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| A black and white logo  Description automatically generated | INTERNATIONAL TELECOMMUNICATION UNION**TELECOMMUNICATIONSTANDARDIZATION SECTOR**STUDY PERIOD 2022-2024 | FG-AI4H-S-101 |
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| **Abstract:** | This document contains the report of the 19th meeting of the ITU-T Focus Group on Artificial Intelligence for Health (FG-AI4H), held in Geneva, 3-5 July 2023. |

Executive Summary

The 19th meeting of FG-AI4H took place at the premises of ITU in Geneva, 3-5 July 2023. This was the last physical meeting of the Focus Group before its end of operations in September 2023. The first two days were regular sessions, and the third day was used for a [workshop](https://www.itu.int/en/ITU-T/Workshops-and-Seminars/ai4h/20230705) within the context of the AI of Good Global Summit "Expert Machine Learning Workshops". The meeting had 179 participants during the three days, with 76 joining in person and 103 remotely.

The focus of the meeting was to wrap up the documents that were sufficiently mature, define the next steps, and to provide a retrospective of the work accomplished and gather the community's expectations for the Global Initiative on AI for Health (GI-AI4H) being established jointly by ITU, WHO and WIPO.

Documents and activities that reached a good maturity point are expected to be further developed within the upcoming GI-AI4H. Those documents and activities that did not mature sufficiently will be archived.

The following documents will be subject to final editing and two-week consultation starting on 1 September 2023.

* DEL 0: Overview of the FG-AI4H deliverables
* DEL 10.2: Dermatology (TG-Derma)
* DEL 10.4: Falls among the elderly (TG-Falls)
* DEL 10.6: Malaria detection (TG-Malaria)
* DEL 10.7: Maternal and child health (TG-MCH)
* DEL 10.8: Neurological disorders (TG-Neuro)
* DEL 10.9: Ophthalmology (TG-Ophthalmo)
* DEL 10.10: Outbreak detection (TG-Outbreaks)
* DEL 10.14: Symptom assessment (TG-Symptom)
* DEL 10.15: Tuberculosis (TG-TB)
* DEL 10.17: Dental diagnostics and digital dentistry (TG-Dental)
* DEL 10.20: AI for endoscopy (TG-Endoscopy)
* DEL 10.21: AI for musculoskeletal medicine (TG-MSK)
* DEL 10.23: AI for traditional medicine (TG-TM)
* DEL 10.24: AI for point-of care diagnostics (TG-POC)

Additionally, the following document will be issued:

* [S-200](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-200.docx): Updated list of FG-AI4H deliverables

The meeting prepared one outgoing liaison statement to JCA-ML informing on the terminology document, DEL0.1, see [FGAI4H-LS10](https://www.itu.int/net/ITU-T/ls/ls.aspx?isn=29360).

The four decisions taken at this meeting are summarized in [Annex E](#AnnexE).

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# Opening

The 19th meeting (S) of FG-AI4H took place in Geneva, 3-5 July 2023 chaired by the FG-AI4H Chairman, Mr Thomas Wiegand (Fraunhofer HHI, Germany). He welcomed the participants and briefly presented an overview of the FG-AI4H work during the opening of the Meeting S.

# Approval of agenda

The agenda in [S-001](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-001.docx) (Agenda) was approved. One revision to the agenda was issued at the ed of the meeting, see [S-001-R01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-001-R01.docx).

The time allocation for the presentation of meeting documents was maintained live at <https://docs.google.com/spreadsheets/d/1dphONRprCPEmMMGqwN2_8uE4EpwmC-H2rtKdk7ESXUQ>.

# Documentation and allocation

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

# IPR

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

# Management updates

No management updates were provided at this meeting.

# Approval of Meeting R outcomes and updates

The report of Meeting R (Cambridge, 21-24 March 2023) in [R-101](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-101.docx) was **approved** without comments.

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

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

No comments were made.

1. The report of the meeting in Cambridge, 21-24 March 2023 found in [R-101](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-101.docx) was approved without comments and its two output documents were noted ([R-102](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-102.docx), [R-200](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-200.docx)).

# Review of incoming liaison statements

[S-031](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-031.docx) – LS on invitation to nominate the representative to the ITU-T JCA-ML [from JCA-ML]

**Abstract**: This liaison statement invites to nominate representatives to JCA-ML, whose scope is the coordination of the ITU-T work programme on applications of machine learning and its related standardization work for telecommunications/ICTs.

Instead of nominating a representative from FGAI4H, it was suggested to point to the new Global Initiative. The draft reply available in [S-032](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-032.docx) was agreed.

# Horizontal and strategic topics

[S-030](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-030.docx%22%20%5Ct%20%22_blank) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-030-A01.pptx): ZODIAC Respiratory Disease Phenotype Observatory [IAEA]

Abstract: Medical imaging plays a crucial role in diagnosing and monitoring infectious diseases, and the COVID-19 pandemic has highlighted the critical role of chest imaging, including computed tomography (CT) scans and baseline X ray analysis, in the early stages of the disease. Medical imaging technologies, such as computed tomography (CT), can detect lesions smaller than 0.5 mm and assess activity without the need for a biopsy. This enables the identification of specific disease characteristics in each patient. However, the analysis of the complex images generated by these technologies can be challenging to the naked eye. Radiomics, a method for extracting large-scale imaging data from medical imaging studies like CT and X ray scans, utilizes data-characterization algorithms to identify disease findings that are not visible to the naked eye. This approach can be complemented by emerging fields such as artificial intelligence (AI), machine learning (ML), and deep learning to identify patterns of lung involvement in COVID-19 patients. The International Atomic Energy Agency (IAEA) has initiated a project with the aim of identifying specific characteristics associated with different virus variants and determining if there are any epidemiological and clinical differences in the development of disease complications and specific medical imaging manifestations in several respiratory infectious diseases.

Enrique Estrada Lobato (IAEA) presented [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-030-A01.pptx), explain the initiative called ZODIAC which is a Zoonotic disease response launched by IAEA two years ago. This is a research project to develop a pandemic early detection and response. IAEA has collaboration agreement with different institutions and a private sector. Pillar 4 of ZODIAC is aiming to provide in access to data on Zoonotic diseases, especially respiratory diseases. AI has been utilized for medical imaging for disease management. A possible collaboration with IAEA on this project could be considered.

[S-038](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-038.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-038-A01.pptx): AI and sexual and reproductive health and rights: Opportunities and risks [WHO-SRH]

Artificial intelligence (AI) presents opportunities for advancing sexual and reproductive health and rights (SRHR), particularly through enabling individuals to access information and services where personal anonymity may be desired and expanding diagnostic and predictive modelling capabilities for hard-to-reach populations. While the potential of AI to improve health service access and delivery continue to emerge, the extent and ways of how AI-based technologies are being used in sexual and reproductive health and rights (SRHR) and related considerations for their effective, ethical, and safe use requires further exploration. In particular, the intersection of AI and SRHR raises additional implications, including issues related to safeguarding bodily autonomy, navigating gendered digital divides, and regulating risks around the use of sensitive data. This session will provide a high-level overview of emerging use cases across the life course in SRHR and the nuanced risks and considerations. It will also be an opportunity to reflect on areas for further elaboration to maximize the benefits and mitigate the threats posed by use of AI-based technologies in SRHR.

Tigest Tamrat (WHO) presented the document using the slides in [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-038-A01.pptx). She highlighted the opportunity for patients in the use of AI in treating sensitive information such as gender specific issues, sexual and reproductive diagnosis. Sameer pointed that the area is of a strong interest of governments. It was also suggested to include gender specific aspects in Topic Groups.

There will be a small expert group on this topic in WHO in September 2023, and it would be better timing to consider a possible creation of the Topic Group after that meeting.

[S-039](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-039.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-039-A01.pptx): Neuroimaging Based Diagnosis of Alzheimer's Disease Using Privacy-Preserving Machine Learning [Inpher]

**Abstract**: Despite intensive efforts to better understand the preclinical manifestation of dementia and Alzheimer's Disease (AD), current clinical research is still short of providing the relevant means for screening, diagnosis, monitoring and outcome prediction. Existing theoretical models demonstrate that early intervention with an impact on AD's progress will reduce healthcare treatment costs estimated at $1 trillion. A steadily accumulating body of empirical evidence showed the potential of machine learning algorithms for brain imaging-based diagnosis of AD. Using non-invasive Magnetic Resonance Imaging (MRI) and state-of-the-art feature extraction methods, Machine Learning (ML) models have been trained to achieve accurate diagnosis of AD in different stages of the disease process. To achieve clinical relevance, these ML models have to be trained and tested beyond a single data center. The privacy of patients' data poses a real challenge for aggregating training and testing datasets across hospitals, research institutions and pharma companies. This two-part blog series presents a viable solution designed by clinical researchers at CHUV and Inpher aiming to build privacy-preserving neuroimaging-based ML models of AD using Inpher's XOR Platform. We specifically show how data providers can securely collaborate to build linear and logistic regression models that clinical and non-clinical researchers can use. With the rising hopes for efficient disease-modifying drugs, our clinically relevant concept of accurate ML-based diagnosis will help clinicians to efficiently stratify patients for clinical trials and finally deliver better care.

Manuel Capel (Inpher, Switzerland) presented their use case on neuroimaging based diagnosis of alzheimer's disease using privacy-preserving machine learning, using the slides in [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-039-A01.pptx). He explained security challenges especially in federated learning models and trade-offs between privacy and performance based on their experiences. He has cooperated with TG-Neuro.

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

Thomas introduced the idea of GI that will have the three pillars: enable; facilitate; and implement. The meeting brainstormed on the facilitate part.

It was suggested to focus on the areas where AI solution would make a bigger impact, such as where an access to medical doctors is difficult. Another suggestion was to allocate fund for the test cases in the field, in particular, in underserved areas, which will fit with targeted SDGs. This would include knowledge transfer and capacity building in such targeted areas. University & researchers would take a role here, not for the purpose of development / products. Money is an issue to transition a technology from a research project to a company product. In some cases, it would be needed to create new companies, or for an existing company to take over the activity, to implement e.g. diagnosis as a service.

Ways of making these ideas happen were discussed, including:

* To create a community network bringing the industry and funders as a think tank, so that investments are done consistently.
* To have a network of funders and partners.
* To conduct a match-making activity, like an innovation factory (see AI4Good as an example).
* ITU/WIPO/WHO not directly involved in deals, but could provide template agreements.
* Use cases are not universal, as the needs are localized. Not to speak of datasets having limited scope. Phased approach, need pilots to validate that what was developed works.
* Partnering with regional incubators, as they would know better the local environment. How do we identify them?
* Receive companies that work within our framework. Things work when users own the issue (when there is buy-in from users).

How to look for funding:

* Need to lobby interested organizations / companies – NB: grants are not earmarked.
* Coordinate national funding.
* Be smart in matching the supply and demand sides (what people want to produce, what people want to consume; adjust expectations).
* Public money for public goods, but not subsidize projects when there is venture capital (VC) funding available. Take a bite to the piece we can chew.

What format would work for GI meetings?

* To make meetings more interactive.
* Serial / parallel structure of meetings.
* Workshop format is good to increase the network and to get new initiatives happen.
* Be flexible in format as the discussion evolves.

Other considerations:

* ICT infrastructure side is also necessary.
* Landscape review of institutions that would work on digital health in target countries. Shan volunteered to work on that.
* Topic Groups: so far, bottom up, but in the initiative we would have also top-down activities (e.g. call for proposals on specific area of priority by WHO's suggestion)
* A collaboration with ISO/IEC JTC1 SC42 "Artificial intelligence" was suggested by Yoav Evenstein (representing SC42).



Figure 1 – Current proposal of GI-AI4H governance structure

# Working Group updates

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

The WG is chaired by Pat Baird (Philips, USA), assisted by vice-chair, Luis Oala (Dotphoton, Switzerland) and Pradeep Balachandran (UNU-MERIT, Netherlands).

[***S-034***](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-034.docx)***＋***[***A01***](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-034-A01.pdf)***: Policy framework design for the standardization of ITU-WHO AI-for-health assessment platform as a global digital public good (Pradeep Balachandran)***

**Abstract:** This document contains the policy framework design for the standardization of ITU-WHO AI-for-health assessment platform to serve as a global digital public good.

Pradeep presented [S-034](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-034.docx) using slides in [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-034-A01.pdf). The updates to the new DAISAM project presented at Meeting R was reported. The aim is to increase the applicability of the DAISAM deliverables by developing a policy framework for the standardization of FG-AI4H AI-for-health assessment platform to serve as a global digital public good. It considers how the GI-AI4H planform can be adopted into the digital health infrastructure of a country, focusing on LMICs. The team is developing the design of analytical framework for policy formulation that is based on:

* + - 1. Technological and infrastructural capability assessment required for country specific health systems for AI4H platform adoption
			2. Platform life cycle based Cost - Benefit (economic) - Risk- Value (social + ecological) Analysis
			3. Business Process Innovation analysis

Other DAISAM topics were discussed under the Open Code Initiative agenda item, see §[‎12](#_FG-AI4H_Open_Code)‎12.

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

WG-DASH has Marc Lecoultre (ML Lab, Switzerland) as chair and Ferath Kherif (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 §‎12.

[***S-036***](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-036.docx)***: Health Data Management and Governance for Trustworthy AI [Ministry of Communications and Technology, Syrian Arab Republic]***

**Abstract**: The rapid growth in digital transformation and the Internet of Things has led to the generation of a huge volume of data, which has become the fuel necessary to push the wheel of artificial intelligence forward, especially due to the current trend to adopt deep learning systems in many applications of the Fourth Industrial Revolution, particularly in the health and clinical field in which data (in its confidentiality and privacy) represents the backbone to take decisions. From here, it was necessary to work diligently to devise the best ways to manage and govern this data properly, provided that this management includes: processes, people, and tools. Furthermore, it should be applied to all types of medical data (Master Data, Reference Data, and Metadata). In this contribution, we propose a unified framework for health data management that is based on the essential pillars of management: Quality Management, Privacy and Security Management, Analytics Management, Technical Management, and above all Data Governance which is the core of Data Management connected to all the aforementioned knowledge area, according to DAMA (Data Management Association) applied with respect to clinical data principles and ethics, indicated by the "European's level-high expert group" and deliverable 1 [6] of our group. We also show that it is important to have this global vision of management and understand the relations and the dependencies among these sectors when planning, designing, and deploying the processes and models during the life-cycle of data. FG-AI4H deliverable 5\_4 introduced data technical requirements specifications for datasets used in AI models. This contribution proposes other essential technical specifications in addition to management requirements specifications in master, reference, and meta health data Acronyms: AI: Artificial Intelligence, DAMA: International Data Management Association, DG: Data Governance, DQ: Data Quality, MDM: Master Data Management, RFM: Reference Data Management, ICD: International Classification of Diseases, CDE: Critical Data Element, CNN: Convolutional Neural Network, ETL: Extract, Transform, Load.

