



# Using AI in occupational therapy

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We've set out advice for the safe and effective use of artificial intelligence (AI) in occupational therapy practice, education and research. It is not a 'how to' guide. It reflects the current capabilities of AI and takes a risk-based approach, with more permissive guidance for low-risk scenarios and greater oversight where there's potential for harm. At the same time, we want the occupational therapy workforce to embrace the opportunities that AI offers and to think creatively about innovation and service improvement.

Use this guidance together with employer-specific policies and procedures and national guidance. You should check which AI tools are approved for use in your organisation. We'll review and update this guidance yearly (unless there are major changes) to reflect advancements in AI technology and evolving best practices in practice, education and research.

We'll publish occupational therapy practice examples over the coming months. In the meantime you can read about AI adoption and learn from success stories on our website and the NHS website.

## Introduction

AI is transforming how we're delivering health and care, streamlining systems, and enhancing outcomes for people accessing services. There are several types of AI used in health and care settings, each with distinct applications. Each of these AI types has a role to play in enhancing efficiency, accuracy and accessibility of health and care services. While AI can't replace human expertise, it acts as a powerful support tool, assisting practitioners to deliver better outcomes for people accessing services and improving health and care systems.

- **Predictive Analytics AI:** This type of AI analyses vast amounts of historical data to identify patterns and predict future trends. It helps anticipate disease outbreaks, assess population risks and optimise hospital resource allocation. Predictive models can flag people at high risk of complications based on their medical history and current symptoms, allowing early intervention and better outcomes.
- **Large Language Model (LLM)** is a type of AI that has been trained on huge amounts of text to understand and generate human-like responses. It can answer questions, summarise information, write creatively and even hold conversations. It works by predicting the most likely next words based on patterns it has learned from language-based data. **Language-based data** refers to any content composed of written or spoken words. This includes materials such as text from books, articles, and websites, as well as transcripts and captions derived from audio or video recordings.
- **Generative AI:** AI models, including large language models (LLMs), are being used to generate health and care reports, summarise clinical studies and tailor intervention plans based on individual's data. These systems can help you interpret complex findings and personalise approaches. Generative artificial intelligence (AI) platforms like ChatGPT, Copilot, Claude, Gemini and Dall-E have already demonstrated capabilities to support occupational therapy activities, including information retrieval, task automation, data analysis and communication. Generative AI refers to a type of artificial intelligence that can create new content, such as text, images, music or even code, based on the data it has been trained on. Instead of just analysing or responding to data, generative AI can produce original outputs that mimic the patterns and styles found in the training data – a creative assistant that can generate new ideas and content<sup>1</sup>.

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<sup>1</sup> Government Digital Service (2025) **Artificial Intelligence Playbook for the UK Government** p22. Available at <https://www.gov.uk/government/publications/ai-playbook-for-the-uk-government>. Accessed 28-02-25

- **Natural Language Processing (NLP):** NLP enables AI to understand and process human language, making it valuable for health and care documentation and interaction with people accessing services. For example, AI-powered systems can transcribe assessment conversations, extract key health insights from unstructured notes taken by practitioners and place into a structured format using pre-determined headings identified by the service, and assist in answering service queries through chatbots. This technology can help reduce administrative burden and can improve accessibility.
- **Robotic Process Automation (RPA):** This automates repetitive tasks such as scheduling appointments and administrative workflows and frees you to focus on direct contact with people accessing services.
- **Machine Learning for Diagnostics:** AI-driven diagnostic tools process medical images, lab results and health and care records to assist clinicians in identifying diseases more efficiently and accurately. These systems, trained on extensive datasets, can detect anomalies in X-rays, MRIs and pathology slides, supporting informed decision making.
- **Agentic AI or Autonomous AI Systems:** These systems can make decisions, coordinate care, manage workflows or simulate clinical reasoning. They represent a level of capability beyond traditional rule-based or reactive AI tools. This field is still maturing, and many current projects are experimental. When thoughtfully designed, however, agentic AI has the potential to transform how we work, automate decision-making and unlock new forms of human-machine collaboration.

