AI in Healthcare Update

August 2025

Welcome to the latest copy of the AI Update. The aim of this publication is to bring together a range of recently published research and guidance that will help you make evidence-based decisions.

Accessing Articles

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Feedback and requests for additional evidence searches

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Please contact Holly if you would like more information, or further evidence searches: holly.cook3@nhs.net.

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Management Reports and Guidance

AI Playbook for the UK Government: The playbook offers guidance on using AI safely, effectively and securely for civil servants and people working in government organisations
Government Digital Service
10 February 2025
https://www.gov.uk/government/publications/ai-playbook-for-the-uk-government

International AI Safety Report 2025
Department for Science, Innovation & Technology
Updated 18 February 2025
https://www.gov.uk/government/publications/international-ai-safety-report-2025/international-ai-safety-report-2025

The state of AI. How organizations are rewiring to capture value
Quantum Black AI by McKinsey
March 2025
https://www.mckinsey.com/capabilities/quantumblack/our-insights/the-state-of-ai

Guidance on the use of AI-enabled ambient scribing products in health and care settings
NHS England
Date published: 27 April, 2025
https://www.england.nhs.uk/long-read/guidance-on-the-use-of-ai-enabled-ambient-scribing-products-in-health-and-care-settings/

Use of Generative AI in ICM Training and Revalidation
The Faculty of Intensive Care Medicine

Published: 09.07.2025
https://www.ficm.ac.uk/index.php/use-of-generative-ai-in-icm-training-and-revalidation

10-Year Health Plan: we need to move from 'techno optimism' to 'techno realism'
The Health Foundation
17 July 2025
https://www.health.org.uk/features-and-opinion/blogs/10-year-health-plan-we-need-to-move-from-techno-optimism-to-techno

McKinsey Technology Trends Outlook 2025
McKinsey & Company
July 22, 2025
https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-top-trends-in-tech

Tools and Resources

Artificial Intelligence Knowledge Hub
Library & Knowledge Service – East Cheshire NHS Trust
Last updated: 27.8.2025
https://www.eastcheshirenhslibrary.net/ai.html

S.E.C.U.R.E. GenAI Use Framework for Staff
Charles Sturt University (Australia)
2025
https://secureframework.ai/

Exploring AI Deployment in the NHS with Newton's Tree
Health Innovation Yorkshire & Humber
August 1, 2025
https://www.youtube.com/watch?v=4swUefRM9Dc

AI knowledge repository
NHS England – Digital
https://digital.nhs.uk/services/ai-knowledge-repository

Institute of Global Health Innovation
Imperial
https://www.imperial.ac.uk/global-health-innovation/

The Provider Podcast – leading the shift from analogue to digital: the art of the possible for NHS leaders
NHS Providers
10 July 2025
https://nhsproviders.org/resources/the-provider-podcast-leading-the-shift-from-analogue-to-digital-the-art-of-the-possible-for-nhs-leaders/

A selection of research and news articles from Medline and CINHAL <6 months

1. FUTURE-AI: international consensus guideline for trustworthy and deployable artificial intelligence in healthcare

Item Type: Journal Article
Publication Date: 2025
Journal: BMJ (Clinical Research Ed.) 388, pp. r340

Access or request full text: https://libkey.io/10.1136/bmj.r340

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=39961614&profid=ehost

2. Reporting guidelines for chatbot health advice studies: explanation and elaboration for the Chatbot Assessment Reporting Tool (CHART)

Item Type: Journal Article
Publication Date: 2025
Journal: BMJ (Clinical Research Ed.) 390, pp. e083305

Access or request full text: https://libkey.io/10.1136/bmj-2024-083305

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40750271&profid=ehost

3. Assessing Artificial Intelligence-Generated Patient Educational Material on Gestational Diabetes Mellitus: Content and Quality Evaluation

Item Type: Journal Article

Authors: Akbağ, Aypar and Nur, Nuran

Publication Date: July/September ,2025

Journal: The Journal of Perinatal & Neonatal Nursing 39(3), pp. 210

Abstract: Purpose: This study aims to evaluate the content and quality of patient educational materials on gestational diabetes mellitus (GDM) generated by ChatGPT and Gemini. **Background:** The sources of knowledge are crucial in the effective management of disease. Artificial intelligence (AI) platforms could become a primary source of patient education materials in the near future. **Methods:** A descriptive research design was employed. Frequently asked questions related to GDM were extracted from patient education

sections of existing guidelines. These questions were then submitted to both ChatGPT and Gemini. The responses provided by these platforms were used to create educational material aimed at pregnant women diagnosed with GDM. The content was reviewed by a panel of 11 experts. The Patient Education Materials Assessment Tool for Printed Materials (PEMAT-P) was employed to evaluate the content's effectiveness and clarity, and the readability was assessed through the Ateşman Readability Formula and the Gunning Fog Index. **Results:** A total of 32 questions regarding GDM were directed to the AI platforms. The resulting educational materials had a readability score of 77.8 based on the Ateşman scale and 16.25 according to the Gunning Fog Index. The experts rated the material as highly comprehensible, with an average PEMAT-P understandability score of 91.36% (range: 86.66%-93.75%) and an actionability score of 89.67% (range: 80%-100%). **Conclusion:** The GDM educational materials generated by ChatGPT and Gemini exhibit a high level of readability, making them easy to understand. Moreover, the material was deemed comprehensible and actionable for pregnant women with GDM. Implications for practice and research: Although AI-generated patient educational materials show great potential, further experimental research is necessary to assess their long-term effectiveness.

Access or request full text: https://libkey.io/10.1097/JPN.0000000000000905

URL: https://journals.lww.com/jpnnjournal/abstract/2025/07000/assessing_artificial_intelligence_generated.8.aspx

4. Insights into the relationship between anxiety and attitudes toward artificial intelligence among nursing students

Item Type: Journal Article

Authors: Ayed, Ahmad;Ejheisheh, Moath Abu;Al-Amer, Rasmieh;Aqtam, Ibrahim;Ali, Amira Mohammed;Othman, Elham H.;Farajallah, Mosaab;Qaddumi, Jamal and Batran, Ahmad

Publication Date: 2025

Journal: BMC Nursing 24(1), pp. 1–6

Abstract: Background: Artificial Intelligence (AI) integration in healthcare education represents a critical technological advancement that requires careful examination of student preparedness and acceptance. In the Palestinian context, limited research exists on nursing students' psychological responses to AI implementation, despite growing global emphasis on AI competency in healthcare professions. Understanding the relationship between anxiety and attitudes toward AI is essential for developing effective educational strategies that can facilitate successful technology adoption while addressing cultural and contextual barriers specific to the Palestinian healthcare education environment. **Introduction:** Artificial Intelligence (AI) integration in nursing education remains underexplored in the Palestinian context, where limited research addresses students' anxiety and attitudes toward AI. This study examines this relationship to fill a critical gap and inform culturally relevant strategies for AI adoption in healthcare education. **Methods:** A cross-sectional study was conducted among 264 nursing students at Palestine Ahliya University (2024–2025). Validated scales (AI Anxiety Scale, SATAI) assessed anxiety and attitudes. We analyzed data via correlation and regression using

