**Association of Indian Universities**

**Sri Balaji Vidyapeeth**

# Academic & Administrative Development Center (AIU-SBVDU AADC)

**Brief Report on**

## AI TECHNOLOGY IN ALLIED HEALTH SCIENCES

**Transforming Healthcare Practice**

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# AI TECHNOLOGY IN ALLIED HEALTH SCIENCES

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The Association of Indian Universities – Sri Balaji Vidyapeeth Deemed to be University Academic and Administrative Development Centre (AIU–SBVDU AADC) organized the National Workshop on "AI Technology in Allied Health Sciences: Transforming Healthcare Practice" (Online Mode) This workshop was designed to provide comprehensive insights into the application of Artificial Intelligence technologies in Allied Health Sciences. The sessions covered key aspects of AI-driven innovations that are transforming healthcare education, clinical practice, and patient care. The program was guided by well renowned and experienced resource persons who shared their expertise on emerging AI tools and technologies relevant to allied health disciplines. This workshop offered an excellent opportunity for faculty members and paramedical professionals to enhance their knowledge and equip themselves with innovative technological approaches for teaching, learning, and clinical practice in the rapidly evolving healthcare environment.

## Objectives of the workshop:

By the end of this 5-day workshop, participants will be able to:

- Introduce participants to the fundamental concepts and applications of Artificial Intelligence in the field of Allied Health Sciences.
- Familiarize allied health professionals with emerging AI-enabled healthcare technologies used in diagnostics, patient monitoring, and clinical decision-making.
- Enhance the capacity of educators and practitioners to integrate AI tools into teaching, research, and clinical practice.
- Encourage the adoption of innovative digital technologies to improve healthcare quality, efficiency, and patient outcomes.

Provide a platform for participants to interact with experts and gain insights into the future role of AI in allied healthcare education and practice.

# Introduction

The Five-Day National Workshop on AI Technology in Allied Health Sciences: Transforming Healthcare Practice was successfully conducted from 03 August 2026 to 07 August 2026 under the aegis of the Association of Indian Universities – Sri Balaji Vidyapeeth Deemed to be University Academic and Administrative Development Centre (AIU–SBVDU AADC). The programme brought together resource persons with expertise in allied health sciences, medical diagnostics, physician associate practice, healthcare ethics, cardiovascular perfusion, public health, clinical research, ophthalmology, academic research and simulation-based education.

## Day 1 – 03.08.2026

The forenoon sessions provided an overview of the **transformative role of Artificial Intelligence in Allied Health Sciences**, with emphasis on its applications in both **clinical practice and diagnostic technology**. The discussions highlighted the use of AI for **data-driven decision-making, pattern recognition, computer vision, natural language processing, robotics, predictive analytics, genomics, precision medicine, and generative AI**. Particular attention was given to the application of AI in **radiology, pathology, microbiology, molecular diagnosis, cancer detection, tuberculosis screening, and sepsis monitoring**, demonstrating its potential to improve the speed and accuracy of healthcare services.

The afternoon sessions enabled participants to understand how AI can support **early disease detection, diagnostic accuracy, workflow efficiency, personalized healthcare, research, and patient care**. Participants also gained awareness of the **ethical, regulatory, privacy, algorithmic bias, and explainability issues** associated with AI implementation. A key learning outcome was the understanding that AI should **complement rather than replace human expertise, clinical judgement, and empathy**, highlighting the need for responsible and effective integration of AI into **Allied Health Sciences education, research, and professional practice**.

## Day 2 – 04.08.2026

The forenoon session focused on the **evolving role of Physician Associates in AI-enabled healthcare** and the importance of integrating AI responsibly into medical education and clinical practice. Participants gained an understanding of applications such as **personalized learning, intelligent tutoring, automated assessment, case-based learning, surgical education, digital libraries, and curriculum development**. The sessions emphasized that AI should **complement human intelligence rather than replace professional judgement**, with human oversight and technical expertise remaining essential.