Anas DAHABIA (Ministry of Communications and Technology, Syrian Arab Republic) presented [S-036](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-036.docx). He indicated resources that can be referred in Deliverables.

## Operations (WG-O)

The WG on operations (WG-O) is co-chaired by Markus Wenzel and Eva Weicken (Fraunhofer HHI, Germany).

Markus briefed the work of WG including the development of DEL0.1 "Common unified terms" and DEL7 AI for health evaluation considerations, both have been approved in previous meetings.

Thomas appreciated the hard work done by Markus and Eva, as they have been ensuring operational aspects of FG, including organization of FG meetings by coordinating with speakers, setting up agenda, etc. Without them the FG organization had not been so successful.

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

The chair of the FG-AI4H WG-Ethics is Andreas Reis (WHO).

[S-043](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-043.pptx): Ethical considerations on AI for health updates [WG-Ethics Chair]

Rohit Malpani from WHO presented updates of Ethics WG activities on behalf of Andreas Reis using the slides in [S-043](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-043.pptx). The dissemination of the published DEL02 | WHO Ethics Guidelines is done via a series of regional workshops, engagement with other global health agencies, and online curriculum on AI ethics guidance. Ethics Sub-Group is developing the followings:

* WHO interim guidance on the ethics and governance of large multi-modal models in healthcare and medicine (aiming for publication in September 2023)
* WHO policy brief on Ethics and governance of pharmaceutical research, development, and access (aiming for publication September/October 2023)
* on-line curriculum for programmers on integrating ethical considerations into the design of AI health technologies. (slated for completion by end of 2023)
* Development of checklist and policy brief related to legislation accounting for ethics for use of AI for health. (slated for completion by end of 2023)

Responding to the question raised by Thomas, Rohit and Deise explained that the checklist for programmers is developed and included in the online curriculum addressing AI developers and will be accessible via [OpenWHO.org](https://openwho.org/). Comments/feedback received to the platform will be considered for further improvement of the curriculum.

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

The chair of the WG-RC is Naomi Lee (NICE, UK), assisted by Shada Alsalamah (WHO).

[S-045](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-045.pptx): DEL02: Regulatory Concepts on AI for Health [Editor DEL02]

Shada briefed the meeting with the contents of DEL2, which is published by ITU but not yet by WHO. The WHO team is currently planning a dissemination phase following the publication of the document, with regional workshops, online courses, etc. DEL02 as a result of work done by WG-RC. DEL2 was approved at Meeting P, as issued as [P-202](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-P-202.docx) and no updates were proposed. The document is undergoing the publication process in ITU and WHO.

Follow-up activities are listed below.

|  |  |
| --- | --- |
| July 2023 | Launch the publication as WHO documentDeliver an AFRO regional workshop on AI for health (south Africa) |
| August 2023 | Develop an online course |
| September 2023 | Launch the online course; |

## Clinical Evaluation (WG-CE)

The co-chairs of the WG-CE are Naomi Lee (NICE, UK), Shubhanan Upadhyay (ADA Health, Germany), and Eva Weicken (Fraunhofer HHI, Germany).

[FGAI4H-S-042](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-042.pptx): WG-CE: WG-Clinical Evaluation of AI for Health Updates [WG-CE]

Eva presented S-042. The group has around 70 members now.

Focus of the WG-CE related discussions were around the new DEL7.4 and by WHO currently under review, its application by some of the topic groups, (TG-PoC in particular).

Concerning the application of DEL7.4 by POC, Nina Linder (Helsinki Univ.) and Johan Lundin (Helsinki Univ.) joined the WG-CO, implementing and adapting the checklist for clinical evaluation for TG-POC activities in Kenya. There was a significant feedback on the conversion of some of the guidance into a checklist, whose first draft was made available in [R-063](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-063.docx) (*Draft checklist for clinical evaluation of AI for health*) for reference and review by all TGs.

The presentation was well noted, no particular comments were made.

## Collaborations and Outreach (WG-CO)

The chair of the WG-CO is Andrew Farlow (University of Oxford, UK), assisted by Matthias Groeschel (Charité, Germany).

[S-044](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-044.pptx): Working Group Collaborations & Outreach updates [WG-CO Chair]

Andrew presented the update in [S-044](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-044.pptx). He reported positive impacts of recent AI webinars and meetings. Next WG-CO meeting will be held in Sri Lanka, collaborating with HISSL, Commonwealth centre for digital health, University of Colombo and Sri Lanka College of Health Informatics. Explained series publication and a concept for investment models considering impact as investment framework in addition to traditional investment considerations.

## Ad-hoc group on digital technologies for COVID health emergency

The co-chairs of the FG-AI4H ad hoc group on AHG on digital technologies for COVID health emergency (AHG-DT4HE) are Shan Xu (CAICT, China) and Ana Rivière-Cinnamond (PAHO/‌WHO). No updates were provided.

# FG-AI4H Open Code Initiative (OCI)

The FG-AI4H open code initiative is chaired by Marc Lecoultre (ML Lab, Switzerland).

[S-040](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-040.pptx): Open Code Initiative – Status update [Chair]

The OCI contains various packages, and members & partners are (<https://aiaudit.org/contributors/> , <https://github.com/orgs/FG-AI4H/teams>):

Core Team: Joachim Krois, Luis Oala, Luis Oala, Marc Lecoultre, Pradeep Balachandran, Dominik Schneider, Ferath Kherif, Golam Rasul.

Contributors: Steffen Vogler, Alixandro Werneck Leite, Danny Xie Li, Kamran Ali, Henry Hoffmann, Shobha Iyer, Shruti Choudhary, Elora Schörverth, Clara Uktar.

Partners: Hasso Plattner Institute (HPI) Potsdam: Richard Keil and al.

The OCI status update was presented by various participants:

* Overall presentation by Marc
* Data sharing and data sourcing by Ferath
* Data annotation package by Marc
* Evaluation (audit) package – by Luis
* Reporting package by Pradeep

Marc Lecoultre introduced the slides in [S-040](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-040.pptx) with overview. Develop software tools (e.g., data acquisition, data storage, annotation, prediction, evaluation, and reporting packages)

* Over 40 developers, regulators, and medical professionals from five continents are involved in the initiative
* 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 was already tested in different proof-of concepts and the whitepaper for assessment platform is developed. The current status is at the Phase 2 where the team is scaling up the platform, implementing different features collaborating with different teams, and expecting the platform to be operational for the Global Initiative. Recommendations in DEL1| WHO *Ethics and governance of artificial intelligence for health guidance* are implemented in the platform. DevSecOps is also being implemented. In parallel, documentations are being developed. Requirements for each module are being built, and workshops helped them derive customer and software requirements.

* 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. The Data Mesh approach was newly presented at this meeting, which is a federated approach to decentralize ownership of the data set.
* DAS (Data Acquisition and Storage) package (aka Data Sourcing package) – Ferath Kherif presented using the slides in [S-040](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-040.pptx), which are also related to DEL5.6. This package is responsible for data ingestion, storage and management. Data is organized in principled way using TOML hierarchical concept. Data is organized in Data spaces indicating areas to which the data is applicable. Details minimum metadata and context requirements. Data schema should be standardized, or should be linked to standardized variables. Currently implementing the federated algorithm, working on prototype, and Marc made a demonstration of the data storage and data catalogue.
* Data annotation package – Marc provided an overview of the annotation package within the context of the OCI. Marc is developing a document together with the DEL 5.3 team on Proposed Standard for Data Annotation in Heath and this will be presented in the July meeting. They will also organize a workshop on this topic for knowledge sharing. This package continues to work with the VISIAN project (visian.org) which is developing the annotation tool for the platform and this is being integrated in it. There was some discussion was made on the need to consider the subjectivity of annotation boundaries.

Tony Arnold, HPI student, presented MIA/Medical Image Annotation Platform that can be utilized as pre annotation tool. Goal is to provide a flexible human-in-the-loop algorism. It was noted that some benchmarking for such pre annotation process would be necessary.

* Evaluation (audit) package (based on eval.ai) – Luis presented the history and what has been done by the team since the establishment. A lesson learned is the importance of considering the maintenance work of the platform that is a critical part to continue the work towards GI. He also highlighted the necessity of working with solutions to attract more people. Integration with Kaggle, OpenML would be considered for the platform to be used widely. He also introduced a new activity of to organize Machine Learning for Health ([ML4H](https://ml4health.github.io/2023/)). Discussion was made on how to bring more people and to have stronger inherent drivers to the group. To bring in companies?
* There is extensive documentation with user manual, playbook and tutorials, and a starter kit – <https://github.com/FG-AI4H/AI4H-Starters>. Finished the setup progress of the Docker-based evaluation pipeline but have some permission setting issues (VPC restriction) on AWS. The team plans on creating an automated environment creation and model submission and to integrate the audit and reporting packages. They also will implement preliminary evaluation scripts for TGs. The e-mail service was updated to allow for registration and inquiries and some small updates were made to the frontend. The work reached an important point, a proof point for Docker-based evaluation. An achievement is community building: <https://aiaudit.org/contributors/>. Collaboration with Google health team. Another achievement is integration of ML flow tool in the AWS environment, including shared storage buckets and *jupyter* notebooks for code and documentation. One full time software developer joins from October. Docker-based evaluation for reproducibility, control over s/w dependencies, easy scaling, future-proof and versatile, secure and isolated test environment. Identified challenges: 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 presented. Reporting package provides a customizable interface for the reporting of the ML model evaluation results. This is a reference implementation of DEL 2.2. Two types of reports will be created: Basic Report and Custom Report. The Basic report has the format split into three sections: Data Specification Sheet; ML Model specification Sheet; and ML Model Summary. Tool called Regulatory Checklist Manager is being developed, which is build as part of the AI regulatory sandbox.

The meeting 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 development towards the transition to the GI.

# FG-AI4H deliverables

## General

List of deliverables

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

In Meeting N, N-046 was presented with the results of a self-assessment on the progress of the various deliverables and provided a basic analysis. S-004 provided an updated analysis and identified a possible way forward for the remaining deliverables, on page 2 onwards. Attachment 1 contains a presentation summarizing the document. The document was noted.

[S-005](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-005.docx): Updated list of FG-AI4H deliverables (as of 2023-07-03) [TSB]

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 meeting in Cambridge, March 2023, as found in [R-200](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-200.docx) / DEL00S and subsequent updates by the secretariat.

The document was noted, and it would be updated after the meeting according to the discussions affecting deliverables as shown in Table 1. Table 1 is an update of S-005 and published in [S-200](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-200.docx) as an output of this meeting.

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

Table 1 – Final list of deliverables (Updates to S-005)

