HEALTH AI FOR ALL CONFERENCE (HAICon 2025)

Conference Chairs' Summary

Health AI for All Network
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Health AI for All Conference (HAICon 2025)

January 7-8, 2025
Kathmandu, Nepal

Conference Chairs

GENERAL CHAIRS

Kiran Raj Pandey,
Medharma Clinics, Nepal

Bishesh Khanal,
NAAMII, Nepal

PROGRAM CHAIRS

Udunna Anazodo,
Montreal Neurological Institute, Canada

Binod Bhattarai,
University of Aberdeen, UK

Rosalind Parkes-Ratanshi,
Makerere University, Uganda

Gilberto Ochoa Ruiz,
Tecnologico de Monterrey, Mexico

Acknowledgement

The Health AI for All Network (HAINet), organisers of HAICon 2025, would like to acknowledge and thank the conference hosts—Nepal Applied Mathematics and Informatics Institute for Research (NAAMII), and the Ministry of Health and Population, Nepal for co-hosting the conference. About 150 participants participated in person during the two day conference, and about 200 more participated remotely. Several organizations including GIZ, BP Eye Foundation, Save the Children, UNFPA and others supported the conference. Suchi Agarwal, Rahul Basnet, Anisha Gyawali, Nikita Shah, Udit Aryal, Aaradhya Gyawali helped organize the conference. Rahul and Nikita also helped draft this Chairs' summary. Mubina KC helped design this document.

Health AI for All Conference (HAICon 2025)

Conference Chairs' Executive Summary

The Health AI for All Conference, a flagship event organized by the Health AI for All Network (HAINet), opened on 7th January 2025 with a focus on addressing the global challenges of healthcare through the application of Health AI, particularly in resource-limited settings. The conference aimed to explore the potential of AI technologies to improve healthcare access, affordability, and quality worldwide, with an emphasis on empowering resource-limited settings to take a leadership role in shaping the future of Health AI.

Welcome Remarks

Dr. Kiran Raj Pandey
General Chair of the Conference

Dr. Kiran Raj Pandey, General Chair of the Conference, emphasized the vital role of Health AI in overcoming global healthcare challenges, especially in resource-limited settings. He noted that Health AI has the potential to bridge gaps in healthcare services, alleviate workforce shortages, and make quality care accessible to underserved populations. By empowering countries such as Nepal, Uganda, Kenya, India, and others in the Global South, the global community can harness AI's transformative potential for addressing pressing healthcare issues. Dr. Pandey emphasized that countries in these regions must take a proactive role in the development of AI tools tailored to their unique healthcare needs. He underscored that AI could revolutionize diagnostic processes, drug discovery, and healthcare delivery by making healthcare systems more efficient and accessible.

Opening Remarks

Dr. Allison Gocotano
World Health Organization

Dr. Allison Gocotano from the World Health Organization highlighted the transformative impact of AI on global healthcare systems, focusing on Nepal's digital health initiatives. He commended Nepal for its efforts to integrate AI into its healthcare system and stressed the importance of AI in bridging critical gaps in the healthcare workforce and accelerating drug discovery. Dr. Gocotano discussed the WHO's 2023 Global Initiative on AI for Health, which aims to deploy AI in a responsible, ethical, and equitable manner to enhance health outcomes globally. He also emphasized the need for partnerships between governments, WHO, and other stakeholders to ensure universal health coverage and improve health outcomes, particularly in resource-constrained regions.

Keynote Address

Dr. Karthik Adappa
WHO Regional Office for South-East Asia

Dr. Karthik Adappa from the WHO Regional Office for South-East Asia provided an overview of the rapid advancements in AI, driven by technological breakthroughs, large data sets, and substantial investments from global tech giants. He discussed AI's significant role in diagnostic fields such as radiology, pathology, and disease screening, citing examples like diabetic retinopathy and cervical cancer detection. However, Dr. Adappa also addressed the challenges associated with AI, including concerns over data privacy, energy consumption, and the need for regulatory frameworks. He emphasized the importance of global collaboration and governance to balance AI innovation with safety, particularly in low- and middle-income countries (LMICs).

Session 1: The Nature of Healthcare Work and the Need for Health AI

Dr. Madan Upadhyaya, Chair of the session, reflected on the evolving role of healthcare work, where decision-making must balance technical expertise with empathy and patient preferences. This session featured discussions on how AI could augment healthcare delivery, particularly in addressing disparities in access and quality.

Dr. Rosalind Parkes-Ratanshi presented the Hub for AI in Maternal,Sexual and Reproductive Health (HASH), which uses AI to improve MSRH in Sub-Saharan Africa. She highlighted the need for responsible AI development, considering issues such as bias, data privacy, and the potential for AI to overshadow healthcare professionals.

Dr. Prajwal Ghimire emphasized AI's potential in Nepal, highlighting applications in primary and secondary care, disease detection, and healthcare delivery in resource-limited settings.

Session 1: Panel Discussion

A panel discussion moderated by Dr. Victoria Mukami explored key themes regarding the ethical implications of AI in healthcare, such as the need for health workers to embrace AI, ensuring accessibility for healthcare professionals, and the importance of data safety. The discussion highlighted the critical need for global collaboration to create ethical frameworks and policies that ensure AI's responsible and equitable use in healthcare.

Session 2: Health AI as a Global Public Good

The second session of the conference focused on the ethical, fairness, and accessibility challenges related to AI in healthcare. Dr. Binod Bhattarai discussed AI's potential in improving diagnostic accuracy and medical training, particularly in gastrointestinal diseases. He also addressed the technical and clinical challenges of implementing AI in surgery and diagnostics.

