The Empathy Error: How AI Can Make Us More Human

Artificial intelligence has evolved from a pop-culture buzzword to an integral part of our zeitgeist. News headlines reading, "These jobs will be obsolete within the next decade" continue to propagate a hunger for novel AI tools that accelerate, analyse and minimise errors. In the field of periodontology, where early detection and precise treatment planning are critical, various adjuncts are available to improve efficiency and accuracy of treatment including voice-activated charting and AI-powered bone-loss analysis (Scott et al., 2023). Yet, despite its vast technical promise, one comment consistently arises in conversations I've had with both dental practitioners and students: "It will never make a patient feel truly understood or cared for like a human." But what if it already can?

Many people, including myself, enter a career in healthcare with kind-hearted intentions, motivated by a desire to help others, form meaningful connections and improve lives. But these priorities can – and do – shift. Through constant observation of their supervisors, medical students have been found to internalise traits that are rewarded—efficiency, knowledge and clinical outcomes—while interpersonal skills are neglected, resulting in an erosion of empathy and compassion (Pearl, 2021). In my experience, it is not uncommon to see little engagement with a patient's life story or communication with family members about non-clinical concerns. When was the last time you took a sincere look at how you communicate? Are you considerate of all cultural backgrounds? How do your language choices impact your patients? In dentistry, where many feel anxious and vulnerable, the smallest acts of compassion can make or break trust and as "softer skills" deteriorate from lack of use, the human touch at the core of our industry begins to fade.

In the meantime, machine-learning tools have only improved at compassionate communication. A 2023 study published in JAMA Internal Medicine found licensed healthcare professionals rated ChatGPT's responses to patient questions as more empathetic and of higher quality compared to those provided by physicians eighty percent of the time (Ayers et al., 2023). This doesn't mean machines *are* more empathetic, but rather that they can simulate compassion more reliably in a pressured system. We underestimate how everything else going on in our lives – everything that makes us "human" and contributes to our empathy as clinicians – not only limits our capacity to engage deeply with patients day-to-day but is a barrier AI simply does not have to overcome.

Integrating artificial intelligence into dental education presents a powerful opportunity to strengthen empathy, cultural sensitivity, and reflective practice among future practitioners. In my experience, professional development is often didactic and leaves little room for personal

growth or emotional intelligence. Workshops where students speak to a clinical actor or roleplay with their peer are already part of many communication courses. Incorporation of clinically trained AI with voice-recognition software would allow students to receive personalised, real-time feedback on their communication with suggestions of how to improve. An unbiased, impersonal mentor allows students to reconsider the use of a certain phrase or implement more culturally apt language, ensuring each patient interaction is thoughtful and kind. This ensures we create graduates who communicate with clarity and build trust across diverse patient populations.

While it's tempting to be swept up in the allure of precision, speed, and innovation, we instead need to take this time in history as an opportunity to reprioritise the role of connection and empathy in dental education systems and professional culture. True integration of AI in dentistry is not just about smarter systems; it's about compassion, care and – most of all – humanity.

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