| No. | Deliverable | Updated initial draft editor | Availability\* |
| --- | --- | --- | --- |
| 0 | Overview of the FG-AI4H deliverables | Shan Xu (CAICT, China) | [S-046](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-046.docx) |
| *0.1* | *Common unified terms in artificial intelligence for health* | *Markus Wenzel* *(Fraunhofer HHI, Germany)* | [*P-201*](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-P-201.docx)*(agreed at P)* |
| *1* | *AI4H ethics considerations* | *Andreas Reis* *(WHO)* | [*O-201*](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-201.docx)(*agreed at O)* |
| *2* | *Overview of regulatory considerations on artificial intelligence for health* | *Shada Alsalamah* *(WHO)* | [*P-202*](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-P-202.docx)*(agreed at P)* |
| *2.1* | *Mapping of IMDRF essential principles to AI for health software* | *Luis Oala* *(Dotphoton, Switzerland),* *Pradeep Balachandran* *(Technical Consultant eHealth, India),* *Pat Baird* *(Philips, USA),* *Thomas Wiegand* *(Fraunhofer HHI, Germany)* | [*R-047*](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-047.docx)*(agreed online, 2023-03-16)* |
| *2.2* | *Good practices for health applications of machine learning: Considerations for manufacturers and regulators* | *Pradeep Balachandran* *(India) and* *Christian Johner* *(Johner Institut, Germany)* | [*P-203*](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-P-203.docx)*(agreed at P)* |
| *3* | *AI4H requirement specifications* | *Pradeep Balachandran* *(India)* | [*R-049*](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-049.docx)*(agreed online, 2023-03-16)* |
| *4* | *AI software life cycle specification* | *Pat Baird* *(Philips, USA)* | [*R-044*](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-044.docx)*(Agreed at R)* |
| 5 | Data specification | Marc Lecoultre (MLlab.AI, Switzerland) | [G-205](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-G-205.docx%22%20%5Ct%20%22_blank) |
| *5.1* | *Data requirements* | *[**Marc Lecoultre* *(MLlab.AI, Switzerland)]\*\** | [*R-066*](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-066.docx)*(agreed online, 2023-03-16)* |
| 5.2 | Data acquisition  | Rajaraman (Giri) Subramanian (Calligo Tech, India), Vishnu Ram (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* *(CAICT, China),* *Harpreet Singh* *(ICMR, India),* *Sebastian Bosse* *(Fraunhofer HHI, Germany)* | [*R-067*](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-067.docx)*(agreed online, 2023-03-16)* |
| *5.4* | *Training and test data specification*  | *Luis Oala* *(Dotphoton, Switzerland),* *Pradeep Balachandran* *(India)* | [*R-066*](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-066.docx)*(agreed online, 2023-03-16)* |
| *5.5* | *Data handling*  | *Marc Lecoultre* *(MLlab.AI, Switzerland)* | [*R-048*](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-048.docx)*(agreed online, 2023-03-16)* |
| 5.6 | Data sharing practices | Ferath Kherif (CHUV, Switzerland), Banusri Velpandian (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* *and* *Stefan Winkler* *(AI Singapore)* | [*R-051*](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-051.docx)*(agreed online, 2023-03-16)* |
| *7* | *AI for health evaluation considerations* | *Markus Wenzel* *(Fraunhofer HHI, Germany)* | [*R-042-R1*](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-042-R1.docx)*(agreed online, 2023-03-16)* |
| 7.1 | AI4H evaluation process description | Yu (Ursula) Zhao (WHO) | [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* *(Robert Koch Institute, Germany)* | [*R-069*](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-069.docx)*(agreed online, 2023-03-16)* |
| 7.3 | Data and artificial intelligence assessment methods (DAISAM) reference | Luis Oala (Dotphoton, Switzerland) | [P-032](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-P-032.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* *(NICE, UK),* *Eva Weicken* *(Fraunhofer HHI, Germany),* *Shubhanan Upadhyay* *(ADA Health, Germany)* | [*R-202*](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-202.docx)*(agreed at R)* |
| 7.4A | Checklist (Annex) | *Naomi Lee* *(NICE, UK),* *Eva Weicken* *(Fraunhofer HHI, Germany),* *Shubhanan Upadhyay* *(ADA Health, Germany)* | [R-063](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-063.docx) |
| 7.5 | Assessment platform | Luis Oala (Dotphoton, Switzerland), Marc Lecoultre and Steffen Vogler (Bayer AG, Germany) | [I-037](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-037.docx) |
| 8 | AI4H scale-up and adoption | Sameer Pujari (WHO), Yu Zhao and Javier Elkin [Previously: Robyn Whittaker (New Zealand)] | –([O-056](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-O-056.pptx)) |
| 9 | AI4H applications and platforms | Manjeet Chalga (ICMR, India) | [L-050](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-050.docx)([P-055](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-P-055.pptx)) |
| 9.1 | Mobile applications | Khondaker Mamun (UIU, Bangladesh), Manjeet Chalga (ICMR, India) | [Q-047](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FG-AI4H-Q-047.docx) |
| 9.2 | Cloud-based AI applications | Khondaker Mamun (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* *(Fraunhofer HHI, Germany)* | [*R-050*](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-050.docx)*(agreed online, 2023-03-16)* |
| 10.1 | Cardiovascular disease management (TG-Cardio) | Benjamin Muthambi (Watif Health, South Africa) | [S-006-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-006-A01.docx) |
| 10.2 | Dermatology (TG-Derma) | Harsha Jayakody (Flash Health, Sri Lanka), Ivy Lee (American Academy of Dermatology, USA) | [S-007-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-007-A01.docx) |
| 10.3 | Diagnosis of bacterial infection and anti-microbial resistance (TG-Bacteria) | Nada Malou (MSF, France) | [S-008-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-008-A01.docx) |
| 10.4 | Falls among the elderly (TG-Falls) | Pierpaolo Palumbo (University of Bologna, Italy) | [S-012-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-012-A01.docx) |
| 10.5 | Histopathology (TG-Histo) | Frederick Klauschen (LMU Munich & Charité Berlin, Germany) | [S-013-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-013-A01.docx) |
| 10.6 | Malaria detection (TG-Malaria) | Rose Nakasi (Makerere University, Uganda) | [S-014-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-014-A01.docx) |
| 10.7 | Maternal and child health (TG-MCH) | Alexandre Chiavegatto Filho (University of São Paulo, Brazil) | [S-015-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-015-A01.docx) |
| 10.8 | Neurological disorders (TG-Neuro) | Marc Lecoultre (MLlab.AI, Switzerland) and Ferath Kherif (CHUV, Switzerland) | [S-016-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-016-A01.docx) |
| 10.9 | Ophthalmology (TG-Ophthalmo) | Arun Shroff (MedIndia) | [S-017-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-017-A01.docx) |
| 10.10 | Outbreak detection (TG-Outbreaks) | Auss Abbood and Alexander Ullrich (Robert Koch Institute, Germany); Khahlil Louisy and Alexander Radunsky (Institute for Technology & Global Health, ITGH, US) | [S-018-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-018-A01.docx) |
| 10.11 | Psychiatry (TG-Psy) | Nicolas Langer (ETH Zurich, Switzerland) | [S-019-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-019-A01.docx) |
| 10.12 | AI for radiology (TG-Radiology) | Darlington Ahiale Akogo (minoHealth AI Labs, Ghana) | [S-023-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-023-A01.docx) |
| 10.13 | Snakebite and snake identification (TG-Snake) | Rafael Ruiz de Castaneda (UniGE, Switzerland) | [S-020-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-020-A01.docx) |
| 10.14 | Symptom assessment (TG-Symptom) | Henry Hoffmann (Ada Health, Germany) and Martin Cansdale (Healthily, UK) | [S-021-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-021-A01.docx) |
| 10.15 | Tuberculosis (TG-TB) | Manjula Singh (ICMR, India) | [S-022-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-022-A01.docx) |
| 10.16 | Volumetric chest CT (TG-DiagnosticCT) | Kuan Chen (Infervision, China) | [S-009-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-009-A01.docx) |
| 10.17 | Dental diagnostics and digital dentistry (TG-Dental) | Falk Schwendicke and Joachim Krois (Charité Berlin, Germany); Tarry Singh (deepkapha.ai, Netherlands) | [S-010-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-010-A01.docx) |
| 10.18 | Falsified Medicine (TG-FakeMed) | Franck Verzefé (TrueSpec-Africa, DRC) | [S-011-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-011-A01.docx) |
| 10.19 | Primary and secondary diabetes prediction (TG-Diabetes) | Andrés Valdivieso (Anastasia.ai, Chile) | [S-024-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-024-A01.docx) |
| 10.20 | AI for endoscopy (TG-Endoscopy) | Jianrong Wu (Tencent Healthcare, China) | [S-025-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-025-A01.docx) |
| 10.21 | AI for musculoskeletal medicine (TG-MSK) | Peter Grinbergs (EQL, UK), Yura Perov (Independent contributor, UK) | [S-026-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-026-A01.docx) |
| 10.22 | AI for human reproduction and fertility (TG-Fertility) | Susanna Brandi, Eleonora Lippolis, (Merck KGaA, Darmstadt, Germany) | [S-027-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-027-A01.docx) |
| 10.23 | AI for traditional medicine (TG-TM) | Saketh Ram Thrigulla (Ministry of Ayush, India) | [S-028-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-028-A01.docx) |
| 10.24 | AI for point-of care diagnostics (TG-POC) | Nina Linder (University of Helsinki, Finland) | [S-029-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-029-A01.docx) |

NOTES

\* Approved deliverables are indicated in *italics*. The document numbers indicated reflect the status as of the end of the Meeting R. 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.

\*\* Acting editor

The following deliverables were approved by the end of the last FG meeting (Meeting R, March 2023):

1. DEL 1: AI4H ethics considerations
2. DEL 0.1: Common unified terms in artificial intelligence for health
3. DEL2: Overview of regulatory considerations on artificial intelligence for health
4. DEL2.2: Good practices for health applications of machine learning: Considerations for manufacturers and regulators
5. DEL 2.1: Mapping of IMDRF essential principles to AI for health software
6. DEL 3: AI4H requirement specifications
7. DEL 4: AI software life cycle specification
8. DEL 5.1: Data requirements
9. DEL 5.3: Data annotation specification
10. DEL 5.4: Training and test data specification.
11. DEL 5.5: Data handling
12. DEL 6: AI training best practices specification
13. DEL07.1: AI4H evaluation process description
14. DEL 7: AI for health evaluation considerations
15. DEL 7.2: AI technical test specification
16. DEL 7.4: Clinical evaluation of AI for health
17. DEL 10: AI4H use cases: Topic description documents

The following deliverable was presented and agreed to go through the online approval process (online consultation starting on 1 September 2023 for two weeks). The submission deadline is 25 August 2023.

* DEL0: Overview of the FG-AI4H deliverables [[S-046](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-046.docx)]

Table 2 provides the list of remaining horizontal deliverables that will be archived at the sunset of the FG-AI4H.

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 2 – Archived horizontal deliverables

| Del No | Deliverable | Editor | Maturity |
| --- | --- | --- | --- |
| 5 | Data specification | Marc Lecoultre |  |
| 5.2 | Data acquisition | Rajaraman Subramanian, Vishnu Ram | D |
| 5.6 | Data sharing practices | Ferath Kherif, Banusri Velpandian |  |
| 7.1 | AI4H evaluation process description | Yu (Ursula) Zhao | F |
| 7.3 | Data and artificial intelligence assessment methods (DAISAM) reference | Luis Oala |  |
| 8 | AI4H scale-up and adoption | Sameer Pujari, Yu Zhao and Javier Elkin | F |
| 9 | AI4H applications and platforms | Manjeet Chalga | D |
| 9.1 | Mobile applications | Khondaker Mamun, Manjeet Chalga | D |
| 9.2 | Cloud-based AI applications | Khondaker Mamun | D |

## New deliverable proposals

There were no new deliverable proposals at this meeting.

## DEL00: Overview of the FG-AI4H deliverables

The editor of [DEL00](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL00.docx) is Shan Xu (CAICT, China).

[S-046](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-046.docx): DEL00: Overview of the FG-AI4H deliverables – Presentation

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.

Shan presented the overview of DEL00 and her analysis on the FGAI4H Deliverables. Overall statistics of each deliverable and words clouds related to specific contents were presented.

Update to DEL00 is found in [S-046](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-046.docx), and it was agreed at this meeting for submission to the 2-week online consultation of the finally edited draft at the end of August 2023.

## DEL05: Data specification

The editor of [DEL05](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL05.docx) is Marc Lecoultre (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).

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/).

## DEL05.2: Data acquisition

Rajaraman (Giri) Subramanian (Calligo Tech, India) and Vishnu Ram (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).

Some concerns were expressed concerning plagiarism on summary and some sections of the document, see <https://ieeexplore.ieee.org/document/8771108> (abstract) and [https://www.jmir.org/‌2019/4/e13043/](https://www.jmir.org/2019/4/e13043/) (main text).

## 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 (CHUV, Switzerland) and Banusri Velpandian (ICMR, India), assisted by the WHO Data Team.

[S-047](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-047.pptx): DEL05.6 – Data sharing and data sourcing update

Ferath briefly presented the aspect of data sharing principle related to DEL5.6 using the presentation in [S-047](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-047.pptx), but no update to DEL5.6 was submitted 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/).

## DEL07.1: AI4H evaluation process description

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

At Meeting R, it was agreed to reformat WHO publication on using AI for screening of cervical cancer ([Generating Evidence for Artificial Intelligence Based Medical Devices: A Framework for Training Validation and Evaluation](https://www.who.int/publications/i/item/9789240038462)) as DEL7.1. However, this agreement was not followed up in time for Meeting S and no updated text was provided. Accordingly, the existing draft will be archived. No presentation was made at this meeting.

# Topic Group updates

Table 3 shows the status of the current TGs for FG-AI4H.

The meeting reviewed updates for the TGs shown in Table 4.

## Template updates: TDD, CfTGP

Minor updates were made in meeting Q to the TDD and CfTGP templates to refresh each cover page for the new ITU-T Study Period:

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

The TG drivers have been reminded / requested on various occasions to update their TDDs and CfTGP based on the new templates.

## Publication of TDDs

The following documents are ready for the online consultation starting 1 September 2023 for two weeks. The deadline of the final version is 25 August 2023.

* DEL 10.4: Falls among the elderly (TG-Falls)
* DEL 10.7: Maternal and child health (TG-MCH)
* DEL 10.8: Neurological disorders (TG-Neuro)
* DEL 10.9: Ophthalmology (TG-Ophthalmo)
* DEL 10.14: Symptom assessment (TG-Symptom)
* DEL 10.17: Dental diagnostics and digital dentistry (TG-Dental)
* DEL 10.20: AI for endoscopy (TG-Endoscopy)
* DEL 10.21: AI for musculoskeletal medicine (TG-MSK)
* DEL 10.23: AI for traditional medicine (TG-TM)
* DEL 10.24: AI for point-of care diagnostics (TG-POC)

The following document will be further updated and may be ready for the online consultation starting 1 September 2023 for two weeks. The deadline of the final version is 25 August 2023.