K.M. Gopakumar from the Third World Network spoke about the critical issue of access to medicines, discussing how AI could disrupt the pharmaceutical industry to make drugs more accessible and affordable. He called for data governance frameworks that treat data as a public good to ensure equitable access to AI's benefits. Kilian Koepsell from GE Healthcare discussed innovations in AI-powered ultrasound technology, which are making diagnostic tools more
accessible and affordable, particularly in low-resource settings. He emphasized the role of AI in expanding access to maternal health and pneumonia diagnostics, helping save lives in underserved regions.

Workshop Session

The conference included two interactive workshops showcasing real-world applications of AI in healthcare. These sessions emphasized practical tools, collaborative learning, and participant feedback.

Workshop 1: AI-Enabled Decision-Making Tools in Healthcare

Shashi Bhattarai
MCDA Expert

Facilitated by MCDA expert Sashi Bhattarai, this workshop introduced an AI-powered MCDA app for clinical decision-making. Participants tested the app live, exploring its interface, variable inputs, and recommendation outputs. Feedback focused on usability and relevance to clinical practice.

Workshop 2: AI Tools for Clinical Learning Supervision

Dr. Binod Bhattarai
AI Scientist from the University of Aberdeen

Led by Dr. Binod Bhattarai from the University of Aberdeen, this session examined AI's role in supervising clinical education. The workshop highlighted adaptive, human-in-the-loop systems that provide real-time feedback. Ethical and design challenges were discussed, reinforcing AI's evolving role in medical training.

Session 3: The State of the Science in Health AI and the Potential to Leapfrog Health Services Delivery with AI

This session explored how advancements in Health AI can transform healthcare delivery, especially in low-resource settings, and was chaired by Dr. Yash Raj Shrestha, Assistant Professor at the University of Lausanne and Academic Director at ETH Zurich's Strategy and AI Laboratory.

Dr. Anazodo addressed the challenges of brain tumor detection in Africa, where limited access to advanced imaging technology hampers early diagnosis. She emphasized how AI can make imaging more affordable, specifically with low-field MRI, though it requires high-field MRI for accuracy. She noted the release of the first publicly available African brain MRI dataset in 2023 as a key development and stressed the importance of region-specific data and local expertise. She highlighted the need for infrastructure investment and multidisciplinary collaboration to make AI successful in Africa.

Dr. Fehr discussed the need for real-world studies to evaluate AI systems, as many are still in development or underperforming in clinical settings. She emphasized transparency in AI tool development and raised concerns about automation bias, where clinicians overly rely on AI, potentially leading to diagnostic errors. She presented challenges in AI applications for sepsis risk prediction and colon cancer diagnosis, urging for robust evidence and collaboration to ensure AI is used responsibly.

Dr. Khanal formulated resource-constrained settings in healthcare across three key spectrums:
lack of experts, lack of technologies, and lack of research and innovation. He demonstrated several examples for each of these cases on how AI can address at scale these constraints to provide quality healthcare in resource-constrained settings. For example, he introduced the concept of AI-powered task-shifting showing examples of how AI can assist non-experts in tasks like cervical cancer screenings and ultrasound imaging, improving diagnostic accuracy in resource-limited settings. He stressed the need for more research and capacity building in resource-constrained settings, and creating data and language-specific AI tools, especially for populations with limited access to technology.

Session 3: Panel Discussion

Moderated by Dr. Rosalind Parkes-Ratanshi, the panel highlighted the importance of interdisciplinary collaboration, AI research integration, and practical implementation of AI solutions in healthcare. Dr. Chetan Arora discussed AI's role in India, particularly in breast and gallbladder cancer detection, while Dr. Shrestha stressed AI's potential to enhance decision-making but cautioned against over-reliance. Dr. Fehr called for a holistic approach to AI research, while Dr. Khanal emphasized capacity-building in the Global South.

Showcase: Advancements in Health Artificial Intelligence in Nepal

The showcase highlighted Health AI innovations in Nepal. Alok Khatri from NAAMII presented the organization's work in AI research, education, and industry innovation, including projects on tuberculosis and AI-driven radiology applications. Dr. Pradeep Raj Regmi from Tribhuvan University discussed AI's role in low-resource settings, particularly in radiology, and how their team developed an app linking patient data to ultrasound machines, addressing Nepal's healthcare challenges.

Town hall Session

The Town hall session engaged participants in a discussion on Health AI's future, focusing on collaboration, data generation, and privacy concerns. Key priorities included ensuring AI accessibility in healthcare, integration into EMR systems, and improving AI in imaging. Participants emphasized interdisciplinary partnerships and the need for better datasets to ensure AI tools are effective and unbiased.

HAICon 2025 Declaration

Dr. Parkes-Ratanshi read a declaration on behalf of the conference chairs. The declaration:
The HAINet Kathmandu declaration commits to, through collaborative efforts, build resource-limited settings as net producers of knowledge and innovation, tools and technologies in Health AI to leapfrog health services delivery in these settings.

Closing Remarks

Dr. Bishesh Khanal reflected on the success of the first Health AI for All Network (HAINet) conference and the importance of breaking down barriers in healthcare through collaboration. Dr. Kiran Raj Pandey spoke about the growth of the HAINet community, the significance of AI in healthcare, and the need for global cooperation to drive meaningful change. He concluded by encouraging continued collaboration and stressing that healthcare should always come before AI.

Health AI for All Conference (HAICon 2025)

Conference Chairs' Summary

Day 1 (January 7, 2025)

Welcome Remarks

Dr. Kiran Raj Pandey
General Chair of the Conference

Dr. Kiran Raj Pandey, on behalf of the Chairs of the Health AI for All Conference (HAICon), opened the conference by welcoming the distinguished speakers and participants. He expressed his gratitude to the co-hosts—the Ministry of Health and Population, Nepal and the Nepal Applied Mathematics and Informatics Institute for Research (NAAMII)—for their professionalism and dynamic efforts in organizing the event.

