Policy and Education Committee
6 June 2024
Artificial intelligence (AI) and implications for osteopathic regulation

Classification	Public
Purpose	For decision.
Issue	AI and consideration of our regulatory approach
Recommendation	1. To consider and provide feedback on the contents of the paper and respond to the questions outlined in paragraph 10. 2. To agree the approach to further engagement with the osteopathic sector and the wider health sector.
Financial and resourcing implications	There are no direct financial implications for this initial work which will be carried out by the Senior Research and Policy Officer with support from the Professional Standards Team.
Equality and diversity implications	Some AI systems have the potential for bias due to the data on which they are based. As a regulator, we need to ensure that this is considered in the uptake of AI in the sector. Digital literacy may also be a factor in thinking about the use of AI for patients.
Communications implications	None
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Key messages from this paper

- The purpose of this paper is to inform the Committee how the use of AI is being dealt with centrally and by other healthcare regulators, to begin to consider how AI might affect the regulation of osteopathy and our next steps.
- The human aspect of healthcare (the interpersonal nature of care and importance of building relationships) means that the uptake of AI technologies may be different than in other regulated healthcare professions.
- However, given the fast pace of the technology and that some regulators are already doing work in this area, we shouldn't discount the potential for AI to be used in osteopathy and the need for us to develop our regulatory response.
- Therefore, we are bringing this paper to get members' views on the information outlined in this paper, the risks and benefits that this technology brings and our proposed next steps over the short and medium term.
- Subject to members' agreement, we will take forward the actions outlined in this paper.

Background

1. What is AI? The Information Commissioners Office notes that artificial intelligence can be defined in different ways, but generally it is used "as an umbrella term for a range of algorithm-based technologies that solve complex tasks by carrying out functions that previously required human thinking."[1]

2. The two main types of AI that are currently relevant to the regulation of osteopathy and osteopathic education are:
   a. Generative AI (including Chat GPT and GPT-4o), which can create new content – text, images, music and so on – based on learned patterns, as well as mimicking human behaviour, demonstrating humour, more chatty, use of intonation etc.; and,
   b. Predictive AI, which can make accurate predictions and estimations about future events based on vast amounts of historical data.[2]

3. Globally, there has been significant expansion in AI capabilities over the past few years. There are many differing views on what this means in the fields of healthcare and regulation; however, there is general agreement that artificial intelligence brings with it huge transformative potential, but also significant complexities and risk.

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[1] https://ico.org.uk/for-organisations/uk-gdpr-guidance-and-resources/artificial-intelligence/explaining-decisions-made-with-artificial-intelligence/part-1-the-basics-of-explaining-ai/definitions/

[2] https://evidence.nihr.ac.uk/collection/artificial-intelligence-10-promising-interventions-for-healthcare/

4. The UK Government has set out its ambition for the UK to become a global leader in the safe development and deployment of AI. To that end, the government published an [AI regulation White Paper in March 2023](#) outlining proposals to regulate AI in the UK and [in February 2024 provided their response](#).

5. Rather than creating a new regulator for AI, the UK government has taken the approach that individual regulators are best placed to respond to the risks and challenges that AI presents in their individual areas.

6. As part of this approach, government will require regulators (on a non-statutory basis) to demonstrate that they are having due regard to the following five cross sectoral principles, which they are expected to interpret and apply within their existing remits.
   a. Safety, security and robustness
   b. Appropriate transparency and accountability
   c. Fairness
   d. Accountability and governance
   e. Contestability and redress

7. Therefore, it will be up to the GOsC to consider these principles and interpret and apply them to our existing work in regulating the use of AI in osteopathy and osteopathic education. In approaching our own thinking, it will be essential to continue to liaise with our colleagues in other health professional regulators to ensure a consistent response and approach.

8. To support regulators, the Government has set up a new central function to monitor AI risks, coordinate regulators and exchange knowledge. There is also funding available to help build regulators' AI capabilities and expertise.

9. Regulators are at different stages of their understanding of the benefits and risks of AI and the level of thinking and work they have done in this area. In January 2024 we attended a cross regulator PSA meeting where regulators shared their current thinking and the work they had been doing. It was clear from this meeting that some regulators have progressed further in this area than us, which is why we have decided to raise this now with the Policy and Education Committee (PEC).