* DEL 10.2: Dermatology (TG-Derma)
* DEL 10.6: Malaria detection (TG-Malaria)
* DEL 10.10: Outbreak detection (TG-Outbreaks)
* DEL 10.15: Tuberculosis (TG-TB)

The following documents were NOT put forward for approval for this time and will be archived:

* DEL 10.1: Cardiovascular disease management (TG-Cardio)
* DEL 10.3 Diagnosis of bacterial infection and anti-microbial resistance (TG-Bacteria)
* DEL 10.5: Histopathology (TG-Histo)
* DEL 10.11: Psychiatry (TG-Psy)
* DEL 10.12: AI for radiology (TG-Radiology)
* DEL 10.13: Snakebite and snake identification (TG-Snake)
* DEL 10.16: Volumetric chest CT (TG-DiagnosticCT)
* DEL 10.18: Falsified Medicine (TG-FakeMed)
* DEL 10.19: Primary and secondary diabetes prediction (TG-Diabetes)
* DEL 10.22: AI for human reproduction and fertility (TG-Fertility)

Table 3 – Summary status update for the various topic groups

| Cover page | Group | Title | Driver(s) | Organization | Meeting created | TDD | CfTGP | PPT used? |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [S-006](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-006.docx) | TG-Cardio | Cardiovascular disease risk prediction | Benjamin Muthambi | WatIF Health, South Africa | C | N | H | – |
| [S-007](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-007.docx) | TG-Derma | Dermatology | Harsha Jayakody, Ivy Lee | Flash Health, Sri Lanka; American Academy of Dermatology, USA | B | R | P | Yes |
| [S-008](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-008.docx) | TG-Bacteria | Diagnosis of bacterial infection and anti-microbial resistance | Nada Malou | Médecins Sans Frontières, France | F | L | – | – |
| [S-009](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-009.docx) | TG-DiagnosticCT | Volumetric chest CT | Kuan Chen | InferVision, China | D | P | H | – |
| [S-010](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-010.docx) | TG-Dental | Dental diagnostics and digital dentistry | Falk Schwendicke, Joachim Krois | Charité Berlin, Germany | G | S | R | Yes |
| [S-011](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-011.docx) | TG-FakeMed | AI-based detection of falsified medicine | Frank Verzefé | TrueSpec-Africa, DRC | F | J | H | – |
| [S-012](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-012.docx) | TG-Falls | Falls among the elderly | Pierpaolo Palumbo | University of Bologna, Italy; Fraunhofer Portugal | B | S | H | Yes |
| [S-013](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-013.docx) | TG-Histo | Histopathology | Frederick Klauschen | LMU Munich & Charite Berlin, Germany | B | I | E | – |
| [S-014](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-014.docx) | TG-Malaria | Malaria detection | Rose Nakasi | Makerere University, Uganda | F | N | L | – |
| [S-015](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-015.docx) | TG-MCH | Maternal and child health | Raghu Dharmaraju, Alexandre Chiavegatto Filho | Wadhwani AI, India; University of Sao Paulo, Brazil | D; rescoped in Meeting G | S | H | Yes |
| [S-016](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-016.docx) | TG-Neuro | Neurological disorders | Marc Lecoultre, Ferath Kherif | ML Labs, Switzerland; CHUV, Switzerland | B | L | E | Yes |
| [S-017](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-017.docx) | TG-Ophthalmo | Ophthalmology | Arun Shroff | MedIndia, India | B | S | M | Yes |
| [S-018](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-018.docx) | TG-Outbreaks | Outbreak detection | Auss Abbood and Alexander Ullrich; Alexander Radunsky and Khahlil Louisy | Robert Koch Institute, Germany; Institute for Technology & Global Health, ITGH, US | E | S | I | Yes |
| [S-019](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-019.docx) | TG-Psy | Psychiatry | Nicolas Langer | ETH Zurich, Switzerland | C | K | H | – |
| [S-020](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-020.docx) | TG-Snake | Snakebite and snake identification | Rafael Ruiz de Castaneda | UniGe, Switzerland | B | I | G | – |
| [S-021](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-021.docx) | TG-Symptom | Symptom assessment | Henry Hoffmann | Ada Health, Germany | B | S | N | Yes |
| [S-022](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-022.docx) | TG-TB | Tuberculosis | Manjula Singh | ICMR, India | C | M | E | – |
| [S-023](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-023.docx) | TG-Radiology | AI for radiology | Darlington Akogo | minoHealth AI Labs, Ghana | D; H (rescoped) | R | H | – |
| [S-024](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-024.docx) | TG-Diabetes | Primary and secondary diabetes prediction | Andrés Valdivieso | Anastasia.ai, Chile | H | K | L | – |
| [S-025](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-025.docx) | TG-Endoscopy | AI for endoscopy | Jianrong Wu | Tencent Healthcare, China | I | S | J | – |
| [S-026](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-026.docx) | TG-MSK | AI for Musculoskeletal medicine | Peter Grinbergs, Mark Elliott | EQL, UK; Warwick University, UK | J | S | R | – |
| [S-027](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-027.docx) | TG-Fertility | AI for human reproduction and fertility | Susanna Brandi, Eleonora Lippolis | Merck KGaA, Darmstadt, Germany | L | N | M | – |
| [S-028](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-028.docx) | TG-TM | AI for traditional medicine | Saketh Ram Thrigulla | Ministry of Ayush, India | P | S | Q | Yes |
| [S-029](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-029.docx) | TG-POC | Topic Group on AI for point-of care diagnostics | Nina Linder | University of Helsinki, Finland | L | S | M | Yes |

Table 4 – Presentation of TGs in Meeting S

| Doc | TG |
| --- | --- |
| [S-010](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-Dental |
| [S-012](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-Falls |
| [S-015](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-MCH |
| [S-017](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-Ophthalmo |
| [S-018](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-Outbreaks |
| [S-021](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-Symptom |
| [S-025](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-Endoscopy |
| [S-026](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-MSK |
| [S-029](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-POC |
| [S-028](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx) | TG-TM |

## TG-Cardio: Use of AI in cardiovascular disease management

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

No updates were provided at this meeting. The TG is archived.

## TG-Derma: AI for Dermatology

Harsha Jayakody (Flash Health, Sri Lanka) and Ivy Lee (American Academy of Dermatology, USA) are co-drivers.

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

Ivy presented the overview of the topic and the work being done by the TG using slides in [A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-007-A03.pptx). The team is focusing on building community, identifying various stakeholders including international dermatology societies, academic, commercial and regulators. Plans to create a learning forum, and to share educational and advocacy resources.

No updates were made to TDD, the latest version is [R-007-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-007-A01.docx) available in the Deliverables folder. The team will try to best to submit the TDD by September 2023.

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

The Topic Driver is Nada Malou. The latest documentation available is as follows:

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

No progress report was presented. The TG is archived.

## TG-Diagnostic CT: Volumetric chest computed tomography

The Topic Driver is Kuan Chen. The latest documentation available is as follows:

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

No progress report was presented. The TG is archived.

## TG-Dental: Dental diagnostics and digital dentistry

The Topic Drivers are Falk Schwendicke (Charité Berlin, DE), Joachim Krois (Dental XR AI, Germany); and Tarry Singh (deepkapha.ai, Netherlands). The latest available documentation is as follows:

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

Joachim reported updates using slides in [S-010-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-010-A03.pptx). One of the most active TGs. The TG has already completed two outputs approved by the FGAI4H:

* TG-Dental Output 1: [Artificial intelligence in dental research: A checklist for authors and reviewers](https://www.itu.int/en/ITU-T/focusgroups/ai4h/Documents/FGAI4H-TG-Dental-O-001.pdf)
* TG-Dental Output 2: [Artificial intelligence for oral and dental healthcare: Core education curriculum](https://www.itu.int/en/ITU-T/focusgroups/ai4h/Documents/FGAI4H-TG-Dental-O-002.pdf)

In addition, the TG also completed the checklist of the ethical considerations on artificial intelligence in dentistry (see below [S-037](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-037.docx)). The TG participates in the Trial Audits 2.0.

The group is further growing with current 62 members in total from 27 countries in 6 continents. Ethical consideration is included in the TDD.

TG-Dental organized a symposium on 5 July 2023, the programme is found [here](https://docs.google.com/spreadsheets/d/1dphONRprCPEmMMGqwN2_8uE4EpwmC-H2rtKdk7ESXUQ/edit#gid=0&range=A161).

The Deliverables folder was updated with the updated TDD in [S-010-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-010-A01.docx), and it was agreed to start the FG Approval process.

[S-037](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-037.docx): Ethical considerations on artificial intelligence in dentistry: A framework and checklist [TG-Dental Topic Driver]

**Abstract**: This document contains the Framework and Checklist of the Ethical Considerations on Artificial Intelligence in Dentistry. The document is complete and could be published.

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

The Topic Driver is Franck Verzefé. The latest documentation available is as follows:

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

No updates were provided at this meeting. The TG is archived.

## TG-Falls: Falls amongst the elderly

The Topic Driver is Pierpaolo Palumbo (University of Bologna, Italy). The latest documentation available is as follows:

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

Pierpaolo presented the topic overview and the updates using slides in [A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-012-A03.pptx). The team is conducting systematic review and individual participant data meta-analysis. Pierpaolo expressed that he is stepping down as driver but agreed to continue until the Global Initiative AI4H is in operation. He also agreed to assist in identifying a possible replacement.

The updated version of TDD is available as [S-012-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-012-A01.docx), and as it is sufficiently mature, it was agreed to be published on the ITU-T website.

[***S-035***](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-035.docx)***: Parameters for the AI system for falls prevention among elderly: Musculoskeletal specialist perspective [Vardhman Mahavir Medical College and Safdarjung Hospital, India]***

Fall prevention is not merely restricted to an episode of a fall; it's an indicator of health and wellness and it requires a multidisciplinary approach. For artificial intelligence (AI) models to predict and prevent falls, a large amount of data from various streams is required. This document proposes some data points from musculoskeletal specialist perspective that can be interpreted, analyzed, and learned in order to generate a deep neural AI network that can predict and prevent a fall. Similar data points from other disciplines may be identified by the specialists of that discipline to give a comprehensive directory of the data that can be used for AI modelling.

Ashish Jaiman (Central Institute of Orthopaedics, Vardhman Mahavir Medical College and Safdarjung Hospital, India) presented [S-035](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-035.docx). As the area of study is overlapped with the TG-Falls, it was suggested to contact the TG-Falls Topic Driver, and Ashish agreed.

## TG-Histo: Histopathology

The Topic Driver is Frederick Klauschen. The latest documentation available is as follows:

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

No updates were provided at this meeting. The TG is archived.

## TG-Malaria: Malaria detection

The Topic Driver is Rose Nakasi. The latest documentation available is as follows:

TDD: [S-014-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-014-A01.docx) (Same as meeting N) – [S-014-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-014-A03.pptx)
CfTGP: [S-014-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-014-A02.docx) (Same as meeting L)
Contributions: N/A

Rose Nakasi presented the background and updates of the TG work using slides in [S-014-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-014-A03.pptx). A CNN model is utilized for detecting malaria parasites in imaging analysis. The group is migrating a new challenge to *codabench* for a wider community and gather more datasets for training and testing. Next steps will be iterating with different algorithms to assess performance on new datasets collected.

Rose confirmed her intention to continue the TG activities after the transition to GI, although no TDD is submitted for approval. The remaining documentation is archived.

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

## TG-MCH: Maternal and child health

The Topic Drivers are Raghu Dharmaraju (Wadhwani AI, India) and Alexandre Chiavegatto (University of São Paulo, Brazil).The latest documentation available is as follows:

TDD: [S-015-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-015-A01.docx) – [S-015-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-015-A03.pptx)
CfTGP: [S-015-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-015-A02.docx) (Same as Meeting H)
Contributions: N/A

Alexandre briefed the meeting on the goals of the TG and recent progress with the slides in [S-015-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-015-A03.pptx). He noted that machine learning has a role in helping reduce rates of death and complication at birth, which in many cases can greatly benefit from simple, low-cost interventions, if early enough warnings are provided. Algorithms need to use routinely available variables. If algorithms use expensive exams, it will be difficult to significantly improve the current situation.

The goal is to predict the risk of neonatal mortality using only data routinely available from birth records in the largest city of the Americas. Last year their lab published their research on algorithms developed to predict neonatal mortality using birth records in Sao Paulo. Since the Meeting P, Global Network's Maternal New-born Health Registry (MNHR) is utilized to see minimum predictive performance.

The team found and got an access to a dataset from Global Network's Maternal Newborn Health Registry (MNHR) which has data from eight low and middle income countries (LMICs). Five out of Eight variables suggested by WHO were tested using the algorithms and a good result with high predictive performance in every single country was obtained. An article will be published to show the outcome.

Updated TDD as shown in [S-015-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-015-A01.docx) was updated to the Deliverables repository, and is ready to move to the approval process.

[***S-033***](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-033.docx) ***+*** [***A01***](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-033-A01.pptx)***: Triaging high volume code mixed maternal healthcare queries in low resource settings using natural language processing technique***s

Abstract: Maternal mortality remains a significant challenge in Kenya despite efforts to improve healthcare services. This study presents the innovative use of a SMS-based digital health platform called PROMPTS, developed by Jacaranda Health, a Non-Profit Organization based in Kenya, Ghana, and Eswatini. PROMPTS leverages Natural Language Processing (NLP) techniques to handle maternal healthcare queries and provide timely, accurate responses, addressing the pressing issues in low-resource settings. PROMPTS reaches 2.2 million mothers in 1,110 Kenyan health facilities, offering free and easily accessible support through SMS. The platform empowers women with knowledge to make informed decisions about their health. Notably, PROMPTS is endorsed by government health systems, ensuring prompt response to all maternal inquiries regardless of volume, reducing the risk of vital questions being overlooked. The study highlights PROMPTS' progress, challenges faced, and lessons learned. It discusses specialized datasets construction, effective triaging of queries with limited language resources and budgets, and handling long-tailed query distributions. Modeling approaches for extreme multi-class settings and high confusion are explored. Implementation and deployment of machine learning applications and ethical considerations in AI model creation are also examined. This study showcases PROMPTS' transformative potential in reshaping health-seeking behaviors among Kenyan women, emphasizing NLP's critical role in improving maternal healthcare outcomes. It contributes to AI for healthcare in low-resource and domain-specific languages, emphasizing the importance of addressing data challenges and modeling complexities in such settings.

Jay Patel (Jacaranda Health, Kenya) presented [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-033-A01.pptx). It is a good use case to implement AI-based digital health platform in a law-resources setting in response to public needs. It was suggested to consider possible collaboration in the GI.

## TG-Neuro: Neurological disorders

The Topic Driver is Marc Lecoultre (ML Labs, Switzerland), with Ferath Kherif (CHUV, Switzerland). The latest documentation available is as follows:

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

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-R-016-A03.pptx). Both federated learning and secret sharing models are applied. They plan to continue working on the topic in the new GI.

No updates were made to the TDD, which was last updated for Meeting L, nor to the CfTGP (Meeting E). The team agreed to submit the current TDD to move to the approval process.

## TG-Ophthalmo: Ophthalmology

The Topic Driver is Arun Shroff. The latest documentation available is as follows:

TDD: [R-017-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-017-A01.docx) - [S-017-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-017-A03.pptx)
CfTGP: [R-017-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-017-A02.docx) (Same as Meeting M)
Contributions: N/A

Arun presented the updates using slides in [S-017-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-017-A03.pptx). The TG is working with the ML Audit Trials team and results were included in a paper "ML4H Auditing: From Paper to Practice" which was selected for the NeurIPS 2020 workshop on Machine Learning for Health, available [here](http://proceedings.mlr.press/v136/oala20a/oala20a.pdf).