Dr. Pandey highlighted that the Health AI for All Conference is a flagship annual event of the Health AI for All Network (HAINet). He emphasized that HAINet serves as a global platform for researchers, healthcare professionals, policymakers, patients, and other stakeholders working to ensure that the benefits of Health AI are accessible to all people, especially those in resource-limited settings.

He particularly stressed that HAINet's mission is to enable countries in the Global South to pool resources and address the challenges posed by breakthrough technologies like Health AI. Historically, these nations have not been able to contribute equally to the creation of scientific knowledge, tools, and technologies needed to solve everyday challenges, such as in healthcare. Dr. Pandey pointed out that countries like Nepal, Kenya, Uganda, Nigeria, Mexico, India, and Vietnam are often seen as consumers of scientific knowledge and technology rather than contributors to its development. He argued that Health AI presents an opportunity for these countries to take ownership of their own healthcare needs, set priorities, and collaborate to solve pressing problems.

The challenges in healthcare are vast. Dr. Pandey noted that more than half of the world's population lacks adequate access to healthcare services. Millions die unnecessarily because they cannot access healthcare services that are readily available to others, and over two billion people face financial hardship when trying to access care.

He stressed that healthcare is a global issue, and good health is a critical asset for all. For AI technologies to fulfill their potential, improving healthcare access, affordability, and quality is one of the most promising applications. Health AI is where the promises of AI can meet the realities of improving lives. If AI is to deliver on its promise, it must do so in healthcare.

One of the greatest barriers to delivering affordable and accessible healthcare worldwide is the shortage of a trained healthcare workforce and the financial resources to employ them. Resource-limited settings often struggle to mobilize an adequate workforce to provide necessary health services.

Dr. Pandey emphasized that Health AI holds significant promise in overcoming this barrier. Recent estimates suggest that Large Language Models, when used alongside other software technologies, could reduce the time required to complete tasks in up to 46% of information-dependent jobs, including healthcare. This is just one example of how AI could transform healthcare.

Technologies like computer vision and image recognition have the potential to revolutionize the diagnosis of long-standing challenges such as tuberculosis and cancer. Additionally, AI could drastically reduce the cost and time involved in discovering new drugs and therapeutic molecules. Health AI could make quality healthcare more accessible and plentiful, ensuring that no one, including those in resource-limited settings, suffer or die needlessly due to lack of access to care.

However, Dr. Pandey emphasized that for Health AI to realize its full potential, everyone must contribute. Unlike previous waves of technological development, resource-limited countries must take the lead in ensuring they play an active role in shaping the future of Health AI. These nations have the people, the ideas, and the data to build their own models, tools, and technologies.

Over the next two days, Dr Pandey added that attendees will gain insights into how we can collectively harness Health AI for the greater good. The event's speakers will share their visions for the future of Health AI, the possibilities it offers, and how it can be developed as a global public good rather than a product for the benefit of the few.

Dr. Pandey encouraged all participants to actively engage during the upcoming town hall session, where they could share their thoughts, concerns, and aspirations regarding Health AI, and discuss how we can collectively realize its full potential. He concluded by expressing his gratitude to the conference speakers, thanking them for their time and generosity in sharing their valuable insights, as well as the participants for attending the conference.

Opening Remarks

Dr. Allison Gocotano
World Health Organization

Dr. Allison Gocotano, Team Lead for the WHO Health Emergencies Programme and Health Cluster Co-Lead with the Ministry of Health and Population in Nepal for humanitarian health responses, began by highlighting the transformative role of artificial intelligence (AI) in healthcare. He specifically focused on Nepal's progress toward building a digital health system.

Dr. Gocotano noted that AI has become an integral part of daily life—from virtual assistants to self-driving cars—and is now reshaping healthcare by enabling disease diagnosis, optimizing treatment strategies, and improving access to quality care. He emphasized that the World Health Organization (WHO) recognizes AI's potential to address major global health challenges, such as bridging workforce gaps, accelerating drug discovery, and enabling personalized care.

He outlined the WHO's 2023 Global Initiative on AI for Health, launched in collaboration with ITU and WIPO, which aims to harness AI for better health outcomes. Dr. Gocotano stressed that this initiative also emphasizes the importance of deploying AI in a responsible, ethical, and equitable manner.

He commended Nepal for its efforts in creating a responsible AI ecosystem, specifically praising the Ministry of Communication and Information Technology for developing a strategic AI concept paper. He also recognized the Ministry of Health and Population (MOHP) for finalizing a digital health blueprint that promotes open standards and technologies, and for implementing digital platforms like electronic medical records and surveillance systems. These advancements are laying the foundation for a more resilient health sector in Nepal.

Dr. Gocotano reiterated that this conference underscores the need to establish ethical standards and governance frameworks to ensure that AI does not exacerbate inequities in healthcare. He expressed gratitude to the organizers for creating a platform that fosters dialogue among experts, policymakers, and stakeholders, enabling collaboration and inclusivity in AI adoption.

He concluded by emphasizing the crucial role of partnerships between governments, WHO, and other stakeholders in leveraging AI for universal health coverage, improved health outcomes, and stronger health systems. Dr. Gocotano reaffirmed the WHO's commitment to supporting countries in deploying AI responsibly, focusing on standards, collaboration, and sustainable programs. With collective effort and commitment, AI has the potential to transform healthcare globally, particularly in resource-limited settings like Nepal, ensuring a healthier and safer future for all.

Keynote Speech

Dr. Karthik Adappa
Regional Adviser for Digital Health,
WHO Regional Office for South-East Asia

Dr. Karthik Adappa, Regional Adviser for Digital Health at the WHO Regional Office for South-East Asia, delivered a keynote address focusing on the advancements, applications, challenges, and responsible use of Health AI.

