

Are you responsible and accountable for your actions?

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ABSTRACT

In all walks of life we are accountable for our actions. However in dentistry the scope and extent of one's responsibilities may not always be obvious. This paper aims to remind clinicians of their need to be cognisant of some fundamental principles, and to ask themselves certain relevant questions before embarking on any procedure. It makes special reference to the obligations associated with the increased use of dental imaging modalities. It does not purport to be a comprehensive review into any specific dental condition or treatment modality, but is rather a broad overview and reminder of their ethical obligations with respect to their "duty of care".

Introduction

Before embarking on any dental procedure or intervention clinicians needs to consider a number of patient, personal, and procedure –related factors, to ask themselves certain questions, and to plan the way forward in a way that will be in their patients' best interest.

Steps, questions and considerations

1. The first consideration is "Why has the patient come in?" They may present with pain, sepsis, traumatic injuries, ill-fitting prostheses, broken restorations, old and unsightly prostheses / restorations, suspicions of dental or oral disease, for a routine check-up, for oral hygiene maintenance, with aesthetic demands, or asking for certain specific treatment. This should be noted and documented using the patient's own words as well as how it was observed and interpreted.
2. The second question is to try and elicit what the patient wants and if they are only interested in immediate care or are also looking for future treatment. They may desire any number of procedures such as: oral hygiene prophylaxis, pain relief, elimination of infection and sepsis, a simple isolated procedure such as an extraction or minor restoration, denture

easing, a denture reline / repair, appliance adjustment, fixed crown and bridge work, implant therapy, temporomandibular joint related therapy, help with other oral issues such as xerostomia, altered taste, burning mouth or suspected malignancy, jaw-wiring for weight loss (A topic for a future ethical debate), and treatment of traumatic injuries. Patients generally have very specific desires that may not necessarily be the same as, or encompass all of their actual needs. It is wise for clinicians to accede to their autonomy and address the former and then try to educate them into appreciating the need for the latter.¹ Many Health Professions Council (HPCSA) complaints stem from mis-communication and fee disputes rather than actual treatment related unhappiness.²⁻⁵

3. The third step is for the dentist to decide on what is needed initially and may require actual direct "hand-on" action or could involve carrying out other adjunct procedures. If the patient is in pain, has active infection / sepsis, or has suffered from a traumatic injury, they will need immediate pain relief and infection control. Procedures such as denture easing / repairs, prosthesis adjustments, placement of tissue conditioners, implant screw tightening or component replacements, are also examples of procedures that can be carried out at the first visit. However initial interventions may also include taking radiographs, impressions for study models, smears, biopsies, or blood tests or any other procedure deemed necessary to make a diagnosis and formulate a comprehensive treatment plan.
4. The fourth consideration is probably the most crucial, and where ethical issues may arise. It behoves the clinician to take a holistic approach and together with the patient, discuss the ideal long term treatment plan and goals.¹ It would be irresponsible, unethical and even at times, negligent to only focus on the first three issues and not have a long-term strategy in mind. Granted there may be rare occasion where no further treatment is warranted, however, this is seldom the case, as most patients will benefit from even basic, regular maintenance therapy. This will involve carrying out treatment according to the proposed plan, referral to other colleagues if more complex procedures are needed, and long term monitoring and maintenance.

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ETHICAL ISSUES RELATED TO DIAGNOSTIC IMAGING

The field of diagnostic imaging has, and continues to advance at an extraordinarily fast rate. Newer, faster, more accurate, detailed and in-depth, and less invasive machines and techniques continue to come onto the market. These range from the well-known dental imaging modalities and views such as periapical radiographs,

panoramic images, extra oral skull views, to the more complex Computed Tomography (CT), Magnetic resonance Imaging (MRI), Ultrasound (US), and Cone Beam Computed Tomography (CBCT).

Before any clinician takes any image they need to be able to answer all of the following questions in the affirmative in keeping with the primary principles of justification, dose optimization and dose limitation:

- Have I ascertained if the patient has had any images taken in the recent months that could still be used?
- Is it necessary to take any images in order to see the area of interest better and / or to carry out the required treatment?
- Will this image add new information or alter the diagnosis/treatment plan?
- Is there an option for non-ionizing radiation?
- Is this the best image to take in order to make the most accurate diagnosis?
- Will this image expose the patient to the least amount of radiation?
- Do I know the exact dose of exposure that this image will inflict on my patient, and have I ensured that I am not exposing them to dangerously high dosages?
- Am I aware of the indications, advantages and limitations with this particular imaging modality and am I still confident it is necessary / the best option?
- Is the patient aware of the costs and risks associated with talking this image?
- Has the patient consented to have this image take?
- Is my equipment functioning optimally in order for it to take the best image possible?
- Am I and my staff protected from scatter radiation when I am taking this image?
- Am I capable of interpreting the findings of this image?
- Do I have the necessary anatomical knowledge to be able to identify all the landmarks that will be evident in this image?
- Do I have the necessary radiological and pathological knowledge to be able to identify abnormalities, inconsistencies, and pathology in this image?
- Have I been trained to identify any and all other features or incidental findings within the entire field of view of this image?

These questions are crucial to guide the practitioner to justification and optimization and help to reduce risks of unnecessary or excessive patient exposure. In depth and basic principles that guide CBCT 'best practise' can be found in the latest version of SEDENTXTCT.⁶

Any person who takes any image is liable to examine it in its entirety (not to only look at their area of interest) and to report on findings from the entire field of view. Failure to detect and manage any pathology is considered negligence and is grounds for litigation. It is alleged that some practitioners expose a large area of the head or jaws and reduce the reconstruction to a small field of view and do not consider the rest of the view their responsibility. The practitioner who referred, the one who exposed, and the one who interpreted are all equally liable.

Any practitioner that engages in radiology beyond conventional 2D imaging is required to undergo additional theoretical and practical training, preferably in an academic institution.^{6,7} This should cover the fundamentals of anatomy and pathology of the jawbones and all structures visible within the confines of the cross sectional data.⁷ If a complex diagnostic image is deemed necessary and extends beyond the jawbones, the practitioner is duty bound to rather refer the patient to a trained radiologist who will be able to provide them and the patients with the most accurate and detailed report. Furthermore it is morally and ethically deplorable to expose any patient to unnecessary imaging merely to offset the expense of having purchased the machinery.⁸

Bear in mind that the concept of 'retrospective litigation' is real and going to gain popularity in this country.

Legal requirements

The licence holder of any x-ray machine is responsible for radiation safety, fulfilment of all statutory requirements and compliance to the Act's, Regulations and Conditions of that license. Part of which is to have a running and monitored Quality Control (QC) program and as stipulated, ensure radiation exposure is kept as low as reasonably achievable (ALARA) without compromising diagnostic efficiency. Mandatory records must include patient demographics, date of examination, clinical indication, type of examination, number of exposures and repeat exposures, name of practitioner, total Dose Area Product (DAP) if applicable, and importantly the diagnostic information obtained from the examination.⁹

Conclusion

Before embarking on any treatment an ethical and professional practitioner needs to take the time to consider patients in a holistic manner that includes both their current and anticipated future treatment needs. At the same time, patients should be educated and empowered to make mutual decisions with regards to the diagnostic, planning, and execution of any treatment. Thereafter the care provided should be tailored and appropriate to their individual desires and needs, time and financial constraints and within the scope, training, and capability of the service provider.

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