely-accepted, standardized ways to acquire medical data.

It had been noted at a past meeting that DEL5.2 needs to be focused on data acquisition, while the more general considerations should be added in DEL5 itself. Some of the aspects in G‑205-A02 are already addressed in other deliverables; removing these repetition elements would simplify the task of preparing this deliverable.

### DEL05.3: Data annotation specification

The editors of [DEL5.3](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL05_3.docx) are [Shan Xu](mailto:xushan@caict.ac.cn) (CAICT, China), [Harpreet Singh](mailto:hsingh@bmi.icmr.org.in) (ICMR, India), [Sebastian Bosse](mailto:sebastian.bosse@hhi.fraunhofer.de) (Fraunhofer HHI, Germany).

No updates were provided at this meeting.

The latest version of DEL5.3 as found in [M-045](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-M-045.docx) (Meeting M) is available in the [deliverables website](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/).

### DEL05.4: Training and test data specification

The editors of [DEL5.4](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL05_4.docx) are [Luis Oala](mailto:luis.oala@hhi.fraunhofer.de) (Fraunhofer HHI, Germany), [Pradeep Balachandran](mailto:pbn.tvm@gmail.com) (Technical e-health consultant, India).

No updates were done in DEL5.4.

The latest version is available from the [deliverables website](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/).

### DEL05.5: Data handling

The editor of [DEL05.5](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL05_5.docx) is [Marc Lecoultre](mailto:ml@mllab.ai) (MLlab.AI, Switzerland). DEL5.5 describes the objectives and proposes an initial outline of the planned deliverable "Data Handling" to help seed future content. It was noted that DEL5.5 is very stable, as it is matches F-103 on the main page.

There was no update to DEL05.5 at this meeting. The last update to [DEL05.5](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL05_5.docx) was in meeting I ([I-045](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-045.docx)).

### DEL05.6: Data sharing practices

The editors of [DEL5.6](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL05_6.docx) are [Ferath Kherif](mailto:Ferath.Kherif@chuv.ch) (CHUV, Switzerland) and [Banusri Velpandian](mailto:banusrir@gmail.com) (ICMR, India), assisted by the WHO Data Team.

There was no update to DEL5.6 at this meeting, the latest update having being made at Meeting L ([L-044](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-044.pptx)), as found in the [deliverables website](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/).

## DEL06: AI Training best practices specification

The editors of [DEL6](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL06.docx) are [Xin Ming Sim](mailto:xinming@aisingapore.org) and [Stefan Winkler](mailto:stefan@aisingapore.org) (AI Singapore).

There was no update to DEL6 at this meeting, the latest update having being made at Meeting K ([K-037](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-K-037.docx)), as found in the [deliverables website](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/).

## DEL07: AI for health evaluation considerations

The editor of [DEL7](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL07.docx) is [Markus Wenzel](mailto:markus.wenzel@hhi.fraunhofer.de) (Fraunhofer HHI, Germany).

[O-035](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-035.docx): Updated DEL07: AI for Health Evaluation Considerations [Editors]

**Abstract:** This introduction with considerations on the evaluation of AI for health sets the scene for the five related documents DEL07.1-5 that describe the evaluation process (DEL07.1), the technical tests (DEL07.2), the test metrics (DEL07.3), the clinical evaluation (DEL07.4), and an assessment platform (DEL07.5) in detail. In this document, an overview of the deliverables DEL7.1-5 is given, considerations on the evaluation process are being made, characteristics of health AI validation and evaluation that are novel are identified, and the concept of standardized model benchmarking is introduced. Moreover, requirements for a benchmarking platform are considered in detail and best practices for the health AI model assessment are collected from selected sources.

Markus introduced [O-035](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-035.docx). He noted that DEL7 could be ready for review if some of the 7.x packages are ready. Other parts could be merged in either DEL7 or DEL7.1. Since the Meeting N, editors of DEL7.1 – 7.5, WGs OCI, AI/ML4H-Audit have reviewed the text, which was improved. Markus encouraged colleagues to point him to additional documentation and published work on best evaluation practices in AI4H.

The update to DEL7 as found in [O-035](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-035.docx) was uploaded to the [deliverables website](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/).

### DEL07.1: AI4H evaluation process description

The editor of [DEL7.1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL07_1.docx) is [Sheng Wu](mailto:wus@who.int) (WHO).

No updates were provided to DEL7.1 at this meeting; the latest update was provided in meeting G ([G-207-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-G-207-A01.docx)).

### DEL07.2: AI technical test specification

The editor of [DEL7.2](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL07_2.docx) is [Auss Abbood](mailto:abbooda@rki.de) (Robert Koch Institute, Germany).

[O-057](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-057.pptx): DEL7.2 AI technical test specification - Progress Report [Editor]

Auss presented the slides in [O-057](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-057.pptx). The deliverable contains a background on software testing that is relevant for the context of AI/ML and AI4H. Auss voiced his concern of overlap with several other deliverables (5 and 7.3). He will be in touch with other deliverable editors. Auss also requested feedback on his deliverable and is looking for a co-driver.

Auss thinks the review process could be started by the next FG meeting (September). It could be faster if he had a co-editor helping with speeding up the draft.

The last update of the text of DEL7.2 was prepared for meeting I ([I-027](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-I-027.docx)), as found in the [deliverables website](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/).

### DEL07.3: Data and artificial intelligence assessment methods (DAISAM) reference

The editor of [DEL 7.3](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL07_3.docx) is [Luis Oala](mailto:luis.oala@hhi.fraunhofer.de) (Fraunhofer HHI, Germany), with [Pradeep Balachandran](mailto:pbn.tvm@gmail.com) (Technical e-health consultant, India).

[O-051](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-051.pptx): (presentation)WG-DAISAM - ML4H Trial Audits–Iteration 2.0

Pradeep presented [O-051](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-051.pptx). The discussion is reported in §10.1 WG-DAISAM.

There were no updates to DEL7.3 at this meeting, and the most recent version is as found in [N-033](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-033.docx) available in the [deliverables website](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/).

### DEL07.4: Clinical evaluation of AI for health

The editors of [DEL7.4](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL07_4.docx) are [Naomi Lee](mailto:naomi.lee@lancet.com), [Rupa Sarkar](mailto:rupa.sarkar@lancet.com) (Lancet, UK), together with [Eva Weicken](mailto:eva.weicken@hhi.fraunhofer.de) (Fraunhofer HHI, Germany) and [Shubs Upadhyay](mailto:shubs.upadhyay@ada.com) (ADA Health, Germany).

[O-038](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-038.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-038-A01.pptx): Updated DEL7.4: Clinical evaluation of AI for health [Editors DEL7.4]

**Summary**: This document provides an overview of the current challenges of *"Clinical Evaluation of AI for Health"*. It is part of the deliverable-series 7.1-7.4 that are outlined by deliverable No.7 "*AI for Health Evaluation considerations".* The purpose of the deliverable No.7.4 is to outline the current best practices, the principles and outstanding issues for further considerations related to clinical evaluation of AI health technologies. It serves as the output document of the WHO/ITU Focus Group on AI for Health (FG-AI4H) Working group on Clinical Evaluation of AI for Health (WG-CE).

Eva and Shubs presented the updates to DEL7.4 using the slides in [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-038-A01.pptx)A01. As explained at the FGAI4H Meeting N, the draft 1.1 is at the final stage. The draft will be shared with WHO, and feedbacks will be collected from a wider community. Discussion will be made to implement the guidance in the real-word. Updates were made by adding relevant common unified terms on clinical evaluation.

Comments:

* James Kim: do you plan to collect data in real-time from the perspective of the economic evaluation. Suggest further analysis on the economic influence.
* Johan Lundin: Partnerships between public and private sectors should be established from the start.

The update to DEL7.4 as found in [O-038](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-038.docx) was adopted to be uploaded to the [deliverables website](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/).

### DEL07.5: Assessment Platform

The editors of DEL7.5 are Luis Oala (Fraunhofer HHI), Marc Lecoultre and [Steffen Vogler](mailto:steffen.vogler@bayer.com) (Bayer AG, Germany).

[***O-055***](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-055.pptx)***: Status update***

Luis and Steffen provided updates on related activities as part of the OCI status update (see §‎11 and [O-055](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-055.pptx)).

No update to DEL7.5 was provided at this meeting. The latest update was made available in Meeting I ([I-037](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-037.docx)), which can be found in the [deliverables website](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/).

## DEL08: AI4H scale-up and adoption

The editor of [DEL8](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL08.docx) is [Sameer Pujari](mailto:pujaris@who.int) (WHO) with Yu Zhao and Javier Elkin.

There is currently no draft of DEL8, and no updates were provided at this meeting.

[***O-056***](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-056.pptx)***: Dynamic Digital Health Maturity Model***

Sameer presented the slides in [O-056](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-056.pptx), where a dynamic digital health maturity model was described for AI4H assessing AI4H scale-up and adoption. The DDHMM is a digital health implementation initiative that dynamically monitors the status of development and implementation progress of digital health at the country level.

## DEL09: AI4H applications and platforms

The editors of [DEL9](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL09.docx) are [Manjeet Chalga](mailto:chalgams.hq@icmr.gov.in) (ICMR, India), [Aveek De](mailto:aveek@cms-india.org) (CMS, India).

There were no updates at this meeting. The latest update was made available in Meeting L ([L-050](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-050.docx)), which can be found in the [deliverables website](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/).

### DEL09.1: Mobile Applications

The editor of [DEL09.1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL09_1.docx) are [Khondaker Mamun](mailto:mamun@cse.uiu.ac.bd) (UIU, Bangladesh) and [Manjeet Chalga](mailto:chalgams.hq@icmr.gov.in) (ICMR, India).

There were no updates at this meeting. The latest update ([N-043](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-043.docx)) was made available in the [deliverables website](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/).

### DEL09.2: Cloud-based AI applications

The editor of [DEL 9.2](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL09_2.docx) is [Khondaker Mamun](mailto:mamun@cse.uiu.ac.bd) (UIU, Bangladesh).

No updates to the draft of DEL9.2 were provided at this meeting. The last update was made available in Meeting I ([I-049](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-K-049.docx)), which can be found in the [deliverables website](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/).

## DEL10: AI4H use cases: Topic Description Documents

The editor of [DEL10](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL10.docx) is [Eva Weicken](mailto:eva.weicken@hhi.fraunhofer.de) (Fraunhofer HHI, Germany).

[O-039](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-039.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-039-A01.pptx): Updated DEL10: AI4H use cases: Topic Description Documents [Editor]

**Abstract:** This document provides an overview of the ITU/WHO Focus Group on AI for Health (FG-AI4H) "AI4H use cases: Topic Description Documents". Each use case is represented by a topic group that is dedicated to a specific health topic in the context of AI. The topic group proposes a procedure to benchmark AI models developed for a special task within this health topic. All members of a topic group create a topic description document (TDD) that contains information about the structure, operations, features, and considerations of the specific health topic. This document constitutes deliverable No. 10 (DEL10) and serves as an introduction to the topic groups and their topic description documents.

Eva introduced the deliverable using the slides in [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-039-A01.pptx). This Deliverable provides a summary of all TDDs, which are part of the documentation of each of the Topic Groups (see §‎13). The current version updates information as a result of the progress in the various TGs.

The update to DEL10 as found in [O-039](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-039.docx) was adopted to be uploaded to the [deliverables website](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/).

# Updates and new proposals for existing TGs

Table 2 shows the status of the current TGs for FG-AI4H.

The meeting format grouped the TGs in thematic groups for presentation and discussion, as shown in Table 3.

## Template updates: TDD, CfTGP

No template updates were made at this meeting. Drivers for the new topic groups are requested to submit at the next meeting a topic description document and call for topic group participation using the current templates:

* [J-105](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-J-105.docx) (TDD)
* [J-103](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-J-103.docx) (CfTGP)

The TG drivers have been reminded / requested on various occasions to update their TDDs and CfTGP based on the new templates, and a few have already done that.

