

Artificial Intelligence in Dentistry

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The development and progression in artificial intelligence has been rapid over the past decade. The expansion of artificial intelligence applications into areas that were previously thought exclusive to human control and expertise is now a measurable phenomenon. This is largely facilitated by rapid advances in data acquisition and consumption, machine learning, and computing infrastructure improvements.

The intention to introduce artificial intelligence applications into medicine and dentistry currently centers around patient care improvement, specifically to diagnostic capacity and prognostication, and to assist by providing tools for advanced decision making and even for treating patients remotely. This is an extremely complex field with close working relationships between various clinicians, researchers, and engineers.

The instant exchange and interpretation of large volumes of information will provide the clinician with a great advantage in the determination of treatment needs and implementation of treatment. However, the functions aren't limited to these only. Automation of claims processing, fraud detection, appointment scheduling and management, including the communication between similar systems in referral practices and dental laboratories, and resource management and control are some of the more immediate benefits provided by artificial intelligence systems.

Virtual automation in dentistry is not a distant imaginary concept anymore. However, the expert human aspect, and touch, remains a critical ingredient in successful patient care and service delivery in which artificial intelligence plays a complimentary role.

There are still some concerns regarding artificial intelligence and its applications. Consideration will be given to individual privacy rights and to autonomy. It is important to also address issues around trustworthiness as well as generalizability of any artificially intelligent application or implementation of such a system.

References

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In the spirit of broader inclusivity we would like to invite authors to provide us with suggestions for the cover page content of the SADJ. This should be all encompassing and not limited in appeal to a single grouping. We hope that these contributions will better our journal in line with our main objectives.

We look forward to receiving meaningful contributions from our membership, and thank you for your continued support and participation.

Warm regards,
Prof NH Wood – Managing Editor
Dr N Metsing – Head: Professional Development SADA