10. In considering this paper, it would be helpful if PEC members could consider the following questions:
   • What is your response to the information outlined in this paper?
   • What are the potential risks and opportunities of AI and how should GOsC response to this to promote innovation and assure patient safety?

- What kinds of competences do we think osteopaths may need to assure patient safety in a future where AI may contribute to how patients are informed about their own needs and treatment options?
- How best should we engage to keep the profession up to date in a fast paced environment?
- What gaps are present in our thinking or approach?
- What are committee members' views on what we should be doing to understand and approach AI within osteopathic education?
- Do you agree with our proposed next step to building our evidence base or are there further steps we should be taking?

Discussion

11. The Osteopaths Act 1993 states that our overarching objective is the protection of the public and we will do this by pursuing the following:

    (a)to protect, promote and maintain the health, safety and well-being of the public;
    (b)to promote and maintain public confidence in the profession of osteopathy; and
    (c)to promote and maintain proper professional standards and conduct for members of that profession.

12. Although we are only at the beginning of our thinking about how AI is being used in osteopathic education and practice, we should consider the above objectives in shaping our approach to AI in addition to the cross sectoral principles set out by the government.

13. The human aspect of healthcare provides challenges to the use of AI. When considering the automation of healthcare roles, the Health Foundation argues that "Given the considerable value attached to the interpersonal dimension of care, some activities – such as communicating a diagnosis of serious illness or comforting a patient – cannot be delegated to machines without undermining the quality and ethos of care."[3] Likewise, research undertaken by the University of Oxford looking at healthcare activities to automate and the desirability to automate, found a low desirability to automate roles where there was a high level of physical contact with patients. And it is difficult to know how AI can anticipate individual patient preferences and values in participating in shared decision making.

14. Although there appears to be little likelihood of the role of the osteopath being automated it is the strong 'human' quality of osteopathic treatment, such as the hands-on nature of treatment and the human interaction (getting to know the

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[3] What do technology and AI mean for the future of work in health care? - The Health Foundation

patient as an individual, understand their needs and make shared decisions around treatment), which means that the uptake of AI may be different in comparison to other regulated healthcare professions.

15. However, AI has potential to be used in osteopathy. For example, it may have use in Musculoskeletal type treatments looking at personalised exercise for example (see https://link.springer.com/article/10.1007/s12553-024-00827-w) and it may be used to improve administrative efficiencies. We should therefore be prepared for its potential future rapid uptake and the benefits and the challenges that this brings in respect to our standards, patient safety and osteopathic education.

16. There is no specific reference to AI in the Osteopathic Practice Standards (OPS) and it would have had little consideration when the OPS were revised back in 2016-2017; however, we would expect osteopaths to apply the standards when using AI in their practice as the OPS applies to all areas of an osteopaths work, in the same way that the OPS has been applied to the use of Adjunctive therapies. For example, the standards around knowledge and skills still need to be met as we would expect osteopaths to apply critical thinking skills to data generated by AI systems to justify clinical reasoning and decision making (underpinning guidance 1.10 under Standard B1).

17. The potential impact on patients also needs to be considered. With the uptake of any new systems or changes in the way patients may be treated through AI systems, we expect osteopaths to continue to take a patient centered approach to the care they provide – new systems should not inhibit this. There are also important questions around the extent to which patients will need to understand the technology being used as part of their treatment, how it is being used and transparency around whether it is the machine or the osteopath taking the final decision. Osteopaths will need to consider how they speak with patients about how AI is used.

18. Additionally, we need to consider how AI can be used in the CPD process, including the benefits and risks. For example, how do we ensure that if osteopaths are using AI as part of the CPD process that it helps to enhance the process, rather than allowing them to take short cuts impacting on the intended benefits of the scheme? Consideration of AI in regards to fitness to practice also presents questions around degrees of responsibilities, that is the extent to which osteopaths should know and understand the technical aspects of the system they are using and what happens when something goes wrong.

19. Likewise, in education the use of AI is a hot topic. Individual education providers will have different approaches to AI, how it is used by students, education providers and how it is incorporated into the curriculum and used in

assessments. On one end of the spectrum, some may be very restrictive, while others may be more positive and see it as a way of preparing students for future practice.

20. Education providers have been supported by the Quality Assurance Agency for Higher Education (QAA), which has developed a number of resources related to Generative AI and the way that it can be used in a positive way while also maintaining academic integrity particularly in relation to assessment of what competences and how best to do this.