He provided an overview of AI's rapid growth, driven by increased computational power, large data sets, and substantial investments from companies like Microsoft and Google, which have invested over $150 billion in AI. Dr. Adappa highlighted that the Nobel Prizes in physics and chemistry reflect AI's growing impact on core science and applications. He also pointed to the emergence of large action models, such as large language models (LLMs) like ChatGPT and LLaMA, which are evolving to handle more complex tasks.

Turning to Health AI applications, Dr. Adappa explained how AI is transforming fields such as radiology, diagnostic pathology, and disease screening, with examples like diabetic retinopathy and cervical cancer detection. He emphasized the importance of early adoption of AI in healthcare, citing the high accuracy of AI models in diabetic retinopathy screening (85–90%) as an example of how AI can improve healthcare service delivery beyond traditional bench tests. He also touched on the future potential of AI in drug discovery, infection forecasting, and personalized medicine.

Addressing the challenges and controversies surrounding AI in healthcare, Dr. Adappa acknowledged that AI models, such as ChatGPT, demonstrate high-quality responses with perceived empathy, but their effectiveness compared to human physicians remains a topic of debate. He stressed the global challenge of balancing innovation with safety and pointed out that regulations for AI in healthcare are often lagging, particularly in low- and middle-income countries (LMICs). Additionally, the energy consumption of AI models and ethical concerns about their societal impact are emerging challenges.

Dr. Adappa highlighted the importance of global governance and regulation, noting that countries in North America, Europe, and Australia are leading in AI regulatory frameworks, while Southeast Asia faces challenges due to gaps in technology and infrastructure. He underscored the role of global initiatives, such as the WHO's Global Initiative on AI for Health, which aims to foster responsible AI deployment through multi-stakeholder collaboration.

Looking ahead, Dr. Adappa discussed the future directions of Health AI, including innovations like autonomous robotic surgeries, which are no longer just science fiction but are becoming increasingly feasible. He emphasized that critical thinking and the ability to ask meaningful questions will be essential skills in an AI-driven future.

He concluded by emphasizing that AI in healthcare is evolving rapidly, with significant potential to enhance productivity, improve diagnostic accuracy, and address public health challenges. However, achieving responsible AI implementation requires balancing innovation with safety, fostering global collaboration, and developing robust regulatory frameworks.

Session 1: The nature of healthcare work and the need and opportunity for Health AI

Dr. Madan Upadhyaya
Chairman,
B.P. Eye Foundation

The main objective of this session was to underline the complex nature of healthcare work, both need for superior decision making skills when human lives are at stake, the need to make such decisions with empathy, while being cognizant of the values and preferences of patients and their families, and where AI could play a part in this complex ecosystem.
Introduction by Dr. Madan Upadhyaya:
Dr. Madan Upadhyaya, chair of the session, provided an insightful introduction, reflecting on the significant changes he has witnessed in medicine over the past 60 years. He stressed that embracing new technologies, including AI, is essential to improving the quality of life, and that age should not be a barrier to innovation.

Talk 1: "AI for Health—Lessons Learned from HASH"

Dr. Rosalind Parkes-Ratanshi
Founding Director of the Academy for Health Innovation, Uganda

Dr. Rosalind Parkes-Ratanshi's presentation focused on the global health inequalities that still persist despite improvements in life expectancy worldwide. She pointed out that countries like the Central African Republic have life expectancies of only 49 years, compared to 86 years in Japan. Low- and middle-income countries (LMICs) face the double burden of infectious and non-communicable diseases due to poverty, weak health systems, and limited resources. Dr. Parkes-Ratanshi emphasized that as AI becomes more accessible, it's critical to ensure that it does not perpetuate existing disparities.

Dr. Parkes-Ratanshi highlighted the role of Health AI in addressing healthcare quality and access gaps, especially through e-health (electronic medical records, stock management, surveillance tools), m-health (telemedicine, text messaging), and other technologies like drones, wearables, and electronic pills.
She introduced the HASH Initiative, a collaborative project involving Infectious Diseases Institute, Sunbird AI, and Makerere University College, focused on improving maternal, sexual, and reproductive health (MSRH) in Sub-Saharan Africa. The initiative connects researchers and innovators to develop AI applications tailored to address MSRH challenges.

Dr. Parkes-Ratanshi emphasized several applications of AI, including predictive algorithms for miscarriage risks, gestational hypertension, contraceptive side effects, and improving sexual and reproductive health education through chatbots and large language models. AI tools like image analysis also show promise in early pregnancy risk assessment and tuberculosis screening.
However, she also highlighted critical challenges in AI development:

- **Bias:** Datasets often over-represent certain groups and exclude marginalized populations.
- **Data Privacy:** In low-resource settings, risks of misuse arise when informed consent processes are not followed.
- **Autonomy:** AI systems may overshadow healthcare professionals, limiting patient involvement.

Dr. Parkes-Ratanshi stressed the need for responsible AI development with stakeholder consultations, interdisciplinary collaboration, and a focus on data-driven solutions. She concluded by emphasizing the importance of integrating AI into health systems to improve risk prediction, patient education, diagnostics, and data management while overcoming social and technological barriers, such as trust and access issues in rural areas.

Talk 2: "Leveraging AI for Healthcare Settings"

Dr. Prajwal Ghimire
AI and Brain Cancer Researcher

Dr. Prajwal Ghimire's presentation delved into the transformative potential of AI in healthcare, with a particular focus on addressing systemic challenges in resource-limited settings like Nepal. Dr. Ghimire highlighted the rising global demand for healthcare, particularly as the elderly population is projected to double by 2050. AI is seen as a critical tool to improve diagnostics, administration, and patient care to meet this growing demand.