SPSS v26. **Results:** High AI anxiety (mean = 80.3, SD = 9.4) contrasted with positive attitudes (mean = 114.3, SD = 12.8). Regression identified attitude as the strongest predictor of anxiety (B = 5.171, p <.001), alongside younger age, female gender, and non-use of AI. Academic year and AI education showed no significant effects. **Conclusion**: Negative attitudes and limited AI exposure drive anxiety, particularly among younger females and non-users. To mitigate this, we recommend integrating AI literacy modules into curricula, fostering hands-on AI experiences, and designing gender-sensitive training. These findings emphasize the urgency of addressing sociocultural and educational barriers to AI readiness in Palestinian nursing education. Clinical trial number: Not applicable.

Access or request full text: https://libkey.io/10.1186/s12912-025-03490-2

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=rzh&AN=186310226&profid=ehost

5. A mixed methods formative evaluation of the United Kingdom National Health Service Artificial Intelligence Lab

Item Type: Journal Article

Authors: Cresswell, Kathrin;Williams, Robin;Dungey, Sheena;Anderson, Stuart;Bernabeu, Miguel O.;Mozaffar, Hajar;Yang, Xiao;Sai, Varun;Bea, Sara and Eason, Sally

Publication Date: 2025

Journal: NPJ Digital Medicine 8(1), pp. 1–19

Access or request full text: https://libkey.io/10.1038/s41746-025-01805-w

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=rzh&AN=186711416&profid=ehost

6. **The use of artificial intelligence based chat bots in ophthalmology triage**

Item Type: Journal Article

Authors: David, Daniel;Zloto, Ofira;Katz, Gabriel;Huna-Baron, Ruth;Vishnevskia-Dai, Vicktoria;Armarnik, Sharon;Zauberman, Noa Avni;Barnir, Elinor Megiddo;Singer, Reut;Hostovsky, Avner and Klang, Eyal

Publication Date: 2025

Journal: Eye (London, England) 39(4), pp. 785–789

Abstract: **Purpose:** To evaluate AI-based chat bots ability to accurately answer common patient's questions in the field of ophthalmology.; **Methods:** An experienced ophthalmologist curated a set of 20 representative

questions and responses were sought from two AI generative models: OpenAI's ChatGPT and Google's Bard (Gemini Pro). Eight expert ophthalmologists from different sub-specialties assessed each response, blinded to the source, and ranked them by three metrics-accuracy, comprehensiveness, and clarity, on a 1-5 scale.; **Results:** For accuracy, ChatGPT scored a median of 4.0, whereas Bard scored a median of 3.0. In terms of comprehensiveness, ChatGPT achieved a median score of 4.5, compared to Bard which scored a median of 3.0. Regarding clarity, ChatGPT maintained a higher score with a median of 5.0, compared to Bard's median score of 4.0. All comparisons were statistically significant ($p < 0.001$).; **Conclusion:** AI-based chat bots can provide relatively accurate and clear responses for addressing common ophthalmological inquiries. ChatGPT surpassed Bard in all measured metrics. While these AI models exhibit promise, further research is indicated to improve their performance and allow them to be used as a reliable medical tool.

Access or request full text: https://libkey.io/10.1038/s41433-024-03488-1

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=39592814&profid=ehost

7. Integrating AI into medical imaging curricula: Insights from UK HEIs

Item Type: Journal Article

Authors: Doherty, G.;Hughes, C.;McConnell, J.;Bond, R.;McLaughlin, L. and McFadden, S.

Publication Date: 2025

Journal: Radiography (London, England : 1995) 31(3), pp. 102957

Abstract: **Introduction:** With artificial intelligence (AI) becoming increasingly integrated into medical imaging, the Health and Care Professions Council (HCPC) updated its Standards of Proficiency for Radiographers in Autumn 2023. These changes require clinicians to be both competent and confident in operating AI and related technologies within their role. Responsibility for meeting these standards extends beyond individual clinicians to higher education institutions (HEIs), which play a crucial role in preparing future professionals. This study examines the current and planned provision of AI education for medical imaging students and staff, identifying potential challenges in its implementation.; **Methods:** An electronic survey was developed and hosted on the Joint Information Systems Committee (JISC) platform. It was disseminated in April 2023 by the Society of Radiographers to UK HEIs offering medical imaging programmes.; **Results:** 24 HEIs responded, with representation from all four UK nations. Of these, 71 % (n = 17) had already integrated AI into their curriculum. Reported challenges included timetabling constraints and the need to upskill staff. 21 % (n = 5) indicated that AI would be incorporated following course revalidation in the 2024/25 academic year, while the remaining two HEIs were unaware of planned changes.; **Conclusion:** Most UK HEIs have begun integrating AI education into medical imaging programmes. However, significant disparities exist in the depth and scope of AI content across institutions. Further efforts are needed to develop a comprehensive and standardised AI curriculum for medical imaging in the UK.; **Implications for Practice:** This study highlights key areas for improvement in AI education within medical imaging programmes. Further research into content and delivery methods is essential to ensure radiography professionals adequately equipped to navigate the evolving clinical

environment. (Copyright © 2025 The Author(s). Published by Elsevier Ltd.. All rights reserved.)

Access or request full text: https://libkey.io/10.1016/j.radi.2025.102957

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40280036&profid=ehost

8. Assessment of the Utility of Artificial Intelligence-Based Chatbots in Patient Education: A Systematic Review and Meta-Analysis

Item Type: Journal Article

Authors: Emile, S. H.;Horesh, N.;Garoufalia, Z.;Gefen, R.;Boutros, M. and Wexner, S. D.