Table 2 – Summary status update for the various topic groups

| Cover page | Group | Title | Driver(s) | Organization | Meeting created | TDD | CfTGP | PPT used? |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [O-006](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-Cardio | Cardiovascular disease risk prediction | [Benjamin Muthambi](file:///C:\Users\campos\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\brm5@caa.columbia.edu) | WatIF Health, South Africa | C | N | H | ‑ |
| [O-007](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-Derma | Dermatology | [Sharad Kumar](file:///C:\Users\campos\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\sharad.kumar@nurithmlabs.tech) | Nurithm Labs, India | B | E | E | Yes |
| [O-008](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-Bacteria | Diagnosis of bacterial infection and anti-microbial resistance | [Nada Malou](file:///C:\Users\campos\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\nada.malou@paris.msf.org) | Médecins Sans Frontières, France | F | L | ‑ | ‑ |
| [O-009](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-DiagnosticCT | Volumetric chest CT | [Kuan Chen](file:///C:\Users\campos\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\ckuan@infervision.com) | InferVision, China | D | N | H | Yes |
| [O-010](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-Dental | Dental diagnostics and digital dentistry | [Falk Schwendicke, Joachim Krois](file:///C:\Users\campos\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\falk.schwendicke@charite.de,%20joachim.krois@charite.de) | Charité Berlin, Germany | G | O | O | Yes |
| [O-011](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-FakeMed | AI-based detection of falsified medicine | [Frank Verzefé](file:///C:\Users\campos\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\fverzefe@gmail.com) | TrueSpec-Africa, DRC | F | J | H | ‑ |
| [O-012](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-Falls | Falls among the elderly | [Pierpaolo Palumbo, Inês Sousa](file:///C:\Users\campos\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\pierpaolo.palumbo@unibo.it,%20ines.sousa@fraunhofer.pt) | University of Bologna, Italy; Fraunhofer Portugal | B | N | H | Yes |
| [O-013](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-Histo | Histopathology | [Frederick Klauschen](file:///C:\Users\campos\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\f.klauschen@lmu.de) | LMU Munich & Charite Berlin, Germany | B | I | E | ‑ |
| [O-014](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-Malaria | Malaria detection | [Rose Nakasi](file:///C:\Users\campos\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\g.nakasirose@gmail.com) | Makerere University, Uganda | F | N | L | ‑ |
| [O-015](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-MCH | Maternal and child health | [Raghu Dharmaraju, Alexandre Chiavegatto Filho](file:///C:\Users\campos\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\rdharmaraju@gmail.com,%20alexdiasporto@usp.br) | Wadhwani AI, India; University of Sao Paulo, Brazil | D; rescoped in Meeting G | L | H | ‑ |
| [O-016](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-Neuro | Neurological disorders | [Marc Lecoultre, Ferath Kherif](file:///C:\Users\campos\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\ml@mllab.ai,%20ferath.kherif@chuv.ch) | ML Labs, Switzerland; CHUV, Switzerland | B | L | E | Yes |
| [O-017](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-Ophthalmo | Ophthalmology | [Arun Shroff](file:///C:\Users\campos\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\arunshroff@gmail.com) | MedIndia, India | B | N | M | ‑ |
| [O-018](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-Outbreaks | Outbreak detection | [Auss Abbood, Stephane Ghozzi](file:///C:\Users\campos\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\ghozzis@rki.de,%20stephane.ghozzi@helmholtz-hzi.de) | Robert Koch Institute, Helmholtz HZI, Germany | E | K | I | Yes |
| [O-019](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-Psy | Psychiatry | [Nicolas Langer](file:///C:\Users\campos\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\n.langer@psychologie.uzh.ch) | ETH Zurich, Switzerland | C | K | H | ‑ |
| [O-020](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-Snake | Snakebite and snake identification | [Rafael Ruiz de Castaneda](file:///C:\Users\campos\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\rafael.ruizdecastaneda@unige.ch) | UniGe, Switzerland | B | I | G | ‑ |
| [O-021](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-Symptom | Symptom assessment | [Henry Hoffmann](file:///C:\Users\campos\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\henry.hoffmann@ada.com) | Ada Health, Germany | B | O | N | Yes |
| [O-022](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-TB | Tuberculosis | [Manjula Singh](file:///C:\Users\campos\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\singhmanjula.hq@icmr.gov.in) | ICMR, India | C | M | E | ‑ |
| [O-023](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-Radiology | AI for radiology | [Darlington Ahiale Akogo](file:///C:\Users\campos\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\darlington@gudra-studio.com) | minoHealth AI Labs, Ghana | D; H (rescoped) | M | H | Yes |
| [O-024](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-Diabetes | primary and secondary diabetes prediction | [Andrés Valdivieso](file:///C:\Users\campos\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\avaldivieso@anastasia.ai) | Anastasia.ai, Chile | H | K | L | ‑ |
| [O-025](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-Endoscopy | AI for endoscopy | [Jianrong Wu](file:///C:\Users\campos\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\edwinjrwu@tencent.com) | Tencent Healthcare, China | I | N | J | ‑ |
| [O-026](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-MSK | AI for Musculoskeletal medicine | [Peter Grinbergs, Yura Perov](file:///C:\Users\campos\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\tgmskorg@eql.ai) | EQL, UK; UK | J | O | O | Yes |
| [O-027](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-Fertility | AI for human reproduction and fertility | [Susanna Brandi, Eleonora Lippolis](file:///C:\Users\campos\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\susanna.brandi@merckgroup.com,%20eleonora.lippolis@merckgroup.com) | Merck KGaA, Darmstadt, Germany | L | N | M | ‑ |
| [O-028](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-Sanitation | AI in sanitation for public health | [Khahlil Louisy, Alexander Radunsky](file:///C:\Users\campos\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\klouisy@hks.harvard.edu,%20aradunsky@mail.harvard.edu) | Harvard, USA | L | N | M | Yes |
| [O-029](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-POC | Topic Group on AI for point-of care diagnostics | [Nina Linder](file:///C:\Users\campos\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\nina.linder@helsinki.fi) | University of Helsinki, Finland | L | N | M | Yes |

Table 3 – Presentation of TGs in Meeting O

| Thematic group | Topic Group | Presenter | Update |
| --- | --- | --- | --- |
| Brain & muscle | TG-Falls | Pierpaolo Palumbo | Continues data sourcing (O-012-A03) |
| TG-Neuro | Ferath Kherif | O-016-A03 |
| New TG Proposal by Cognevity | Seyed Mahdi Khaligh-Razavi | Delegates welcomed the presentation, proposed to join TG-Neuro (O-037-A01) |
| Non-communicable diseases – cancer | TG-Radiology | Darlington Agogo | O-023-A03 |
| TG-Dermatology | Sharad Kumar | O-007-A03 |
| TG-DiagnosticCT | Kuan Chen | O-009-A03 |
| Public Health | TG-Symptom | Henry Hoffmann | O-021-A01 |
| TG-Dental | Joachim Krois | O-010-A01 |
| Communicable diseases | TG-Outbreak | Auss Abood | O-018-A03 |
| TG-Sanitation | Alexander Radunksy | Will be merged with TG-Outbreaks, O-028-A03 |
| TG-Malaria | Rose Nakasi |  |
| TG-MSK | Yura Perov | O-026-A01 |

## TG-Cardio (Use of AI in Cardiovascular Disease Management)

[Benjamin Muthambi](mailto:brm5@caa.columbia.edu) is the driver for the main topic as well as for sub-topic 1 (CVD Risk Prediction using AI). The latest documentation available is as follows:

TDD: [O-006-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-006-A01.docx) [(Same as Meeting N)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006-A03.pptx)CfTGP: [O-006-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-006-A02.docx) (Same as Meeting H)  
Contributions: N/A

No updates were provided at this meeting.

## TG-Derma (Dermatology)

The Topic Driver is [Sharad Kumar](mailto:sharad.kumar@nurithmlabs.tech) (Nurithm Labs Private Limited, India) who replaced Weihong Huang (Xiangya Hosp. Central S. University, China; [whuangcn@qq.com](mailto:whuangcn@qq.com)) since Meeting M.

TDD: [O-007-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-007-A01.docx) (Same as Meeting E) - [O-007-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-007-A03.pptx)  
CfTGP: [O-007-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-007-A02.docx) (Same as Meeting E)

Sharad introduced the work in the topic group using the slides in [O-007-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-007-A03.pptx). He explained the common skin conditions which need to be detected sooner than later to avoid complications. He also pointed out that oral conditions could be detected in the oral cavity without the need of additional hardware.

Sharad expressed the needs to have more participation in the topic group, and he is open to suggestions such as the collaboration with the OCI / Audit Trial project team. Pradeep and Marc will follow up offline with Sharad.

No updates to the TGG or CfTGP were made at this meeting.

## TG-Bacteria (Diagnoses of bacterial infection and anti-microbial resistance, AMR)

The Topic Driver is [Nada Malou](mailto:nada.malou@paris.msf.org,nada_malou@yahoo.fr). The latest documentation available is as follows:

TDD: [O-008-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-008-A01.docx) (Same as Meeting L)   
CfTGP: N/A  
Contributions: N/A

No progress report was presented.

## TG-Diagnostic CT (Volumetric chest computed tomography)

The Topic Driver is [Kuan Chen](mailto:ckuan@infervision.com). The latest documentation available is as follows:

TDD: [O-009-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-009-A01.docx) (Same as Meeting N) – [O-009-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-009-A03.pptx)   
CfTGP: [O-009-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-009-A02.docx) (Same as Meeting H)  
Contributions: N/A

The presentation in [O-009-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-009-A03.pptx) was introduced by Sun Yi Peng on behalf of the TG Driver and provided an overview of the TG and their research. A new pulmonary nodule dataset called PN9 contains 8,798 CT scans and 40,439 annotated nodules of 9 different classes. A slice-aware network (SANet) was presented.

No updates were made to TDD or CfTGP at this Meeting.

## TG-Dental (Dental diagnostics and digital dentistry)

The Topic Drivers are [Falk Schwendicke](mailto:falk.schwendicke@charite.de), [Joachim Krois](mailto:Joachim.krois@charite.de) (Charité Berlin, DE) and [Tarry Singh](mailto:tarry.singh@deepkapha.ai) (deepkapha.ai, Netherlands). The latest available documentation is as follows:

TDD: [O-010-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-010-A01.docx) – [O-010-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-010-A03.pptx)   
CfTGP: [O-008-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-008-A02.docx)  
Contributions: N/A

Joachim presented the progress report in [O-010-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-010-A03.pptx). The TDD document was updated for this meeting, see [O-010-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-010-A01.docx). New sub-topic on Oral & Maxillofacial Oncology was created. A checklist is being developed to overcome ethical issues. Observing more experts interested in the dual track of data sciences and dentistry. Contributors to this group increase rapidly and nine new members joined the TG since Meeting N, and now the group has 43 members from 18 countries of 5 continents. Its own website (<https://www.autodontics.com/>) was created to reach out more dentists to establish standardized benchmarking of Endodontic AI systems.

Sameer: how to make a maximum impact to the Governments? Joachim: Dentistry is a field that a lot of research is still needed. The work on AI for dentistry is at a beginning stage and the TG successfully build a community and it is growing. The challenge would be moving from research to implementation benchmarking guidelines.

Eva: how the FG could help further Joachim: appreciate OCI as it provides infrastructure to test technologies. More promotion of the FG would be helpful to have more impact of the TG's work. Henry (TG-Symptom): Expect an impact of the final Deliverables to be published in 2023, by promoting the FG in a wider community.

The Deliverables folder was updated with the updated TDD in [O-010-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-010-A01.docx).

## TG-FakeMed: AI-based detection of falsified medicine

The Topic Driver is [Franck Verzefé](mailto:fverzefe@gmail.com). The latest documentation available is as follows:

TDD: [O-011-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-011-A01.docx) (Same as meeting J)  
CfTGP: [O-011-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-011-A02.docx) (Same as Meeting H)  
Contributions: N/A

No progress report was presented.

## TG-Falls (Falls amongst the elderly)

[Pierpaolo Palumbo](mailto:pierpaolo.palumbo@unibo.it) (University of Bologna, Italy) replaces [Inês Sousa](mailto:ines.sousa@fraunhofer.pt) (Fraunhofer Portugal) as interim Topic Driver until September 2021. The latest documentation available is as follows:

TDD: [O-012-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-012-A01.docx) (Same as Meeting X)– [O-012-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-012-A03.pptx)   
CfTGP: [O-011-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-011-A02.docx) (Same as Meeting H)  
Contributions: N/A

Pierpaolo presented an overview and update of the TG-Falls work using the slides in [A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-012-A03.pptx).

Focusing on the work with ML4H Trial Audit project 2.0. The group will review datasets for sensor-based fall prediction. Pierpaolo thinks FGAI4H has been helpful to have more credibility which facilitate their work.

Andrew: how big are datasets? Pierpaolo: different epidemiological data with thousands of subjects, and size increases when data includes sensor information.

No updates were made to TDD or CfTGP at this Meeting.

## TG-Histo (Histopathology)

The Topic Driver is [Frederick Klauschen](mailto:f.klauschen@lmu.de). The latest documentation available is as follows:

TDD: [O-013-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-013-A01.docx) (Same as Meeting I)   
CfTGP: [O-013-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-013-A02.docx) (Same as Meeting E)  
Contributions: N/A

No progress report was provided at this meeting.

## TG-Malaria: Malaria detection

The Topic Driver is [Rose Nakasi](mailto:g.nakasirose@gmail.com). The latest documentation available is as follows:

TDD: [O-014-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-014-A01.docx) (Same as meeting N)   
CfTGP: [O-014-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-014-A02.docx) (Same as meeting L)  
Contributions: N/A

Rose updated the meeting on the TG progress (slides not submitted to the secretariat for uploading). Since Meeting N, the group has been focusing on benchmarking, instead of competition, and implementing classification task on codabench. Discussion is being made on the outcomes of the implemented platform.