The updated TDD as shown in [R-017-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-017-A01.docx) is uploaded to the Deliverables repository. The team agreed to submit the current TDD to move to the approval process.

## TG-Outbreaks: AI for outbreak detection

The Topic Drivers are Auss Abbood and Alexander Ullrich (Robert Koch Institute/RKI, Germany), Alexander Radunsky (ITGH, US) and Khahlil Louisy (Institute for Technology & Global Health, ITGH, US). An updated TDD document was not yet submitted, after the merger of TG-Sanitation into TG-Outbreaks.

The latest documentation available is as follows:

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

Auss provided updates using slides in [S-018-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-018-A03.pptx). The team has merged TDDs of two previous groups into one. Ethics considerations were taken into consideration, specifically the data the team operates is the aggregated population level data, thus there is an individual-level risk.

The team has a lot of data algorithms, metrics, etc. gathered in Germany that they are using internally, and they are consulting lawyers on how to show publicly and to run for benchmarking, which is the same kind of problem that other TGs have. This point may need to be considered for the federated data approach. The team plans to discuss with potential partners for the GI. For the regulation matter, it was suggested to connect with CEN-CENELEC JTC21 "Artificial Intelligence" and this will be discussed offline.

Updated TDD as shown in [S-018-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-018-A01.docx) was updated to the Deliverables repository.

The team would be comfortable to submit the TDD for the online approval during summer.

## TG-Psy: Psychiatry

The Topic Driver is Nicholas Langer. The latest documentation available is as follows:

TDD: [S-019-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-019-A01.docx) (Same as Meeting K) – [S-019-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-019-A03.pptx)CfTGP: [S-019-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-019-A02.docx) (Same as Meeting H)
Contributions: N/A

No updates were provided at this meeting. The TG is archived.

## TG-Snake: Snakebite and snake identification

The Topic Driver is Rafael Ruiz. The latest documentation available is as follows:

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

No updates were provided at this meeting. The TG is archived.

## TG-Symptom: Symptom assessment

The Topic Drivers are Henry Hoffmann (ADA Health) and Martin Cansdale (Healthily, UK). The latest documentation available is as follows:

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

Henry presented the progress report (including a general overview of the activity) in [S-021-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-021-A03.pptx). The TG is one of the most active Topic Groups. The team is working with the OCI concerning the annotation tool. Henry thinks a neutral organization would be necessary that organizes the data collection and executes the benchmarking.

The updated TDD in [S-021-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-021-A01.docx) was uploaded to the Deliverables repository, and as it is sufficiently mature, it was agreed to move to the approval process.

## TG-TB: Tuberculosis

The Topic Driver is Manjula Singh (ICMR, India). The latest documentation available is as follows:

TDD: [S-022-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-022-A01.docx) (Same as Meeting M – to be provided) – [S-022-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-022-A03.pptx) (not yet shared)
CfTGP: [S-022-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-022-A02.docx) (Same as Meeting E)
Contributions: N/A

Manjula and Minika presented the updates using slides in [S-022-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-022-A03.pptx).

No TDD or CfTGP updates were provided at this meeting. Manjula will submit the updated TDD after the Meeting S for approval as a FGAI4H output, and she confirmed the desire to continue the TG work towards the transition to GI. The team agreed to submit the current TDD to move to the approval process.

## TG-Radiology: AI for Radiology

The Topic Driver is Darlington Ahiale Akogo (minoHealth AI Labs, Ghana). The latest documentation available is as follows:

TDD: [S-023-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-023-A01.docx) (Same as Meeting R)CfTGP: [S-023-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-023-A02.docx) (Same as Meeting H)
Contributions: N/A

No updates were provided at this meeting, but it is felt that, given the progress made by the group, that the current TDD could be submitted to the approval process after clean-up.

## TG-Diabetes: Primary and secondary diabetes prediction

The Topic Driver is Andrés Valdivieso (Anastasia.ai, Chile) The latest documentation available is as follows:

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

No updates were provided at this meeting. The TG is archived.

## TG-Endoscopy: AI for endoscopy

The Topic Driver is Jianrong Wu (Tencent Healthcare, China). The latest documentation available is as follows:

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

Jianrong Wu presented the updates. The team is working with data available in hospitals in China. The device was approved by the national authority and the team is preparing the launch of the solution.

The updated TDD is available in [S-025-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-025-A01.docx) and as it is sufficiently mature, it was agreed to move to the approval process.

## TG-MSK: AI for musculoskeletal medicine

The co-Topic Drivers are Peter Grinbergs (EQL, UK) and Mark Elliott (Warwick University, UK). Both can be reached through a common e-mail address, tgmskorg@googlegroups.com. The latest documentation available is as follows:

TDD: [S-026-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-026-A01.docx)
CfTGP: [[S-026-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-026-A02.docx) (same as Meeting R)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-M-026-A02.docx)Contributions: N/A

Mark presented the overall work of the group, which has focused on a sub-theme within the topic group, and now will focus on benchmarking and standardisation of biomechanics data for AI applications, for the next stage for the GI.

The updated TDD in [S-026-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-026-A01.docx) was uploaded to the Deliverables repository and as it is sufficiently mature, it was agreed to move to the approval process.

## TG-Fertility: AI for human reproduction and fertility

The co-Topic Drivers are Susanna Brandi and Eleonora Lippolis (Merck KGaA, Darmstadt, Germany). The latest documentation available is as follows:

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

No updates were provided at this meeting. The TG is archived.

## TG-TM: AI for traditional medicine

The Topic Driver is Saketh Ram Thrigulla (Ministry of Ayush, Govt of India).

The latest documentation available is as follows:

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

Saketh Ram presented the updates of the work of the group. Current gold standard in traditional medicine (TM) is whole system approach involving continuous interaction between the subject and the TM practitioner. TM relies on individualized expertise, and many subjective data utilized in TM diagnostics will be converted into objective data for AI training.

The team is examining various papers to collect terminology for standardization and methodologies of each area of traditional medicine. The team is engaged in the development of benchmarking system architecture, AI input, output data structure for the benchmarking, scores and metrics, and test dataset acquisition.

Discussion will be made at the Global Summit on TM that will be organized by WHO Global Center for Traditional Medicine (GCTM) in August 2023.

The current version will be updated for approval as an output of the FG-AI4H work. The team would then continue the TDD work to improve the benchmark section.

The updated TDD in [S-028-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-028-A01.docx) was uploaded to the Deliverables repository.

## TG-POC: AI for point-of care diagnostics

The Topic Driver is Nina Linder (University of Helsinki, Finland). The latest documentation available is as follows:

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

Nina presented updates on the activities done by the group using the slides in [S-029-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-029-A03.pptx). The group progressed the 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 is conducting validation studies for POC diagnostics for helminth infections and malaria in Tanzania and Kenya. Cervical screening will be expanded to HIV negative women in Kenya and Tanzania, for which the collaboration with WG-CE is conducted. Validation study in Kenya is planned to end in December 2023.

Cost effectiveness is considered, including costs for training of technicians, AI cloud platform subscription and time spent by technician, AI processing and time spent by pathologist.

New study for cervical screening using AI at the POC in Tanzania has started, with general population regardless of HIV status. The team also looks for Human Papilloma Virus (HIV) status as this is crucial for the development of cervical cancer. and initial contacts with researchers studying breast cancer for diagnostics in low-resource settings, prepare for publication of cervical screening validation study, and TG-POC workshop planned for October 2023.

The TG-PoC is also collaborating with the WG-CE to test the guidance deliverable produced by the WG and has developed an initial checklist version of the clinical evaluation criteria that the WG-CE is looking into making an Annex to DEL7.4. See §‎11.6.

Another collaboration is with Fraunhofer and Univ. Helsinki on explainable machine learning of image and clinical data on blest cancer screening.

The updated TDD in [S-029-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-029-A01.docx) was uploaded to the Deliverables repository. The Team would submit the TDD by 25 August 2023 for the online consultation process after completing some sections.

# Proposals for new topic areas

There were no proposals for new topic areas in view of the sunset of the FG-AI4H.

# Status of previous output documents

No updates were made to the following FG-AI4H output documents, which are now archived:

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

# Outcomes of this meeting

## WG updates

There were no updates to WGs at this meeting.

## TG updates

New TG/sub-TG:

There were no updates to TGs/sub-TGs at this meeting.

Updates to leadership / scope of existing TGs:

There were no updates to TG drivers at this meeting, although Pierpaolo Palumbo (University of Bologna, Italy) indicated that he would step down as driver for TG-Falls (Falls among the elderly) as the group transitions to the GI.

## Output liaison statements

One output LSs was prepared at this meeting:

* [FGAI4H-LS10](https://www.itu.int/net/ITU-T/ls/ls.aspx?isn=29360): LS/r on the FG-AI4H DEL0.1, Glossary of terms and definitions for machine learning (JCA-ML-LS2) [to JCA-ML] (Ref: [S-032](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-032.docx))

## Output documents

The following deliverables will be reviewed and submitted for online consultation starting 1 September 2023 for two weeks. The deadline of the final version is 25 August 2023:

* DEL 0: Overview of the FG-AI4H deliverables [[S-046](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-046.docx)]
* DEL 10.4: Falls among the elderly (TG-Falls) [[S-012](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx)]
* DEL 10.7: Maternal and child health (TG-MCH) [[S-015](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx)]
* DEL 10.8: Neurological disorders (TG-Neuro)
* DEL 10.9: Ophthalmology (TG-Ophthalmo) [[S-017](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx)]
* DEL 10.14: Symptom assessment (TG-Symptom) [[S-021](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx)]
* DEL 10.17: Dental diagnostics and digital dentistry (TG-Dental) [[S-010](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx)]
* DEL 10.20: AI for endoscopy (TG-Endoscopy) [[S-025](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx)]
* DEL 10.21: AI for musculoskeletal medicine (TG-MSK) [[S-026](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx)]
* DEL 10.23: AI for traditional medicine (TG-TM) [[S-028](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx)]
* DEL 10.24: AI for point-of care diagnostics (TG-POC) [[S-029](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx)]

The following document will be further updated and may be ready for the online consultation starting 1 September 2023 for two weeks. The deadline of the final version is 25 August 2023.

* DEL 10.2: Dermatology (TG-Derma)
* DEL 10.6: Malaria detection (TG-Malaria)
* DEL 10.10: Outbreak detection (TG-Outbreaks) [[S-018](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006.docx)]
* DEL 10.15: Tuberculosis (TG-TB)

Additionally, the following document will be issued, based on Table 1:

* [S-200](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-200.docx): Updated list of FG-AI4H deliverables
1. It was agreed that following document will be further updated and may be ready for the online consultation starting 1 September 2023 for two weeks: DEL0, DEL10.2, DEL10.4, DEL10.6, DEL10.7, DEL10.8, DEL10.9, DEL10.10, DEL10.14, DEL10.15, DEL10.17, DEL10.20, DEL10.21, DEL10.23, DEL10.24. Deadline for editors to submit the documents to the secretariat is 25 August 2023.
2. The remaining deliverables listed in Table 1 were considered not sufficiently mature and will be archived.
3. The updated list of deliverables will be issued as [S-200](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-200.docx).

## Deliverables and parent group reporting

No deliverables were approved 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).

A progress report will be issued to the FG-AI4H parent group, ITU-T Study Group 16, for its meeting in Geneva, 10-21 July 2023. A draft was not yet available at the time of the closure of the FG-AI4H meeting S.

# Future work

## Schedule of future FG meetings and workshops

The schedule of meetings was reviewed; Table 5 has the updated information, see also [S-003](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-003.docx).

The Focus Group will close operations in September 2023 but its experts may continue to organize online webinars under the umbrella of AI for Good to discuss AI-based methods in healthcare. Meeting S is the last physical meeting of the FG-AI4H, an option to organize a short online meeting to deal with Deliverables is retained. Relevant FG-AI4H activities are planned to be continued in the ITU/WHO/WIPO Global Initiative on AI for health.

Table 5 – Schedule of future FG meetings (as of 2023-07-04)

| Meeting | Date | Venue | Notes |
| --- | --- | --- | --- |
| S | 3-5 July 2023 | Geneva | Current meeting, last physical meeting |
| T | Aug.-Sep. 2023 | Online | Option retained. |

## Work plan and timeline

Update drafts of the deliverables in §‎16.4 are expected to be available by 25 August 2023 in time to start the two weeks consultation by 1 September 2023.

## Interim activities (online)

Mature TGs and WGs will continue their activities until the end of the FG-AI4H lifetime and prepare the transition to the GI-AI4H. Communications on subsequent activities would be announced in the TG-specific and/or general mailing lists (see [Annex D](#AnnexD)).

# Promotion and outreach

No interim promotion activities were held in addition to the series of the Discovery series on AI and health that can be seen at [https://aiforgood.itu.int/search-result-programme/?keyword=&‌category=346&event-venue=&enddate=&startdate=Select+year](https://aiforgood.itu.int/search-result-programme/?keyword=&category=346&event-venue=&enddate=&startdate=Select+year).

# Workshop

A workshop was held on Wed 5 July 2023 together with the AI for Good Day 0 events. The programme can be found at <https://aiforgood.itu.int/event/ai-for-health/> & <https://itu.int/en/ITU-T/Workshops-and-Seminars/ai4h/20230705>. The recordings of the workshop are found here:

* Morning: <https://itu.zoom.us/rec/share/lKUsaYC5UU18OY0DpB8EGKw8XfhScW_qL08CEEeSPPzAxpug-31U03-rXxjAzeiK.MOPDs-avtB0HYKGz?startTime=1688539598000>
* Afternoon: <https://itu.zoom.us/rec/share/lKUsaYC5UU18OY0DpB8EGKw8XfhScW_qL08CEEeSPPzAxpug-31U03-rXxjAzeiK.MOPDs-avtB0HYKGz?startTime=1688557996000>

# A.O.B.

None.