Publication Date: 2025

Journal: The American Surgeon , pp. 31348251367031

Abstract: Background Chatbots and large language models, particularly ChatGPT, have led to an increasing number of studies on the potential for chatbots in patient education. In this systematic review, we aimed to provide a pooled assessment of the appropriateness and accuracy of chatbot responses in patient education across various medical disciplines. **Methods** This was a PRISMA-compliant systematic review and meta-analysis. PubMed and Scopus were searched from January-August 2023. Eligible studies that assessed the utility of chatbots in patient education were included. Primary outcomes were the appropriateness and quality of chatbot responses. Secondary outcomes included readability and concordance with published guidelines and Google searches. A random-effect proportional meta-analysis was used for pooling data. **Results** Following initial screening, 21 studies were included. The pooled rate of appropriateness of chatbot answers was 89.1% (95%CI: 84.9%-93.3%). ChatGPT was the most assessed chatbot. Responses, while accurate, were found to be at a college reading level as the weighted mean Flesh-Kincaid Grade Level was 13.1 (95%CI: 11.7-14.5) and the weighted mean Flesch Reading Ease Score was 38.6 (95%CI: 29- 48.2). Answers of chatbots to questions relevant to patient education had 78.6%-95% concordance with published guidelines in colorectal surgery and urology. Chatbots had higher patient education scores (87% vs 78%) than Google Search. **Conclusions** Chatbots provide largely accurate and appropriate answers for patient education. The advanced reading level of chatbot responses might be a limitation to their wide adoption as a source for patient education. However, they outperform traditional search engines and align well with professional guidelines, showcasing their potential in patient education.

Access or request full text: https://libkey.io/10.1177/00031348251367031

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40790847&profid=ehost

9. Computer aided detection and diagnosis of polyps in adult patients undergoing colonoscopy: a living clinical practice guideline

Item Type: Journal Article

Authors: Foroutan, Farid;Vandvik, Per Olav;Helsingen, Lise M.;Kalager, Mette;Rutter, Matt;Selby, Kevin;Pilonis, Nastazja Dagny;Anderson, Joseph C.;McKinnon, Annette;Fuchs, Jonathan M.;Quinlan, Casey;Buskermolen, Maaike;Senore, Carlo;Wang, Pu;Sung, Joseph J. Y.;Haug, Ulrike;Bjerkelund, Silje;Triantafyllou, Konstantinos;Shung, Dennis L.;Halvorsen, Natalie, et al

Publication Date: 2025

Journal: BMJ (Clinical Research Ed.) 388, pp. e082656

Abstract: Clinical Question: In adult patients undergoing colonoscopy for any indication (screening, surveillance, follow-up of positive faecal immunochemical testing, or gastrointestinal symptoms such as blood in the stools) what are the benefits and harms of computer-aided detection (CADe)?; **Context and Current Practice:** Colorectal cancer (CRC), the third most common cancer and the second leading cause of cancer-related death globally, typically arises from adenomatous polyps. Detection and removal of polyps during colonoscopy can reduce the risk of cancer. CADe systems use artificial intelligence (AI) to assist endoscopists by analysing real-time colonoscopy images to detect potential polyps. Despite their increasing use in clinical practice, guideline recommendations that carefully balance all patient-important outcomes remain unavailable. In this first iteration of a living guideline, we address the use of CADe at the level of an individual patient.; **Evidence:** Evidence for this recommendation is drawn from a living systematic review of 44 randomised controlled trials (RCTs) involving more than 30 000 participants and a companion microsimulation study simulating 10 year follow-up for 100 000 individuals aged 60-69 years to assess the impact of CADe on patient-important outcomes. While no direct evidence was found for critical outcomes of colorectal cancer incidence and post-colonoscopy cancer incidence, low certainty data from the trials indicate that CADe may increase positive endoscopy findings. The microsimulation modelling, however, suggests little to no effect on CRC incidence, CRC-related mortality, or colonoscopy-related complications (perforation and bleeding) over the 10 year follow-up period, although low certainty evidence indicates CADe may increase the number of colonoscopies performed per patient. A review of values and preferences identified that patients value mortality reduction and quality of care but worry about increased anxiety, overdiagnosis, and more frequent surveillance.; Recommendation: For adults who have agreed to undergo colonoscopy, we suggest against the routine use of CADe (weak recommendation).; **How This Guideline Was Created:** An international panel, including three patient partners, 11 healthcare providers, and seven methodologists, deemed by MAGIC and The BMJ to have no relevant competing interests, developed this recommendation. For this guideline the panel took an individual patient approach. The panel started by defining the clinical question in PICO format, and prioritised outcomes including CRC incidence and mortality. Based on the linked systematic review and microsimulation study, the panel sought to balance the benefits, harms, and burdens of CADe and assumed patient preferences when making this recommendation UNDERSTANDING THE RECOMMENDATION: The guideline panel found the benefits of CADe on critical outcomes, such as CRC incidence and post-colonoscopy cancer incidence, over a 10 year follow up period to be highly uncertain. Low certainty evidence suggests little to no impact on CRC-related mortality, while the potential burdens-including more frequent surveillance colonoscopies-are likely to affect many patients. Given the small and uncertain benefits and the

likelihood of burdens, the panel issued a weak recommendation against routine CADe use.The panel acknowledges the anticipated variability in values and preferences among patients and clinicians when considering these uncertain benefits and potential burdens. In healthcare settings where CADe is available, individual decision making may be appropriate.; **Updates**: This is the first iteration of a living practice guideline. The panel will update this living guideline if ongoing evidence surveillance identifies new CADe trial data that substantially alters our conclusions about CRC incidence, mortality, or burdens, or studies that increase our certainty in values and preferences of individual patients. Updates will provide recommendations on the use of CADe from a healthcare systems perspective (including resource use, acceptability, feasibility, and equity), as well as the combined use of CADe and computer aided diagnosis (CADx). Users can access the latest guideline version and supporting evidence on MAGICapp, with updates periodically published in The BMJ .

Access or request full text: https://libkey.io/10.1136/bmj-2024-082656

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40147837&profid=ehost

10. Data and data privacy impact assessments in the context of AI research and practice in the UK

Item Type: Journal Article

Authors: Gilbert, Fiona J.;Palmer, Jo;Woznitza, Nick;Nash, Jonathan;Brackstone, Carla;Faria, Lisa;Dunbar, J. K.;Hogg, Henry David Jeffry;Liu, Xiaoxuan and Denniston, Alastair K.