No updates were made to TDD or CfTGP at this Meeting.

## TG-MCH: Maternal and child health

The Topic Drivers are [Raghu Dharmaraju](mailto:rdharmaraju@gmail.com) (Wadhwani AI, India) and [Alexandre Chiavegatto](mailto:alexdiasporto@usp.br) (University of São Paulo, Brazil).The latest documentation available is as follows:

TDD: [O-015-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-015-A01.docx) (Same as Meeting L)  
CfTGP: [O-015-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-015-A02.docx) (Same as Meeting H)  
Contributions: N/A

No updates were provided at this meeting.

## TG-Neuro: Neurological disorders

The Topic Driver is [Marc Lecoultre](mailto:ml@mllab.ai) (ML Labs, Switzerland), with [Ferath Kherif](mailto:Ferath.kherif@chuv.ch) (CHUV, Switzerland). The latest documentation available is as follows:

TDD: [O-016-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-016-A01.docx) (Same as Meeting L) – [O-016-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-016-A03.pptx)CfTGP: [O-016-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-016-A02.docx) (Same as Meeting E)  
Contributions: [O-037](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-037.docx)

Ferath presented the overview of the work of the TG using the slides in [A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-016-A03.pptx). Focusing now on the Trial audit project. Ferath thinks FG-AI4H has been helpful to connect with people, allow them to collect more data. No updates were made to the TDD or CfTGP.

[***O-037***](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-037.docx) ***+*** [***A01***](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-037-A01.docx)***: New TG or subtopic proposal:*** ***Scalable digital platform for proactive brain health***

[Seyed Khaligh-Razavi](mailto:seyed@cognetivity.com) and [Tom Sawyer](mailto:tom@cognetivity.com) (Cognetivity, UK) introduced O-037 with their work on AI-based cognitive impairment detection and their platform CognICA, using the slides in [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-037-A01.docx).

Cognitive impairment is a symptom of wide range of brain diseases such as depression, dementia and anxiety. Today there is no rapid and sensitive tool to detect impairment, even though it has been clearly shown that early detection can improve outcomes and reduce cost. For example, early detection of dementia alone is estimated to have close to 8 tr dollars cost saving. This is because current antiquated approaches to detect impairment are not working. They have significant limitation and biases. They are designed for later stages of the disease when symptoms such as memory loss are clearly present. CognICA was developed to address these limitations. CognICA to brain health will be what blood pressure tool is to cardiovascular health. CognICA is an FDA-registered AI-powered digital platform for cognitive assessment that looks at the brain's information processing in particular visual information, as opposed to memory. It takes 5 min to administer and is designed to be more sensitive to less severe brain deteriorations, compared to the current pen-and-paper standard of care. The tool can be utilized as a population wide risk-based screening, before going to a full assessment. This area of study is good to be included in TG-Neuro as a sub-topic.

After discussion, it was agreed that proactive brain health would be suitable as a new sub-topic in TG-Neuro.

1. Scalable digital platform for proactive brain health has been agreed as a new sub-topic within TG-Neuro, led by [Seyed Khaligh-Razavi](mailto:seyed@cognetivity.com) and [Tom Sawyer](mailto:tom@cognetivity.com) (Cognetivity, UK), with [O-037](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-037.docx) as reference.

## TG-Ophthalmo (Ophthalmology)

The Topic Driver is [Arun Shroff](mailto:arunshroff@gmail.com). The latest documentation available is as follows:

TDD: [O-017-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-017-A01.docx) (Same as Meeting N) CfTGP: [O-017-A02 (Same as Meeting M)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-017-A02.docx﷟HYPERLINK%20%22https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-017-A02.docx%22)Contributions: N/A

No updates were provided at this meeting.

## TG-Outbreaks (AI for Outbreak Detection)

The Topic Driver are [Auss Abbood](mailto:abbooda@rki.de) (Robert Koch Institute, Germany) and [Stéphane Ghozzi](mailto:stephane.ghozzi@helmholtz-hzi.de) (HZI, Germany). The latest documentation available is as follows:

TDD: [O-018-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-018-A01.docx) (Same as Meeting K) – [O-018-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-018-A03.pptx)  
CfTGP: [O-018-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-018-A02.docx) (Same as Meeting I)  
Contributions: N/A

The TG Driver Auss Abbood provided updates on the progress of TG-Outbreaks using the slides in [O-018-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-018-A03.pptx).

The group plans to work on ethics and regulation to be added in the TDD.

Additionally, as reported in §‎13.15, the TG is preparing to cover the topics handled before under TG-Sanitation, as these two topics complement nicely.

Auss informed that Stéphane Ghozzi, current co-TG driver, would be replaced by Alexander Ullrich ([UllrichA@rki.de](mailto:UllrichA@rki.de), Robert Koch Institute). Some members needed to leave the group due to issues related to the Covid-19 Pandemic.

No updates were made to the TDD, which was last updated for Meeting K, nor to the CfTGP (Meeting I).

## TG-Sanitation

The co-Topic Drivers are [Khahlil Louisy](mailto:klouisy@hks.harvard.edu) (Institute for Technology & Global Health, ITGH, US), [Alexander Radunsky](mailto:aradunsky@mail.harvard.edu) (ITGH, US). The latest documentation available is as follows:

TDD: [O-028-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-028-A01.docx) (Same as Meeting N) – [O-028-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-029-A03.pptx)  
CfTGP: [[O-028-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-028-A02.docx) (Same as Meeting M)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-M-028-A02.docx)Contributions: N/A

Alexander presented updates to TG activities using the presentation in [A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-029-A03.pptx). No update was made to the TDD at this meeting.

A proposal was made to merge the TG-Sanitation work into the TG-Outbreaks, to explore a number of synergies that have been identified, for example for wastewater surveillance.

The proposal was agreed, and the group is preparing the necessary work plan and documentation updates to merge of the TG with TG-Outbreak, next steps are being discussed.

See also related discussions at §‎13.14.

1. It was agreed to merge the TG-Sanitation topics into TG-Outbreaks. The meeting thanked the work of the co-topic drivers and wished them the best for the continuation of the work within TG-Outbreaks.

## TG-Psy (Psychiatry)

The Topic Driver is [Nicholas Langer](mailto:n.langer@psychologie.uzh.ch). The latest documentation available is as follows:

TDD: [O-019-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-019-A01.docx) (Same as Meeting K) CfTGP: [O-019-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-019-A02.docx) (Same as Meeting H)  
Contributions: N/A

No updates were provided at this meeting.

## TG-Snake (Snakebite and snake identification)

The Topic Driver is [Rafael Ruiz](mailto:rafael.ruizdecastaneda@unige.ch). The latest documentation available is as follows:

TDD: [O-020-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-020-A01.docx) (Same as Meeting I)  
CfTGP: [O-020-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-020-A02.docx) (Same as Meeting G)  
Contributions: N/A

No updates were provided at this meeting.

## TG-Symptom (Symptom assessment)

The Topic Driver is [Henry Hoffmann](mailto:henry.hoffmann@ada.com). The latest documentation available is as follows:

TDD: [O-021-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-021-A01.docx) – [O-021-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-021-A03.pptx)CfTGP:  [[O-021-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-021-A02.docx) (Same as Meeting N)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-M-021-A02.docx)Contributions: N/A  
Contributions: N/A

[Martin Cansdale](mailto:martin@your.md) (Healthily, UK) and Henry presented the progress report (including a general overview of the activity) in [O-021-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-021-A03.pptx). Martin Cansdale joined the TG as a co-Topic Driver, as decided the 4th TG workshop of the topic group held online, 7–8 April 2022. Work on the five active workstreams continues. The revision of the necessary annotation guidelines was started. The group set out the main roadmap items (Figure 10 of O-021-A01) focusing on the final document submission deadline in 2023.

Work with the Audit Trial 2.0 project continues, which started reviewing the AI benchmarking interface. They decided to investigate FHIR as format for encoding the benchmarking cases to send to the participating AIs which will increase the interoperability of the benchmarking cases. Explored the feasibility of integrating the TG-Symptom annotation tool with the OCI.

The updated TDD in [O-021-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-021-A01.docx) was uploaded to the Deliverables repository.

## TG-TB (Tuberculosis)

The Topic Driver is [Manjula Singh](mailto:drmanjulasb@gmail.com). The latest documentation available is as follows:

TDD: [O-022-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-022-A01.docx) (Same as Meeting M)  
CfTGP: [O-022-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-022-A02.docx) (Same as Meeting E)  
Contributions: [O-059](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-059.pptx)

No updates were provided at this meeting.

A related contribution was introduced:

[O-059](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-059.pptx) – Use and assessment of AI tools for tuberculosis diagnostics (FIND)

O-059 was presented by [Morten Ruhwald](mailto:morten.ruhwald@finddx.org) (FIND) concerning activities in FIND for identifying quality AI tools for tuberculosis diagnostics. He highlighted the importance of creating and implementing evidence generation frameworks for AI-based diagnostics that tailor to LMIC contexts (in addition to existing high-income country settings), and that tuberculosis remains an area with a large need for such tools. This need is heightened by the global shortage of radiologists, in particular in the Southern hemisphere. They observed that computer-aided diagnostics tool start to be on par with humans and there would be benefit in furthering the adoption of good quality tools. FIND has developed a framework (see [www.ai4hlth.org](http://www.ai4hlth.org/)) where they collect information such as product description and comparison, certification status, issues around data sharing and privacy, as well as cost.

FIND is interested in collaborating with the FG-AI4H, which was welcomed by the meeting. They were encouraged to get involved, in particular within the context of TG-Radiology and TG-TB.

## TG-Radiology (Radiology)

The Topic Driver is [Darlington Ahiale Akogo](mailto:darlington@gudra-studio.com) (minoHealth AI Labs, Ghana). The latest documentation available is as follows:

TDD: [O-023-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-023-A01.docx) (Same as Meeting M) – [O-023-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-023-A03.pptx﷟HYPERLINK%20%22https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-023-A03.pptx%22)CfTGP: [O-023-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-023-A02.docx) (Same as Meeting H)  
Contributions: N/A

The TG driver presented the slides on the progress report in [O-023-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-023-A03.pptx) with an overview and update for the TG-Radiology. The group works on TG-Radiology Audit challenge on health.aiaudit.org.

Darlington also voiced that AI is a useful tool to classify breast lesions as determined with the radiologist, however, the level of precision limits the use of imaging radiology using AI to a clinical support tool for the radiologist.

No updates were made to the TDD, which was last updated for Meeting M, nor to the CfTGP (Meeting H).

## TG-Diabetes (Primary and secondary diabetes prediction)

The Topic Driver is [Andrés Valdivieso](mailto:avaldivieso@anastasia.ai) (Anastasia.ai, Chile) The latest documentation available is as follows:

TDD: [O-024-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-024-A01.docx) (same as Meeting K)   
CfTGP: [O-024-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-024-A02.docx) (same as Meeting L, draft by the secretariat)  
Contributions: N/A

No progress report was presented.

## TG-Endoscopy (AI for endoscopy)

The Topic Driver is [Jianrong Wu](mailto:edwinjrwu@tencent.com) (Tencent Healthcare, China). The latest documentation available is as follows:

TDD: [O-025-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-025-A01.docx) (Same as Meeting N) CfTGP: [O-025-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-025-A02.docx) (Same as Meeting J)  
Contributions: N/A

No updates were provided at this meeting.

## TG-MSK (AI for musculoskeletal medicine)

The co-Topic Drivers are Peter Grinbergs (EQL, UK) and Yura Perov (Consultant, UK), both can be reached through a common e-mail address, [tgmskorg@googlegroups.com](mailto:tgmskorg@googlegroups.com). The latest documentation available is as follows:

TDD: [O-026-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-026-A01.docx) – [O-026-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-026-A03.pptx)  
CfTGP: [[O-026-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-026-A02.docx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-M-026-A02.docx)Contributions: N/A

Peter and Yura delivered a progress report on the activities of the TG using the slides in [A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-026-A03.pptx). The updated version of the TDD is available in [O-026-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-026-A01.docx).

The current focus of the Group is prediction for and prevention of MSK conditions, including risk identification and risk reduction. Since Meeting N, added more cases (11 cases added to the original eight cases), spanning extra pathologies (inclusive of hip, wrist, shoulder, foot, hallux, rheumatology examples), added data for incidence, prevalence, average disability weight, YLD Global (%) and DALY (%). Michael Guard (EQL, UK) joined the TG.

The first version of the prototype (demo) has been developed and is available at [https://github.com/‌perov/fgai4h-tg-msk-prototype](https://github.com/perov/fgai4h-tg-msk-prototype).

The updated TDD in [O-026-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-026-A01.docx) is uploaded to the Deliverables repository.