Dr. Ghimire drew comparisons between the healthcare challenges faced by countries like Nepal and more developed nations such as the UK. He pointed out that while clinicians worldwide juggle diagnostics, treatment, and administration, leading to burnout, Nepal faces additional barriers, including unequal healthcare access, staff shortages, and infrastructure gaps. AI can play a crucial role in alleviating these burdens by augmenting healthcare delivery.

He also discussed global AI adoption in healthcare, highlighting successful AI integration in the NHS (National Health Service) in the UK for workforce development, diagnostics, and administrative efficiency. Dr. Ghimire explored AI's potential in Nepal's healthcare future, including applications in primary and secondary care, local resource allocation, medical education, telemedicine, early disease detection, and AI-powered health monitoring.

Dr. Ghimire also outlined key barriers to AI implementation:

- **Technological:** Infrastructure and digital transformation challenges.
- **Ethical & Regulatory:** Issues of data privacy and trust.
- **Resource Constraints:** Limited financial and human resources.

He proposed a framework for effective AI adoption, known as "CARES," which stands for:

- **Connectivity & Infrastructure**
- **Awareness & Trust**
- **Resource Allocation**
- **Ethical & Regulatory Frameworks**
- **Sustainability**

Dr. Ghimire also presented a roadmap for AI implementation in healthcare, emphasizing the urgent need to invest in digital infrastructure, cloud-based platforms, and AI training for healthcare professionals. He stressed the importance of partnerships between global institutions, local hospitals, and policymakers to maximize AI's potential in transforming healthcare, especially in resource-limited settings.

Session 1: Panel Discussion

The session concluded with a panel discussion moderated by Dr. Victoria Mukami. The panel explored several critical themes, including:

- The need for health workers to embrace AI and use it for the benefit of patients.
- The importance of making AI tools more accessible so that doctors, nurses, and other health workers can learn to use them effectively.
- The ethical development, deployment, and use of AI, with a focus on data safety and trust.

Session 2: Health AI as a Global Public Good: Ethics, Fairness, Access, Data Sovereignty and Ownership

This session delved into the ethical considerations, fairness, access, and data sovereignty challenges surrounding the deployment of Health AI, focusing on how AI can be a global public good.

Talk 3: "Computer-Aided Diagnostics and Clinical Skills Assessment"

Dr. Binod Bhattarai
AI Scientist from the University of Aberdeen

Dr. Binod Bhattarai, an AI scientist from the University of Aberdeen, presented the transformative potential of Health AI, particularly in diagnostics, surgery, and medical education. He focused on gastrointestinal (GI) diseases, such as polyps and ulcerative colitis, and discussed how AI, especially computer-aided detection (CADe), addresses high adenoma miss rates (6–27%) by aiding in anomaly and polyp detection. Dr. Bhattarai highlighted that increasing Adenoma Detection Rates (ADR) can significantly reduce cancer risk.

He explained the technical challenges, such as camera motion, light reflections, and polyp variability. Dr. Bhattarai also introduced AI-based semantic segmentation, which improves surgical precision by tracking tissue-instrument interactions in delicate surgeries like cataract procedures. He emphasized AI's growing role in healthcare, particularly in improving diagnostic accuracy, surgical precision, and medical training. By integrating multimodal data and leveraging machine learning advancements, AI can address global health challenges.

Talk 4: "AI and Access to Medicines"

K.M. Gopakumar
Third World Network

K. M. Gopakumar, from the Third World Network, addressed the critical issue of access to medicines and the role of AI in overcoming the barriers to affordability and availability. He discussed the global disparities in access to medicines, highlighting that even in India, only a small percentage of the population receives free medicines. The concentration of pharmaceutical research and drug development in wealthier regions, along with IP protections and regulatory capture, perpetuate inequalities in access.

Gopakumar then discussed AI's transformative potential in the pharmaceutical industry, including applications in drug discovery, preclinical and clinical trials, drug repurposing, and post-marketing surveillance. He raised key questions about whether the cost savings from AI will benefit consumers, whether neglected diseases will receive more attention, and whether AI will lead to a further concentration of power in the pharmaceutical industry.

He emphasized the need to resolve data governance issues, advocating for treating data as a public good rather than a private commodity. Ensuring equitable benefit-sharing and empowering communities and states in regulating data is crucial for the responsible deployment of AI in healthcare.

In conclusion, Gopakumar underscored that while AI holds immense potential to revolutionize the pharmaceutical sector, its ethical challenges must be addressed to ensure that its benefits are accessible to all, especially in developing countries.

Workshop Session

In addition to keynote presentations and panel discussions, the conference featured two hands-on workshops that allowed participants to engage more directly with emerging applications of artificial intelligence in healthcare. These sessions provided a collaborative environment for exploring practical tools and innovative research, with an emphasis on real-world implementation and feedback.

Workshop 1: AI-Enabled Decision-Making Tools in Healthcare

Shashi Bhattarai
MCDA Expert

Facilitator: Sashi Bhattarai, MCDA Expert

Dr. Sashi Bhattarai led an engaging workshop focused on the application of artificial intelligence in multiple criteria decision analysis (MCDA). He introduced a newly developed AI-powered MCDA application designed to support clinical decision-making by systematically evaluating multiple factors. Participants were invited to download and test the app in real time, allowing them to explore its interface, input variables, and assess how the AI generated recommendations based on weighted criteria. The interactive format fostered hands-on engagement, and participants provided feedback on usability and relevance to their respective fields.