21. In their [response to a government consultation](#) on generative artificial intelligence in education, the QAA noted many benefits and concerns regarding the use of AI in educational settings (some of which are outlined in the table later on in this paper).

22. However, they also highlighted that for healthcare professions the use of AI needs to be carefully considered given the importance that graduates have the knowledge, skills and experience to meet the standards for registration and practice safely and effectively once registered.

23. Like the OPS, there is very little direct mention of use of technology and AI in our [Graduate Outcomes and Standards for Education and Training](#) (2022). The graduate outcomes do not reference being aware of and using AI or other digital technologies. This is a gap moving forward, for as technologies develop, we would expect osteopathic students to become competent in their use as a way of training them to be competent future professionals. On the other hand, in the Standards for Education and Training under Standard 4 – Quality evaluation, review and assurance, it states:

    "Education providers must ensure and be able to demonstrate that:…

    d. they demonstrate an ability to embrace and implement innovation in osteopathic practice and education, where appropriate."

24. Given that the use of AI and digital technologies could be considered innovations, OEIs need to think carefully about how they are preparing students to utilise these technologies given their role in preparing students for future practice. However, it remains for us as the regulator to set the outcomes required for graduation.

Other regulators

25. AI is currently being thought about by all regulators, to varying degrees and in different areas. All healthcare regulators are considering what this means for their professional standards as well as their approach to AI in education and CPD.

26. For example, the General Optical Council in their consultation on [revising their standards of practice for Optometrists and Dispensing Opticians](#) has sought views on the introduction of a new standard around the application of professional judgement when using digital technologies and amending a current standard around awareness of good practice to add that digital technologies should also be taken into account.

27. The GMC also considered AI through holding workshops with specialists and experts when updating Good Medical Practice. Additionally, when the HCPC updated their standards of proficiency last year, one of the key changes they made was in the area of digital skills and new technologies and they provided an additional [factsheet](#) to support registrants.

28. In education, the [HCPC has produced a document](#) to help education providers for the courses that they quality assure, consider this area and how it relates to their standards. They are asking education providers to consider AI, from the perspective of their standards and will collect this as part of the performance review process. Once this information has been collected, it will help them to understand and build an overall picture of how their education providers are approaching AI and this will be used to inform the upcoming review of their standards of education and training.[4]

29. The Professional Standards Authority has recognised the need for greater understanding of how AI will impact professional regulation and as part of their role supporting regulators on emerging issues, convened a policy forum on AI in January 2024. This brought regulators together to discuss the work that they are doing and the opportunity to share ideas and concerns.

Issues that we should be considering

30. The following table presents some of the benefits and challenges that we should be considering in regards to artificial intelligence and its use in osteopathic education and practice. This list is not exhaustive and has been gathered through desk based research and discussions with other regulators.

	Benefits	Challenges
Education	• Improve the quality of provision and student experience; • Improve AI literacy and competence to help students better integrate into the workplace of the future; and,	• Academic integrity (eg. Plagiarism, ethical behaviour) • Automation/depersonalisation of feedback in assessments • Discrepancy in approaches to AI at an institutional level leading to differentials in graduate skills and/or familiarity with different types of AI systems.

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[4] [Artificial intelligence (AI) in education | (hcpc-uk.org)](#)

	Benefits	Challenges
	• Speeding up processes and drive efficiencies.	
Practice	• Could offer more tailored solutions or treatment options based on patients with similar traits/symptoms. • Aid patient communication • Lead to osteopaths taking on responsibilities for areas of practice or services that they may not have been able to offer previously. • Improve business practices and reduce costs.	• Use of technology without a clear understanding of what it does, what can go wrong and how to fix it. • Removing the patient from the centre of care (what if differences between what the patient says and what the machine says – who do you believe?). • Overreliance on AI, negatively impacting on an osteopath's skills and ability to think critically about the information they are presented with. • Lack of data leading to generalised assumptions or misdiagnosis. • Insufficient data to allow systems/devices to make accurate decisions. • Manipulative patient advertising and upselling
CPD	• Help with simulation and development of scenarios that can be used for discussion and learning.	• Used to generate reflective accounts (eg. through co-pilot) without the osteopath actually doing the work and the benefit of reflection.
FTP	• Aid with triaging of concerns.	• The extent to which osteopaths should be held accountable when it is a systems issue and the osteopath does not have the technical knowledge.
Internal	• Generally improve efficiencies through: • Undertaking analysis of consultation responses • Analysis of large data sets • Aid response to queries regarding the OPS from osteopaths	• Lack of understanding and expertise in AI.

