



CPD4dentalnurses

YOUR FUTURE IN YOUR HANDS

Clinical Photography in Dental Practice

Aims: This article will discuss the role of Clinical Photography in Dental Practice.

Objectives: On completion of this verifiable CPD article the participant will be able to demonstrate, through completion of a questionnaire, the ability to:

- Identify the different types of dental photography.
- Understand the need for patient consent for photographs.
- Be able to identify the different types of dental photographs and their use.
- Have knowledge of the variety of reasons photographs can be beneficial to the clinician and the patient.
- Identify the different types of training available in dental photography.
- Have knowledge of the types of equipment needed in dental photography.

Introduction

Dental photography involves capturing detailed images of the teeth, gums, and surrounding oral structures, primarily for clinical documentation, patient education, and marketing purposes. It is widely used by dentists, orthodontists, and other dental professionals to track progress, plan treatments, improve patient communication and communicate with laboratories or specialists.

Traditionally, dental charting methods and study models were used by the profession in treatment planning and delivery. However, they do have limitations and as dental computer software has advanced it has allowed the role of clinical photography to become part of the normal practice of dentistry.

Historically, clinical photographs were taken and recorded by the dental practitioner, but with appropriate training and indemnity in place, this can now be completed under the scope of practice of all dental care professionals. This additional skill can enhance job satisfaction and add value to a team member. Delegating photography to a trained DCP can improve workflow in a busy practice, providing consistency and ensure standardised images for comparison over time.

Consent



The patient must consent before any photographs or images are taken and this should be recorded in their records. They must have a clear understanding of the purpose and the way in which photographs will be used and consent to the specific use of them. They should be allowed to withdraw this consent at any time.

The General Dental Council standards for the dental team state: You must obtain valid consent and maintain and protect patients' information.¹

The patient must consent to each type of usage, for example, whether photographs will only be included in their clinical records, or whether they will also be used for teaching/education purposes, posted to social media or published elsewhere. Consent is required even if the photographs are anonymised, and the patient is not identifiable.²

It should be reaffirmed with the patient before taking any images if consent was given at a different appointment.

In addition to a clinician's professional duty in relation to GDC guidance, they must also be sure to comply with GDPR/data protection laws.

Written consent should be provided through the use of a consent form (preferably one that is specific to the patient's circumstances) that is then scanned into the clinical records. Consent can be confirmed verbally where appropriate and documented in the clinical records.²

The Different Types of Dental Photography

Intraoral Photography: Focuses on capturing close up images of the teeth and gums inside the mouth. They usually focus on different areas of the mouth for example:

Anterior View: Shows the front teeth and can include the upper and lower arches.

Buccal View: Shows the side (cheek) view of either the right or left set of teeth.

Occlusal View: Captures the biting surfaces of the upper or lower teeth.

Lingual View: Displays the inside (tongue side) of the teeth.³



Anterior View



Buccal View



Occlusal View



Lingual View

Extraoral Photography: Includes images of the face, smile, and jaw to assess overall facial aesthetics. These photographs are typically used in dentistry, orthodontics, and oral surgery to assess facial symmetry, jaw alignment, and overall facial aesthetics.

Extraoral photographs generally include:

1. **Frontal View:** A straight on image showing the full face, often used to assess facial symmetry.
2. **Profile View:** A side view of the face, focusing on jaw alignment and facial proportions.
3. **Smiling View:** Shows the patient's smile to evaluate the alignment and visibility of teeth when smiling.
4. **45-Degree View:** An angled view capturing both the profile and part of the frontal face, useful for a comprehensive assessment.^{3,4}



Frontal View⁵



Profile View⁵



Smiling View⁵

These photographs complement intraoral images by providing a broader perspective on how dental and orthodontic issues relate to the overall facial structure. They are essential for treatment planning, monitoring progress, and documenting before-and-after results.⁴

Portrait Photography: Captures the full face and is often used for before-and-after images in cosmetic dentistry. Unlike intraoral and extraoral photographs, which focus on the teeth and oral structures, portrait photographs provide a comprehensive view of the patient's face, head and sometimes shoulders, allowing dental professionals to assess the relationship between dental features and facial aesthetics. Extra-oral photographs emphasise diagnostic details, while portrait photographs prioritise visual appeal.