Workshop 2: AI Tools for Clinical Learning Supervision

Dr. Binod Bhattarai
AI Scientist from the University of Aberdeen

Facilitator: Dr. Binod Bhattarai, AI Scientist, University of Aberdeen

Dr. Binod Bhattarai conducted a workshop exploring the iterative development of artificial intelligence tools to support and supervise clinical learning. Drawing from ongoing research, he demonstrated how AI can be integrated into clinical education environments to monitor learner progress, provide real-time feedback, and adapt to individual learning needs. The session highlighted the importance of human-in-the-loop approaches, ensuring that the AI evolves in alignment with clinical training standards. Participants engaged in discussions around design challenges, ethical considerations, and future directions for AI-enhanced medical education.

The workshops offered a valuable opportunity for attendees to interact with cutting-edge AI tools and to reflect on their potential impact in clinical and educational settings. Both sessions underscored the importance of user-centered design and iterative development, while also highlighting the diverse applications of AI across healthcare domains. These workshops not only enriched the conference experience but also sparked meaningful conversations about the future of AI-enabled decision support and learning in medicine.

Talk 5: "Expanding Access to Ultrasound with AI"

Dr. Kilian Koepsell
Chief Innovation Officer
GE Healthcare

Dr Kilian Koepsell, Chief Innovation Officer at GE Healthcare, discussed how AI-powered ultrasound technology can help overcome significant healthcare challenges, particularly in emerging economies with limited healthcare infrastructure. Koepsell highlighted that AI-guided ultrasound could improve diagnostics, especially for conditions like rheumatic heart disease, by making diagnostic tools more accessible, affordable, and equitable.

He introduced innovations in AI-assisted ultrasound, such as:

Handheld and Portable Ultrasound Devices: These AI-guided devices enable non-experts to perform diagnostic imaging, reducing reliance on highly trained sonographers and expanding accessibility in underserved areas.

AI-Driven Scan Guidance and Interpretation: AI provides real-time probe guidance, quality-meter feedback, and automatic image capture to ensure high-quality diagnostic results.

Ejection Fraction (EF) Calculation: AI assists in measuring heart function, improving the diagnosis of cardiovascular diseases, which are prevalent in low- and middle-income countries (LMICs).

Dr Koepsell also highlighted the role of AI in maternal and fetal health, particularly in LMICs where half of pregnant individuals do not receive ultrasound screenings. AI-driven obstetric scanning can improve accessibility and early detection of pregnancy complications, especially in countries like Kenya, Ethiopia, Nigeria, and Bangladesh.

He addressed the challenges in maternity and healthcare, noting that even in high-income countries, rural areas often lack maternal care services. AI-powered ultrasound provides low-cost, point-of-care diagnostics that can improve maternal and infant health outcomes.

Lastly, Koepsell touched on how AI could assist in the diagnosis of diseases like pneumonia, which remains a leading cause of death in children under five. AI-guided lung ultrasound could help frontline health workers in LMICs identify pneumonia early and save lives.

In conclusion, Dr. Koepsell emphasized that AI-powered ultrasound is transforming diagnostic healthcare by guiding non-experts to perform high-quality scans, enhancing workflow efficiency through automation, and supporting clinical decision-making with AI-based insights.

Health AI for All Conference (HAICon 2025)

Conference Chairs' Summary

Day 2 (January 8, 2025)

Session 3: The State of the Science in Health AI and the Potential to Leapfrog Health Services Delivery with AI

This session focused on the scientific advancements in Health AI and its potential to revolutionize healthcare delivery, particularly in low-resource settings. The session was chaired by Dr. Yash Raj Shrestha, Assistant Professor at the University of Lausanne and Academic Director at ETH Zurich's Strategy and AI Laboratory

Talk 6: "AI in Neuroimaging for Brain Tumor Detection" by Dr. Udunna Anazodo

Dr. Udunna Anazodo
Researcher in Neuroimaging,
Montreal Neurologica Institute

Dr. Udunna Anazodo, a leading researcher in Neuroimaging at the Montreal Neurologica Institute, addressed the challenges of brain tumor imaging in Africa. The continent faces a high incidence of brain tumors, but the lack of advanced imaging technology severely hampers early diagnosis and treatment. Many African countries have only one MRI scanner per million people, limiting access to essential imaging resources.

Dr. Anazodo discussed how AI can help bridge this gap by making imaging more affordable and accessible. She highlighted the potential of low-field MRI (0.2T–0.5T), although it still requires at least a 1.5T MRI for accurate diagnoses. AI is particularly beneficial in tumor segmentation and classification, though existing models have struggled to perform effectively on African populations. She emphasized the importance of collecting region-specific datasets to improve AI models' performance.

A significant development in this area is the release of the first publicly available African brain MRI dataset in 2023, which could fuel the development of AI-driven solutions for brain tumor care tailored to the region. Dr. Anazodo stressed the importance of building local expertise, noting that 307 students, clinicians, radiologists, and neurosurgery residents have been trained in AI-based tumor imaging in recent years. She also pointed out the need to standardize imaging protocols to improve diagnostic accuracy across the continent.

Ultimately, Dr. Anazodo highlighted that while AI presents a transformative opportunity, success will require multidisciplinary collaboration and investment in infrastructure to address these healthcare gaps in Africa.

Talk 7: "Evaluating the Real-World Effectiveness of AI"

Dr. Jana Fehr
AI Researcher,
Berlin Institute for Health

Dr. Jana Fehr, an AI researcher at the Berlin Institute for Health at Charité, addressed several critical issues in the evaluation and deployment of medical AI technologies. One of the central themes of her talk was the necessity of real-world studies to assess the effectiveness of AI solutions. She argued that while many AI systems are still in the development stage, retrospective datasets often fail to capture their performance in actual clinical settings.

Prospective studies are crucial for determining whether AI can reliably replicate or surpass the diagnostic capabilities of healthcare professionals. Dr. Fehr also stressed the importance of transparency in the development of AI systems. She highlighted that for AI to be trusted in clinical settings, the development process, data used, and decision-making mechanisms behind the AI tools must be clear and accessible. Additionally, transparency should extend to how easy it is for healthcare providers to use the tools and how they make decisions.