# Closing

The FG-AI4H chairman thanked everyone for attending the meeting and hopes to see them at the first GI-AI4H meeting. It was mentioned that some people have been at almost every one of the 19 meetings. He thanked Bastiaan and Simão and the ITU Secretariat for their support, without their support the group – "a teenager now at its 19th meeting" – would not have even become toddlers. The management team did a fantastic job, it held weekly phone calls over 5 years almost without fail. The vice chairs were always supportive and special thanks go to Sameer. Special thanks also go to Marcus, and Eva, who have put in lots of work to smoothly organize the operations of the FG. Andrew was instrumental for getting together a large community particularly for LMICs and together with Matthias to organize the Webinars. Naomi for triggered the clinical evidence work and Shada for her hard work on the regulatory considerations side. Andreas Reis drove the ethics work and it was the first one to be ready. The topic group drivers were very important, some of which producing TDDs with over 200 pages. The deliverables so far are in the order of 2,000 plus pages and it is something to be proud to be a part of. He concluded noting that the participants have been the core of something that will grow much bigger and encouraged all to work towards that goal.

The meeting was closed on Tue 4 July 2023 around 1700 hours (CEST), which was followed by the workshop on Wed 5 July 2023.

Annex A:
Agenda

|  |  |  |
| --- | --- | --- |
|  |  | Related Documents |
| 1 | Opening | [S-002](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-002.pptx) (FG-AI4H Introduction) |
| 2 | Approval of agenda | [S-001](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-001.docx) (Agenda); Initial timing: [link](https://docs.google.com/spreadsheets/d/1dphONRprCPEmMMGqwN2_8uE4EpwmC-H2rtKdk7ESXUQ) |
| 3 | Documentation and allocation | [S-001](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-001.docx) (Allocation); Annex B (Documentation)  |
| 4 | IPR | Annex A |
| 5 | Management updates | No updates |
| 6 | Approval of Meeting R outcomes and updates | [R-101](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-101.docx): Meeting Report[R-102](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-102.docx): Updated call for proposals: use cases, benchmarking, and data[R-200](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-200.docx): Updated list of deliverables |
|  | Interim activities:  |  |
| 7 | Review of incoming LSs |  |
| a | LS on invitation to nominate the representative to the ITU-T JCA-ML [from JCA-ML] | [S-031](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-031.docx) à *reply suggesting use of the terminology developed, DEL0.1.*[S-032](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-032.docx): Draft reply LS to JCA-ML (S-031) |
| b |  |  |
| c |  |  |
| 8 | Information on AI-related activities | – |
| 9 | Global Initiative |  |
| 10 | Working Group updates |  |
| a | Data and AI solution assessment methods (WG-DAISAM) [Pat Baird; Luis Oala] | [S-034](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-034.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-034-A01.pdf):Policy framework design for the standardization of ITU-WHO AI-for-health assessment platform as a global digital public good (Pradeep Balachandran) |
| b | Data and AI solution handling (WG-DASH) [Marc Lecoultre; Ferath Kherif]  | [S-036](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-036.docx): Health Data Management and Governance for Trustworthy AI [Ministry of Communications and Technology, Syrian Arab Republic] |
| c | Ethics (WG-Ethics) [Andreas Reis] | [S-043](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-043.pptx): Ethical considerations on AI for health updates |
| d | Operations (WG-O) [Markus Wenzel; Eva Weicken] | [S-041](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-041.pptx): WG-O: DEL0.1 and DEL7 updates |
| e | Regulatory considerations (WG-RC) [Shada Alsalamah] | [S-045](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-045.pptx): Regulatory-Considerations on AI for health updates |
| f | Clinical Evaluation (WG-CE) [Naomi Lee; Shubhanan Upadhyay; Eva Weicken] | [S-042](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-042.pptx): WG-CE Updates |
| g | Collaborations and Outreach (WG-CO) [Andrew Farlow] | [S-044](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-044.pptx): WG-CO Updates |
| h | AI and other digital technologies for COVID-19 health emergency (AHG-DT4HE) [Shan Xu, Ana Rivière-Cinnamond] |  |
|  |  |  |
| 11 | Open Code Project [Marc Lecoultre] | S-40: Open Code Initiative – Status update  |
| 12 | FG-AI4H deliverables | Updated table: [S-005](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-005.docx)Landing page [here](https://www.itu.int/en/ITU-T/focusgroups/ai4h/Pages/deliverables.aspx)Status update: [S-004](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-004.docx) & [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-004-A01.pptx) |
| a | New deliverables | – |
| b | Published deliverables | [DEL0.1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL00_1.docx): FG-AI4H terms and definitions[DEL1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL01.docx): AI4H ethics considerations[DEL2](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL02.docx): AI4H regulatory best practices[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 |
| c | Approved deliverables under publication |  |
|  | [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 |  |
|  | [DEL3](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL03.docx): AI4H requirements specifications |  |
|  | [DEL4](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL04.docx): AI software life cycle specification |  |
|  | [DEL5.1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL05_1.docx): Data requirements |  |
|  | [DEL5.3](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL05_3.docx): Data annotation specification |  |
|  | [DEL5.4](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL05_4.docx): Training and test data specification | [S-048](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-048.pptx): Update: Training and test data specification |
|  | [DEL5.5](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL05_5.docx): Data handling |  |
|  | [DEL6](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL06.docx): AI training best practices specification |  |
|  | [DEL7](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL07.docx): AI for health evaluation considerations |  |
|  | [DEL7.2](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL07_2.docx): AI technical test specification |  |
|  | [DEL7.4](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL07_4.docx): Clinical evaluation of AI for health |  |
|  | [DEL10.0](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL10_0.docx): AI4H use cases: Topic Description Documents |  |
| d | Deliverables submitted to the online approval process |  |
|  | None at this meeting |  |
| e | [DEL0](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL00.docx): Overview of deliverables | [S-046](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-046.pptx): DEL00 Update |
| f | [DEL5](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL05.docx): Data specification |  |
| g | [DEL5.2](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL05_2.docx): Data acquisition |  |
| h | [DEL5.6](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL05_6.docx): Data sharing practices | [S-047](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-047.pptx): Update: Data sharing practices – Progress review presentation |
| i | [DEL7.1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL07_1.docx): AI4H evaluation process description |  |
| j | [DEL7.3](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL07_3.docx): Data and artificial intelligence assessment methods (DAISAM) reference |  |
| k | [DEL7.5](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL07_5.docx): Assessment platform |  |
| l | DEL8: AI4H scale-up and adoption |  |
| m | [DEL9](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL09.docx): AI4H applications and platforms |  |
| n | [DEL9.1](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL09_1.docx): Mobile applications [DEL9.2](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/Deliverables/DEL09_2.docx): Cloud-based AI applications |  |
| o |  |  |
| 13 | Updates to TGs and new proposals |  |
| a | Template updates: TDD, CfTGP | [Q-105](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-Q-105.docx): TDD template[Q-103](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-Q-103.docx): CfTGP template |
| b | TG-Cardio (Cardiovascular Risk Prediction) [Benjamin Muthambi] | TDD: [S-006-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-006-A01.docx) - [[S-006-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-006-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-006-A03.pptx)CfTGP: [[S-006-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-006-A02.docx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-006-A02.docx)Contributions:  |
| c | TG-Derma (Dermatology) [Harsha Jayakody, Ivy Lee] | TDD: [S-007-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-007-A01.docx) - [S-007-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-007-A03.pptx)CfTGP: [S-007-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-007-A02.docx)Contributions: |
| d | TG-Bacteria (Diagnoses of bacterial infection and anti-microbial resistance - AMR)[Nada Malou] | TDD: [S-008-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-008-A01.docx) - [S-008-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-008-A03.pptx)CfTGP: [S-008-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-008-A02.docx)Contributions:  |
| e | TG-DiagnosticCT (Volumetric chest computed tomography) [Kuan Chen] | TDD: [S-009-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-009-A01.docx) - [[S-009-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-009-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-009-A03.pptx)CfTGP: [S-009-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-009-A02.docx) Contributions:  |
| f | TG-Dental (Dental diagnostics and digital dentistry)[Falk Schwendicke, Joachim Krois] | TDD: [S-010-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-010-A01.docx) - [[S-010-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-010-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-010-A03.pptx)CfTGP: [[S-010-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-010-A02.docx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-010-A02.docx)Contributions: [S-037](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-037.docx): Ethical considerations on artificial intelligence in dentistry: A framework and checklist [TG-Dental Topic Driver] |
| g | TG-FakeMed: AI-based detection of falsified medicine[Franck Verzefé] | TDD: [S-011-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-011-A01.docx) - [[S-011-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-011-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-011-A03.pptx)CfTGP: [[S-011-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-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 for Inês Sousa] | TDD: [S-012-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-012-A01.docx)- [[S-012-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-012-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-012-A03.pptx)CfTGP: [[S-012-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-012-A02.docx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-012-A02.docx)Contributions: [S-035](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-035.docx): Parameters for the AI system for falls prevention among elderly: Musculoskeletal specialist perspective |
| i | TG-Histo (Histopathology) [Frederick Klauschen] | TDD: [S-013-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-013-A02.docx) - [S-013-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-013-A03.pptx) CfTGP: [S-013-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-013-A02.docx) Contributions: |
| j | TG-Malaria: Malaria detection [Rose Nakasi] | TDD: [S-014-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-014-A01.docx) - [[S-014-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-014-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-014-A03.pptx) CfTGP: [[S-014-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-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, Alexandre Chiavegatto Filho] | TDD: [S-015-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-015-A01.docx) - [S-015-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-015-A03.pptx) CfTGP: [S-015-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-015-A02.docx%22%20%5Ct%20%22_blank) Contributions: [S-033](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-033.docx): Triaging high volume code mixed maternal healthcare queries in low resource settings using natural language processing techniques |
| l | TG-Neuro: Neurological disorders [Marc Lecoultre] | TDD: [S-016-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-016-A01.docx) - [[S-016-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-016-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-016-A03.pptx)CfTGP: [[S-016-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-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] | TDD: [S-017-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-017-A01.docx) - [S-017-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-017-A03.pptx) CfTGP: [[S-017-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-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) [Auss Abbood, Alexander Ullrich, Alexander Radunsky, Khahlil Louisy] | TDD: [S-018-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-018-A01.docx) - [S-018-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-018-A03.pptx)CfTGP: [S-018-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-018-A02.docx)Contributions: |
| o | TG-Psy (Psychiatry) [Nicholas Langer] | TDD: [S-019-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-019-A01.docx) - [[S-019-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-019-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-019-A03.pptx)CfTGP: [S-019-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-019-A02.docx) Contributions:  |
| p | TG-Snake (Snakebite and snake identification) [Rafael Ruiz] | TDD: [S-020-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-020-A01.docx) - [[S-020-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-020-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-020-A03.pptx)CfTGP: [S-020-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-020-A02.docx)Contributions: |
| q | TG-Symptom (Symptom assessment) [Henry Hoffmann, Martin Cansdale] | TDD: [S-021-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-021-A01.docx) - [[S-021-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-021-A03.pptx%22%20%5Ct%20%22_blank)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-H-021-A03.pptx) CfTGP: [[S-021-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-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] | TDD: [S-022-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-022-A01.docx) - [[S-022-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-022-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-022-A03.pptx)CfTGP: [S-022-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-022-A02.docx%22%20%5Ct%20%22_blank) Contributions: |
| s | TG-Radiology (Radiology) [Darlington Ahiale Akogo] | TDD: [S-023-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-023-A01.docx) - [S-023-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-023-A03.pptx) CfTGP: [S-023-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-023-A02.docx) Contributions:  |
| t | TG-Diabetes[Andrés Valdivieso] | TDD: [S-024-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-024-A01.docx) - [S-024-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-024-A03.pptx)CfTGP: [[S-024-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-024-A02.docx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-024-A02.docx)Contributions: |
| u | TG-Endoscopy[Jianrong Wu] | TDD: [S-025-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-025-A01.docx) - [[S-025-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-025-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-025-A03.pptx)CfTGP: [[S-025-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-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, Mark Elliott] | TDD: [S-026-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-026-A01.docx) - [[S-026-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-026-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-026-A03.pptx)CfTGP: [S-026-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-026-A02.docx) Contributions: |
| w | TG-Fertility (AI for human reproduction and fertility)[Susanna Brandi, Eleonora Lippolis]  | TDD: [S-027-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-027-A01.docx) - [[S-027-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-027-A03.pptx)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-L-026-A03.pptx)CfTGP: [S-027-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-027-A02.docx) Contributions: |
| x | TG-TM (AI for traditional medicine)[Saketh Ram Thrigulla] | TDD: [S-028-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-028-A01.docx) - [S-028-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-028-A03.pptx) CfTGP: [S-028-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-028-A02.docx) Contributions: |
| y | TG-POC (Topic Group on AI for point-of care diagnostics)[Nina Linder] | TDD: [S-029-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-029-A01.docx) - [S-029-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-029-A03.pptx) CfTGP: [S-029-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-029-A02.docx) Contributions: |
|  |  |  |
| 14 | Horizontal / cross-cutting topics |  |
| a | ZODIAC Respiratory Disease Phenotype Observatory | [S-030](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-030.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-030-A01.pptx):[IAEA] ZODIAC Respiratory Disease Phenotype Observatory |
| b | AI and sexual and reproductive health and rights: opportunities and risks | [S-038](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-038.docx): [WHO-SRH] AI and sexual and reproductive health and rights: Opportunities and risks |
| c |  |  |
| 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)][Q-105](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-Q-105.docx): TDD template[Q-103](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-Q-103.docx): CfTGP template |
| 16 | Overview of approvals proposed at this meeting | [S-004](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-004.docx) & [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-004-A01.pptx) |
| 17 | Outcomes of this meeting | a) Outgoing liaison statementsb) Structure updatesc) d) Output documents- ...- …e) Updated list of planned deliverables[[S-005](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-005.docx)à S-200] |
| 18 | Future work |  |
| a | Schedule of future FG meetings and workshops | [S-003](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-003.docx) |
| b | Format of next meeting |  |
| c | Work plan and timeline- Deliverables |  |
| d | Interim activities (online) | Webinars within AI4G platformPre-FG meeting TG-specific workshops |
| 19 | Promotion and outreach | ITU [AI4G Health Track Webinars](https://aiforgood.itu.int/search-result-programme/?keyword=&category=346&event-venue=&enddate=&startdate=Select+year) |
| a | Promotional activities |  |
| b | Press communication |  |
| c | Funding and partnerships |  |
| 20 | A.O.B. |  |
| 21 | Closing |  |