Publication Date: 2025

Journal: Frontiers in Health Services , pp. 1–6

Access or request full text: https://libkey.io/10.3389/frhs.2025.1525955

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=rzh&AN=184969907&profid=ehost

11. 'In the Midst of Every Crisis, Lies Great Opportunity': Perceptions of the Future Use of Artificial Intelligence in the UK NHS Primary Care

Item Type: Journal Article

Authors: Greenhalgh, Sue;Guo, Li and Yeowell, Gill

Publication Date: 2025

Journal: Musculoskeletal Care 23(2), pp. 1–9

Abstract: Background: Amidst a backdrop of crisis in primary healthcare, characterised by increasing patient demands and a stagnant workforce, artificial intelligence (AI) is proposed as a potential enhancer of clinical efficacy and decision-making support. Interviews explored how AI could serve as a 'clinical nudge', assisting rather than supplanting human decision-makers. **Method:** This qualitative study explores stakeholder perceptions of AI in NHS primary care settings in the Northwest of England through semi-structured interviews and site visits. Participants included healthcare professionals and patients. **Results:** All highlighted AI's potential to manage large amounts of patient data that may contain inaccuracies or irrelevant information effectively, and aid in the implementation of clinical guidelines. However, concerns about data quality, cybersecurity and the impact on clinical skills were prevalent. **Conclusions:** Findings suggest a cautious but optimistic view of AI as a tool for improving efficiency and patient safety in primary care, emphasising the need for robust governance structures to ensure its beneficial integration into clinical workflows. This study underlines the necessity of balancing technological innovation with the preservation of essential human elements within the healthcare process.

Access or request full text: https://libkey.io/10.1002/msc.70092

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=rzh&AN=186226653&profid=ehost

12. Complete AI-Enabled Echocardiography Interpretation With Multitask Deep Learning

Item Type: Journal Article

Authors: Holste, G.;Oikonomou, E. K.;Tokodi, M.;Kovács, A.;Wang, Z. and Khera, R.

Publication Date: 2025

Journal: JAMA 334(4), pp. 306–318

Abstract: Importance: Echocardiography is a cornerstone of cardiovascular care, but relies on expert interpretation and manual reporting from a series of videos. An artificial intelligence (AI) system, PanEcho, has been proposed to automate echocardiogram interpretation with multitask deep learning.; Objective: To develop and evaluate the accuracy of an AI system on a comprehensive set of 39 labels and measurements on transthoracic echocardiography (TTE).; **Design, Setting, and Participants:** This study represents the development and retrospective, multisite validation of an AI system. PanEcho was developed using TTE studies conducted at Yale New Haven Health System (YNHHS) hospitals and clinics from January 2016 to June 2022 during routine care. The model was internally validated in a temporally distinct YNHHS cohort from July to December 2022, externally validated across 4 diverse external cohorts, and publicly released.; **Main Outcomes and Measures:** The primary outcome was the area under the receiver operating characteristic curve (AUC) for diagnostic classification tasks and mean absolute error for parameter estimation tasks, comparing AI predictions with the assessment of the interpreting cardiologist.; Results: This study included 1.2

million echocardiographic videos from 32 265 TTE studies of 24 405 patients across YNHHS hospitals and clinics. The AI system performed 18 diagnostic classification tasks with a median (IQR) AUC of 0.91 (0.88-0.93) and estimated 21 echocardiographic parameters with a median (IQR) normalized mean absolute error of 0.13 (0.10-0.18) in internal validation. For instance, the model accurately estimated left ventricular ejection fraction (mean absolute error: 4.2% internal; 4.5% external) and detected moderate or worse left ventricular systolic dysfunction (AUC: 0.98 internal; 0.99 external), right ventricular systolic dysfunction (AUC: 0.93 internal; 0.94 external), and severe aortic stenosis (AUC: 0.98 internal; 1.00 external). The AI system maintained excellent performance in limited imaging protocols, performing 15 diagnosis tasks with a median (IQR) AUC of 0.91 (0.87-0.94) in an abbreviated TTE cohort and 14 tasks with a median (IQR) AUC of 0.85 (0.77-0.87) on real-world point-of-care ultrasonography acquisitions from YNHHS emergency departments.; **Conclusions and Relevance:** In this study, an AI system that automatically interprets echocardiograms maintained high accuracy across geography and time from complete and limited studies. This AI system may be used as an adjunct reader in echocardiography laboratories or AI-enabled screening tool in point-of-care settings following prospective evaluation in the respective clinical workflows.

Access or request full text: https://libkey.io/10.1001/jama.2025.8731

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40549400&profid=ehost

13. AI-Guided Lung Ultrasounds Could Help Nonexpert Clinicians Acquire "Expert-Level" Images

Item Type: Journal Article

Authors: Hswen, Y. and Abbasi, J.

Publication Date: 2025

Journal: JAMA 333(12), pp. 1019–1020

Access or request full text: https://libkey.io/10.1001/jama.2024.28235

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=39982719&profid=ehost

14. A Large Proportion of Parkinson Disease Diagnoses Are Wrong-Here's How AI Could Help

Item Type: Journal Article

Authors: Hswen, Y. and Anderer, S.

Publication Date: 2025

Journal: JAMA 334(3), pp. 198–199

Access or request full text: https://libkey.io/10.1001/jama.2025.3276

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40512482&profid=ehost

15. How AI Could Improve Health Care for People With Intellectual and Developmental Disabilities

Item Type: Journal Article

Authors: Hswen, Y. and Collins, N.

Publication Date: 2025

Journal: JAMA 333(16), pp. 1377–1379

Access or request full text: https://libkey.io/10.1001/jama.2025.2552

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40116837&profid=ehost

16. Can AI teach medicine? Not whether but how

Item Type: Journal Article

Authors: Jankowski, Molly

Publication Date: 2025

Journal: BMJ (Clinical Research Ed.) 390, pp. r1571

Abstract: Competing Interests: Competing interests: None declared.

Access or request full text: https://libkey.io/10.1136/bmj.r1571

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40730381&profid=ehost

17. Advancements in artificial intelligence transforming medical education: a comprehensive overview

Item Type: Journal Article

Authors: Khakpaki, Aliasghar

Publication Date: 2025

Journal: Medical Education Online 30(1), pp. 2542807

Abstract: Background: Artificial intelligence (AI) is revolutionizing medical education by introducing innovative tools and reshaping traditional teaching and learning methods. AI technologies such as virtual and augmented reality, adaptive learning platforms, and AI-driven assessments are increasingly recognized for their potential to enhance diagnostic precision, clinical decision-making, and personalized learning experiences.; **Objective:** This narrative review explores the current trends, challenges, and innovations associated with the integration of AI in medical education. It aims to critically examine how AI transforms teaching and learning processes while addressing ethical concerns and practical barriers.; **Methods:** We performed a systematic literature search across three major databases (PubMed, Scopus, and Web of Science) for publications dated 2010-2024. Our search strategy employed key terms including 'artificial intelligence,' 'medical education,' and 'AI-based learning platforms' to identify relevant peer-reviewed articles, review papers, and case studies. After screening and selection, 67 studies met our inclusion criteria for final analysis.; **Results:** AII technologies improve learning outcomes by creating personalized, immersive, and interactive environments. They support clinical decision-making and procedural skills training while addressing diverse learner needs. However, ethical issues like data privacy, algorithmic biases, and equitable access, coupled with challenges like faculty resistance and technological infrastructure gaps, limit broader adoption.; **Conclusion:** AI is an important tool in medical education, offering significant opportunities to enhance learning outcomes and bridge educational gaps. However, its successful integration requires ethical frameworks, faculty training, and equitable resource allocation. A balanced approach that combines technological innovation with human-centered pedagogy is essential to preserve empathy and ethical care in healthcare.