## TG-Fertility (AI for human reproduction and fertility)

The co-Topic Drivers are [Susanna Brandi](mailto:susanna.brandi@merckgroup.com) and [Eleonora Lippolis](mailto:eleonora.lippolis@merckgroup.com) (Merck KGaA, Darmstadt, Germany). The latest documentation available is as follows:

TDD: [O-027-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-027-A01.docx) (same as Meeting N)CfTGP: [O-027-A02 (same as Meeting M)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-M-027-A02.docx)Contributions: N/A

No updates were provided at this meeting.

## TG-POC (AI for point-of care diagnostics)

The Topic Driver is [Nina Linder](mailto:nina.linder@helsinki.fi) (University of Helsinki, Finland). The latest documentation available is as follows:

TDD: [O-029-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-029-A01.docx) (Same as meeting N) – [O-029-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-029-A03.pptx)  
CfTGP: [[O-029-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-029-A02.docx) (Same as meeting M)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-M-026-A02.docx)Contributions: N/A

The Topic Driver presented updates to the TDD using the slides in [A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-029-A03.pptx). The group conducted proof of concept studies of a novel method that combines artificial intelligence (AI) and mobile digital microscopy for example for cell-based cervical cancer screening in resource-limited settings, in rural area in Kenya, with 700 women with HIV. The group will conduct validation studies for POC diagnostics for helminth infections and malaria in Tanzania and Kenya.

No update was made to the TDD or CfTGP at this meeting.

# Proposals for new topic areas

## Proposed new TG on Nephrology

[O-031](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-031.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-031-A01.docx) New TG Proposal on Nephrology: Role of Artificial Intelligence in Kidney Disease

**Abstract:** The rising prevalence of end-stage renal disease (ESRD) and its related morbidity is a major global public health issue. The number of new ESRD cases in the United States in 2015 was 124,111, according to the 2017 US Renal Data System (USRDS) Annual Data Report. As the number of people diagnosed with ESRD rises, so does the supply for renal replacement therapy (RRT). In China, haemodialysis (HD) is used by approximately 86 % of the dialysis population. In many countries, patient outcomes with peritoneal dialysis are comparable to or better than those with haemodialysis, and peritoneal dialysis is also more cost-effective. Current estimates suggest that more than 272,000 patients receive peritoneal dialysis worldwide, representing approximately 11% of the global dialysis population[6](https://www.nature.com/articles/nrneph.2016.181#ref-CR6). Use of this modality differs dramatically, however, between different regions and countries. The annual global growth rate of peritoneal dialysis is estimated to be 8%, which is higher than that of haemodialysis (approximately 6–7%).

While nephrology is an important area to investigate further, and the work was well acknowledged, the meeting requested that the submitter refine the proposal for example, input parameters, parameters to be benchmarked and data sources, for submission at a subsequent meeting.

# Review / reconfirmation of previous output documents

The following documents are reconfirmed without any updates:

* [F-103](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-F-103.docx): Updated FG-AI4H data acceptance and handling policy
* [C-104](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-C-104.docx): Thematic classification scheme
* [F-105](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-F-105.docx): ToRs for the WG-Experts and call for experts
* [F-106](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-F-106.docx): Guidelines on FG-AI4H online collaboration tools
* [M-107](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-M-107.docx): Updated FG-AI4H Onboarding document
* [FG-AI4H Whitepaper](https://www.itu.int/en/ITU-T/focusgroups/ai4h/Documents/FG-AI4H_Whitepaper.pdf) ([K-002](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-K-002.docx))

The call for proposals in N-102 will be updated and uploaded to the repository as [O-102](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-102.docx), for proposals at Meeting P.

# Working methods

No changes were agreed to the working methods.

NOTE – [Annex D](#AnnexD) hereinafter contains the agreed procedures for online approval of document as well as for organizing e-meetings.

# Outcomes of this meeting

## WG updates

There were no changes to the FG-AI4H leadership.

## TG updates

New TG/sub-TG:

* No new TGs were proposed at this meeting.
* TG-Neuro: New sub-topic group on Scalable digital platform for proactive brain health, led by [Seyed Khaligh-Razavi](mailto:seyed@cognetivity.com) and [Tom Sawyer](mailto:tom@cognetivity.com) (Cognetivity, UK). Reference: [O-037](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-037.docx).

Updates to leadership / scope of existing TGs:

* Outbreak detection (TG-Outbreaks): [Auss Abbood](mailto:abbooda@rki.de) and [Alexander Ullrich](mailto:UllrichA@rki.de) (Robert Koch Institute, Germany)
* Symptom assessment (TG-Symptom): [Henry Hoffmann](mailto:henry.hoffmann@ada.com) (Ada Health, Germany) and [Martin Cansdale](mailto:martin@your.md) (Healthily, UK)

## Output liaison statements

Two outgoing liaison statements were prepared as outcome of discussions at this meeting and submitted for the online approval procedure:

* [N-056](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-056.docx) – LS/r on invitation to review Artificial Intelligence Standardization Roadmap and provide missing or updated information (SG13-LS234/[N-038](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-038.docx)) [to ITU-T SG13]. Dispatched as [FGAI4H-LS8](https://www.itu.int/net/ITU-T/ls/ls.aspx?isn=28266).
* [N-058](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-058.docx) – LS on the establishment of JCA on digital COVID-19 certificates (JCA-DCC) (TSAG-LS47/[N-039](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-039.docx)). Dispatched as [FGAI4H-LS9](https://www.itu.int/net/itu-t/ls/ls.aspx?isn=28309).

## Output documents

No new output documents were agreed. The following updated **output documents** were agreed:

* [N-102](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-102.docx): Updated call for proposals: use cases, benchmarking, and data (to be issued when the dates of the next meeting are defined)
* [N-200](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-200.docx): Updated list of FG-AI4H deliverables

## Deliverables and parent group reporting

No new deliverables were agreed at this meeting. All available deliverables were reviewed, their latest version is found in the [FG-AI4H collaboration site](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/SitePages/Deliverables.aspx).

The next report to SG16 will be needed for its meeting planned October/November 2022.

# Future work

## Schedule of future FG meetings and workshops

The schedule of meetings in [O-003](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-003.docx) was reviewed; Table 2 has the updated information.

In view of the COVID-19 pandemic, physical meetings after Brasilia were transformed into virtual meetings, until this Meeting O in Berlin. Future meetings are expected to be physical meetings with remote participation. In addition to meetings, **topic-specific webinars** should be organized around horizontal deliverables (DEL01 to DEL09). The Focus Group will continue to organize online webinars under the umbrella of AI for Good to highlight promises and perils around the use of AI-based methods in healthcare.

Table 2 – Schedule of future FG meetings (as of 2022-06-02)

| Meeting | Date | Venue | Notes |
| --- | --- | --- | --- |
| O | 31 May- 2 June 2022 | Fraunhofer/HHI, Berlin | This meeting |
| P | 19-22 September 2022 | University of Helsinki | TBC |
| Q | December 2022 | Physical | Africa (TBC) |
| R | March 2022 | TBD | TBD |

The following is a list of potential future meeting locations:

|  |  |  |
| --- | --- | --- |
| Asia:   1. Bangladesh 2. Philippines 3. Singapore 4. South Korea 5. Thailand   Middle-East   1. Oman 2. UAE | Africa   1. South Africa 2. Uganda 3. Kenya 4. Ghana 5. Rwanda 6. Nigeria   Europe   1. Berlin | Americas   1. Canada 2. US 3. Chile |

## Work plan and timeline

Update drafts of the deliverables in Table 1 (see §‎11) are expected to be available by two weeks before the next FG-AI4H plenary meeting (to be announced).

## Interim activities (online)

TGs and WGs will continue their activities between this and the next FG meeting. Communications on planned e-meetings will be announced in the TG-specific and/or general mailing lists (see [Annex D](#AnnexD)) with at least one-week notice.

# Promotion and outreach

The meeting was reminded that a series of webinars took place. The idea is that the webinars on horizontal and vertical themes of the Deliverables take place every two weeks and are organized within the context of the AI for Good online events. The whole series of the Discovery series on AI and health can be seen here: <https://aiforgood.itu.int/search-result-programme/?keyword=&category=346&event-venue=&enddate=&startdate=Select+year>.

# A.O.B.

None.

# Closing

The FG-AI4H chairman thanked all participants for having joined the meeting, in particular those submitting contributions and engaged in the discussions. The chairman also thanked the vice-chairs, WG chairs/co-/vice-chairs, and topic drivers who joined the discussions. Finally, he expressed his appreciation for the essential work performed by the secretariat, in particular Simão Campos, Ayda Dabiri, Matthias Groeschel, Kaoru Mizuno and Bastiaan Quast.

The meeting was closed on Thu 17 February 2022 around 1500 hours (Geneva time).

