

Ministry of Electronics and Information Technology
Report
GPAI Convening on Global Health and AI
Global IndiaAI Summit, 2024
3-4 July, 2024

Brief Overview

The Global Partnership on Artificial Intelligence (GPAI) is a multistakeholder initiative that brings together leading experts from science, industry, civil society, international organisations, and governments. It aims to promote trustworthy AI and tackle pressing global issues, such as Global Health, which is a thematic priority for GPAI.

As the lead chair for 2024, India has spearheaded numerous GPAI initiatives. One of the key highlights being the recently concluded Global IndiaAI Summit, 2024, held at Bharat Mandapam in New Delhi, which hosted the convening on Global Health and AI. This event provided an essential platform for the key stakeholders from industry organisations, start ups, academia, civil society and government organisations working at the intersection of AI and healthcare. The objective of the convening was to engage in deep discussions, brainstorm solutions, and contemplate the specific challenges and opportunities of integrating AI into healthcare, especially within the context of the Global South.

The convening was a follow-up to an earlier domestic consultation which underscored the importance of understanding local realities and contexts in the deployment of AI solutions in healthcare. The domestic consultation shed light on specific challenges and opportunities at the local level, setting a foundational stage for broader discussions. The convening at the Global IndiaAI Summit, 2024, elevated this dialogue to a global scale, with a particular focus on the challenges and opportunities unique to the Global South. Together, these sessions delved into how AI technologies could be effectively integrated into health systems worldwide while being attuned to local nuances. We hope that these discussions are pivotal in shaping GPAI's ongoing and future strategies in this vital area.

Part I: Domestic Consultation on Global Health and AI

Introduction

The Domestic Consultation on Global Health and AI was held on June 3, 2024, led by Smt. Kavita Bhatia, Scientist G and Group Coordinator at MeitY. This consultation brought together a diverse group of experts and stakeholders from the field of healthcare, AI, data science, and policy-making to discuss the integration of AI in global health initiatives, with a focus on the Indian and Global South context.

The consultation aimed to collect valuable feedback on AI-related health issues, consolidate domestic insights and recommendations for global sharing, and demonstrate India's commitment to leveraging AI for improved healthcare practices and outcomes. The discussion points from this consultation were intended to feed into the GPAI Convening on Global Health and AI, allowing India to share its insights and recommendations with a global audience.

Key Findings and Conclusion

This consultation highlighted several broad themes and solutions for integrating AI into healthcare, particularly in resource-constrained environments. Key themes identified include:

- **Digital and Physical Infrastructure:** The urgent need for robust digital and physical infrastructures to support AI deployment and operation.
- **Regulatory and Legal Frameworks:** Development of comprehensive regulatory and legal frameworks to ensure patient privacy and ethical use of AI.
- **Data Quality and Accessibility:** Developing and maintaining accurate, complete, and standardised local health datasets is crucial. This encompasses digitising health records, improving existing data, and identifying and addressing data gaps.
- **Capacity Building and Training:** Capacity building through targeted training programs and international knowledge exchanges for healthcare professionals.
- **Ethical Considerations and Privacy Issues:** Ethical considerations and privacy measures to ensure responsible data use and patient trust.
- **Collaborative Efforts:** Collaborative efforts across sectors to develop practical, interoperable and ethical AI solutions
- **Contextual Adaptation of AI Models:** Tailoring AI solutions to address specific contextual factors, such as demographic profiles, disease patterns, and healthcare infrastructure.
- **Monitoring and Evaluation:** Regular monitoring and evaluation allows for the continuous improvement of AI models, informed by user insights and stakeholder perspectives, to maintain their effectiveness, relevance, and alignment with changing healthcare landscapes.

Based on the themes highlighted during the domestic consultation, three critical themes emerged as broadly applicable and essential for the successful integration of AI in healthcare at a global scale. These core themes are: **Data Quality and Accessibility, Digital Infrastructure and Regulatory and Legal Framework**. Building on these core themes, the GPAI Convening on Global Health and AI, further explored these critical areas, delving into in-depth discussions and expert insights.

Part II: GPAI Convening on Global Health and AI

Background

The **GPAI Convening on Global Health and AI**, held on July 3, 2024, provided an opportunity to experts from Industry, start-ups, educational institutions, civil society and international organisation and government organisations to showcase their work, deliberate on the unique context and challenges of integrating AI in healthcare, particularly in the global south, and develop potential new directions for GPAI's future endeavours.

The convening focused on three critical pillars identified during the domestic consultation: **Data Quality and Accessibility, Digital Infrastructure, and Regulatory and Legal Frameworks**. These issues are particularly relevant in the context of the global south where high-quality, reliable data and robust digital infrastructure are often lacking. AI systems in healthcare require consistent data quality checks and interoperability between systems in order to function effectively. Additionally, substantial improvements in digital infrastructure, such as broadband and cloud services, are essential for effective AI deployment at the grassroots level. Further, a robust regulatory and legal framework is necessary to ensure the safe integration of AI. By focusing on these pillars, the convening aimed to understand the global viewpoints, learn from best practices, and explore how these can be adapted to improve AI implementation in low-resource settings.