Access or request full text: https://libkey.io/10.1080/10872981.2025.2542807

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40798935&profid=ehost

18. Research on artificial intelligence, machine and deep learning in medicine: global characteristics, readiness, and equity

Item Type: Journal Article

Authors: Klingelhöfer, Doris;Braun, Markus;Dröge, Janis;Groneberg, David A. and Brüggmann, Dörthe

Publication Date: 2025

Journal: Globalization and Health 21(1), pp. 36

Abstract: **Background:** Artificial intelligence (AI) will have a lasting and drastic impact on medical research and healthcare. In addition to the benefits, the associated risks are also the subject of controversial debate and there are fears of serious consequences. There is an urgent need for action, which must be underpinned by scientific information.; **Methods**: By analyzing temporal and geographic patterns, including national readiness for access to AI, we therefore identified incentives and barriers to global research under socioeconomic conditions.; **Results:** The explosive increase in annual publications started in 2017. The main players in AI med research were the USA, China, the UK, Germany, and South Korea. There was a significant correlation between the publication output on AI in medicine (AI med) and the metrics for economy and innovation. Additionally, citation patterns show the disadvantage of the Global South compared to the North American and European countries. In several weaker economies: Jordan, Pakistan, Egypt, Bangladesh, and Ethiopia, a more positive position was found in relation to the number of articles suggesting a better ranking in AI med research in the future.; **Conclusion:** The results show the need for advanced global networking to ensure all relevant aspects for equitable development and the beneficial use of AI med without promoting racial or regional inequities and to enforce this not only in the AI systems of economically strong countries but also for the participation of economically weaker countries. (© 2025. The Author(s).)

Access or request full text: https://libkey.io/10.1186/s12992-025-01128-1

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40484942&profid=ehost

19. Artificial intelligence in surgery: evolution, trends, and future directions

Item Type: Journal Article

Authors: Li, Huiyang;Han, Zhuoqi;Wu, Haixiao;Musaev, Elmar R.;Lin, Yile;Li, Shu;Makatsariya, Alexander D.;Chekhonin, Vladimir P.;Ma, Wenjuan and Zhang, Chao

Publication Date: 2025

Journal: International Journal of Surgery (London, England) 111(2), pp. 2101–2111

Abstract: Artificial intelligence (AI) is significantly transforming surgery by enhancing precision, decision-making, and patient outcomes. This bibliometric analysis examines AI's impact on surgery, highlighting research trends, key contributors, and evolving themes from 1998 to 2024. Utilizing data from the Web of Science Core Collection and analyzed through the Bibliometrix tool, the study reviews publication trends, author impact, institutional contributions, country-specific research activities, and keyword frequency. A total of 821 articles were examined, revealing a 14.53% annual growth rate in publications, increasing from one in 1998 to 328 in 2023. Influential contributors include 10 157 authors, notably HASHIMOTO DA and ITO M. Prominent institutions such as Harvard University and Stanford University, along with leading countries like the USA and China, play major roles in this field. High-frequency keywords identify core research areas: surgery,

artificial intelligence, classification, diagnosis, and outcomes. Thematic evolution shows a shift from foundational concepts to advanced applications and interdisciplinary collaborations. AI integration into surgical practices is revolutionizing the field, driving advancements in precision, efficiency, and patient care. The study underscores significant research growth, influential contributors, and key trends, emphasizing the importance of continued interdisciplinary collaboration and innovation. Future research should focus on enhancing AI applications, addressing data quality and security challenges, and expanding into diverse surgical contexts to further improve surgical outcomes and patient care. AI in surgery is a rapidly evolving and promising field for innovation, with its full potential reliant on enhanced collaboration across disciplines.

Access or request full text: https://libkey.io/10.1097/JS9.0000000000002159

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=39693484&profid=ehost

20. What makes a 'good' decision with artificial intelligence? A grounded theory study in paediatric care

Item Type: Journal Article

Authors: McCradden, Melissa D.;Thai, Kelly;Assadi, Azadeh;Tonekaboni, Sana;Stedman, Ian;Joshi, Shalmali;Zhang, Minfan;Chevalier, Fanny and Goldenberg, Anna

Publication Date: 2025

Journal: BMJ Evidence-Based Medicine 30(3), pp. 183–193

Abstract: **Objective:** To develop a framework for good clinical decision-making using machine learning (ML) models for interventional, patient-level decisions.; **Design:** Grounded theory qualitative interview study.; **Setting:** Primarily single-site at a major urban academic paediatric hospital, with external sampling.; Participants: Sixteen participants representing physicians (n=10), nursing (n=3), respiratory therapists (n=2) and an ML specialist (n=1) with experience working in acute care environments were identified through purposive sampling. Individuals were recruited to represent a spectrum of ML knowledge (three expert, four knowledgeable and nine non-expert) and years of experience (median=12.9 years postgraduation). Recruitment proceeded through snowball sampling, with individuals approached to represent a diversity of fields, levels of experience and attitudes towards artificial intelligence (AI)/ML. A member check step and consultation with patients was undertaken to vet the framework, which resulted in some minor revisions to the wording and framing.; **Interventions:** A semi-structured virtual interview simulating an intensive care unit handover for a hypothetical patient case using a simulated ML model and seven visualisations using known methods addressing interpretability of models in healthcare. Participants were asked to make an initial care plan for the patient, then were presented with a model prediction followed by the seven visualisations to explore their judgement and potential influence and understanding of the visualisations. Two visualisations contained contradicting information to probe participants' resolution process for the contrasting information. The ethical justifiability and clinical reasoning process were explored.; **Main Outcome:** A comprehensive

framework was developed that is grounded in established medicolegal and ethical standards and accounts for the incorporation of inference from ML models.; **Results:** We found that for making good decisions, participants reflected across six main categories: evidence, facts and medical knowledge relevant to the patient's condition; how that knowledge may be applied to this particular patient; patient-level, family-specific and local factors; facts about the model, its development and testing; the patient-level knowledge sufficiently represented by the model; the model's incorporation of relevant contextual factors. This judgement was centred on and anchored most heavily on the overall balance of benefits and risks to the patient, framed by the goals of care. We found evidence of automation bias, with many participants assuming that if the model's explanation conflicted with their prior knowledge that their judgement was incorrect; others concluded the exact opposite, drawing from their medical knowledge base to reject the incorrect information provided in the explanation. Regarding knowledge about the model, we found that participants most consistently wanted to know about the model's historical performance in the cohort of patients in their local unit where the hypothetical patient was situated.; **Conclusion:** Good decisions using AI tools require reflection across multiple domains. We provide an actionable framework and question guide to support clinical decision-making with AI.