AI is also playing an increasingly valuable role in occupational therapy education and research, enhancing learning experiences, streamlining studies and supporting evidence-based advancements.

### **AI in occupational therapy education**

AI-powered tools are transforming occupational therapy education by offering personalised learning experiences and interactive training methods. Virtual simulations and AI-driven tutoring systems help you if you are a learner to refine clinical reasoning, while adaptive learning platforms adjust content to individual progress. Natural Language Processing facilitates automated transcription and summarisation, helping learners navigate literature efficiently. AI-generated case studies and assessments also support skill development, ensuring learners gain practical expertise in working with people who access services.

### **AI in research**

AI can accelerate research by analysing vast datasets quickly and efficiently. Machine learning models can assist in identifying trends within data, contributing to illness prediction and prevention studies. AI-driven literature reviews help you as a researcher synthesise findings across multiple sources, improving evidence-based decision-making. AI enables researchers to draft reports, refine hypotheses and model potential health interventions, streamlining the research process. AI also supports clinical trials by assisting with participant recruitment, analysing real-time data, detecting patterns in interventions and detecting trends, clusters, or correlations in complex datasets and visualising data.

Across both education and research, AI serves as a powerful enabler, helping you harness data-driven insights while freeing up time for critical thinking and innovation.

## **AI – What the occupational therapy workforce should do now**

1. Take responsibility for professional development in AI.
2. Understand the use of and apply AI in occupational therapy practice.
3. Maintain safety and privacy when using AI.
4. Use AI tools ethically and responsibly.
5. Manage risks associated with AI use.
6. Use AI to enhance practice and productivity where appropriate.
7. Maintain records and documentation of AI use.
8. Evaluate and improve the use of AI.
9. Collaborate and communicate effectively about AI.
10. Consider sustainable practices when using AI to minimise environmental impact.
11. Use AI in occupational therapy education.
12. Use AI in occupational therapy research.
13. Manage and lead the integration and development of AI.

### **1. Take responsibility for professional development in AI**

1.1 Engage in developing your AI literacy to progress understanding, confidence and skill in using AI systems relevant to occupational therapy.

1.2 Stay informed about advancements in AI technology and its applications in occupational therapy. AI is rapidly evolving and staying updated is crucial for safely leveraging its benefits and mitigating risks.

1.3 Regularly assess your skills and confidence in AI use and seek more training as needed. Self-assessment and ongoing professional development are essential in AI use to ensure that you stay informed, adaptive, and responsible for your engagement with this rapidly evolving technology.

### **2. Understand the use of and apply AI in occupational therapy practice**

2.1 Understand the basic principles and capabilities of AI systems. This includes knowledge of how AI generates content and its potential applications to occupational therapy.

2.2 Recognise the potential benefits and limitations of AI to occupational therapy, including current capabilities and limitations.

2.3 Understand the difference between administrative applications of AI and those that may influence practice-based decision-making. This distinction is crucial for appropriate use and risk management in several aspects of practice.

2.4 Recognise AI as a powerful assistant that can augment human capabilities across practice, education and research. Understand that AI is a tool to enhance, not replace, professional expertise, judgment or human contact.

### **3. Maintain safety and privacy when using AI**

3.1 Ensure that the use of AI does not compromise safety. Be aware of standards designed to help health and care organisations assure the clinical safety of their health and care IT software<sup>2</sup>. Safety should always be the primary concern when implementing AI in occupational therapy.

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<sup>2</sup> <https://digital.nhs.uk/data-and-information/information-standards/governance/latest-activity/standards-and-collections/dcb0160-clinical-risk-management-its-application-in-the-deployment-and-use-of-health-it-systems/>

3.2 Maintain strict adherence to data protection regulations, including Medical Devices regulations<sup>3</sup> and General Data Protection Regulations<sup>4</sup>, when using AI systems that may process personal data. Compliance with data protection laws is essential to protect patient privacy and maintain trust.

3.3 Regularly review and update practices to maintain privacy and data security in line with evolving AI technologies. As AI systems evolve, so too should the measures taken to protect personal information.