Annex A:  
Agenda

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | Related Documents |
| 1 | Opening | | | [O-002](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-002.pptx) (FG-AI4H Introduction), [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-002-A01.pptx) (Fraunhofer HHI Introduction) |
| 2 | Approval of agenda | | | [O-001](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-001.docx) (Agenda);  Initial timing: [link](https://docs.google.com/spreadsheets/d/1smOSiyEqZqsuKp27-ryba-7uNAYGiKDbPJttqvU78Pg/edit?usp=sharing) |
| 3 | Documentation and allocation | | | [O-001](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-001.docx) (Allocation);  Annex B (Documentation) |
| 4 | IPR | | | Annex A |
| 5 | Management updates | | |  |
| a | | | Vice-chairs | * No updates |
| b | | | WGs | * Mr Andrew Farlow (University of Oxford, UK) was confirmed as chair of WG-CO Collaboration and outreach created prior to meeting N |
| c | | | TGs | * No updates |
| 6 | Approval of Meeting N outcomes and updates | | | [N-101](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-101.docx): Meeting Report [N-102](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-102.docx): Updated call for proposals: use cases, benchmarking, and data [N-200](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-N-200.docx): Updated list of FG-AI4H deliverables |
|  | Interim activities: | | | N/A |
| 7 | Review of incoming LSs | | |  |
| a | | | LS on the outcomes of the first meeting of the ITU-T Focus Group on Testbed Federations for IMT-2020 and beyond [from FG-TBFxG] | FG-TBFxG to various groups for info: [O-030](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-030.pptx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-030-A01.pptx) + [A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-030-A02.pptx) à *to Note* |
| b | | |  |  |
| c | | |  |  |
| 8 | Information on AI-related activities | | | Webinars; ITU AI4H challenge |
| 9 | Horizontal and strategic topics | | |  |
| 10 | Working Group updates | | |  |
| a | | | Data and AI solution assessment methods (WG-DAISAM) [Pat Baird; Luis Oala] | [O-051](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-051.pptx): ML4H Trial Audits–Iteration 2.0 |
| b | | | Data and AI solution handling (WG-DASH) [Marc Lecoultre; Ferath Kherif] |  |
| c | | | Ethics (WG-Ethics) [Andreas Reis] | [O-053](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-053.pptx): WG-Ethics update  Workshop on 30 May 2022 presentations: [O-040](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-040.pptx), [O-041](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-041.pptx), [O-042](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-042.pptx) |
| d | | | Operations (WG-O) [Markus Wenzel; Eva Weicken] |  |
| e | | | Regulatory considerations (WG-RC) [Shada Alsalamah] | (See agenda item 12.e) |
| f | | | Clinical Evaluation (WG-CE) [Naomi Lee; Shubhanan Upadhyay; Eva Weicken] |  |
| g | | | Collaborations and Outreach (WG-CO) [Andrew Farlow] | [O-054](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-054.pptx): WG-CO update  Workshop on 30 May 2022 presentations: [O-043](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-043.pptx), [O-044](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-044.pptx), [O-045](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-045.pptx); [O-043](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-043.pptx); [O-044](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-044.pptx); [O-045](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-045.pptx); [O-046](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-046.pptx); [O-054](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-054.pptx) |
| h | | | AI and other digital technologies for COVID-19 health emergency (AHG-DT4HE) [Shan Xu, Ana Rivière-Cinnamond] |  |
|  | | |  |  |
| 11 | Open Code Project [Marc Lecoultre] | | | [O-052](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-052.pptx): Open Code Initiative – Status update |
| 12 | FG-AI4H deliverables | | | [O-005](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-005.docx): Updated list of planned deliverables  [O-004](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-004.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-004-A01.pptx): Publication of Focus Group Deliverables – follow-up |
| a | | | New deliverables | – |
| b | | | [DEL0](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL00.docx): Overview of deliverables |  |
| c | | | [DEL0.1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL00_1.docx): FGAI4H terms and definitions | [O-032-R2](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-032-R2.docx): DEL0.1 Update: Common unified terms in artificial intelligence for health |
| d | | | [DEL1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL01.docx): AI4H ethics considerations | [O-060](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-060.docx): Updated DEL01 - Ethics and governance of artificial intelligence for health |
| e | | | [DEL2](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL02.docx): AI4H regulatory best practices | [O-034](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-034.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-034-A01.pptx): Update - Overview of Regulatory Considerations on Artificial Intelligence for Health [Editor] |
| f | | | [DEL2.1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL02_1.docx): Mapping of IMDRF essential principles to AI for health software |  |
| g | | | [DEL2.2](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL02_2.docx): Good practices for health applications of machine learning: Considerations for manufacturers and regulators | [O-036](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-036.docx): Updates to DEL2.2 |
| h | | | [DEL3](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL03.docx): AI4H requirements specifications | No updates for this meeting |
| i | | | [DEL4](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL04.docx): AI software life cycle specification | [O-033](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-033.pptx): Cybersecurity and AI/ML Data Lifecycles Follow up [Editor] |
| j | | | [DEL5](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL05.docx): Data specification |  |
| k | | | [DEL5.1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL05_1.docx): Data requirements |  |
| l | | | [DEL5.2](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL05_2.docx): Data acquisition |  |
| m | | | [DEL5.3](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL05_3.docx): Data annotation specification |  |
| n | | | [DEL5.4](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL05_4.docx): Training and test data specification |  |
| o | | | [DEL5.5](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL05_5.docx): Data handling |  |
| p | | | [DEL5.6](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL05_6.docx): Data sharing practices |  |
| q | | | [DEL6](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL06.docx): AI training best practices specification |  |
| r | | | [DEL7](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL07.docx): AI for health evaluation considerations | [O-035](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-035.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-035-A01.docx): |
| s | | | [DEL7.1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL07_1.docx): AI4H evaluation process description | [O-56](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-056.pptx): DEL7.1: AI4H evaluation process description - Dynamic Digital Health Maturity Model |
| t | | | [DEL7.2](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL07_2.docx): AI technical test specification | [O-57](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-057.pptx): Updated DEL 7.2 [Editor] |
| u | | | [DEL7.3](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL07_3.docx): Data and artificial intelligence assessment methods (DAISAM) reference |  |
| v | | | [DEL7.4](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL07_4.docx): Clinical evaluation of AI for health | [O-038](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-038.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FG-AI4H-O-038-A01.pptx): Updated DEL7.4 [Editors] |
| w | | | [DEL7.5](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL07_5.docx): Assessment platform | [O-055](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-055.pptx): Status update |
| x | | | DEL8: AI4H scale-up and adoption |  |
| y | | | [DEL9](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL09.docx): AI4H applications and platforms |  |
| z | | | [DEL9.1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL09_1.docx): Mobile applications (Manjeet),  [DEL9.2](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL09_2.docx): Cloud-based AI applications |  |
| aa | | | [DEL10.0](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL10_0.docx): AI4H use cases: Topic Description Documents | [O-039](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-039.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-039-A01.pptx): Updated DEL10 [Editors] |
| 13 | Updates to TGs and new proposals | | |  |
| a | | Template updates: TDD, CfTGP | | [J-105](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-J-105.docx): TDD template (to note)  [J-103](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-J-103.docx): CfTGP template (to note) |
| b | | TG-Cardio (Cardiovascular Risk Prediction)  [[Benjamin Muthambi](mailto:brm5@caa.columbia.edu)] | | TDD: [O-006-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-006-A01.docx) - [[O-006-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-006-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006-A03.pptx) CfTGP: [[O-006-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-006-A02.docx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-006-A02.docx) Contributions: |
| c | | TG-Derma (Dermatology)  [[Sharad Kumar](mailto:sharad.kumar@nurithmlabs.tech)] | | TDD: [O-007-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-007-A01.docx) - [O-007-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-007-A03.pptx)CfTGP: [O-007-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-007-A02.docx) Contributions: |
| d | | TG-Bacteria (Diagnoses of bacterial infection and anti-microbial resistance - AMR) [[Nada Malou](mailto:nada.malou@paris.msf.org)] | | TDD: [O-008-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-008-A01.docx) - [O-008-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-008-A03.pptx) CfTGP: [O-008-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-008-A02.docx)  Contributions: |
| e | | TG-DiagnosticCT (Volumetric chest computed tomography)  [[Kuan Chen](mailto:ckuan@infervision.com)] | | TDD: [O-009-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-009-A01.docx) - [[O-009-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-009-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-009-A03.pptx) CfTGP: [O-009-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-009-A02.docx)  Contributions: |
| f | | TG-Dental (Dental diagnostics and digital dentistry) [[Falk Schwendicke](mailto:falk.schwendicke@charite.de), [Joachim Krois](mailto:Joachim.krois@charite.de)] | | TDD: [O-010-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-010-A01.docx) - [[O-010-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-010-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-010-A03.pptx) CfTGP: [[O-010-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-010-A02.docx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-010-A02.docx) Contributions: |
| g | | TG-FakeMed: AI-based detection of falsified medicine [[Franck Verzefé](mailto:fverzefe@gmail.com)] | | TDD: [O-011-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-011-A01.docx) - [[O-011-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-011-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-011-A03.pptx) CfTGP: [[O-011-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-011-A02.docx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-011-A02.docx) Contributions: |
| h | | TG-Falls (Falls among the elderly)  [[Pierpaolo Palumbo](mailto:pierpaolo.palumbo@unibo.it) for [Inês Sousa](mailto:ines.sousa@fraunhofer.pt)] | | TDD: [O-012-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-012-A01.docx)- [[O-012-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-012-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-012-A03.pptx) CfTGP: [[O-012-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-012-A02.docx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-012-A02.docx) Contributions: |
| i | | TG-Histo (Histopathology)  [[Frederick Klauschen](mailto:frederick.klauschen@charite.de)] | | TDD: [O-013-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-013-A01.docx) - [O-013-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-013-A03.pptx)  CfTGP: [O-013-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-013-A02.docx)  Contributions: Workshop presentations [O-047](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-047.pptx); [O-048](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-048.pptx); [O-049](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-049.pptx); [O-050](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-050.pptx); |
| j | | TG-Malaria: Malaria detection  [[Rose Nakasi](mailto:g.nakasirose@gmail.com)] | | TDD: [O-014-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-014-A01.docx) - [[O-014-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-014-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-014-A03.pptx) CfTGP: [[O-014-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-014-A02.docx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-014-A02.docx) Contributions: |
| k | | TG-MCH: Maternal and child health  [[Raghu Dharmaraju](mailto:rdharmaraju@gmail.com), [Alexandre Chiavegatto Filho](mailto:alexdiasporto@usp.br)] | | TDD: [O-015-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-015-A01.docx) - [O-015-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-015-A03.pptx)  CfTGP: [O-015-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-015-A02.docx" \t "_blank)  Contributions: |
| l | | TG-Neuro: Neurological disorders  [[Marc Lecoultre](mailto:ml@mllab.ai)] | | TDD: [O-016-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-016-A01.docx) - [[O-016-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-016-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-016-A03.pptx) CfTGP: [[O-016-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-016-A02.docx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-016-A02.docx) Contributions: |
| m | | TG-Ophthalmo (Ophthalmology)  [[Arun Shroff](mailto:arunshroff@gmail.com)] | | TDD: [O-017-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-017-A01.docx) - [O-017-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-017-A03.pptx)  CfTGP: [[O-017-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-017-A02.docx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-017-A02.docx) Contributions: |
| n | | TG-Outbreaks (AI for Outbreak Detection)  [[Stéphane Ghozzi](mailto:GhozziS@rki.de)] | | TDD: [O-018-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-018-A01.docx) - [O-018-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-018-A03.pptx) CfTGP: [O-018-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-018-A02.docx) Contributions: |
| o | | TG-Psy (Psychiatry)  [[Nicholas Langer](mailto:n.langer@psychologie.uzh.ch)] | | TDD: [O-019-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-019-A01.docx) - [[O-019-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-019-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-019-A03.pptx) CfTGP: [O-019-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-019-A02.docx)  Contributions: |
| p | | TG-Snake (Snakebite and snake identification)  [[Rafael Ruiz](mailto:rafael.ruizdecastaneda@unige.ch)] | | TDD: [O-020-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-020-A01.docx) - [[O-020-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-020-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-020-A03.pptx) CfTGP: [O-020-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-020-A02.docx) Contributions: |
| q | | TG-Symptom (Symptom assessment)  [[Henry Hoffmann](mailto:henry.hoffmann@ada.com)] | | TDD: [O-021-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-021-A01.docx) - [[O-021-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-021-A03.pptx" \t "_blank)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-021-A03.pptx) CfTGP: [[O-021-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-021-A02.docx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-021-A02.docx) Contributions: |
| r | | TG-TB (Tuberculosis)  [[Manjula Singh](mailto:drmanjulasb@gmail.com)] | | TDD: [O-022-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-022-A01.docx) - [[O-022-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-022-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-022-A03.pptx) CfTGP: [O-022-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-022-A02.docx" \t "_blank)  Contributions: [O-059](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-059.pptx) |
| s | | TG-Radiology (Radiology)  [[Darlington Ahiale Akogo](mailto:darlington@gudra-studio.com)] | | TDD: [O-023-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-023-A01.docx) - [O-023-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-023-A03.pptx)  CfTGP: [O-023-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-023-A02.docx)  Contributions: |
| t | | TG-Diabetes [[Andrés Valdivieso](mailto:avaldivieso@anastasia.ai)] | | TDD: [O-024-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-024-A01.docx) - [O-024-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-024-A03.pptx)  CfTGP: [[O-024-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-024-A02.docx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-024-A02.docx) Contributions: |
| u | | TG-Endoscopy [[Jianrong Wu](mailto:edwinjrwu@tencent.com)] | | TDD: [O-025-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-025-A01.docx) - [[O-025-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-025-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-025-A03.pptx) CfTGP: [[O-025-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-025-A02.docx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-025-A02.docx) Contributions: |
| v | | TG-MSK (AI for Musculoskeletal medicine) [[Peter Grinbergs, Yura Perov](mailto:tgmskorg@googlegroups.com)] | | TDD: [O-026-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-026-A01.docx) - [[O-026-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-026-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-026-A03.pptx) CfTGP: [O-026-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-026-A02.docx)  Contributions: |
| w | | TG-Fertility (AI for human reproduction and fertility) [[Susanna Brandi](mailto:susanna.brandi@merckgroup.com), [Eleonora Lippolis](mailto:eleonora.lippolis@merckgroup.com)] | | TDD: [O-027-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-027-A01.docx) - [[O-027-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-027-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-026-A03.pptx) CfTGP: [O-027-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-027-A02.docx)  Contributions: |
| x | | TG-Sanitation (AI in sanitation for public health) [[Khahlil Louisy](mailto:klouisy@hks.harvard.edu), [Alexander Radunsky](mailto:aradunsky@mail.harvard.edu)] | | TDD: [O-028-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-028-A01.docx) - [[O-028-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-029-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-026-A03.pptx) CfTGP: [O-028-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-028-A02.docx)  Contributions: |
| y | | TG-POC (Topic Group on AI for point-of care diagnostics) [[Nina Linder](mailto:nina.linder@helsinki.fi)] | | TDD: [O-029-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-029-A01.docx) - [[O-029-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-029-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-026-A03.pptx) CfTGP: [O-029-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-029-A02.docx)  Contributions: Workshop presentations [O-047](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-047.pptx); [O-048](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-048.pptx); [O-049](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-049.pptx); [O-050](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-050.pptx) |
| 14 | Proposals for new topic areas | | |  |
| a | | Nephrology: Role of artificial intelligence in kidney disease | | [O-031](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-031.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-031-A01.docx): [Ark Health Solution, Shanghai, China] Asked proponent to refine the proposal |
| b | | Scalable digital platform for proactive brain health | | [O-037](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-037.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-037-A01.pdf): [Cognetivity, UK] New sub-topic in TG-Neuro |
| 15 | Review / reconfirmation of previous output documents | | | [F-103](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-F-103.docx): Updated FG-AI4H data acceptance and handling policy  [C-104](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-C-104.docx): Thematic classification scheme  [F-105](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-F-105.docx): ToRs for the WG-Experts and call for experts  [F-106](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-F-106.docx): Guidelines on FG-AI4H online collaboration tools  [M-107](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-M-107.docx): Updated FG-AI4H Onboarding document  [FG-AI4H Whitepaper](https://staging.itu.int/en/ITU-T/focusgroups/ai4h/Documents/FG-AI4H_Whitepaper.pdf) [[K-002](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-K-002.docx)]  [J-105](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-J-105.docx): TDD Template  [J-103](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-J-103.docx): CfTGP template |
| 16 | Outcomes of this meeting | | | a) Outgoing liaison statements None  b) Structure updates None  c) Call for proposals - O-102 (Updated CfP)  d) Output documents - DEL1: [O-060](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-060.docx) 🡪 [O-201](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-201.docx) - …  e) Updated list of planned deliverables [[O-005](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-005.docx)à [O-200](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-200.docx)] |
| 17 | Future work | | |  |
| a | | Schedule of future FG meetings and workshops | | [O-003](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-003.docx) |
| b | | Format of next meeting | |  |
| c | | Work plan and timeline  - Deliverables | | Start review deliverables indicated in O‑004-R1. |
| d | | Interim activities (online) | | Webinars within AI4G platform  Pre-FG meeting TG-specific workshops |
| 18 | Promotion and outreach | | |  |
| a | | Promotional activities | |  |
| b | | Press communication | |  |
| c | | Funding and partnerships | |  |
| 19 | A.O.B. | | |  |
| 20 | Closing | | |  |