Access or request full text: https://libkey.io/10.1136/bmjebm-2024-112919

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=39939160&profid=ehost

21. Ethical and regulatory considerations in the use of AI and machine learning in nursing: A systematic review

Item Type: Journal Article

Authors: Mohammed, Sobhia Ahmed Abdel Qader;Osman, Yasmine Mahmoud Moussa;Ibrahim, Ateya Megahed and Shaban, Mostafa

Publication Date: 2025

Journal: International Nursing Review 72(1), pp. 1–18

Abstract: Aim: This study systematically explores the ethical and regulatory considerations surrounding the integration of artificial intelligence (AI) and machine learning (ML) in nursing practice, with a focus on patient autonomy, data privacy, algorithmic bias, and accountability. **Background:** AI and ML are transforming nursing practice by enhancing clinical decision-making and operational efficiency. However, these technologies present significant ethical challenges related to ensuring patient autonomy, safeguarding data privacy, mitigating algorithmic bias, and ensuring transparency in decision-making processes. Current frameworks are not sufficiently tailored to nursing-specific contexts. **Methods:** A systematic review was conducted, adhering to PRISMA guidelines. Six major databases were searched for studies published between 2000 and 2024. Seventeen studies met the inclusion criteria and were included in the final analysis. Results: Five key themes emerged from the review: enhancement of clinical decision-making, promotion of ethical awareness, support

for routine nursing tasks, challenges in algorithmic bias, and the importance of public engagement in regulatory frameworks. The review identified critical gaps in nursing-specific ethical guidelines and regulatory oversight for AI integration in practice. **Discussion:** AI technologies offer substantial benefits for nursing, particularly in decision-making and task efficiency. However, these advantages must be balanced against ethical concerns, including the protection of patient rights, algorithmic transparency, and bias mitigation. Current regulatory frameworks require adaptation to meet the ethical needs of nursing. **Conclusion and implications for nursing and health policy:** The findings emphasize the need for the development of nursing-specific ethical guidelines and robust regulatory frameworks to ensure the responsible integration of AI technologies into nursing practice. AI integration must uphold ethical principles while enhancing the quality of care.

Access or request full text: https://libkey.io/10.1111/inr.70010

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=rzh&AN=184046319&profid=ehost

22. Beyond AlphaFold: how AI is decoding the grammar of the genome

Item Type: Journal Article

Authors: Perkel, Jeffrey M.

Publication Date: -08-18 ,2025

Journal: Nature 644(8077), pp. 829–832

Abstract: Scientists are seeking to decipher the role of non-coding DNA in the human genome, helped by a suite of artificial-intelligence tools.

Access or request full text: https://libkey.io/10.1038/d41586-025-02621-8

URL: https://www.nature.com/articles/d41586-025-02621-8

23. Diabetic Retinopathy Is Massively Underscreened-An AI System Could Help

Item Type: Journal Article

Authors: Perlis, R. and Schweitzer, K.

Publication Date: 2025

Journal: JAMA 333(19), pp. 1653–1655

Access or request full text: https://libkey.io/10.1001/jama.2025.2778

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40249630&profid=ehost

24. Prejudiced interactions with large language models (LLMs) reduce trustworthiness and behavioral intentions among members of stigmatized groups

Item Type: Journal Article

Authors: Petzel, Zachary W. and Sowerby, Leanne

Publication Date: 2025

Journal: Computers in Human Behavior 165, pp. N.PAG

Abstract: Users report prejudiced responses generated by large language models (LLMs) like ChatGPT. Across 3 preregistered experiments, members of stigmatized social groups (Black Americans, women) reported higher trustworthiness of LLMs after viewing unbiased interactions with ChatGPT compared to when viewing AI-generated prejudice (i.e., racial or gender disparities in salary). Notably, higher trustworthiness accounted for increased behavioral intentions to use LLMs, but only among stigmatized social groups. Conversely, White Americans were more likely to use LLMs when AI-generated prejudice confirmed implicit racial biases, while men intended to use LLMs when responses matched implicit gender biases. Results suggest reducing AI-generated prejudice may promote trustworthiness of LLMs among members of stigmatized social groups, increasing their intentions to use AI tools. Importantly, addressing AI-generated prejudice could minimize social disparities in adoption of LLMs which might further exacerbate professional and educational disparities. Given expected integration of AI in professional and educational settings, these findings may guide equitable implementation strategies among employees and students, in addition to extending theoretical models of technology acceptance by suggesting additional mechanisms of behavioral intentions to use emerging technologies (e.g., trustworthiness). • Three experiments examine the effects of prejudice generated by LLMs. • AI-generated prejudice reduced trust among Black Americans and UK women. • Distrust subsequently diminished intentions to use LLMs. • Stronger implicit biases promoted intentions among White Americans and UK men.

Access or request full text: https://libkey.io/10.1016/j.chb.2025.108563

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=rzh&AN=182639771&profid=ehost

25. An Overview of Real-World Data Infrastructure for Cancer Research

Item Type: Journal Article

Authors: Price, G.;Peek, N.;Eleftheriou, I.;Spencer, K.;Paley, L.;Hogenboom, J.;van Soest, J.;Dekker, A.;van

Herk, M. and Faivre-Finn, C.

Publication Date: 2025

Journal: Clinical Oncology 38, pp. N.PAG

Abstract: There is increasing interest in the opportunities offered by Real World Data (RWD) to provide evidence where clinical trial data does not exist, but access to appropriate data sources is frequently cited as a barrier to RWD research. This paper discusses current RWD resources and how they can be accessed for cancer research. There has been significant progress on facilitating RWD access in the last few years across a range of scales, from local hospital research databases, through regional care records and national repositories, to the impact of federated learning approaches on internationally collaborative studies. We use a series of case studies, principally from the UK, to illustrate how RWD can be accessed for research and healthcare improvement at each of these scales. For each example we discuss infrastructure and governance requirements with the aim of encouraging further work in this space that will help to fill evidence gaps in oncology. There are challenges, but real-world data research across a range of scales is already a reality. Taking advantage of the current generation of data sources requires researchers to carefully define their research question and the scale at which it would be best addressed. • There is increasing interest in the opportunities offered by Real World Data (RWD) to provide evidence where clinical trial data does not exist. • Advances in healthcare data infrastructure have improved and real-world data access for research is available across a range of scales. • Local, regional, national, and federated RWD resources have different properties and provide access to cohorts of differing size and detail. • Choice of real-world data research infrastructure should be driven by research question and hypothesis.