Common portrait views in portrait photographs are similar to extra oral and include:

Frontal Face: Straight-on view, typically capturing the face with a natural expression and with a full smile. These photographs are usually wider than extra oral photographs and can include more of the face and upper body.

Smiling Portrait: Captures the patient smiling naturally or fully, emphasizing the teeth and gums often used to capture before and after photographs.^{3,4}

Why use Photography



- **Documentation**

Photographs are an essential part of a patient's clinical records. They provide evidence of the patient's condition before, during, and after treatment, which can be vital in case of disputes or legal considerations. Photographs can help document patient consent and serve as part of the evidence supporting the proposed treatment plan.⁶

- **Diagnosis and treatment Planning**

Before and after photographs of clinical cases can reduce the fear, a patient may have and give them reassurance that the dental procedure they are going to have is possible. An explanation of the procedure with photographs builds trust between the clinician and patient.⁴

Photographs provide an in depth look at the dentition and a baseline reference point at the beginning of treatment that can be referred to as treatment progresses. High-quality images allow the clinician to closely examine the teeth, soft tissues, and oral structures, which can reveal details that might be missed during a clinical examination alone.⁶

Extra oral photographs can help assess facial symmetry, lip position, and the patient's smile line, which are essential for aesthetic cases like cosmetic dentistry or orthodontics.

Intra oral photographs allow the clinician to evaluate tooth alignment, occlusion (bite), arch shapes, and other factors when planning treatments like braces, implants, or restorative work. With traditional charting it can be difficult to record very early caries, the extent of decay, leaky restorations and marginal deficiencies, tooth surface loss, demineralisation, abrasion, attrition, erosion and abfraction. Wear, facets, chips and fractures with photographs these can be captured demonstrating the extent of damage.⁷

- **Monitoring of Conditions**

Dental photographs are highly effective in monitoring various oral conditions over time. They provide a visual record that helps track the progression or improvement of a patient's condition, offering valuable insights that complement clinical observations.⁷

A high-quality clinical photograph will 'show' features such as cracks, surface characteristics, pits, fissures and discolouration translucencies and opacities, saving on an enormous amount of written and possibly inaccurate descriptions.

Within the field of orthodontics, high-quality clinical photographs are essential as a diagnostic tool, to monitor treatment progress, and for educational and medicolegal purposes.

They are of particular value in recording periodontal and gingival conditions. The severity of inflammation, colour and pathology of soft tissues can be seen and used as a reference to compare the results of treatment and motivate patients.⁷



Periodontal treatment



Teeth Whitening



Orthodontic Treatment

- **Patient Education/Motivation**

Dental photographs are a powerful tool for motivating patients by helping them visualise their oral health and understand the benefits of treatment.

Before-and-after images of cases involving teeth whitening, orthodontics, or restorative treatments can help patients decide on treatment options.

Close-up intraoral photographs can make issues like plaque buildup, gum recession, tooth wear, or cavities more apparent. Patients are often more motivated to take action when they can clearly see the problem areas that need attention.

By showing patients images of their own teeth, they get personalised and relatable feedback. This helps them to understand the importance of recommended treatments, like improved oral hygiene, periodontal treatment, or restorative work.

Sharing photographs builds trust, as it allows patients to see exactly what the clinician sees. This transparency can make patients feel more involved and in control of their treatment decisions and it helps to build patient/clinician trust.⁶

- **Medico- Legal**



Dental photographs play a crucial role in medico-legal cases, providing valuable evidence that can be used in a variety of situations. This could include:

Pre and post treatment photographs: Provide a clear record of the condition of a patient's teeth and oral health before and after dental treatment. This could be essential in a malpractice case. They are also a record of the standard of dental treatment should that come into question.

Forensic Odontology: In case involving unidentified bodies, dental records and photographs can be compared with existing and dental records to confirm identity. Or, in the case of a missing person they may prove valuable.

Documenting of Injuries: In cases of assault injuries, trauma, bite marks or signs of abuse to the oral cavity or head and neck they could be used as evidence in court. Photographs of injuries caused by accident may be useful in compensation cases.

Photographs have a role to play in proving that informed consent was given by a patient.