Broad Discussions

Experts convened at the gathering unanimously agreed that technology, particularly AI, can play a crucial role in addressing societal challenges, especially in the realm of global health. AI solutions have the potential to revolutionise healthcare by enhancing medical consultations, improving patient history collection, and facilitating direct access to electronic outpatient departments (eOPD). These technologies provide doctors with differential diagnoses and standardised treatment options, significantly advancing screening and diagnostic processes.

The experts also highlighted AI's impact on community health given its ability to simplify test readings and enable home screenings. In conditions like diabetic retinopathy (DR), AI can detect early symptoms, directing patients to appropriate specialists for further diagnosis. Additionally, AI's predictive power is evident in its ability to forecast adverse tuberculosis (TB) outcomes, using data from half a million TB patients in India to initiate timely treatments for those at high risk. These applications highlight AI's critical role in enhancing diagnostic accuracy and patient care in diverse healthcare settings.

Key Findings

1. Data Quality and Accessibility

Panellists highlighted that AI models created in developed countries might not effectively translate to low-resource settings, which often exhibit different disease patterns and healthcare system structures. There was a consensus on the urgent need to develop, govern, and maintain **local health data sets**, with the initial step being the shift from paper-based to

digital data collection. This transition is vital for enhancing data quality, as it facilitates easier access and analysis, and allows for the implementation of consistent quality checks to ensure data reliability and usefulness. India's **Ayushman Bharat Digital Mission (ABDM)** is driving the health ecosystem towards creating more electronic health records, with a citizen-centric approach and consent at the core of its architecture. Experts also acknowledged that while substantial data sets already exist, without proper computational analysis, they cannot yield valuable outcomes.

Moreover, robust data governance and streamlining efforts are necessary to strengthen data management. This involves **aligning datasets to specific contexts, and developing common data repositories** as reliable sources of information for diverse stakeholders. Notably, India's Ayushman Bharat is being exhibited as a global model for digital public infrastructure. Also, the National Public Health Repository also serves as a valuable foundation in this regard. Further, addressing **gaps within the existing data**, particularly in regions lacking comprehensive health data, is also essential for training and implementing effective AI models.

Moreover, specific data related challenges, such as **gender inequities** in available data and **data blindness**, must be addressed to ensure nuanced data accurately represents diverse identities and conditions. Additionally, establishing **clear evaluation criteria** for data is crucial to ensure high-quality inputs into AI models, essential for functionality, scalability, and accuracy in diverse healthcare settings.

Experts also strongly advocated for **making datasets publicly available**, stimulating innovation and enabling startups and researchers to develop and refine AI models effectively. In this regard, the Indian data protection legislation, particularly the DPDP Act, serves as a comprehensive guide for addressing data security and privacy concerns

2. Digital Infrastructure

Experts also emphasised the **digital divide** between the Global North, with its advanced technological infrastructure that fully leverages AI, and the Global South, where low-resource countries often struggle to keep pace. However, data from the Network Readiness Index reveals that this divide is not uniform; some low-or-middle-income countries (LMICs) have shown surprising advancements in network capabilities, challenging typical expectations. This range in technological progress across various regions underscores the critical need for **targeted investments and strategic planning**. Such efforts are essential to bridge the technological gaps and enable the effective deployment of advanced healthcare solutions in low resource economies, ensuring equitable access to AI benefits.

In terms of physical **infrastructure requirements**, experts mentioned that there is a critical need for reliable and high-speed internet, sophisticated cloud services, and robust local networks. These digital backbones are essential for the effective implementation and operation of AI applications in healthcare. The absence of such infrastructure can severely limit the functionality of AI technologies, affecting everything from data processing speeds to the real-time capabilities of health monitoring systems.

Additionally, there exists a need for **advanced medical equipment and devices** that can effectively integrate with and support AI technologies. This ranges from diagnostic imaging

equipment to patient monitoring systems that are AI-compatible. The availability of such technology not only enhances diagnostic and treatment capabilities but also ensures that AI solutions can be fully utilised to improve patient outcomes.

3. Regulatory Frameworks

Experts also stressed the importance of developing a **comprehensive legal framework**. They detailed the necessity for robust regulations governing the storage, transfer, and processing of health data to ensure ethical AI usage. The speaker underscored that without such legal underpinnings, the trust necessary for the broad adoption of AI technologies could significantly wane, potentially stalling progress.

Ensuring quality, affordable, and accessible healthcare for all requires robust healthcare systems. To achieve this, it is critical to move towards an adaptable regulatory framework that can be tailored to the unique contexts and requirements of various regions while maintaining consistent standards. Experts further highlighted the need to **prioritise standardisation, simplify compliance requirements, and enable greater interoperability** across health systems. This would allow different AI systems to work together seamlessly, enhancing the overall effectiveness of healthcare delivery..