The second sessions also provided insights into the **ethical and legal dimensions of AI in healthcare**, including autonomy, beneficence, non-maleficence and justice. Participants were introduced to the **LERT framework—Laws, Ethics, Reliability, Validity and Transparency**—as a basis for building trust in AI systems. Key learning outcomes included awareness of **data privacy, algorithmic bias, accountability, liability, informed consent, regulatory requirements, validation, auditing and data security**, along with the importance of maintaining **human interaction and ethical responsibility** while implementing AI in healthcare and allied health research.

## Day 3 – 05.08.2026

The first sessions provided comprehensive insights into the **application of Artificial Intelligence in cardiovascular perfusion, cardiac surgery, public health, and healthcare outreach**. Participants gained an understanding of how AI can support **continuous monitoring, early prediction of complications, personalized perfusion, haemodynamic optimization, remote patient monitoring, disease surveillance, and outbreak prediction**. Emerging technologies such as **deep learning, digital twins, IoT-enabled devices, Edge AI, robotic systems, and AI-based digital health platforms** were also highlighted.

The key learning outcomes included an appreciation of the potential of AI to improve **patient safety, clinical precision, preventive healthcare, and efficiency of healthcare delivery**. The second session also emphasized the importance of **data**

**quality, privacy, cybersecurity, digital infrastructure, transparency, human oversight, and AI literacy** for responsible implementation. Overall, participants gained a broader understanding of how AI can strengthen both **specialized clinical care and population-level public health services**.

## Day 4 – 06.08.2026

The sessions provided participants with valuable insights into the **application of Artificial Intelligence in clinical research, clinical trial design, and ophthalmology**. The clinical research session highlighted the use of AI for **literature searching, eligibility screening, data cleaning, protocol review, sample size calculation, and report preparation**, while emphasizing the importance of structured research questions using the **PICOT framework**. Participants also gained awareness of **AI output verification, ethical considerations, responsible data management, researcher accountability, and relevant research guidelines** such as ICH E6R3, SPIRIT AI, and CONSORT AI.

The ophthalmology session highlighted recent developments in **AI-assisted diagnosis, personalized treatment planning, and robotic technologies**, along with advances in cataract surgery and the management of diabetic retinopathy and glaucoma. Overall, the sessions enhanced participants' understanding of how AI can support **evidence-based research, early disease detection, diagnostic accuracy, and clinical decision-making**, while reinforcing that AI should **augment professional expertise rather than replace clinical judgement**.

## Day 5 – 07.08.2026

The sessions provided participants with practical exposure to **AI tools for allied health sciences research and AI-enhanced simulation-based education**. The research session highlighted the importance of **responsible use and verification of AI-generated information**, particularly references and DOI details. Participants were introduced to tools such as **Google Notebook LM, Sky Space, Napkin AI, BioRender, Illustry, Power Drill, and Whisper Flow**, which can support literature review, manuscript preparation, scientific illustration, presentations, data visualization, and other research activities.

The simulation session focused on the use of **AI-enabled simulation for competency development, clinical reasoning, procedural skill training, crisis management, and AI-assisted assessment**. Participants were introduced to platforms such as **OLabs, Virtual Labs, and virtual patient simulation tools**, along with their potential applications in allied health education. Overall, the sessions enhanced participants' understanding of how AI can support **research productivity, interactive learning, clinical skill development, and competency-based education**, while emphasizing **data privacy, faculty training, responsible implementation, and the need for appropriate human oversight**.

## Program Outcomes and Key Learnings

The program enhanced participants' understanding of the transformative role of Artificial Intelligence in Allied Health Sciences, covering its applications in education, research, diagnostics, clinical practice, public health, and simulation-based learning. Participants gained practical knowledge of AI-assisted research tools, diagnostic technologies, personalized learning, clinical decision-making, digital health platforms, and simulation technologies. The program also strengthened awareness of responsible AI use, including data privacy, security, ethical considerations, algorithmic bias, transparency, validation, and human oversight. Participants were introduced to emerging technologies such as generative AI, digital twins, IoT, robotics, virtual patients, and AI-enabled assessment. Overall, the program encouraged participants to integrate appropriate AI tools into teaching, research, clinical practice, and competency-based education, while maintaining professional judgement, accountability, and patient-centred care.