3.4 Be aware of the potential risks associated with AI use, including data breaches and unauthorised access to sensitive information about people who access services. Implement strategies to mitigate these risks and have validated contingency plans in place.

#### **4. Use AI tools ethically and responsibly**

4.1 Understand and adhere to ethical principles governing the use of AI in health and care, including transparency, fairness, and accountability to maintain public trust and ensure equity.

4.2 Ensure that the use of AI does not introduce or continue to cause biases. AI bias refers to systematic and unfair outcomes produced by AI systems, often caused by imbalanced data, flawed design choices or societal inequalities embedded in the algorithms. Ethical AI use needs careful design, training on diverse datasets and ongoing evaluation to prevent discriminatory outcomes. Look out for potential biases in AI systems and take steps to mitigate them<sup>5</sup>.

4.3 Be open and honest with people who access services about the use of AI in their care and obtain informed consent where appropriate. People who access services have the right to know when and how AI is used.

4.4 Ask about and respect an individual's preferences regarding AI during assessment and intervention. Individuals may rely on AI-driven technologies such as speech-to-text software, chatbots or assistive devices to support their engagement in the assessment or intervention. Make room for these whenever you can, instead of ignoring or changing them.

4.5 Recognise the importance of practitioner oversight and decision-making in AI-assisted processes ensuring quality assurance is maintained. While AI can provide valuable insights, final decisions should always involve your professional judgment and review.

4.6 Advocate for and choose AI solutions that make their decision-making process clear. This helps with understanding of how the system or product arrives at its conclusions so that it can be explained to people accessing services.

#### **5. Manage risks associated with AI use**

5.1 Have robust quality assurance processes in place, adhering to local practice and policy guidance on the use and application of AI within services.

5.2 Conduct regular risk assessments of AI use, identifying potential areas of concern. Proactive risk management, aligned with safety considerations, is essential for safely implementing AI in occupational therapy.

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<sup>3</sup> <https://www.gov.uk/government/publications/impact-of-ai-on-the-regulation-of-medical-products/impact-of-ai-on-the-regulation-of-medical-products>

<sup>4</sup> <https://ico.org.uk/for-organisations/uk-gdpr-guidance-and-resources/artificial-intelligence/guidance-on-ai-and-data-protection/>

<sup>5</sup> <https://pmc.ncbi.nlm.nih.gov/articles/PMC10287014/>

5.3 Develop and implement strategies to mitigate risks linked with AI use, particularly in areas with potential for harm. Having a clear risk mitigation strategy that identifies, assesses and reduces potential risks associated with AI systems helps prevent serious events and assures patient safety.

5.4 Make sure you are aware of organisational contingency plans in place for system failures or inaccuracies in AI-generated content. Backup plans ensure continuity of care in case of AI system issues.

5.5 Report any serious events or near-misses related to AI use, following appropriate local channels and reporting systems. Reporting helps identify systemic issues and contributes to the overall safety of AI use.

5.6 Be aware of the potential for over-reliance on AI and actively work to maintain critical thinking and hands-on skills. Balance AI use with non-digital occupational therapy skills to prevent deskilling.

## **6. Use AI to enhance practice and productivity where appropriate<sup>6</sup>**

6.1 Consider use of AI to improve productivity and streamline tasks such as appointment scheduling, record-keeping and assessment/report writing while maintaining confidentiality. AI can significantly reduce the time spent on assessment recording and reporting as well as routine administrative tasks.

6.2 Ensure that AI-generated administrative content is accurate and tailored to individual needs. You must review, quality assure, critically appraise and customise AI-generated content to maintain accuracy and personalisation.

6.3 Maintain responsibility for reviewing and validating any AI-generated administrative content before its use or dissemination. You, as the occupational therapy practitioner, stay accountable for all content, even if AI generated it.

6.4 Be aware of the use of generative AI in third-party digital (or technology-enabled care), for example, in remote monitoring or technology equipment we prescribe/recommend.