During the discussion on **policy and licensing challenges**, industry representatives shared their insights on the existing regulatory landscape. They noted that complex policies and licensing requirements can present obstacles to innovation and slow the adoption of vital AI technologies. The representatives suggested that streamlining these processes could help foster a more supportive environment for development and deployment.

Finally, the significance of **stakeholder engagement** in regulation was a recurring theme. Several speakers highlighted the critical need to involve all relevant stakeholders in the regulatory process, from tech developers to end-users. This inclusive approach ensures that the AI lifecycle and principles are not only thoroughly integrated and addressed but also resonate with the actual needs and realities of those impacted by these technologies.

Recommendations and Conclusion

The following recommendations were proposed by the participants of the GPAI Convening on Global Health and AI:

- **Develop Comprehensive Health Data Sets:** Efforts may be undertaken to develop comprehensive health data sets for effective AI model training.
- **Customizable AI Models:** Develop AI models that are customizable to the local context.
- **Scalability and Security:** Ensure scalability and security of AI models to handle varying healthcare demands.
- **AI Model Audits:** Implement regular audits to ensure AI model accuracy.
- **AI Playbook:** Develop an AI playbook to guide the development and deployment of AI solutions in healthcare, incorporating best practices, ethical considerations, and regulatory requirements.
- **Open-Source Models:** Develop open-source models for the health sector.
- **Regulatory Framework and Network:** Establish a comprehensive regulatory framework and network for AI-based healthcare solutions, adapted to suit specific cities, that brings together the AI lifecycle, core principles, and all stakeholders, while strengthening governance mechanisms for data management and development.

The GPAI Convening on Global Health and AI, was a highly engaging and informative session that delved into the complex nuances of AI's impact on the health sector. This convening provided a glimpse into the vast potential of AI to transform healthcare, especially in resource-constrained environments, highlighting the opportunities and challenges that lie ahead.

By leveraging AI's capabilities intelligently, India stands to enhance diagnostic accuracy, improve patient care, and strengthen healthcare systems, setting a leading example for the Global South. This approach not only addresses local healthcare challenges but also positions India as a leader in integrating AI technology within healthcare on a global scale.

Annexure - I

Domestic Consultation on Global Health and AI

List of Speakers

Keynote Speaker

- Dr. Karthik Adapa, Regional Advisor, Digital Health, WHO

Moderator

- Smt. Kavita Bhatia, Scientist G and Group Coordinator, AI & ET Division, MeitY

Speakers/Panellists

- Dr. Sanghamitra Singh, Chief of Programmes, Population Foundation of India (PFI)
- Mr. Utsav Malhotra, COO, Noise
- Dr. Vidur Mahajan, Founder, CEO, and Chief Medical Officer, Carpl.AI
- Dr. Kriti Soni, Head of Global R&D, RP Sanjiv Goenka Group
- Dr. Shibu Vijayan, Medical Director - Global Health, Qure.ai
- Dr. Mona Duggal, Assistant Professor, PGIMER, Chandigarh, India;
- Ms. Megha Chawdhry, Advisor, BrainSight AI;
- Dr. Kamal Kishore, Assistant Professor, Post Graduate Institute of Medical Education and Research
- Mr. Mihir Kulkarni, ML Scientist II, Wadhvani AI;
- Dr. Chiranjib Bhattacharya, Professor, Department of Computer Science and Automation, Indian Institute of Science Bangalore;
- Ms. Rigveda Kadam, Head - Digital Access, Foundation for Innovative New Diagnostics (FIND)

Annexure - II

GPAI Convening on Global Health and AI

List of Speakers

Keynote Speaker:

- Dr. Karthik Adapa, Regional Advisor, Digital Health, WHO

Moderator:

- Mr. Sameer Kanwar, Director - Digital Health, India and South Asia, PATH

Speakers/ Panellists

- Ms. Megha Chwdhry, Advisor, Brainsight AI
- Dr. Sanjay Sarin, Vice President - Access, FIND
- Mr. Mihir Kulkarni, ML Scientist II, Wadhwani AI
- Dr. Mona Duggal, Assistant Professor, PGIMER, Chandigarh
- Ms. Jo Aggarwal, Co-founder & CEO, Wysa
- Ms. Geethanjali Radhakrishnan, Founder, CEO and MD, Adiuvo Diagnostics Pvt. Ltd.
- Dr. Basant Garg, Additional CEO, National Health Authority
- Shri. Madhukar Bhagat, JS (E-Health), MoHFW
- Dr. Ankit Modi, Head of Products and Founding Member, Qure.ai
- Prof. Anurag Aggarwal, Head, Koita Center for Digital Health at Ashoka, Dean, BioSciences and Health Research, Trivedi School of Biosciences, Ashoka University