Annex B:
Documentation

NOTE – Missing documents are those pre-allocated but that were not available as of the preparation of the report.

| Name | Title | Source |
| --- | --- | --- |
| [FGAI4H-S-001](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-001.docx) | Agenda of the 19th meeting (Meeting S) of the Focus Group on Artificial Intelligence for Health (FG-AI4H) | Chairman FG-AI4H |
| [FGAI4H-S-002](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-002.pptx) | Introduction to ITU/WHO Focus Group on AI for Health (FG-AI4H) | Chairman FG-AI4H |
| [FGAI4H-S-003](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-003.docx) | Schedule of future FG meetings (as of 2023-07-03) | Chairman FG-AI4H |
| [FGAI4H-S-004](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-004.docx) | Publication of Focus Group Deliverables – follow-up (Geneva, 2023-07-03) | TSB |
| [FGAI4H-S-004-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-004-A01.xlsx) | Att.1 - FG Deliverable status update - Input data and tables | TSB |
| [FGAI4H-S-004-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-004-A02.pptx) | Att.2 - FG Deliverable status update - Presentation | TSB |
| [FGAI4H-S-005](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-005.docx) | Updated list of FG-AI4H deliverables (as of 2023-07-03) | TSB |
| [FGAI4H-S-006](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-006.docx) | Updates for Cardiovascular disease risk prediction (TG-Cardio) | TG-Cardio Topic Driver |
| [FGAI4H-S-006-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-006-A01.docx) | Att.1 – TDD update (TG-Cardio) |  |
| [FGAI4H-S-006-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-006-A02.docx) | Att.2 – CfTGP (TG-Cardio) |  |
| [FGAI4H-S-006-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-006-A03.pptx) | Att.3 – Presentation (TG-Cardio) |  |
| [FGAI4H-S-007](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-007.docx) | Updates for Dermatology (TG-Derma) | TG-Derma Topic Driver |
| [FGAI4H-S-007-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-007-A01.docx) | Att.1 – TDD update (TG-Derma) |  |
| [FGAI4H-S-007-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-007-A02.docx) | Att.2 – CfTGP (TG-Derma) |  |
| [FGAI4H-S-007-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-007-A03.pptx) | Att.3 – Presentation (TG-Derma) |  |
| [FGAI4H-S-008](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-008.docx) | Updates for Diagnosis of bacterial infection and anti-microbial resistance (TG-Bacteria) | TG-Bacteria Topic Driver |
| [FGAI4H-S-008-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-008-A01.docx) | Att.1 – TDD update (TG-Bacteria) |  |
| [FGAI4H-S-008-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-008-A02.docx) | Att.2 – CfTGP (TG-Bacteria) |  |
| [FGAI4H-S-008-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-008-A03.pptx) | Att.3 – Presentation (TG- Bacteria) |  |
| [FGAI4H-S-009](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-009.docx) | Updates for Volumetric chest CT (TG-DiagnosticCT) | TG-DiagnosticCT Topic Driver |
| [FGAI4H-S-009-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-009-A01.docx) | Att.1 – TDD update (TG-DiagnosticCT) |  |
| [FGAI4H-S-009-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-009-A02.docx) | Att.2 – CfTGP (TG-DiagnosticCT) |  |
| [FGAI4H-S-009-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-009-A03.pptx) | Att.3 – Presentation (TG-DiagnosticCT) |  |
| [FGAI4H-S-010](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-010.docx) | Updates for Dental diagnostics and digital dentistry (TG-Dental) | TG-Dental Topic Driver |
| [FGAI4H-S-010-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-010-A01.docx) | Att.1 – TDD update (TG-Dental) |  |
| [FGAI4H-S-010-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-010-A02.docx) | Att.2 – CfTGP (TG-Dental) |  |
| [FGAI4H-S-010-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-010-A03.pptx) | Att.3 – Presentation (TG-Dental) |  |
| [FGAI4H-S-011](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-011.docx) | Updates for falsified medicine (TG-FakeMed) | TG-FakeMed Topic Driver |
| [FGAI4H-S-011-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-011-A01.docx) | Att.1 – TDD update (TG-FakeMed) |  |
| [FGAI4H-S-011-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-011-A02.docx) | Att.2 – CfTGP (TG-FakeMed) |  |
| [FGAI4H-S-011-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-011-A03.pptx) | Att.3 – Presentation (TG- FakeMed) |  |
| [FGAI4H-S-012](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-012.docx) | Updates for Falls among the elderly (TG-Falls) | TG-Falls Topic Driver |
| [FGAI4H-S-012-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-012-A01.docx) | Att.1 – TDD update (TG-Falls) |  |
| [FGAI4H-S-012-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-012-A02.docx) | Att.2 – CfTGP (TG-Falls) |  |
| [FGAI4H-S-012-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-012-A03.pptx) | Att.3 – Presentation (TG-Falls) |  |
| [FGAI4H-S-013](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-013.docx) | Updates for Histopathology (TG-Histo) | TG-Histo Topic Driver |
| [FGAI4H-S-013-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-013-A01.docx) | Att.1 – TDD update (TG-Histo) |  |
| [FGAI4H-S-013-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-013-A02.docx) | Att.2 – CfTGP (TG-Histo) |  |
| [FGAI4H-S-013-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-013-A03.pptx) | Att.3 – Presentation (TG-Histo) |  |
| [FGAI4H-S-014](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-014.docx) | Updates for Malaria detection (TG-Malaria) | TG-Malaria Topic Driver |
| [FGAI4H-S-014-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-014-A01.docx) | Att.1 – TDD update (TG-Malaria) |  |
| [FGAI4H-S-014-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-014-A02.docx) | Att.2 – CfTGP (TG-Malaria) |  |
| [FGAI4H-S-014-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-014-A03.pptx) | Att.3 – Presentation (TG-Malaria) |  |
| [FGAI4H-S-015](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-015.docx) | Updates for Maternal and child health (TG-MCH) | TG-MCH Topic Driver |
| [FGAI4H-S-015-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-015-A01.docx) | Att.1 – TDD update (TG-MCH) |  |
| [FGAI4H-S-015-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-015-A02.docx) | Att.2 – CfTGP (TG-MCH) |  |
| [FGAI4H-S-015-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-015-A03.pptx) | Att.3 – Presentation (TG-MCH) |  |
| [FGAI4H-S-016](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-016.docx) | Updates for Neurological disorders (TG-Neuro) | TG-Neuro Topic Driver |
| [FGAI4H-S-016-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-016-A01.docx) | Att.1 – TDD update (TG-Neuro) |  |
| [FGAI4H-S-016-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-016-A02.docx) | Att.2 – CfTGP (TG-Neuro) |  |
| [FGAI4H-S-016-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-016-A03.pptx) | Att.3 – Presentation (TG-Neuro) |  |
| [FGAI4H-S-017](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-017.docx) | Updates for Ophthalmology (TG-Ophthalmo) | TG-Ophthalmo Topic Driver |
| [FGAI4H-S-017-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-017-A01.docx) | Att.1 – TDD update (TG-Ophthalmo) |  |
| [FGAI4H-S-017-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-017-A02.docx) | Att.2 – CfTGP (TG-Ophthalmo) |  |
| [FGAI4H-S-017-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-017-A03.pptx) | Att.3 – Presentation (TG-Ophthalmo) |  |
| [FGAI4H-S-018](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-018.docx) | Updates for Outbreak detection (TG-Outbreaks) | TG-Outbreaks Topic Driver |
| [FGAI4H-S-018-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-018-A01.docx) | Att.1 – TDD update (TG-Outbreaks) |  |
| [FGAI4H-S-018-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-018-A02.docx) | Att.2 – CfTGP (TG-Outbreaks) |  |
| [FGAI4H-S-018-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-018-A03.pptx) | Att.3 – Presentation (TG-Outbreaks) |  |
| [FGAI4H-S-019](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-019.docx) | Updates for Psychiatry (TG-Psy) | TG-Psy Topic Driver |
| [FGAI4H-S-019-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-019-A01.docx) | Att.1 – TDD update (TG-Psy) |  |
| [FGAI4H-S-019-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-019-A02.docx) | Att.2 – CfTGP (TG-Psy) |  |
| [FGAI4H-S-019-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-019-A03.pptx) | Att.3 – Presentation (TG-Psy) |  |
| [FGAI4H-S-020](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-020.docx) | Updates for Snakebite and snake identification (TG-Snake) | TG-Snake Topic Driver |
| [FGAI4H-S-020-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-020-A01.docx) | Att.1 – TDD update (TG-Snake) |  |
| [FGAI4H-S-020-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-020-A02.docx) | Att.2 – CfTGP (TG-Snake) |  |
| [FGAI4H-S-020-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-020-A03.pptx) | Att.3 – Presentation (TG- Snake) |  |
| [FGAI4H-S-021](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-021.docx) | Updates for Symptom assessment (TG-Symptom) | TG-Symptom Topic Driver |
| [FGAI4H-S-021-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-021-A01.docx) | Att.1 – TDD update (TG-Symptom) |  |
| [FGAI4H-S-021-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-021-A02.docx) | Att.2 – CfTGP (TG-Symptom) |  |
| [FGAI4H-S-021-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-021-A03.pptx) | Att.3 – Presentation (TG-Symptom) |  |
| [FGAI4H-S-022](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-022.docx) | Updates for Tuberculosis (TG-TB) | TG-TB Topic Driver |
| [FGAI4H-S-022-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-022-A01.docx) | Att.1 – TDD update (TG-TB) |  |
| [FGAI4H-S-022-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-022-A02.docx) | Att.2 – CfTGP (TG-TB) |  |
| [FGAI4H-S-022-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-022-A03.pptx) | Att.3 – Presentation (TG-TB) |  |
| [FGAI4H-S-023](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-023.docx) | Updates for Radiology (TG-Radiology) | TG-Radiology Topic Driver |
| [FGAI4H-S-023-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-023-A01.docx) | Att.1 – TDD update (TG-Radiotherapy) |  |
| [FGAI4H-S-023-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-023-A02.docx) | Att.2 – CfTGP (TG-Radiotherapy) |  |
| [FGAI4H-S-023-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-023-A03.pptx) | Att.3 – Presentation (TG-Radiotherapy) |  |
| [FGAI4H-S-024](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-024.docx) | Updates for Primary and secondary diabetes prediction (TG-Diabetes) | TG-Diabetes Topic Driver |
| [FGAI4H-S-024-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-024-A01.docx) | Att.1 – TDD update (TG-Diabetes) |  |
| [FGAI4H-S-024-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-024-A02.docx) | Att.2 – CfTGP (TG-Diabetes) |  |
| [FGAI4H-S-024-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-024-A03.pptx) | Att.3 – Presentation (TG-Diabetes) |  |
| [FGAI4H-S-025](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-025.docx) | Updates for Endoscopy (TG-Endoscopy) | TG-Endoscopy Topic Driver |
| [FGAI4H-S-025-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-025-A01.docx) | Att.1 – TDD update (TG-Endoscopy) |  |
| [FGAI4H-S-025-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-025-A02.docx) | Att.2 – CfTGP (TG-Endoscopy) |  |
| [FGAI4H-S-025-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-025-A03.pptx) | Att.3 – Presentation (TG-Endoscopy) |  |
| [FGAI4H-S-026](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-026.docx) | Updates for AI for Musculoskeletal medicine (TG-MSK) | TG-MSK Topic Driver |
| [FGAI4H-S-026-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-026-A01.docx)  | Att.1 – TDD update (TG-MSK) |  |
| [FGAI4H-S-026-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-026-A02.docx) | Att.2 – CfTGP (TG-MSK) |  |
| [FGAI4H-S-026-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-026-A03.pptx) | Att.3 – Presentation (TG-MSK) |  |
| [FGAI4H-S-027](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-027.docx) | Updates for AI for human reproduction and fertility (TG-Fertility) | TG-Fertility Topic Driver |
| [FGAI4H-S-027-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-027-A01.docx) | Att.1 – TDD update (TG-Fertility) |  |
| [FGAI4H-S-027-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-027-A02.docx) | Att.2 – CfTGP (TG-Fertility) |  |
| [FGAI4H-S-027-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-027-A03.pptx) | Att.3 – Presentation (TG-Fertility) |  |
| [FGAI4H-S-028](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-028.docx) | Updates for AI for traditional medicine (TG-TM) | TG-TM Topic Driver |
| [FGAI4H-S-028-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-028-A01.docx) | Att.1 – TDD update (TG-TM) |  |
| [FGAI4H-S-028-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-028-A02.docx) | Att.2 – CfTGP (TG-TM) |  |
| [FGAI4H-S-028-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-028-A03.pptx) | Att.3 – Presentation (TG-TM) |  |
| [FGAI4H-S-029](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-029.docx) | Updates for AI for point-of care diagnostics (TG-POC) | TG-POC Topic Driver |
| [FGAI4H-S-029-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-029-A01.docx) | Att.1 – TDD update (TG-POC) |  |
| [FGAI4H-S-029-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-029-A02.docx) | Att.2 – CfTGP (TG-POC) |  |
| [FGAI4H-S-029-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-029-A03.pptx) | Att.3 – Presentation (TG-POC) |  |
| [FGAI4H-S-030](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-030.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-030-A01.pptx) | ZODIAC Respiratory Disease Phenotype Observatory + Att.1 Presentation | International Atomic Energy Agency (IAEA) |
| [FGAI4H-S-031](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-031.docx) | LS on invitation to nominate the representative to the ITU-T JCA-ML [from JCA-ML] | ITU-T JCA-ML |
| [FGAI4H-S-032](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-032.docx) | Draft reply LS to JCA-ML (S-031) | FG-AI4H Management |
| [FGAI4H-S-033](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-033.docx) | Triaging High Volume Code Mixed Maternal Healthcare Queries in Low Resource Settings Using Natural Language Processing Techniques | Jacaranda Health |
| [FGAI4H-S-034](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-034.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-034-A01.pdf) | Policy framework design for the standardization of ITU-WHO AI-for-health assessment platform as a global digital public good + Att.1 Presentation | Pradeep Balachandran |
| [FGAI4H-S-035](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-035.docx) | Parameters for the AI system for falls prevention among elderly: Musculoskeletal specialist perspective | INDIA |
| [FGAI4H-S-036](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-036.docx)  | Health Data Management and Governance for Trustworthy AI  | Syria |
| [FGAI4H-S-037](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-037.docx) | Ethical Considerations on Artificial Intelligence in Dentistry: A Framework and Checklist | TG-Dental Topic Driver |
| [FGAI4H-S-038](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-038.docx) | AI and Sexual and Reproductive Health and Rights: Opportunities and risks +  | WHO |
| [FGAI4H-S-039](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-039.docx) + [A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-039-A01.pptx) | Neuroimaging Based Diagnosis of Alzheimer’s Disease Using Privacy-Preserving Machine Learning | Inpher |
| [FGAI4H-S-040](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-040.pptx) | Open Code Initiative – Status update | Open Code Group |
| [FGAI4H-S-041](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-041.pptx) | WG-O: DEL0.1 and DEL7 updates | WG-O |
| [FGAI4H-S-042](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-042.pptx) | WG-CE: WG-Clinical Evaluation of AI for Health Updates | WG-CE |
| [FGAI4H-S-043](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-043.pptx) | WG-Ethics: Ethical considerations on AI for health updates | WG-Ethics |
| [FGAI4H-S-044](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-044.pptx) | WG-CO: Collaborations and Outreach updates  | WG-CO |
| [FGAI4H-S-045](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-045.pptx) | WG-RC: Regulatory-Considerations on AI for health updates | WG-RC |
| [FGAI4H-S-046](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-046.pptx) | DEL00 Update: Overview of the FG-AI4H deliverables | Editor |
| [FGAI4H-S-047](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-047.pptx) | DEL5.6 Update: Data sharing practices – Progress review presentation | Editor |
| [FGAI4H-S-048](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-048.pptx) | DEL5.4 Update: Training and test data specification | Editor |
| [FGAI4H-S-049](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-049.pptx) | DEL10 Update: AI4H use cases: Topic Description Documents | Editor |
| [FGAI4H-S-050](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-050.docx) | AI for Health Workshop presentations | TSB |
| [FGAI4H-S-050-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-050-A01.pptx) | Att.1 - Presentation - WG-Clinical Evaluation of AI for Health  | WG-CE |
| [FGAI4H-S-050-A02](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-050-A02.pptx) | Att.2 - Presentation – Introduction to Topic Groups | FG-AI4H |
| [FGAI4H-S-050-A03](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-050-A03.pptx) | Att.3 - Presentation – Working Group "Regulatory Considerations on AI for Health" | WG-RC |
| [FGAI4H-S-050-A04](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-050-A04.pptx) | Att.4 - Presentation - Ethics and Governance of AI for health | WG-Ethics |
| [FGAI4H-S-050-A05](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-050-A05.pptx) | Att.5 - Presentation – Working Group Collaborations & Outreach | WG-CO |
| [FGAI4H-S-050-A06](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-050-A06.pptx) | Att.6 - Presentation - Supporting innovations in AI enabled diagnosis for low- and middle-income countries | FIND |
| [FGAI4H-S-050-A07](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-050-A07.pptx) | Att.7 - Presentation – Overview of the Focus Group on AI for Health | FG-AI4H Chairman |
| [FGAI4H-S-050-A08](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-050-A08.pptx) | Att.8 - Presentation – Topic Group "AI for Maternal and Child Health in developing regions" | TG-MCH |
| [FGAI4H-S-050-A09](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-050-A09.pptx) | Att.9 - Presentation – Topic Group "Point-of-Care Mobile Microscopy and AI Diagnostics" | TG POC |
| [FGAI4H-S-050-A10](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-050-A10.pptx) | Att.10 - Presentation - Topic Group "Data and AI solution assessment methods" | WG-Daisam |
| [FGAI4H-S-050-A11](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-050-A11.pptx) | Att.11 - Presentation – Topic Group "Outbreaks" | TG-Outbreaks |
| [FGAI4H-S-050-A12](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-050-A12.pptx) | Att.12 - Presentation – Topic Group "Dental diagnostics and digital dentistry" | TG-Dental |
| [FGAI4H-S-050-A13](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-S-050-A13.pptx) | Att.13 - Presentation – Working Group "Data and AI Solution Handling" | WG-DASH |