Access or request full text: https://libkey.io/10.1016/j.clon.2024.03.011

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=rzh&AN=183084542&profid=ehost

26. Evaluating ChatGPT's Accuracy and Readability in Responding to Common Ophthalmology Questions

Item Type: Journal Article

Authors: Riazi Esfahani, Parsa;Ward, Jason;Yong, Aidan;Nguyen, Tri Brian;Reddy, Akshay J.;Sobhani, Sina;Chen, Dalbert;Akanda, Marib and Sheikh, Shazia

Publication Date: 2025

Journal: Cureus 17(7), pp. e87920

Abstract: **Objectives:** Eye-related conditions are a prevalent issue that continues to grow worldwide, affecting the sight of at least 2.2 billion individuals globally. Many patients may have questions or concerns that they bring to the internet before their healthcare provider, which can impact their health behavior. With the

popularity of large language model (LLM)-based artificial intelligence (AI) chat platforms, like ChatGPT, there needs to be a better understanding of the suitability of their generated content. We aim to evaluate ChatGPT for the accuracy, comprehensiveness, and readability of its responses to ophthalmology-related medical inquiries.; **Methodology:** Twenty-two ophthalmology patient questions were generated based on commonly searched symptoms on Google Trends and used as inputs on ChatGPT. Flesch Reading Ease (FRE) and Flesch-Kincaid Grade Level (FKGL) formulas were used to evaluate response readability. Two English-speaking, board-certified ophthalmologists evaluated the accuracy, comprehensiveness, and clarity of the responses as proxies for appropriateness. Other validated tools, including QUEST, DISCERN, and an urgency scale, were used for additional quality metrics. Responses were analyzed using descriptive statistics and comparative tests. **Results:** All responses scored a 2.0 for QUEST Tone and 1.0 for Complementarity. DISCERN Uncertainty had a mean of 3.86 ± 0.48, with no responses receiving a 5. Urgency to seek care scores averaged 2.45 ± 0.60, with only the narrow-angle glaucoma response prompting an ambulance call. Readability scores resulted in a mean FRE of 45.3 ± 9.98 and FKGL of 10.1 ± 1.74. These quality assessment scores showed no significant differences between categories of conditions. The ophthalmologists' reviews rated 15/22 (68.18%) of responses as appropriate. The mean scores for accuracy, comprehensiveness, and clarity were 4.41 ± 0.73, 4.89 ± 0.32, and 4.55 ± 0.63, respectively, with comprehensiveness ranking significantly higher than the other aspects ($P < 0.01$). The responses for glaucoma and cataract had the lowest appropriateness ratings.; **Conclusions:** ChatGPT generally demonstrated appropriate responses to common ophthalmology questions, with high ratings for comprehensiveness, clarity, and support for medical professional follow-up. Performance did vary by conditions, with weaker appropriateness in responses related to glaucoma and cataract.

Access or request full text: https://libkey.io/10.7759/cureus.87920

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40809620&profid=ehost

27. Investigating the Key Trends in Applying Artificial Intelligence to Health Technologies: A Scoping Review

Item Type: Journal Article

Authors: Samah, T. and Samar, M.

Publication Date: 2025

Journal: PloS One 20(5), pp. e0322197

Abstract: **Background:** The use of Artificial Intelligence (AI) is exponentially rising in the healthcare sector. This change influences various domains of early identification, diagnosis, and treatment of diseases.; **Purpose:** This study examines the integration of AI in healthcare, focusing on its transformative potential in diagnostics and treatment, and the challenges and methodologies. shaping its future development.; **Methods:** The review included 68 academic studies retracted from different databases (WOS, Scopus and Pubmed) from January 2020 and April 2024. After careful review and data analysis, AI methodologies, benefits and

challenges, were summarized.; **Results:** The number of studies showed a steady rise from 2020 to 2023. Most of them were the results of a collaborative work with international universities (92.1%). The majority (66.7%) were published in top-tier (Q1) journals and 40% were cited 2-10 times. The results have shown that AI tools such as deep learning methods and machine learning continue to significantly improve accuracy and timely execution of medical processes. Benefits were discussed from both the organizational and the patient perspective in the categories of diagnosis, treatment, consultation and health monitoring of diseases. However, some challenges may exist, despite these benefits, and are related to data integration, errors related to data processing and decision making, and patient safety.; **Conclusion:** The article examines the present status of AI in medical applications and explores its potential future applications. The findings of this review are useful for healthcare professionals to acquire deeper knowledge on the use of medical AI from design to implementation stage. However, a thorough assessment is essential to gather more insights into whether AI benefits outweigh its risks. Additionally, ethical and privacy issues need careful consideration.

Access or request full text: https://libkey.io/10.1371/journal.pone.0322197

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40372995&profid=ehost

28. Artificial Intelligence in Medical Education: a Scoping Review of the Evidence for Efficacy and Future Directions

Item Type: Journal Article

Authors: Shaw, Kody;Henning, Marcus A. and Webster, Craig S.

Publication Date: 2025

Journal: Medical Science Educator 35(3), pp. 1803–1816

Abstract: Artificial intelligence (AI) has demonstrated clinical potential, yet its influence on medical education remains limited. This review explores AI applications in medical education, evaluates available evidence and considers future applications. We conducted a scoping review (PubMed, MEDLINE, SCOPUS, Google Scholar; 2010-2022) identifying 42 relevant peer-reviewed articles. Four key themes emerged: surgical skills assessment, radiology training, interactive learning, and text interpretation. Current applications enhance surgical simulation and facilitate interactive learning. These tools may evolve towards comprehensive and individualised educational aids. Despite promising early applications, evidence on educational and clinical outcomes remains limited. Future research should prioritise validated outcomes in larger trials to confirm generalisability and address AI limitations. (© The Author(s) 2025.)

Access or request full text: https://libkey.io/10.1007/s40670-025-02373-0

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40625971&profid=ehost

29. Regulation of AI scribes in clinical practice

Item Type: Journal Article

Authors: Shemtob, Lara;Majeed, Azeem and Beaney, Thomas

Publication Date: 2025

Journal: BMJ (Clinical Research Ed.) 389, pp. r1248

Abstract: Competing Interests: Competing interests: The BMJ has judged that there are no disqualifying financial ties to commercial companies. The authors declare no other interests.