Annex B:  
Documentation

| Name | Title | | Source |
| --- | --- | --- | --- |
| [FGAI4H-O-001](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-001.docx) | Agenda of the 15th meeting (Meeting O) of the Focus Group on Artificial Intelligence for Health (FG-AI4H) | | Chairman FG-AI4H |
| [FGAI4H-O-002](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-002.pptx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-002-A01.pptx) | Introduction to ITU/WHO Focus Group on AI for Health (FG-AI4H) and to the Fraunhofer Heinrich Hertz Institute (Fraunhofer HHI) | | Chairman FG-AI4H |
| [FGAI4H-O-003](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-003.docx) | Schedule of future FG meetings (as of 2022-05-31) | | Chairman FG-AI4H |
| [FGAI4H-O-004-R01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-004-R01.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-004-A01.pptx) | Publication of Focus Group Deliverables – follow-up + Att.1 Input data and tables | | TSB |
| [FGAI4H-O-005](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-005.docx) | Updated list of FG-AI4H deliverables (as of 2022-5-31) | | TSB |
| [FGAI4H-O-006](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-006.docx) | Updates for Cardiovascular disease risk prediction (TG-Cardio) | | TG-Cardio Topic Driver |
| [FGAI4H-O-006-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-006-A01.docx) | Att.1 – TDD update (TG-Cardio) | |  |
| [FGAI4H-O-006-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-006-A02.docx) | Att.2 – CfTGP (TG-Cardio) | |  |
| [FGAI4H-O-006-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-006-A03.pptx) | Att.3 – Presentation (TG-Cardio) | |  |
| [FGAI4H-O-007](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-007.docx) | Updates for Dermatology (TG-Derma) | | TG-Derma Topic Driver |
| [FGAI4H-O-007-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-007-A01.docx) | Att.1 – TDD update (TG-Derma) | |  |
| [FGAI4H-O-007-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-007-A02.docx) | Att.2 – CfTGP (TG-Derma) | |  |
| [FGAI4H-O-007-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-007-A03.pptx) | Att.3 – Presentation (TG-Derma) | |  |
| [FGAI4H-O-008](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-008.docx) | Updates for Diagnosis of bacterial infection and anti-microbial resistance (TG-Bacteria) | | TG-Bacteria Topic Driver |
| [FGAI4H-O-008-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-008-A01.docx) | Att.1 – TDD update (TG-Bacteria) | |  |
| [FGAI4H-O-008-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-008-A02.docx) | Att.2 – CfTGP (TG-Bacteria) | |  |
| [FGAI4H-O-008-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-008-A03.pptx) | Att.3 – Presentation (TG- Bacteria) | |  |
| [FGAI4H-O-009](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-009.docx) | Updates for Volumetric chest CT (TG-DiagnosticCT) | | TG-DiagnosticCT Topic Driver |
| [FGAI4H-O-009-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-009-A01.docx) | Att.1 – TDD update (TG-DiagnosticCT) | |  |
| [FGAI4H-O-009-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-009-A02.docx) | Att.2 – CfTGP (TG-DiagnosticCT) | |  |
| [FGAI4H-O-009-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-009-A03.pptx) | Att.3 – Presentation (TG-DiagnosticCT) | |  |
| [FGAI4H-O-010](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-010.docx) | Updates for Dental diagnostics and digital dentistry (TG-Dental) | | TG-Dental Topic Driver |
| [FGAI4H-O-010-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-010-A01.docx) | Att.1 – TDD update (TG-Dental) | |  |
| [FGAI4H-O-010-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-010-A02.docx) | Att.2 – CfTGP (TG-Dental) | |  |
| [FGAI4H-O-010-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-010-A03.pptx) | Att.3 – Presentation (TG-Dental) | |  |
| [FGAI4H-O-011](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-011.docx) | Updates for falsified medicine (TG-FakeMed) | | TG-FakeMed Topic Driver |
| [FGAI4H-O-011-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-011-A01.docx) | Att.1 – TDD update (TG-FakeMed) | |  |
| [FGAI4H-O-011-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-011-A02.docx) | Att.2 – CfTGP (TG-FakeMed) | |  |
| [FGAI4H-O-011-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-011-A03.pptx) | Att.3 – Presentation (TG- FakeMed) | |  |
| [FGAI4H-O-012](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-012.docx) | Updates for Falls among the elderly (TG-Falls) | | TG-Falls Topic Driver |
| [FGAI4H-O-012-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-012-A01.docx) | Att.1 – TDD update (TG-Falls) | |  |
| [FGAI4H-O-012-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-012-A02.docx) | Att.2 – CfTGP (TG-Falls) | |  |
| [FGAI4H-O-012-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-012-A03.pptx) | Att.3 – Presentation (TG-Falls) | |  |
| [FGAI4H-O-013](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-013.docx) | Updates for Histopathology (TG-Histo) | | TG-Histo Topic Driver |
| [FGAI4H-O-013-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-013-A01.docx) | Att.1 – TDD update (TG-Histo) | |  |
| [FGAI4H-O-013-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-013-A02.docx) | Att.2 – CfTGP (TG-Histo) | |  |
| [FGAI4H-O-013-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-013-A03.pptx) | Att.3 – Presentation (TG-Histo) | |  |
| [FGAI4H-O-014](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-014.docx) | Updates for Malaria detection (TG-Malaria) | | TG-Malaria Topic Driver |
| [FGAI4H-O-014-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-014-A01.docx) | Att.1 – TDD update (TG-Malaria) | |  |
| [FGAI4H-O-014-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-014-A02.docx) | Att.2 – CfTGP (TG-Malaria) | |  |
| [FGAI4H-O-014-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-014-A03.pptx) | Att.3 – Presentation (TG-Malaria) | |  |
| [FGAI4H-O-015](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-015.docx) | Updates for Maternal and child health (TG-MCH) | | TG-MCH Topic Driver |
| [FGAI4H-O-015-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-015-A01.docx) | Att.1 – TDD update (TG-MCH) | |  |
| [FGAI4H-O-015-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-015-A02.docx) | Att.2 – CfTGP (TG-MCH) | |  |
| [FGAI4H-O-015-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-015-A03.pptx) | Att.3 – Presentation (TG-MCH) | |  |
| [FGAI4H-O-016](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-016.docx) | Updates for Neurological disorders (TG-Neuro) | | TG-Neuro Topic Driver |
| [FGAI4H-O-016-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-016-A01.docx) | Att.1 – TDD update (TG-Neuro) | |  |
| [FGAI4H-O-016-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-016-A02.docx) | Att.2 – CfTGP (TG-Neuro) | |  |
| [FGAI4H-O-016-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-016-A03.pptx) | Att.3 – Presentation (TG-Neuro) | |  |
| [FGAI4H-O-017](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-017.docx) | Updates for Ophthalmology (TG-Ophthalmo) | | TG-Ophthalmo Topic Driver |
| [FGAI4H-O-017-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-017-A01.docx) | Att.1 – TDD update (TG-Ophthalmo) | |  |
| [FGAI4H-O-017-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-017-A02.docx) | Att.2 – CfTGP (TG-Ophthalmo) | |  |
| [FGAI4H-O-017-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-017-A03.pptx) | Att.3 – Presentation (TG-Ophthalmo) | |  |
| [FGAI4H-O-018](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-018.docx) | Updates for Outbreak detection (TG-Outbreaks) | | TG-Outbreaks Topic Driver |
| [FGAI4H-O-018-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-018-A01.docx) | Att.1 – TDD update (TG-Outbreaks) | |  |
| [FGAI4H-O-018-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-018-A02.docx) | Att.2 – CfTGP (TG-Outbreaks) | |  |
| [FGAI4H-O-018-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-018-A03.pptx) | Att.3 – Presentation (TG-Outbreaks) | |  |
| [FGAI4H-O-019](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-019.docx) | Updates for Psychiatry (TG-Psy) | | TG-Psy Topic Driver |
| [FGAI4H-O-019-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-019-A01.docx) | Att.1 – TDD update (TG-Psy) | |  |
| [FGAI4H-O-019-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-019-A02.docx) | Att.2 – CfTGP (TG-Psy) | |  |
| [FGAI4H-O-019-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-019-A03.pptx) | Att.3 – Presentation (TG-Psy) | |  |
| [FGAI4H-O-020](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-020.docx) | Updates for Snakebite and snake identification (TG-Snake) | | TG-Snake Topic Driver |
| [FGAI4H-O-020-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-020-A01.docx) | Att.1 – TDD update (TG-Snake) | |  |
| [FGAI4H-O-020-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-020-A02.docx) | Att.2 – CfTGP (TG-Snake) | |  |
| [FGAI4H-O-020-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-020-A03.pptx) | Att.3 – Presentation (TG- Snake) | |  |
| [FGAI4H-O-021](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-021.docx) | Updates for Symptom assessment (TG-Symptom) | | TG-Symptom Topic Driver |
| [FGAI4H-O-021-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-021-A01.docx) | Att.1 – TDD update (TG-Symptom) | |  |
| [FGAI4H-O-021-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-021-A02.docx) | Att.2 – CfTGP (TG-Symptom) | |  |
| [FGAI4H-O-021-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-021-A03.pptx) | Att.3 – Presentation (TG-Symptom) | |  |
| [FGAI4H-O-022](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-022.docx) | Updates for Tuberculosis (TG-TB) | | TG-TB Topic Driver |
| [FGAI4H-O-022-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-022-A01.docx) | Att.1 – TDD update (TG-TB) | |  |
| [FGAI4H-O-022-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-022-A02.docx) | Att.2 – CfTGP (TG-TB) | |  |
| [FGAI4H-O-022-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-022-A03.pptx) | Att.3 – Presentation (TG-TB) | |  |
| [FGAI4H-O-023](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-023.docx) | Updates for Radiology (TG-Radiology) | | TG-Radiology Topic Driver |
| [FGAI4H-O-023-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-023-A01.docx) | Att.1 – TDD update (TG-Radiotherapy) | |  |
| [FGAI4H-O-023-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-023-A02.docx) | Att.2 – CfTGP (TG-Radiotherapy) | |  |
| [FGAI4H-O-023-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-023-A03.pptx) | Att.3 – Presentation (TG-Radiotherapy) | |  |
| [FGAI4H-O-024](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-024.docx) | Updates for Primary and secondary diabetes prediction (TG-Diabetes) | | TG-Diabetes Topic Driver |
| [FGAI4H-O-024-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-024-A01.docx) | Att.1 – TDD update (TG-Diabetes) | |  |
| [FGAI4H-O-024-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-024-A02.docx) | Att.2 – CfTGP (TG-Diabetes) | |  |
| [FGAI4H-O-024-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-024-A03.pptx) | Att.3 – Presentation (TG-Diabetes) | |  |
| [FGAI4H-O-025](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-025.docx) | | Updates for Endoscopy (TG-Endoscopy) | TG-Endoscopy Topic Driver |
| [FGAI4H-O-025-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-025-A01.docx) | Att.1 – TDD update (TG-Endoscopy) | |  |
| [FGAI4H-O-025-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-025-A02.docx) | Att.2 – CfTGP (TG-Endoscopy) | |  |
| [FGAI4H-O-025-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-025-A03.pptx) | Att.3 – Presentation (TG-Endoscopy) | |  |
| [FGAI4H-O-026](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-026.docx) | Initial documents for AI for Musculoskeletal medicine (TG-MSK) | | TG-MSK Topic Driver |
| [FGAI4H-O-026-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-026-A01.docx) | Att.1 – TDD update (TG-MSK) | |  |
| [FGAI4H-O-026-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-026-A02.docx) | Att.2 – CfTGP (TG-MSK) | |  |
| [FGAI4H-O-026-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-026-A03.pptx) | Att.3 – Presentation (TG-MSK) | |  |
| [FGAI4H-O-027](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-027.docx) | Initial docs: AI for human reproduction and fertility (TG-Fertility) | | TG-Fertility Topic Driver |
| [FGAI4H-O-027-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-027-A01.docx) | Att.1 – TDD update (TG-Fertility) | |  |
| [FGAI4H-O-027-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-027-A02.docx) | Att.2 – CfTGP (TG-Fertility) | |  |
| [FGAI4H-O-027-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-027-A03.pptx) | Att.3 – Presentation (TG-Fertility) | |  |
| [FGAI4H-O-028](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-028.docx) | Initial docs: AI in sanitation for public health (TG-Sanitation) | | TG-Sanitation Topic Driver |
| [FGAI4H-O-028-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-028-A01.docx) | Att.1 – TDD update (TG-Sanitation) | |  |
| [FGAI4H-O-028-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-028-A02.docx) | Att.2 – CfTGP (TG-Sanitation) | |  |
| [FGAI4H-O-028-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-029-A03.pptx) | Att.3 – Presentation (TG-Sanitation) | |  |
| [FGAI4H-O-029](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-029.docx) | Initial docs: Topic Group on AI for point-of care diagnostics (TG-POC) | | TG-POC Topic Driver |
| [FGAI4H-O-029-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-029-A01.docx) | Att.1 – TDD update (TG-POC) | |  |
| [FGAI4H-O-029-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-029-A02.docx) | Att.2 – CfTGP (TG-POC) | |  |
| [FGAI4H-O-029-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-029-A03.pptx) | Att.3 – Presentation (TG-POC) | |  |
| [FGAI4H-O-030](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-030.pptx) | LS on the outcomes of the first meeting of the ITU-T Focus Group on Testbed Federations for IMT-2020 and beyond (FG-TBFxG) | | FG-TBFxG |
| [FGAI4H-O-030-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-030-A01.pptx) | Att.1 - FG-TBFxG work plan, list of deliverables (2022-04-07) | |  |
| [FGAI4H-O-030-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-030-A02.pptx) | Att.2 - Report of the 1st FG-TBFxG meeting (online, 4-7 Apr. 2022) | |  |
| [FGAI4H-O-031](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-031.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-031-A01.docx) | New TG Proposal on Nephrology: Role of Artificial Intelligence in Kidney Disease | | Ark Health Solution (Shanghai) Ltd. |
| [FGAI4H-O-032-R2](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-032-R2.docx) | DEL0.1 Update: Common unified terms in artificial intelligence for health | | Editors |
| [FGAI4H-O-033](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-033.pptx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-033-A01.xlsx) | Cybersecurity and AI/ML Data Lifecycles Follow up | | Editor DEL04 |
| [FGAI4H-O-034](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-034.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-034-A01.pptx) | DEL02 Update: Overview of Regulatory Considerations on Artificial Intelligence for Health | | Editors DEL02 |
| [FGAI4H-O-035](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-035.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-035-A01.docx) | DEL07 Update: AI for health evaluation considerations | | Editors DEL07 |
| [FGAI4H-O-036](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-036.docx) | DEL2.2 update: Good practices for health applications of machine learning: Considerations for manufacturers and regulators | | Editor DEL2.2 |
| [FGAI4H-O-037](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-037.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-037-A01.pdf) | New TG or subtopic proposal: Scalable digital platform for proactive brain health | | Cognetivity (UK) |
| [FGAI4H-O-038](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-038.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-038-A01.docx) | DEL7.4 Update: Clinical evaluation of AI for health | | Editors DEL7.4 |
| [FGAI4H-O-039](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-039.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-039-A01.pptx) | DEL10 Update: AI4H use cases: Topic Description Documents | | Editors DEL10 |
| [FGAI4H-O-040](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-040.pptx) | Workshop: WG-Ethics - Strengthen digital health governance - implementing global strategy on digital health | | WHO |
| [FGAI4H-O-041](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-041.pptx) | Workshop: WG-Ethics - Guidance of Ethics and Governance of Artificial Intelligence for Health | | WHO |
| [FGAI4H-O-042](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-042.pptx) | Workshop: WG-Ethics - Knowledge transfer - Introductory course: Ethics and governance of AI4Health | | WHO |
| [FGAI4H-O-043](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-043.pptx) | Workshop: WG-CO - The clinical research perspective | | DNDi |
| [FGAI4H-O-044](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-044.pptx) | Workshop: WG-CO - Equitable data infrastructure and effective pandemic intelligence | | University of Ghana |
| [FGAI4H-O-045](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-045.pptx) | Workshop: WG-CO - Data sharing and managed access | | University of Oxford |
| [FGAI4H-O-046](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-046.pptx) | Workshop: WG-CO - Development of genomics data infrastructure and standards within Africa | | H3ABioNet (South Africa) |
| [FGAI4H-O-047](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-047.pptx) | Workshop: TG-POC & TG-Histo - When is AI good enough for implementation in diagnostics? | | Institute for Molecular Medicine Finland – FIMM |
| [FGAI4H-O-048](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-048.pptx) | Workshop: TG-POC & TG-Histo - Intro: Validation of annotations for AI models within the scope of point-of-care diagnostics (POC) | | Institute for Molecular Medicine Finland – FIMM |
| [FGAI4H-O-049](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-049.pptx) | Workshop: TG-POC & TG-Histo - AI in morpho-molecular diagnostics and beyond | | LMU Munich |
| [FGAI4H-O-050](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-050.pptx) | Workshop: TG-POC & TG-Histo - Improving the quality of annotations in digitized whole slide images | | Institute for Molecular Medicine Finland – FIMM |
| [FGAI4H-O-051](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-051.pptx) | ML4H Trial Audits–Iteration 2.0 | | WG-DAISAM |
| [FGAI4H-O-052](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-052.pptx) | Open Code Initiative – Status update | | Open Code Group |
| [FGAI4H-O-053](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-053.pptx) | WG-Ethics update | | WG-Ethics |
| [FGAI4H-O-054](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-054.pptx) | WG-CO update | | WG-CO |
| [FGAI4H-O-055](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-055.pptx) | DEL7.5: Assessment Platform - Presentation | | Editors DEL7.5 |
| [FGAI4H-O-056](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-056.pptx) | DEL7.1: AI4H evaluation process description - Dynamic Digital Health Maturity Model | | Editor DEL7.1 |
| [FGAI4H-O-057](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-057.pptx) | DEL7.2: AI technical test specification - Progress Report | | Editor DEL7.2 |
| [FGAI4H-O-058](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-058.pptx) | Transition to ITU/WHO Global Initiative on AI for Health | | FG-AI4H management |
| [FGAI4H-O-059](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-059.pptx) | Use and assessment of AI tools for tuberculosis diagnostics | | FIND |
| [FGAI4H-O-060](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-060.docx) | DEL01 - Ethics and governance of artificial intelligence for health | | Editor DEL01 |
| [FGAI4H-O-101-R01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-101-R01.docx) | Report of the 15th meeting (Meeting O) of the Focus Group on Artificial Intelligence for Health (FG-AI4H) | | FG-AI4H |
| [FGAI4H-O-102](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-102.docx) | Updated call for proposals: Use cases, benchmarking, and data | | FG-AI4H |
| [FGAI4H-O-200](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-200.docx) | Updated list of FG-AI4H deliverables | | FG-AI4H |
| [FGAI4H-O-201](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-201.docx) | DEL01 – Ethics and governance of artificial intelligence for health | | FG-AI4H |

