

Artificial Intelligence: Your dentolegal guide to using AI in practice

dentalprotection.org/ai-framework



THE
**SAFER
PRACTICE**
FRAMEWORK™

Dental
Protection |



Be empowered to make informed decisions to support safer AI use in practice

The adoption and integration of Artificial Intelligence (AI) into clinical practice could be transformational, introducing a host of new opportunities along with some risks.

In dentistry, AI can be used to support diagnosis, treatment planning, and monitoring, leaving clinicians to deal with the complexity created by the blurring of boundaries when it comes to clinical responsibility, professional judgement, and legal liability.

The new two-part 'AI safer practice framework' from Dental Protection, created by Dental Director Raj Rattan, can help you navigate the challenges that might be presented when using AI in dental practice when it comes to consent, accountability, and clinical judgement.

It can also help guide you in making informed decisions and ensuring your records support you in case of any dentolegal challenge.

Together, **INFORMED** and **RECORDS** follow a clear chronology:

- **INFORMED** helps with decision-making at the point of care.
- **RECORDS** ensures thorough documentation afterwards.

INFORMED™

Guides ethical decision-making using AI

INFORMED is a real-time, process-based guide for using AI in clinical care. It supports clinician oversight, promotes collaborative decision-making, and reduces automation bias thereby avoiding over-reliance on algorithmic systems.

RECORDS™

Documents AI-assisted decisions for accountability and clinical rationale

RECORDS is used for documenting AI-driven decisions. It captures clinical rationale, the role AI has played, and the clinician's decision – crucial for transparency in audits, complaints, or legal reviews.



Ethical decision-making using AI

	COMPONENTS	PROCESS
I	1. IDENTIFY	a. Identify the most appropriate AI system and ensure compliance with appropriate regulatory and legal guidance, including any relevant data protection requirements b. Identify where in the clinical pathway AI was used (eg assessment, diagnosis, treatment planning) and the reason for its use c. Identify any potential bias within the AI system – is it suitable for your patient demographic? d. Ensure any users undertake specific training for the AI system to understand uses, benefits, and limitations
N	2. NATURE OF OUTPUT	a. Describe what the AI system was used for – was it: i. Diagnostic (disease detection) ii. Predictive (assessing risk or outcome) iii. Simulative (visualising results, eg cosmetic outcome) iv. Analytical (measurements) v. Assistive (highlighting areas of interest)
F	3. FINDINGS	a. Consider to what extent the AI output matches the clinical findings b. Interpret the AI output and review the findings generated by the AI system c. Challenge, question, and triangulate the AI output with other clinical data, including symptoms, dental history, and investigations/results d. Use this process to inform the clinical diagnosis
O	4. OVERSIGHT	a. Retain final decision-making authority (human-in-the-loop model) b. Remember that the clinician is likely to be considered legally and ethically responsible even when supported by AI c. Remember that AI is a decision support tool, not a substitute for clinical judgement d. Confirm the clinical rationale for accepting the AI recommendation. If the AI output was overridden, explain the reason(s) why e. Ensure high quality and accurate patient data is inputted into the AI system f. If a second opinion has been obtained, note how it has influenced the final clinical decision
R	5. RISK	a. Share information with the patient about the risks of AI and its limitations – this is necessary for valid consent b. Give the patient the opportunity to ask questions c. Where AI has been used in diagnosis, simulation, or treatment planning, inform patients of the role AI played in the decision and any known risks, such as false positives and data bias
M	6. MONITORING	a. Check for and follow any available supplier guidance to monitor/update AI performance over time b. Ensure each application of AI is logged for later inclusion in clinical audit or governance review c. Audit AI use and note/address any observed discrepancies, harm, concerns, bias, and limitations
E	7. EXPLAINABILITY	a. Be able to understand, interpret, and communicate how the AI system arrived at its output b. Understand the input-output relationship and how the AI system reached a conclusion – not just what it concluded c. Communicate and translate the output in patient-friendly language to help with understanding d. Remember patients cannot give valid consent if they don't understand how technology influences their diagnosis or treatment plan
D	8. DUTY OF CARE	a. Remember that the clinician is likely to be considered legally and ethically responsible for diagnosis and treatment, even when an algorithm is involved b. Keep in mind that the legal principle of non-delegable duty is likely to apply

RECORDSTM Documenting AI-assisted decisions

R	RECORD	Record the name and version of the AI system and how and when it was used
E	EVALUATE	Explain the purpose and function – describe what the AI system was used for
C	COMPARE	Compare the AI output with clinical signs, history, and test results before finalising diagnosis or a treatment plan
O	OVERSIGHT	Confirm the clinician has reviewed all the relevant information
R	RATIONALE	Record the clinical rationale to ensure it is robust from a clinical and legal perspective
D	DOCUMENT	Document the explanation of AI's role and its limitations and that AI-supported care has been discussed with the patient
S	SAFETY	Note any actions taken to protect the patient from foreseeable harm

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