Another issue Dr. Fehr raised was automation bias, where clinicians may become overly reliant on AI, potentially leading to diagnostic errors. She emphasized that AI tools, despite their promise, are not infallible and must be used with a critical mindset.

Dr. Fehr also discussed AI's application in sepsis risk prediction and colon cancer diagnosis. She pointed out that current AI systems for predicting sepsis have shown limitations, such as missing a significant portion of cases. She also discussed the uncertain benefits of AI in colonoscopy for detecting neoplasia, emphasizing the need for comprehensive prospective studies to validate AI tools.

In closing, Dr. Fehr highlighted the importance of collaboration and more robust evidence to support the widespread use of AI in healthcare. She cautioned against unrealistic expectations and stressed the need for AI to be deployed responsibly and with clear evidence of its effectiveness.

Talk 8: "AI in Low-Resource Settings: Challenges and Opportunities"

Dr. Bishesh Khanal
Founding Director,
NAAMII

Dr. Bishesh Khanal, founding director at the Nepal AI Research Institute (NAAMII), discussed the challenges faced by low-resource healthcare settings, particularly in Nepal. Dr. Khanal highlighted that rural areas in Nepal suffer from a lack of doctors, radiologists, and medical devices, which makes healthcare delivery challenging. Even when AI solutions exist, limited infrastructure and the lack of relevant datasets further restrict access to these technologies.

Dr. Khanal noted that health posts, the most accessible healthcare facilities in rural areas, often lack internet connectivity, making it difficult to implement AI solutions. Meanwhile, tertiary hospitals in urban areas face overwhelming patient loads, and private hospitals remain too expensive for most people. He also pointed out that even in high-income countries, some regions still struggle with resource limitations, showing that these challenges are global.

A key point Dr. Khanal made was the lack of research in low-resource settings, which delays healthcare innovations. He cited tuberculosis and malaria as diseases that have impacted populations for years, yet progress has been slow. He also highlighted the language barrier, which restricts the use of AI tools like ChatGPT, as they are often limited to English.

Dr. Khanal discussed AI's potential to address some of these resource limitations. For example, in rural areas, AI can help non-experts perform essential tasks, such as cervical cancer screenings, which traditionally rely heavily on skilled professionals. With AI assistance, even non-specialists can achieve similar diagnostic accuracy. He also emphasized the importance of quality control when AI is used to guide nurses and gynecologists in performing these tests.

In the context of ultrasound imaging, Dr. Khanal highlighted how AI can assist non-experts in obtaining accurate images, even in the absence of trained professionals. AI can guide the operator to the correct view, improving diagnostic accuracy and assisting in remote consultations with specialists. He also mentioned how AI could be used to calculate gestational age in fetuses, outperforming radiologists in some instances.

Finally, Dr. Khanal underscored the need for more data to evaluate AI's effectiveness in clinical settings, not just in machine learning models. He also pointed out the importance of making AI tools available in languages like Nepali to ensure accessibility for wider populations.

Session 3: Panel Discussion

The panel discussion was moderated by Dr. Rosalind Ratanshi and featured a dynamic group of experts sharing their insights on the future of Health AI, challenges in implementation, and the global collaboration needed for success.

Dr. Chetan Arora, a faculty member at the Indian Institute of Technology Delhi, participated virtually in the discussion. His research focuses on computer vision and machine learning, particularly in the areas of breast and gallbladder cancer detection. He shared the critical role of AI in healthcare, particularly in India, where resource constraints are prevalent. Dr. Arora emphasized the importance of developing practical hardware solutions for deployment in field settings. He proposed AI solutions for breast and gallbladder cancer screening, noting the significant potential for AI in overcoming healthcare challenges in rural India. The Indian government, he said, is particularly keen on supporting the integration of Health AI into healthcare systems, providing a critical opportunity for scaling AI solutions.

Dr. Yash Raj Shrestha, Chairperson of the session, offered his perspective on the three key dimensions of AI's role in healthcare: research, clinical expertise, and patient empowerment. He highlighted AI's potential to enhance decision-making but stressed that it should not replace human expertise. Dr. Shrestha cautioned against over-reliance on AI and advocated for a balanced approach, where AI augments clinical work while preserving the critical role of healthcare professionals. He also emphasized the importance of training healthcare staff to effectively integrate AI into clinical settings.

Dr. Rosalind Park Rotanshi raised an important question about building research capabilities in Health AI. Dr. Jana Fehr responded, stressing the need for a broader, more holistic approach to AI research. She called for methodologies that integrate not only AI research but also economics and social science to ensure that AI solutions are effective and sustainable in real-world contexts. Collaboration with social scientists, who understand community dynamics, is essential to ensuring AI's practical application.

Dr. Bishesh Khanal underscored the importance of implementation science and capacity-building in the global south. He highlighted the ease of access to information today but pointed out that the necessary infrastructure and resources to translate knowledge into meaningful innovation remain a challenge. Dr. Khanal emphasized the importance of creating educational and research opportunities for postgraduate students to drive AI innovation in these regions.

Dr. Arora further elaborated on the role of three pillars in supporting healthcare in India: research, government support, and industry involvement. He gave a compelling example of how AI could support immunization compliance through simple, AI-driven solutions. In this scenario, AI helps remind parents of vaccination schedules, ensuring timely immunizations, especially among illiterate communities.

Shifting the conversation, Dr. Shrestha shared his experience with global collaborations, mentioning his work with pharmaceutical companies in Switzerland and challenges in data collection from Nigeria. He discussed the difficulty in incentivizing data collection and ensuring accountability in large, complex ecosystems, pointing out the need for collective efforts that prioritize human values and ethics.