Annex C:  
List of participants

| Full Name | E-mail | Represented Organization | Country | Remote only | WS | Day 1 | Day 2 | Day 3 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ABBOOD Auss | abbooda@rki.de | Robert Koch Institute | Germany | No | X | X |  |  |
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| AN Qing | anqing.aq@alibaba-inc.com | Alibaba China Co. Ltd. | China | Yes | R |  |  |  |
| ARSIWALA Lubaina | lubaina.arsiwala@charite.de | Charite Universitatsmedizin Berlin | Germany | Yes |  | R |  |  |
| ASCHHEIM Kenneth | forensics@dental-nyc.com | Kenneth W. Aschheim DDS D-ABFO | United States | Yes | R | R |  |  |
| BADR Zaid | zaidbadr@hotmail.com | University of Nebraska Medical Center | United States | Yes |  | R |  |  |
| BALACHANDRAN Pradeep | pbn.tvm@gmail.com | Guest | Switzerland | Yes | R | R |  |  |
| BASHIR Humayra | humayrabashir19@gmail.com | University of Oxford | UK | Yes | R |  |  |  |
| BEYER Robert | robbeyer@villgroafrica.org | Villgro Africa | Kenya | Yes | R |  |  |  |
| BIERWIRTH Manuel | manuel.bierwirth@merckgroup.com | Merck KGaA | Germany | Yes |  | R |  |  |
| BRINZ Janet | brinz.janet@gmail.com | Universität Regensburg | Germany | Yes | R | R |  |  |
| CHOI Jungyul | passjay@gmail.com | Korea Communications Commission KCC | Korea (Rep. of) | Yes | R |  |  |  |
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| FAJAR Jum'atil | jumatil@gmail.com | RSUD | Indonesia | Yes | R |  |  |  |
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| HACKSHAW Tracy | tracy.hackshaw@upu.int | Universal Postal Union | Switzerland | Yes | R |  |  |  |
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| KAYODE John | kayode.jo@nafdac.gov.ng | NAFDAC | Nigeria | Yes | R |  |  |  |
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| KONARE Yaya | konareyaya2@gmail.com | Ministry, PTT & Digital Economy | Guinea | Yes | R |  |  |  |
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| LOWE Catherine | catherinelowe@medsec.com | MedSec LLC | United States | Yes |  | R |  |  |
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| MENEZES Audrey | audrey@your.md | Department for Digital, Culture, Media and Sport (DCMS) | UK | No | X | X |  |  |
| MURAKAMI Makoto | makoto.murakami.ty@hco.ntt.co.jp | NTT Communications Corporation | Japan | Yes | R | R |  |  |
| OALA Luis | luis.oala@hhi.fraunhofer.de | Fraunhofer HHI & IIS | Germany | No |  | R |  |  |
| OMAR Mohammed | mohammed.omar.2000@hotmail.com | University of Iowa | United States | Yes |  | R |  |  |
| OVABOR Kelvin | ovabor.k@nafdac.gov.ng | NAFDAC | Nigeria | Yes | R |  |  |  |
| PALLAN Madhavan | madhpallan@gmail.com | United Nations Research Institute for Social Development | Switzerland | Yes | R | R |  |  |
| QU Xiangyu | qu\_xiangyu@dahuatech.com | Zhejiang Dahua Technology | China | Yes |  | R |  |  |
| RADUNSKY Alex | aradunsky@mail.harvard.edu | Harvard University | United States | No | X | X |  |  |
| ROGANOVIC Jelena | jelena.roganovic@stomf.bg.ac.rs | University of Belgrade | Serbia | Yes | R |  |  |  |
| SAMORI Issah | issahsamori@gmail.com | minoHealth AI Labs | Ghana | Yes | R |  |  |  |
| SCHMIDT Anders | asts333@gmail.com | Private | Denmark | Yes |  | R |  |  |
| SCHNEIDER Lisa | schneider.lisa@charite.de | Charité Universitätsmedizin Berlin | Germany | No | X | R |  |  |
| SCHÖRVERTH Elora-Dana | elora.schoerverth@hhi.fraunhofer.de | Fraunhofer HHI & IIS | Germany | Yes |  | R |  |  |
| SIEVERS Niklas | nsievers@iom.int | International Organization for Migration | Switzerland | No | X |  |  |  |
| STEINKE Jannis | jannis.steinke@tu-braunschweig.de | Technical University of Braunschweig | Germany | No | X | X |  |  |
| SUUTALA Antti | antti.suutala@helsinki.fi | University of Helsinki | Finland | Yes | R |  |  |  |
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| URIBE Sergio | sergio.uribe@rsu.lv | Riga Stradins University | Latvia | Yes | R |  |  |  |
| VEREMIS Brandon | bmveremis@gmail.com | N/A | United States | No | X | X |  |  |
| VOGLER Steffen | steffen.vogler@bayer.com | Bayer AG | Germany | No | R | X |  |  |
| WAKHLU VIMAL | vimalwakhlu@gmail.com | ITU-APT Foundation of India | India | Yes | R |  |  |  |
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| WIEGAND Thomas | thomas.wiegand@hhi.fraunhofer.de | Fraunhofer HHI & IIS | Germany | No | X | X | X | X |
| ALSALAMAH Shada | alsalamahs@who.int | WHO | Switzerland | Yes | R | R |  |  |
| PUJARI Sameer | pujaris@who.int | WHO | Switzerland | No | X | R |  |  |
| REIS Andreas | reisa@who.int | WHO | Switzerland | No | X | R |  |  |
| ZHAO Yu (Ursula) | zhaoy@who.int | WHO | Switzerland | No | X | X |  |  |
| DABIRI Ayda | ayda.dabiri@itu.int | ITU | Switzerland | Yes | R | R |  |  |
| CAMPOS Simão | simao.campos@itu.int | ITU | Switzerland | No | X | X | X | X |
| GROESCHEL Matthias | matthias.groeschel@itu.int | ITU | Switzerland | No | X | X | X | X |
| MIZUNO KAORU | kaoru.mizuno@itu.int | ITU | Switzerland | Yes | R | R |  |  |
| TAHAWI Hiba | hiba.tahawi@itu.int | ITU | Switzerland | Yes | R | R |  |  |