Access or request full text: https://libkey.io/10.1136/bmj.r1248

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40541424&profid=ehost

30. Should medical students be encouraged to use generative artificial intelligence to study?

Item Type: Journal Article

Authors: Sibal, Rhea;Webster, George and Manton-Roseblade, Elgan

Publication Date: 2025

Journal: BMJ (Clinical Research Ed.) 390, pp. r1418

Abstract: Competing Interests: Competing interests: All authors have read and understood BMJ policy on declaration of interests and declare no relevant interests.

Access or request full text: https://libkey.io/10.1136/bmj.r1418

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40701660&profid=ehost

31. Equitable machine learning counteracts ancestral bias in precision medicine

Item Type: Journal Article

Authors: Smith, L. A.;Cahill, J. A.;Lee, J. H. and Graim, K.

Publication Date: 2025

Journal: Nature Communications 16(1), pp. 2144

Abstract: Gold standard genomic datasets severely under-represent non-European populations, leading to inequities and a limited understanding of human disease. Therapeutics and outcomes remain hidden because we lack insights that could be gained from analyzing ancestrally diverse genomic data. To address this significant gap, we present PhyloFrame, a machine learning method for equitable genomic precision medicine. PhyloFrame corrects for ancestral bias by integrating functional interaction networks and population genomics data with transcriptomic training data. Application of PhyloFrame to breast, thyroid, and uterine cancers shows marked improvements in predictive power across all ancestries, less model overfitting, and a higher likelihood of identifying known cancer-related genes. Validation in fourteen ancestrally diverse datasets demonstrates that PhyloFrame is better able to adjust for ancestry bias across all populations. The ability to provide accurate predictions for underrepresented groups, in particular, is substantially increased. Analysis of performance in the most diverse continental ancestry group, African, illustrates how phylogenetic distance from training data negatively impacts model performance, as well as PhyloFrame's capacity to mitigate these effects. These results demonstrate how equitable artificial intelligence (AI) approaches can mitigate ancestral bias in training data and contribute to equitable representation in medical research. (© 2025. The Author(s).)

Access or request full text: https://libkey.io/10.1038/s41467-025-57216-8

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40064867&profid=ehost

32. Pitfalls of large language models in medical ethics reasoning

Item Type: Journal Article

Authors: Soffer, Shelly;Sorin, Vera;Nadkarni, Girish N. and Klang, Eyal

Publication Date: 2025

Journal: NPJ Digital Medicine 8(1), pp. 461

Abstract: Competing Interests: Competing interests: The authors declare no competing interests.

Access or request full text: https://libkey.io/10.1038/s41746-025-01792-y

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40696098&profid=ehost

33. Artificial intelligence in medicine: How do experts think AI could transform the NHS?

Item Type: Journal Article

Authors: Stokel-Walker, Chris

Publication Date: 2025

Journal: BMJ (Clinical Research Ed.) 388, pp. r248

Access or request full text: https://libkey.io/10.1136/bmj.r248

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=39904521&profid=ehost

34. Evaluation of AI Summaries on Interdisciplinary Understanding of Ophthalmology Notes

Item Type: Journal Article

Authors: Tailor, P. D.;D'Souza, H. S.;Castillejo Becerra, C. M.;Dahl, H. M.;Patel, N. R.;Kaplan, T. M.;Kohli, D.;Bothun, E. D.;Mohney, B. G.;Tooley, A. A.;Baratz, K. H.;Iezzi, R.;Barkmeier, A. J.;Bakri, S. J.;Roddy, G. W.;Hodge, D.;Sit, A. J.;Starr, M. R. and Chen, J. J.

Publication Date: 2025

Journal: JAMA Ophthalmology 143(5), pp. 410–419

Abstract: Importance: Specialized ophthalmology terminology limits comprehension for nonophthalmology clinicians and professionals, hindering interdisciplinary communication and patient care. The clinical implementation of large language models (LLMs) into practice has to date been relatively unexplored.; **Objective:** To evaluate LLM-generated plain language summaries (PLSs) integrated into standard ophthalmology notes (SONs) in improving diagnostic understanding, satisfaction, and clarity.; **Design, Setting, and Participants:** Randomized quality improvement study conducted from February 1, 2024, to May 31, 2024, including data from inpatient and outpatient encounters in a single tertiary academic center. Participants were nonophthalmology clinicians and professionals and ophthalmologists. The single inclusion criterion was any encounter note generated by an ophthalmologist during the study dates. Exclusion criteria were (1) lack of established nonophthalmology clinicians and professionals for outpatient encounters and (2) procedure-only patient encounters.; Intervention: Addition of LLM-generated plain language summaries to ophthalmology notes.; **Main Outcomes and Measures:** The primary outcome was survey responses from nonophthalmology clinicians and professionals assessing understanding, satisfaction, and clarity of ophthalmology notes. Secondary outcomes were survey responses from ophthalmologists evaluating PLS in terms of clinical workflow and accuracy, objective measures of semantic quality, and safety analysis.; **Results:** A total of 362 (85%) nonophthalmology clinicians and professionals (33.0% response rate) preferred the PLS to SON. Demographic data on age, race and ethnicity, and sex were not collected. Nonophthalmology clinicians and

professionals reported enhanced diagnostic understanding (percentage point increase, 9.0; 95% CI, 0.3-18.2; P = .01), increased note detail satisfaction (percentage point increase, 21.5; 95% CI, 11.4-31.5; P .06]). PLS semantic analysis found high meaning preservation (bidirectional encoder representations from transformers score mean F1 score: 0.85) with greater readability than SONs (Flesch Reading Ease: 51.8 vs 43.6; Flesch-Kincaid Grade Level: 10.7 vs 11.9). Ophthalmologists (n = 489; 84% response rate) reported high PLS accuracy (90% 320 of 355] a great deal) with minimal review time burden (94.9% 464 of 489] ≤1 minute). PLS error rate on ophthalmologist review was 26% (126 of 489). A total of 83.9% (104 of 126) of errors were deemed low risk for harm and none had a risk of severe harm or death.; **Conclusions and Relevance:** In this study, use of LLM-generated PLSs was associated with enhanced comprehension and satisfaction among nonophthalmology clinicians and professionals, which might aid interdisciplinary communication. Careful implementation and safety monitoring are recommended for clinical integration given the persistence of errors despite physician review.

Access or request full text: https://libkey.io/10.1001/jamaophthalmol.2025.0351

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=40178837&profid=ehost

35. **Moving Toward Implementation of Responsible Artificial Intelligence in Health Care: The European TRAIN Initiative**

Item Type: Journal Article

Authors: van Genderen, M. E.;Kant, I. M. J.;Tacchetti, C. and Jovinge, S.

Publication Date: 2025

Journal: JAMA 333(17), pp. 1483–1484

Access or request full text: https://libkey.io/10.1001/jama.2025.1335

URL: https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=mdc&AN=39928513&profid=ehost