Our regulatory response and next steps

31. It is clear that for us to continue to ensure that osteopaths can continue to practise safely and effectively, any use of AI in osteopathy should be considered through the lens of the objectives that are set out in the Osteopaths Act 1993. We should not look to stifle innovation and to remain flexible in this area, but questions we could be asking ourselves are:
    - What do we need to do to ensure use is compatible with our standards?
    - How should we be developing our educational outcomes and standards to assure practitioners are fit for the future?
    - Does it/will it impact on patient safety?
    - Will its use impact on public confidence in the profession?

32. Our remit is to regulate osteopathy and osteopathic education and therefore our focus should be on how osteopaths and OEIs use these systems. We do not have the ability to regulate the developers of AI systems, but, like other regulators, we do have the regulatory levers to set the requirements that end users are required to meet in line with our standards and to hold them to account for doing so as a way of influencing system development.

33. In general, the OPS, our graduate outcomes and standards for education and training are sufficiently high level enough to enable them to apply to the use of AI and digital technologies. However, this does not mean that we shouldn't provide clearer guidance on the use of AI and we will need to consider this when reviewing the OPS next year and whether more explicit AI guidance needs to be developed in the meantime.

34. What this work has identified is that we don't have a clear understanding of:
    a. OEIs' approaches to AI (eg. how it is being used and managed);
    b. How AI is being used by osteopaths in practice; or,
    c. Osteopaths readiness and confidence to engage with AI systems.

35. Therefore, in relation to the actions that we take, we should be targeting osteopaths and sector stakeholders, education providers and other regulators. Suggested actions are set out in the below table.

Timeframe	Activity
Short term actions (in the next 6 months)	**Other regulators** - we should be continuing to engage with other regulators to discuss issues around AI as many of the issues they face will be the same. This will provide efficiencies and ensure pooling of ideas, expertise and help to ensure a consistent approach. **This work will be ongoing in the short, medium and long term.** **Sector stakeholders including osteopaths** – **We plan to run a workshop in Autumn 2024.** This will help us to

Timeframe	Activity
	understand, amongst other things, the extent to which osteopaths are using AI, their confidence and readiness in utilising AI and the types of skills they think need to be developed. This does not preclude us from having informal dialogue on this matter with stakeholders, such as the Institute of Osteopathy or NCOR. **Internally in GOsC** – **We will undertake horizon scanning internally in summer 2024** to understand how AI may affect the different areas of GOsC and to inform our future strategic approach. **OEIs** – we need to build a clear picture of how OEIs are using AI and the consistency of approaches across the sector. This could inform potential benchmarking and identification of good practice and we could use this to inform any future updates to the graduate outcomes and standards for education and training. **Initial exploration of AI issues could be discussed at the next RELM (GOsC / OEI) meeting with the information from this discussion informing further exploratory work with OEIs later in 2024.**
Medium term actions (6-18 months)	**Beginning of the review of the OPS** – Evidence and views will help us to determine any amendments that need to be made to the OPS and this along with other issues could be explored with stakeholders (including patients and other regulators) via roundtable discussions. **Patients' views** – patient views on the use of AI in osteopathy and their expectations around how it could be used in their treatment is highly important. We could consider a workshop with patients to help us understand patient need in this area with the view to develop any future, additional resources.
Longer term actions (18 months plus)	To be determined based on the evidence we have gathered.

36. Specifically, questions that can be explored with both the sector and regulators are:
    - What competences will osteopaths (healthcare professionals) need in the future?
    - What are the opportunities and risks of AI and how do we exploit / mitigate these?
    - How do we find the right balance between promoting innovation and ensuring patient safety?

- How do we ensure a consistent approach with other regulators? (for regulators)

37. Once we have made progress in building our understanding and evidence base, we will be better informed about our tangible longer-term actions in addressing AI in the sector, such as amending standards and producing additional guidance. We will report back to the Committee in early 2025 on progress and any further actions we need to take.

Recommendations:

38. To consider the content of the paper.

39. To consider and respond to the questions in paragraph 10 and provide views on potential next steps.