Annex D:  
Summary of FG-AI4H resources and electronic working methods

Working groups

| Working Group | Leadership |
| --- | --- |
| Clinical evaluation of AI for health (WG-CE) | Co-chairs: Naomi Lee (The Lancet, UK), Upadhyay Shubhanan (ADA Health, Germany), Eva Weicken (Fraunhofer HHI, Germany) |
| Data and AI solution assessment methods (WG-DAISAM) | Chair: Pat Baird (Philips) Vice-chair: Luis Oala (Fraunhofer HHI, DE) |
| Data and AI solution handling (WG-DASH) | Chair: Marc Lecoultre (MLlab.AI, CH) Vice chair: Ferhat Kerif (CHUV, CH) |
| Operations (WG-O) | Co-chairs: Markus Wenzel and Eva Weicken (Fraunhofer HHI, Germany) |
| Regulatory considerations on AI for health (WG-RC) | Chair: Naomi Lee (The Lancet, UK)  Vice-chairs:   * Paolo Alcini (European Medicines Agency, EU) * Chandrashekar Ranga (CDSCO, India) * Khair ElZarrad (FDA, USA) * Michael Berensmann and Seidel, Robin (Federal Institute for Drugs and Medical Devices, Germany) * Liang Hong (National Medical Products Administration, China) |
| Ethical considerations on AI for health (WG-RC) | Chair: Andreas Reis (WHO) |
| Digital Technologies for COVID Health Emergency (AHG-DT4HE) | Co-chairs: Ana Riviere-Cinnamond (PAHO) and Shan Xu (CAICT, China) |

Topic Groups

| Topic group | Acronym | Leader | References | Created |
| --- | --- | --- | --- | --- |
| 1. Cardiovascular disease risk prediction | TG-Cardio | [Benjamin Muthambi](mailto:brm5@caa.columbia.edu) (Watif Health, South Africa) | [O-006-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-006-A01.docx) | C |
| 1. Dermatology | TG-Derma | [Sharad Kumar](mailto:sharad.kumar@nurithmlabs.tech) (Nurithm Labs, India) | [O-007-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-007-A01.docx) | B |
| 1. Diagnosis of bacterial infection and anti-microbial resistance | TG-Bacteria | [Nada Malou](mailto:nada.malou@paris.msf.org) (MSF, France) | [O-008-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-008-A01.docx) | F |
| 1. Falls among the elderly | TG-Falls | [Pierpaolo Palumbo](mailto:pierpaolo.palumbo@unibo.it) (University of Bologna, Italy) a.i. [[Inês Sousa](mailto:ines.sousa@fraunhofer.pt) (Fraunhofer Portugal) on maternity leave, Sep 2021] | [O-012-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-012-A01.docx) | B |
| 1. Histopathology | TG-Histo | [Frederick Klauschen](mailto:frederick.klauschen@charite.de) (Charité Berlin, Germany) | [O-013-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-013-A01.docx) | B |
| 1. Malaria detection | TG-Malaria | [Rose Nakasi](mailto:g.nakasi.rose@gmail.com) (Makerere University, Uganda) | [O-014-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-014-A01.docx) | F |
| 1. Maternal and child health | TG-MCH | [Raghu Dharmaraju](mailto:rdharmaraju@gmail.com) (Wadhwani AI, India) and [Alexandre Chiavegatto Filho](mailto:alexdiasporto@usp.br) (University of São Paulo, Brazil) | [O-015-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-015-A01.docx) | D; G |
| 1. Neurological disorders | TG-Neuro | [Marc Lecoultre](mailto:ml@mllab.ai) (ML Labs, Switzerland) and [Ferath Kherif](mailto:Ferath.kherif@chuv.ch) (CHUV, Switzerland) | [O-016-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-016-A01.docx) | B |
| 1. Ophthalmology | TG-Ophthalmo | [Arun Shroff](mailto:arunshroff@gmail.com) (MedIndia) | [O-017-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-017-A01.docx) | B |
| 1. Outbreak detection | TG-Outbreaks | [Auss Abbood](mailto:abbooda@rki.de) and [Alexander Ullrich](mailto:UllrichA@rki.de) (Robert Koch Institute, Germany) ; [Khahlil Louisy](mailto:klouisy@hks.harvard.edu) and [Alexander Radunsky](mailto:aradunsky@mail.harvard.edu) (Institute for Technology & Global Health, ITGH, US) | [O-018-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-018-A01.docx) & [O‑028-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-028-A01.docx) | E; merged with TG-Sanitation at meeting O |
| 1. Psychiatry | TG-Psy | [Nicolas Langer](mailto:n.langer@psychologie.uzh.ch) (ETH Zurich, Switzerland) | [O-019-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-019-A01.docx) | C |
| 1. Radiology | TG-Radiology | [Darlington Ahiale Akogo](mailto:darlington@gudra-studio.com) (minoHealth AI Labs, Ghana) | [O-023-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-023-A01.docx) | D; H |
| 1. Snakebite and snake identification | TG-Snake | [Rafael Ruiz de Castaneda](mailto:Rafael.RuizDeCastaneda@unige.ch) (UniGE, Switzerland) | [O-020-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-020-A01.docx) | B |
| 1. Symptom assessment | TG-Symptom | [Henry Hoffmann](mailto:henry.hoffmann@ada.com) (Ada Health, Germany) and [Martin Cansdale](mailto:martin@your.md) (Healthily, UK) | [O-021-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-021-A01.docx) | B |
| 1. Tuberculosis | TG-TB | [Manjula Singh](mailto:singhmanjula.hq@icmr.gov.in) (ICMR, India) | [O-022-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-022-A01.docx) | C |
| 1. Volumetric chest CT | TG-DiagnosticCT | [Kuan Chen](mailto:ckuan@infervision.com) (Infervision, China) | [O-009-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-009-A01.docx) | D |
| 1. Dental diagnostics and digital dentistry | TG-Dental | [Falk Schwendicke](mailto:falk.schwendicke@charite.de) and [Joachim Krois](mailto:Joachim.krois@charite.de) (Charité Berlin, Germany); [Tarry Singh](mailto:tarry.singh@deepkapha.ai) (deepkapha.ai, Netherlands) | [O-010-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-010-A01.docx) | G |
| 1. AI-based detection of falsified medicine | TG-FakeMed | [Franck Verzefé](mailto:fverzefe@gmail.com) (TrueSpec-Africa, DRC) | [O-011-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-011-A01.docx) | F |
| 1. Primary and secondary diabetes prediction | TG-Diabetes | [Andrés Valdivieso](mailto:avaldivieso@anastasia.ai) (Anastasia.ai & Tecnigen, Chile) | [O-024-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-024-A01.docx) | H |
| 1. AI for endoscopy | TG-Endoscopy | [Jianrong Wu](mailto:edwinjrwu@tencent.com) (Tencent Healthcare, China) | [O-025-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-025-A01.docx) | I |
| 1. AI for musculoskeletal medicine | TG-MSK | [Peter Grinbergs (EQL, UK), Yura Perov (UK)](mailto:tgmskorg@googlegroups.com) | [O-026-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-026-A01.docx) | J |
| 1. AI for human reproduction and fertility | TG-Fertility | [Susanna Brandi](mailto:susanna.brandi@merckgroup.com), [Eleonora Lippolis](mailto:eleonora.lippolis@merckgroup.com) (Merck KGaA, Darmstadt, Germany) | [O-027-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-027-A01.docx) | L |
| 1. AI for point-of care diagnostics | TG-POC | [Nina Linder](mailto:nina.linder@helsinki.fi) (University of Helsinki, Finland) | [O-029-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-029-A01.docx) | L |

Mailing lists

| Description | Mailing list | Archive |
| --- | --- | --- |
| General mailing list | [fgai4h@lists.itu.int](mailto:fgai4h@lists.itu.int) | <https://itu.int/ml/lists/arc/fgai4h> |
| TG-Cardio), specific discussions for sub-topic on clinical predictions | [fgai4htgcardiocp@lists.itu.int](mailto:fgai4htgcardiocp@lists.itu.int) | <https://itu.int/ml/lists/arc/fgai4htgcardiocp> |
| TG-Cardio), specific dis­cussions for sub-topic on cardiac image analyses | [fgai4htgcardiocia@lists.itu.int](mailto:fgai4htgcardiocia@lists.itu.int) | <https://itu.int/ml/lists/arc/fgai4htgcardiocia> |
| TG-Derma | [fgai4htgderma@lists.itu.int](mailto:fgai4htgderma@lists.itu.int) | <https://itu.int/ml/lists/arc/fgai4htgderma> |
| TG-Diabetes | [fgai4htgdiabetes@lists.itu.int](mailto:fgai4htgdiabetes@lists.itu.int) | <https://itu.int/ml/lists/arc/fgai4htgdiabetes> |
| TG-Falls | [fgai4htgfalls@lists.itu.int](mailto:fgai4htgfalls@lists.itu.int) | <https://itu.int/ml/lists/arc/fgai4htgfalls> |
| TG-Malaria | [fgai4htgmalaria@lists.itu.int](mailto:fgai4htgmalaria@lists.itu.int) | <https://itu.int/ml/lists/arc/fgai4htgmalaria> |
| TG-Ophthalmo | [fgai4htgophthalmo@lists.itu.int](mailto:fgai4htgophthalmo@lists.itu.int) | <https://itu.int/ml/lists/arc/fgai4htgophthalmo> |
| TG-Outbreaks | [fgai4htgoutbreaks@lists.itu.int](mailto:fgai4htgoutbreaks@lists.itu.int) | <https://itu.int/ml/lists/arc/fgai4htgoutbreaks> |
| TG-Symptoms | [fgai4htgsymptom@lists.itu.int](mailto:fgai4htgsymptom@lists.itu.int) | <https://itu.int/ml/lists/arc/fgai4htgsymptom> |
| TG-MSK | [fgai4htgmsk@lists.itu.int](mailto:fgai4htgmsk@lists.itu.int) | <https://itu.int/ml/lists/arc/fgai4htgmsk> |
| TG-Psy | [fgai4htgpsy@lists.itu.int](mailto:fgai4htgpsy@lists.itu.int) | <https://itu.int/ml/lists/arc/fgai4htgpsy> |
| TG-Fertility | [fgai4htgfertility@lists.itu.int](mailto:fgai4htgfertility@lists.itu.int) | <https://itu.int/ml/lists/arc/fgai4htgfertility> |
| AHG-DT4HE | [fgai4hahgdt4he@lists.itu.int](mailto:fgai4hahgdt4he@lists.itu.int) | <https://itu.int/ml/lists/arc/fgai4hahgdt4he> |

Working methods (Ref: [E-101](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-E-101.docx), report of Meeting E)

Decision making by correspondence

Decisions should preferably be taken in physical meetings of the FG. However, in order to allow the FG to work more efficiently, an online decision-making process would be useful.

The FG agreed to an online approval process for taking decisions (e.g. appointments and documentation). The initial procedure is as follows:

* Decisions are taken by consensus. (Note: consensus is declared by the chairman and it does *not* imply unanimity.)
* The general FG mailing list ([fgai4h@lists.itu.int](mailto:fgai4h@lists.itu.int)) is used to announce the decision being taken, provide links to relevant documents.
* Specify a commenting period, typically two weeks, for receiving comments with concerns. These comments should be addressed by email to the secretariat, [tsbfgai4h@itu.int](mailto:tsbfgai4h@itu.int). Absence of comments imply agreement to the proposed decision.
* If comments are received, they are discussed and resolved by the FG management in coordination with the commenters.
* If the amendment is minor, the chairman declares approval
* If the amendment is substantive, another consultation is started, or decision is postponed till the next meeting of the FG

Organizing interim electronic meetings

The following procedure is to be applied for organizing interim meetings of the FG and its WGs:

* **Announcement** in the general FG email reflector ([fgai4h@lists.itu.int](mailto:fgai4h@lists.itu.int)) for date/time and objectives **two weeks prior**
* **Documents** uploaded to the appropriate repository

Annex E  
Summary of decisions

This is a summary of the decisions taken at Meeting G (Berlin, 31 May – 2 June 2022):

[Dec-N-1. The report of the virtual meeting held online, 15 – 17 February 2022 found in N-101 was approved without comments and its two output documents were noted (N-102 and N-200).](#_Toc113623512)

[Dec-N-2. DEL01 is agreed at this meeting as an identical publication of 2021 WHO Ethics and governance of artificial intelligence for health guidance document, as found in O-201.](#_Toc113623513)

[Dec-N-3. Scalable digital platform for proactive brain health has been agreed as a new sub-topic within TG-Neuro, led by Seyed Khaligh-Razavi and Tom Sawyer (Cognetivity, UK), with O-037 as reference.](#_Toc113623514)

[Dec-N-4. It was agreed to merge the TG-Sanitation topics into TG-Outbreaks. The meeting thanked the work of the co-topic drivers and wished them the best for the continuation of the work within TG-Outbreaks.](#_Toc113623515)

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