6.4 Use AI to help create personalised intervention plans and education materials where appropriate, including cultural and language preferences. Confidentiality must be a priority here, don't upload personal or identifying information. AI can help consider multiple factors to create individualised plans and materials. Procedures should also be in place to validate materials that have been translated, ensuring they retain the same intentionality as the original content.

6.5 Leverage AI to assist with assessment, while maintaining critical thinking and clinical reasoning skills where appropriate. AI can help identify patterns and risk factors but shouldn't replace professional judgment, reasoning skills and risk management.

6.6 Prioritise strength-based person-centred care in all AI informed decisions and implementations. Ensure that the use of AI enhances the quality of the therapeutic relationship and doesn't replace it.

## **7. Maintain records and documentation of AI use**

7.1 Accurately document the use of AI with people who access services, including the specific systems used and their role in decision-making processes. Proper documentation ensures transparency and facilitates evaluation of AI's impact on outcomes.

7.2 Ensure that AI-generated content in health and care records is clearly identifiable. This

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<sup>6</sup> <https://ergonomics.org.uk/resource/integrating-human-centred-ai-in-clinical-practice.html>

maintains accountability and allows for appropriate interpretation of AI-generated information. You should know and follow your local policy on record keeping and countersigning records<sup>7</sup>.

## **8. Evaluate and improve the use of AI**

8.1 Regularly assess the impact of AI products and services on service efficiency, outcomes and quality of care. Continuous evaluation ensures that AI use is beneficial and aligned with quality care standards and RCOT standards for practice, conduct and ethics.

8.2 Take part in audits and research related to the use of AI in occupational therapy. Contributing to the evidence base helps advance the field and improve the safe and effective use of AI applications in occupational therapy.

8.3 Contribute to the development and refinement of AI systems for occupational therapy through feedback and collaboration with developers. Your insights are valuable for creating AI tools that meet the needs of the profession and people that access our services.

8.4 Engage in ongoing research to evaluate the long-term impacts of AI integration on occupational therapy practice and outcomes. This helps in understanding the broader implications of AI use in the profession.

## **9. Collaborate and communicate effectively about AI**

9.1 Clearly communicate the role and limitations of AI in occupational therapy to people who access services, carers and other health and care professionals. Open and honest communication about AI use helps manage expectations and maintain trust.

9.2 Collaborate with those designing, developing, deploying or using AI as part of service provision, information governance professionals and other relevant stakeholders to ensure appropriate implementation and use of AI systems. Interdisciplinary collaboration is key to effectively integrating AI into occupational therapy practice.

9.3 Working as part of a team, engage in multidisciplinary discussions about the use of AI in health and care to promote best practices and address concerns. Sharing experiences and insights across disciplines can help improve AI use in health and care systems overall.

9.4 Foster collaboration between occupational therapy researchers and AI experts to develop AI tools specifically tailored to occupational therapy needs and the needs of those using our services. This ensures AI tools are developed with a deep understanding of occupational therapy and user requirements.

## **10. Consider sustainable practices when using AI to minimise environmental impact.**

10.1 Be aware that the use of AI tools has an environmental impact for every query undertaken. Before using it, consider if AI is the best method of generating content or if alternative methods would be more appropriate.

10.2 Choose devices and hardware designed to be energy efficient where possible. This can help reduce the overall energy consumption of your AI-related activities.

10.3 Many cloud (internet) providers offer options to use renewable energy-powered data centres. Where possible, choose these options to reduce your carbon footprint.

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<sup>7</sup> *Keeping records. Guidance for occupational therapists* (2018), available at: <https://www.rcot.co.uk/practice-resources/rcot-publications/downloads/keeping-records>

10.4 Engage with and support companies and organisations that prioritise sustainability in their AI practices. This can include using products and services from companies committed to reducing their environmental impact.

10.5 Proactively influence policymakers and businesses to adopt sustainable AI practices. Your voice can help drive broader changes in the industry.