Showcase: Advancements In Health Ai In Nepal

Alok Khatri
Head of Education Outreach, NAAMII

The showcase highlighted the innovative work being done in Health AI research and development in Nepal.

The first presentation was by Alok Khatri, the Head of Education Outreach at NAAMII (Nepal Artificial Intelligence and Machine Intelligence Institute). Mr. Khatri introduced NAAMII, which has emerged as a leading institution in AI research and development in Nepal and South Asia. He explained NAAMII's three-pronged approach: scientific research, educational outreach, and industry innovation. NAAMII's work spans government-level initiatives, local community programs, and collaborations with various sectors to ensure AI is accessible and impactful.

Mr. Khatri highlighted NAAMII's work in health AI, including collaborations with Tribhuvan University and Kathmandu University on projects such as tuberculosis drug resistance prediction and AI-driven radiology applications. NAAMII also focuses on developing AI ethics, ensuring that AI solutions are developed responsibly. He also mentioned the Multimodal Learning Lab and Genomics Lab, both pivotal in advancing healthcare and AI applications in Nepal.

In terms of education, Mr. Khatri shared that NAAMII's AI School, a significant training program, has grown rapidly. The latest edition saw 191 students learning from 22 professors, with over 700 participants attending across several editions. This success reflects growing interest in AI education in Nepal, and NAAMII continues to expand its educational outreach by launching AI clubs in schools and offering training for administrative staff.

The second presentation of the showcase was by Dr. Pradeep Raj Regmi, an Assistant Professor of Radiology at Tribhuvan University Teaching Hospital. Dr. Regmi outlined the role of AI in radiology, particularly in the context of low-resource settings. He discussed the challenges faced by his hospital, which serves a diverse population with limited resources and a high patient load. Dr. Regmi highlighted the potential for AI to assist in task shifting, allowing non-experts to conduct diagnostic tasks with AI's assistance, improving diagnostic accuracy in rural and underserved areas.

He emphasized that while AI can play a significant role in identifying conditions such as lung cancer, breast cancer, and stroke, the implementation of AI in these settings is not without challenges. The limitations of technical infrastructure, internet access, and human resources in government hospitals make it difficult to deploy AI solutions. Dr. Regmi's team, however, developed an innovative app that registers patient information and links it directly to ultrasound machines, creating an efficient system to collect and store patient data. This innovation is a step forward in addressing the resource challenges in Nepal's healthcare system.

Town hall Session

The Town hall session provided an open forum for conference participants to voice their aspirations, concerns, and feedback on the future direction of Health AI. The session revealed strong engagement from both young professionals (ages 25-34) and established experts (ages 35-50), with 90% of participants calling for collaborative technology development. This highlighted the need for interdisciplinary partnerships to drive effective solutions in Health AI. Key priorities identified during the discussion included data generation, curation, and sharing, with a significant focus on high-quality, unbiased datasets.

Transparency, interoperability, and privacy compliance were also emphasized as critical factors for AI's successful integration into healthcare. Participants expressed concerns about bridging the gap between AI research and real-world healthcare applications, proposing solutions such as open-access publishing, visual tools, and stakeholder engagement. Disease areas of focus were identified, with maternal health, mental health, tuberculosis, coronary artery disease (CAD), and cervical cancer being top priorities.

The session also raised questions about improving AI accessibility in healthcare, expected implementation timelines, and fostering university collaborations to ensure robust curricula. AI integration into hospital Electronic Medical Record (EMR) systems and advancing AI in imaging were also highlighted as essential steps forward. Strengthening collaboration across sectors was seen as a key to unlocking AI's full potential in healthcare.

In conclusion, the conference brought together a diverse group of professionals and experts, all united in their goal to harness the power of Health AI to address global healthcare challenges. While the potential is vast, ongoing collaboration, research, and a focus on ethical, inclusive development will be critical to ensuring that Health AI can benefit all of humanity.

HAICon 2025 Declaration

Toward the end of the Conference, a declaration was made. Dr Rosaling Parkes-Ratanshi read the declaration on behalf of the conference chairs. The text of the Conference is as follows:

The HAINet Kathmandu declaration commits to, through collaborative efforts, build resource-limited settings as net producers of knowledge and innovation, tools and technologies in Health AI to leapfrog health services delivery in these settings.

Dr Ratanshi also committed to hosting the second Health AI for All Conference (HAICon) in Uganda.

Closing Remarks

Dr. Bishesh Khanal

Founding Director,
NAAMII

Dr Khanal mentioned that this is the first conference the Health AI for All Network (HAINet) has organized, and it is still in its early stages, with plans for expansion in the future. He highlighted key themes such as identifying problems and addressing barriers in healthcare. He emphasized the importance of removing these barriers and fostering global collaboration. He expressed his happiness that the event was successfully held in Kathmandu.

Dr. Kiran Raj Pandey

General Chair of the Conference

Dr. Kiran Raj Pandey reflected on the journey of building the HAINet community, and also the two day conference that had just concluded, noting that just three months ago, they couldn't have imagined hosting a successful conference with such high participation. While there was excitement, there was also some fear, as they hoped that promising initiatives would deliver impressive results. He stressed the importance of having doctors who understand AI technology and highlighted that collaboration is key to generating the brightest ideas. He emphasized that health should always come before AI because healthcare is for everyone, and that doctors, public health workers, and scientists must work together. He called for global collaboration and expressed optimism that, despite the challenges, meaningful changes would come in the long run. He encouraged everyone to unite in building a collaborative network, noting that the platform created in Nepal is not only for Nepal but for the world, with next year's program set to take place in Uganda. He concluded by thanking everyone for their participation and his team for their support.


Health AI for All Network
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