Dental photographs are a powerful tool in dental marketing, helping practices attract new patients, build trust, and showcase their expertise. High-quality images can effectively communicate the results of treatments, highlight patient transformations, and convey the quality of care provided.

Displaying real cases and outcomes helps build transparency and confidence, as potential patients can see exactly what results are achievable.

Using high quality real photographs are an ideal way to build engaging content for websites and social media platforms.⁶

- **Peer Review and Research**

Photographs are crucial in peer review and research for documenting, analysing, and sharing clinical findings and treatment outcomes. They provide objective visual evidence that supports clinical observations and enhances the credibility and educational value of research.⁷

- **Personal Interest and Satisfaction**

Photographs can provide the team with an added dimension and DCP's that are trained and indemnified to take photographs in the surgery often find it a rewarding and interesting part of their working day.

Training to Take Digital Photographs



Training to take dental photographs involves learning the principles of dental photography, understanding the proper techniques, and practicing with the right equipment to ensure consistent, high-quality results. Dentists, dental nurses, dental

hygienists and therapists can all source training in digital photography to enhance their skill set.^{3,8}

Training can be undertaken through online courses, in house training, or from participating in a photography workshop or course. Seeking a mentor who can provide feedback and tips on improving your technique and sharing photographs with the team

for peer review can lead to improving techniques by using the feedback and tips given by other professionals.³

Equipment



If photography is to form an important part of the clinical approach and clinical records, consideration should be given to the quality of the equipment purchased. Before choosing and purchasing a digital camera system, the most important factor to consider is the quality of an image required for dental purposes.⁴

Clinicians can choose from multiple systems for dental photography that will work well for most practices. However, the digital single lens reflex (DSLR) camera is the most ideally suited for practices that wish to use photography for documentation. A macro lens is ideal for close-up shots of teeth, gums, and other intraoral structures. It ensures minimal distortion and high detail, (85mm to 105mm). A ring flash provides even lighting around the subject, reducing shadows in intraoral photography and a twin flash offers more control over lighting angles and shadows, useful for more detailed or angled shots.^{3,10}

Mobile Phones



With the advances in the quality of cameras on a mobile phone it is possible to use your smartphone for dental photography, clip on macro lenses are also available to increase magnification if needed.^{4,10}

For time-pressured dental teams, quickly reaching for a personal mobile phone may seem like an easy way to take clinical photographs. However, photographs should ideally be taken on a dedicated device that is designated for clinical use only and stored securely. Once the photograph is uploaded into the clinical records it should be

deleted from the device. This approach minimises the risk of photographs being accessed by an unauthorised person, or the device being lost/stolen.²

Additional Equipment

Additional equipment that can be used includes:

- Editing software
- Cheek retractors and lip holders
- High quality intra oral mirrors
- Occlusal mirrors
- Tripod or camera stand
- Articulating arm or extension arm
- Barrier covers to maintain cross infection control
- Disinfectants and sterilisers ^{4,10}

Top 10 Tips for Dental Photography in Practice



1. Source suitable training.
2. Choose the right equipment carefully to suit your practice.
3. Begin with basic shots and gradually progress to more complex techniques.
4. Ensure you have proper lighting.
5. Ensure you have patient consent and maintain their privacy.
6. Maintain patient comfort.
7. Practice consistently.
8. Adhere to infection control procedures.
9. Ensure you have a robust system in place for storage of photographs.
10. Be consistent.^{2,3,4}

Personal Development Plan and Reflective Learning

This CPD is linked to the following GDC Enhanced CPD Development Outcome:

B. Effective management of self, and effective management of others or effective work with others in the dental team, in the interests of patients at all times; providing constructive leadership where appropriate.

C. Maintenance and development of knowledge and skill within your field of practice.

Reflective learning is now a requirement of the GDC Enhanced Professional Development Scheme. As such, you will be given the option to answer some reflective learning questions, before your certificate is generated.

Please remember that you can choose if you wish to fill this in on completion of the exam, but you can also update this at any time from your CPD log. If you take a few moments to write your reflection on completion, you will have fulfilled the Enhanced CPD requirements.

Further reading

<https://www.dental-update.co.uk/content/dental-photography/dental-photography-a-practical-guide/>

<https://www.meetdandy.com/learning-center/articles/how-to-take-intraoral-and-extraoral-photographs/>

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