## **11. Use AI in occupational therapy education**

We recommend that occupational therapy educators/lecturers follow the Russell Group five principles on the use of generative AI tools in education <sup>8</sup> to prepare our future occupational therapy workforce to be leaders in an increasingly AI-enabled world. These are:

11.1 Universities will support students (learners) and staff to become AI literate.

11.2 Staff should be equipped to support students to use generative AI tools effectively and appropriately in their learning experience.

11.3 Universities will adapt teaching and assessment to incorporate the ethical use of generative AI and support equal access.

11.4 Universities will ensure academic rigour and integrity is upheld.

11.5 Universities will work collaboratively to share best practice as the technology and its application in education evolves.

11.6 When using AI tools to produce content for any document, whether academic, research or otherwise, remembering to include a reference/ citing the use of AI<sup>9</sup>.

Further guidance on principles of AI in education can be found from Allied Health Professions Federation (AHPF)<sup>10</sup>.

## **12. Use AI in occupational therapy research**

12.1 Explore AI use for enhanced literature review, synthesis and qualitative and quantitative data analysis in research projects. AI can rapidly analyse vast amounts of research papers and complex datasets, potentially uncovering new insights and informing evidence-based practice.

12.2 Consider using AI to assist with hypothesis generation and research protocol design. AI can suggest novel research questions and assist in creating methodologies.

12.3 Ensure transparency and reproducibility when using AI in research by providing detailed descriptions of AI methodologies and analysis. This helps address issues of research integrity and allows for validation of results.

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<sup>8</sup> Russell Group principles on the use of generative AI tools in education (2023) Available at <https://www.russellgroup.ac.uk/policy/policy-briefings/principles-use-generative-ai-tools-education> Accessed 28/2/25

<sup>9</sup> <https://libguides.brown.edu/c.php?g=1338928&p=9868287> .

<sup>10</sup> <https://www.ahpf.org.uk/Education.htm>

12.4 Be aware of potential biases in AI-assisted research and take steps to mitigate them. Critically evaluate AI-generated insights and support the inclusion of diverse representation in training data.

12.5 Adhere to ethical guidelines for AI use in research, including proper data handling and participant consent. Develop clear protocols for the ethical use of AI in occupational therapy research.

Further guidance on using AI to promote integrity and high ethical standards in AI in research can be found on the [UKRIO website](#).

### **13. Manage and lead the integration and development of AI**

13.1 Provide vision and direction for the integration of AI in occupational therapy. Leaders should develop and communicate a clear strategy for AI adoption that aligns with organisational goals.

13.2 Foster a culture of innovation and continuous learning around AI technologies. Encourage team members to explore and experiment with AI tools and provide/signpost to resources for ongoing education and skill development.

13.3 Ensure equitable access to AI tools and training across occupational therapy teams. Address potential disparities in AI access and literacy within the team to promote accessible, fair and consistent use of AI technologies.

13.4 Influence, develop and implement policies and procedures for the ethical use of AI in occupational therapy practice. Create clear guidelines that address issues such as data privacy, informed consent, and responsible AI use.

13.5 Manage change effectively during the implementation of AI technologies. Anticipate and address concerns and provide support to team members during the transition to AI-enhanced practice.

13.6 Allocate resources effectively for AI implementation and maintenance. Consider both the financial and human resources needed for successful AI integration, including technology acquisition, training and ongoing support.

13.7 Monitor and evaluate the impact of AI on team performance and outcomes. Implement systems to track key performance indicators related to AI use and use this data to inform decision-making.

13.8 Collaborate with other departments and external partners in AI implementation. Influence and work closely with IT, information governance, legal and other relevant departments, as well as external AI providers, to ensure smooth integration of AI technologies.

13.9 Advocate for the responsible use of AI in occupational therapy at a broader professional and policy level. Engage with professional bodies, policymakers, and other stakeholders to shape the future of AI in occupational therapy.

We've produced this guide in collaboration with a group of RCOT members with experience of using AI in practice, education and research. It is drawn from expert advice from Dr Michael Rowe, Assistant Professor Digital Innovation, School of Health and Social Care, University of Lincoln.

## Background and further reading

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