## Role of AI in Allied Health Sciences

Artificial Intelligence is emerging as a valuable tool in Allied Health Sciences, supporting education, research, diagnostics, clinical practice, and patient care. AI can assist in personalized learning, intelligent tutoring, automated assessment, clinical decision-making, diagnostic interpretation, predictive analytics, and simulation-based training. In research, AI tools can facilitate literature searching, data organization, manuscript preparation, scientific visualization, and evidence

synthesis. AI-enabled technologies also support public health surveillance, remote monitoring, disease prediction, and precision healthcare. Advanced applications such as generative AI, robotics, digital twins, virtual patients, and AI-assisted simulation provide new opportunities for competency-based education and clinical skill development. However, effective implementation requires attention to data privacy, ethical use, transparency, security, validation, and human oversight. Overall, AI should complement professional expertise and clinical judgement, enabling Allied Health professionals to deliver more efficient, evidence-based, and patient-centred care.

## Faculty Engagement and Interactive Learning

The program encouraged active participation through interactive discussions, live demonstrations, polls, quizzes, and practical activities. Participants were given opportunities to explore AI tools, simulation platforms, and digital learning resources, enhancing their understanding through experiential and hands-on learning. The interactive sessions also facilitated knowledge sharing, peer learning, and exchange of ideas, while encouraging participants to discuss the practical application of AI in education, research, and healthcare. Overall, the program created an engaging learning environment that promoted collaboration, innovation, and professional development.

## Institutional Impact

The program reflected the institution’s strong commitment to academic excellence, innovation, and faculty development by providing a structured platform for learning and professional interaction. The organizing institution successfully brought together experts from diverse fields, emerging AI technologies, practical demonstrations, and interactive learning opportunities, ensuring meaningful exposure for participants.

The initiative strengthened the institution’s commitment to integrating Artificial Intelligence into Allied Health Sciences education, research, and healthcare practice, while promoting responsible and ethical adoption of emerging technologies. Overall, the program reinforced the institution’s vision of continuous professional

development, technological advancement, interdisciplinary collaboration, and educational excellence.

# Feedback and Reflections

The program received positive feedback from participants, who appreciated the informative sessions, expert resource persons, and practical exposure to emerging AI technologies. The interactive demonstrations and discussions helped participants gain greater clarity on the practical applications of AI in education, research, diagnostics, and healthcare.

Participants valued the opportunity to explore new AI tools and simulation platforms and expressed interest in further hands-on training and practical workshops. Overall, the program was perceived as a valuable and enriching learning experience, encouraging participants to explore responsible and innovative applications of AI in their professional practice.

# Conclusion

## Overall Reflections and Conclusion

The five-day workshop provided an informative and meaningful learning experience on the emerging role of Artificial Intelligence in Allied Health Sciences. The sessions covered AI applications across education, diagnostics, clinical practice, public health, research, ophthalmology, cardiovascular care and simulation-based training. The practical demonstrations and discussions helped participants understand the potential of AI tools while reinforcing the importance of human oversight, ethical use, data privacy, validation and professional accountability.

The workshop successfully encouraged knowledge sharing and professional interaction and provided participants with exposure to several practical AI platforms and emerging technologies. The programme highlighted the need for responsible adoption of AI, curriculum integration, hands-on training and continued faculty development. Participants expressed the value of practical demonstrations and interactive learning, supporting the inclusion of more hands-on and experiential components in future programmes.

Overall, the National Workshop on AI Technology in Allied Health Sciences: Transforming Healthcare Practice successfully addressed contemporary developments in AI-enabled healthcare and provided a strong foundation for applying appropriate AI tools in teaching, research and clinical practice.