Annex C:
List of participants

Overall participation for meeting and workshop: 179 (Physical 103, Remote 76).

| Last Name | First Name | Entity | Country | E-mail | Remote |
| --- | --- | --- | --- | --- | --- |
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| Ahmad | Qasim | Rejuve.AI | Netherlands | qasim.ahmad@rejuve.ai |  |
| Akhlaghi | Amir | Iranian Permanent Mission (Geneva) | Iran (Islamic Republic of) | a.akhlaghi49@gmail.com | X |
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Annex D:
Summary of FG-AI4H resources and electronic working methods

Working groups

| Working Group | Leadership |
| --- | --- |
| [Clinical evaluation of AI for health (WG-CE)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/wg/SitePages/WG-CE.aspx) | 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)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/wg/SitePages/WG-DAISAM.aspx) | Chair: Pat Baird (Philips)Vice-chair: Luis Oala (DotPhoton, CH) |
| [Data and AI solution handling (WG-DASH)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/wg/SitePages/WG-DASH.aspx) | Chair: Marc Lecoultre (MLlab.AI, CH)Vice chair: Ferath Kherif (CHUV, CH) |
| [Ethical considerations on AI for health (WG-Ethics)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/wg/SitePages/WG-Ethics.aspx) | Chair: Andreas Reis (WHO) |
| [Operations (WG-O)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/wg/SitePages/WG-O.aspx) | Co-chairs: Markus Wenzel and Eva Weicken (Fraunhofer HHI, Germany) |
| [Regulatory considerations on AI for health (WG-RC)](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/wg/SitePages/WG-RC.aspx) | Chair: Naomi Lee (NICE, 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)
 |
| [Collaborations and Outreach (WG-CO)](https://www.itu.int/en/ITU-T/focusgroups/ai4h/Pages/WG-CO.aspx) | Chair: Andrew farlow (Oxford University, UK) |
| [Digital Technologies for COVID Health Emergency (AHG-DT4HE)](https://www.itu.int/en/ITU-T/focusgroups/ai4h/Pages/dt4he.aspx) | Co-chairs: Ana Riviere-Cinnamond (PAHO) and Shan Xu (CAICT, China) |

Topic Groups

| Topic group | Acronym | Leader | References | Created |
| --- | --- | --- | --- | --- |
| 1. Use of AI in cardiovascular disease management
 | TG-Cardio | Benjamin Muthambi (Watif Health, South Africa) | [R-006-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-006-A01.docx) | C |
| 1. Dermatology
 | TG-Derma | Harsha Jayakody (MyDoctor, Sri Lanka), Ivy Lee (American Academy of Dermatology, USA) from Meeting Q | [R-007-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-007-A01.docx) | B |
| 1. Diagnosis of bacterial infection and anti-microbial resistance
 | TG-Bacteria | Nada Malou (MSF, France) | [R-008-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-008-A01.docx) | F |
| 1. Falls among the elderly
 | TG-Falls | Pierpaolo Palumbo (University of Bologna, Italy) | [R-012-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-012-A01.docx) | B |
| 1. Histopathology
 | TG-Histo | Frederick Klauschen (Charité Berlin, Germany) | [R-013-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-013-A01.docx) | B |
| 1. Malaria detection
 | TG-Malaria | Rose Nakasi (Makerere University, Uganda) | [R-014-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-014-A01.docx) | F |
| 1. Maternal and child health
 | TG-MCH | Raghu Dharmaraju (Wadhwani AI, India) and Alexandre Chiavegatto Filho (University of São Paulo, Brazil) | [R-015-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-015-A01.docx) | D; G |
| 1. Neurological disorders
 | TG-Neuro | Marc Lecoultre (ML Labs, Switzerland) and Ferath Kherif (CHUV, Switzerland) | [R-016-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-016-A01.docx) | B |
| 1. Ophthalmology
 | TG-Ophthalmo | Arun Shroff (MedIndia) | [R-017-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-017-A01.docx) | B |
| 1. Outbreak detection
 | TG-Outbreaks | Auss Abbood and Alexander Ullrich (Robert Koch Institute, Germany) ; Khahlil Louisy and Alexander Radunsky (Institute for Technology & Global Health, ITGH, US) | [R-018-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-018-A01.docx)  | E; merged with TG-Sanitation at meeting O |
| 1. Psychiatry
 | TG-Psy | Nicolas Langer (ETH Zurich, Switzerland) | [R-019-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-019-A01.docx) | C |
| 1. Radiology
 | TG-Radiology | Darlington Ahiale Akogo (minoHealth AI Labs, Ghana) | [R-023-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-023-A01.docx) | D; H |
| 1. Snakebite and snake identification
 | TG-Snake | Rafael Ruiz de Castaneda (UniGE, Switzerland) | [R-020-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-020-A01.docx) | B |
| 1. Symptom assessment
 | TG-Symptom | Henry Hoffmann (Ada Health, Germany) and Martin Cansdale (Healthily, UK) | [R-021-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-021-A01.docx) | B |
| 1. Tuberculosis
 | TG-TB | Manjula Singh (ICMR, India) | [R-022-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-022-A01.docx) | C |
| 1. Volumetric chest CT
 | TG-DiagnosticCT | Kuan Chen (Infervision, China) | [R-009-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-009-A01.docx) | D |
| 1. Dental diagnostics and digital dentistry
 | TG-Dental | Falk Schwendicke (Charité Berlin, Germany); Joachim Krois (Dental XR AI, Germany); Tarry Singh (deepkapha.ai, Netherlands) | [R-010-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-010-A01.docx) | G |
| 1. AI-based detection of falsified medicine
 | TG-FakeMed | Franck Verzefé (TrueSpec-Africa, DRC) | [R-011-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-011-A01.docx) | F |
| 1. Primary and secondary diabetes prediction
 | TG-Diabetes | Andrés Valdivieso (Anastasia.ai & Tecnigen, Chile) | [R-024-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-024-A01.docx) | H |
| 1. AI for endoscopy
 | TG-Endoscopy | Jianrong Wu (Tencent Healthcare, China) | [R-025-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-025-A01.docx) | I |
| 1. AI for musculoskeletal medicine
 | TG-MSK | Peter Grinbergs (EQL, UK), Mark Elliott (UK) | [R-026-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-026-A01.docx) | J |
| 1. AI for human reproduction and fertility
 | TG-Fertility | Susanna Brandi, Eleonora Lippolis (Merck KGaA, Darmstadt, Germany) | [R-027-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-027-A01.docx) | L |
| 1. AI for traditional medicine
 | TG-TM | Saketh Ram Thrigulla (Ministry of Ayush, India) | [R-028-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-028-A01.docx) | P |
| 1. AI for point-of care diagnostics
 | TG-POC | Nina Linder (University of Helsinki, Finland) | [R-029-A01](https://extranet.itu.int/sites/itu-t/focusgroups/ai4h/docs/FGAI4H-R-029-A01.docx) | L |

Mailing lists

| Description | Mailing list | Archive |
| --- | --- | --- |
| General mailing list | 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 | <https://itu.int/ml/lists/arc/fgai4htgcardiocp> |
| TG-Cardio), specific dis­cussions for sub-topic on cardiac image analyses | fgai4htgcardiocia@lists.itu.int | <https://itu.int/ml/lists/arc/fgai4htgcardiocia> |
| TG-Derma | fgai4htgderma@lists.itu.int | <https://itu.int/ml/lists/arc/fgai4htgderma>  |
| TG-Diabetes | fgai4htgdiabetes@lists.itu.int | <https://itu.int/ml/lists/arc/fgai4htgdiabetes> |
| TG-Falls | fgai4htgfalls@lists.itu.int | <https://itu.int/ml/lists/arc/fgai4htgfalls> |
| TG-Malaria | fgai4htgmalaria@lists.itu.int | <https://itu.int/ml/lists/arc/fgai4htgmalaria> |
| TG-Ophthalmo | fgai4htgophthalmo@lists.itu.int | <https://itu.int/ml/lists/arc/fgai4htgophthalmo> |
| TG-Outbreaks | fgai4htgoutbreaks@lists.itu.int | <https://itu.int/ml/lists/arc/fgai4htgoutbreaks> |
| TG-Symptoms | fgai4htgsymptom@lists.itu.int | <https://itu.int/ml/lists/arc/fgai4htgsymptom> |
| TG-MSK | fgai4htgmsk@lists.itu.int | <https://itu.int/ml/lists/arc/fgai4htgmsk> |
| TG-Psy | fgai4htgpsy@lists.itu.int | <https://itu.int/ml/lists/arc/fgai4htgpsy> |
| TG-Fertility | fgai4htgfertility@lists.itu.int | <https://itu.int/ml/lists/arc/fgai4htgfertility> |
| TG-TM | fgai4htgsymptom@lists.itu.int  | <http://www.itu.int/ml/lists/arc/fgai4htgsymptom>  |
| AHG-DT4HE | 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) 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. 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) for date/time and objectives **two weeks prior**
* **Documents** uploaded to the appropriate repository

Annex E:
Summary of decisions

[Dec-S-1. The report of the meeting in Cambridge, 21-24 March 2023 found in R-101 was approved without comments and its two output documents were noted (R-102, R-200).](#_Toc139817831)

[Dec-S-2. It was agreed that following document will be further updated and may be ready for the online consultation starting 1 September 2023 for two weeks: DEL0, DEL10.2, DEL10.4, DEL10.6, DEL10.7, DEL10.8, DEL10.9, DEL10.10, DEL10.14, DEL10.15, DEL10.17, DEL10.20, DEL10.21, DEL10.23, DEL10.24. Deadline for editors to submit the documents to the secretariat is 25 August 2023.](#_Toc139817832)

[Dec-S-3. The remaining deliverables listed in Table 1 were considered not sufficiently mature and will be archived.](#_Toc139817833)

[Dec-S-4. The updated list of deliverables will be issued as S-200.](#_Toc139817834)

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