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Abstracts

WILL DIGITAL RADIOGRAPHY REALLY IMPROVE YOUR PRACTICE EFFICIENCY?

Work flow with digital intra-oral radiography: a systematic review. Wenzel A and Møystad A. *Acta Odont Scand* 2010; **68**: 106–114.

I was told recently that intra-oral digital radiography is one of the fastest growing developments in general dental practice. This paper reports a systematic review of the six most frequently stated advantages of this modality; less working time, lower radiation dose for the patient, fewer retakes and errors, wider dynamic range, easier access to patient information and easier image storage and communication.

The results were somewhat surprising. There is indeed a saving in time when the switch is made from conventional to digital imaging. However, other unexpected problems than those under initial consideration were found which adversely affected the outcome. These were patient discomfort, damage to the digital receptor, degradation of the image, cross-contamination and viewing conditions. These seem to lead to an increased number of retakes which then counters the anticipated reduction in patient dose.

Interestingly, patients reported that there was no improvement in information and understanding whether the image was a digital display or a conventional film. Patients also reported that there was a significant increase in discomfort when the image sensors were compared to conventional film. Concern was expressed over the storage of digital images, which may not be as accurate as anticipated. Furthermore, digital images may be 'enhanced' or manipulated, which may involve a loss of accuracy or even legitimacy. Concerns were also expressed with regard to cross-infection risks, particularly when the phosphor plate system is transferred to the digital processor.

The authors' conclusion that not all the anticipated advantages were found to be supported by the literature may be of considerable interest to practitioners considering changing their radiographic practice.

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