Clinical digital photography is one of the most important communication tools in the dental office. It allows the dental team to educate patients without holding a mirror and explaining what is being changed or enhanced. Digital photography can be fun and exciting; everything from patient education to laboratory communication can be expedited with the click of a button. With more detail and better clarity, high-quality photography elevates patient records to an entirely new level.

It is important to choose a digital camera based on the photography use of your practice, whether that be for AACD accreditation, marketing, education or laboratory communication. Some of the most popular cameras on the market today are the Canon 50 and 60D (Canon USA), the Fuji S3 (Fuji Film) and the Kodak Easy Share (Kodak Dental Systems).

Both the Canon 60D and the Fuji S3 have a detachable flash for portrait photography. They also have a variety of settings which allows you to shoot a single tooth or a full smile to fill the frame. Both of these cameras also allow you to shoot on a RAW setting for photos that can't be altered in Adobe Photoshop (a requirement for the AACD accreditation). Although the Kodak Easy Share is a good camera, you may not be able to get close intraoral shots like the ones you can get with the Canon or the Fuji. It is important for each team to decide what works for the office and how the photos will be used.

**CAMERA CARDS**

I recommend that every office have at least two cards, one to use as a primary and another as a backup. If more than one person will be taking pictures regularly, each team member who uses the camera should have their own card and download his or her images immediately. Working this way prevents
one person from having to constantly manage photos. WiFi cards can also simplify the process.

**SETUP**

Setups are made for specific dental procedures as well as digital photography. The tray setup for taking these pictures consists of retractors, plastic and metal mirrors, buccal and occlusal mirrors with handles, a black background, and a paddle. Experimenting with different retractors and mirrors will allow you to decide what works best for your office.

**BACKGROUND**

When taking portrait photography, choosing the right background is important. Light, neutral backgrounds are best; blue, gray and beige are recommended for contrast between the patient’s hair and the background. You can purchase different backgrounds through Photomed Technologies, or you can make your own.

**RECOGNIZING PATIENTS**

When prospective patients come in for a new patient consult, we interview them and take digital photos to help communicate the treatment the patient may or may not need. This also helps the team remember who the patient is if treatment is delayed, or if the patient doesn’t come back right away. Place the photos in the front of the patient’s chart so the patient is immediately recognized by the team. Our office takes photos using four frames: full face, retracted smile, and retracted mirror shots for both the maxillary and mandibular arches.

**AACD FORMAT**

In our office, the standard AACD accredited photographs are used with a series of 12 required views. If this is one of the reasons for photography in your office, the entire dental team should be trained to take photos using the same techniques to ensure consistency. Even if accreditation isn’t your primary goal, these standards can still be useful in maintaining consistency in your photograph efforts. The requirements are designed and produced specifically for dentists as a guide for the photographic requirements in the AACD accreditation review process. The photos should consist of 24 slides; (twelve before and 12 after images) and should be in RAW format. (See your camera’s manual for shooting in RAW.)

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**THE 12 REQUIRED VIEWS FOR ACCREDITATION**

**Magnification**

Images of the required views will be captured at one of three magnification ratios (1:10, 1:2, 1:1). Make any necessary magnification conversions to produce an image magnification comparable to the images illustrated in the photography guide. Lens magnification conversion is needed for many digital SLR cameras without full frame sensors. Settings will vary with sensor and face size. Cameras with smaller sensors will require approximately a 1.5 times increase of the setting on the lens barrel (1:10 – 1:15, 1:2 – 1.3, 1:1 – 1:1.5).

**Views**

**NON-RETRACTED VIEWS**

1. Natural Full Face – frontal angle  
   1:10 (1:15) magnification
2. Full Natural Smile – frontal angle  
   1:2 (1:3) magnification
3. Full Natural Smile – right lateral angle  
   1:2 (1:3) magnification
4. Full Smile – left lateral view – 1:2  
   (1:3) magnification

**RETRACTED VIEWS**

5. Upper and lower teeth slightly parted –  
   frontal view – 1:2 (1:3) magnification
6. Upper and lower teeth slightly parted –  
   right lateral – 1:2 (1:3) magnification
7. Upper and lower teeth slightly parted – left  
   lateral – 1:2 (1:3) magnification
8. Maxillary anterior in view only – frontal  
   view – 1:1 (1:1.5) magnification
9. Maxillary anterior in view only – right  
   lateral – 1:1 (1:1.5) magnification
10. Maxillary anterior in view only – left  
    lateral – 1:1 (1:1.5) magnification

**RETRACTED VIEWS USING A MIRROR**

11. Maxillary arch – occlusal view  
    – 1:2 (1:3) magnification
12. Mandibular arch – occlusal view  
    – 1:2 (1:3) magnification

To get a copy of the AACD Accreditation guide which outlines the photography requirements, visit www.aacd.com.
FULL-FACE PORTRAIT PHOTOGRAPHY
This shot is framed horizontally. The full-face view should include the top of the head to just below the chin with the nose in the middle of the portrait to center the head in the frame. The patient should stand with a straight posture. Some patients have a habit of tucking their chin down. If this occurs, place your hand underneath the patient’s chin to straighten it. Some common errors include; camera height in relation to the patient, head tilting or not centered correctly in the frame, blinking and the inability to smile.

FULL-SMILE: FRONTAL VIEW: 1:2
The central incisors are the focus of the frontal-view full smile. This view should include the corners of the mouth, and the patient should exhibit a full, natural smile. The nose and the chin should not be in the frame, and the smile should show equal amount of skin above and below the lips. Encourage the patient to give an exaggerated smile to show as many teeth as possible. Make sure there is no evidence of saliva, food, lipstick, impression material, plaque or other distracting debris in the photo. The camera should be at the same level as the patient.

FULL-SMILE: RIGHT AND LEFT LATERAL VIEWS: 1:2
The lateral smile view is created with the lateral incisor as the center focal point of the photo. The frame of the photo should include upper and lower lips, as well as equal amounts of skin above and below the lips. Do not take this photo like a profile photograph and make sure that the camera is at the same level as the patient.

UPPER AND LOWER TEETH: FRONTAL VIEW: 1:2
The upper and lower teeth should be slightly parted so the incisial edges are visible. The retractors should be minimally visible and the lips should not approach the frame; the maxillary central incisors are the focal point of the image. Make sure the camera lens is parallel to the plane of occlusion to avoid creating the appearance of occlusal plane discrepancies. Avoid tilting or off-centering the frame, and make sure that the camera is not too low or too high in relation to the face.

UPPER AND LOWER TEETH: RIGHT AND LEFT LATERAL VIEW: 1:2
The upper and lower teeth should be slightly parted so the incisial edges are visible. The retractors should be minimally visible and the lips should not be in the frame; the frame should include the upper and lower lips and equal amounts of skin above and below the lips. Avoid photographing this as a portrait, and keep the camera at the same level as the patient.

UPPER ARCH: OCCLUSAL VIEW: 1:2
The upper arch occlusal view is always taken as a reflected view using a high-quality mirror. The lips and cheeks should be retracted for all the gingiva to be visible in the arch; the distal of the second molars should be in the frame. You should not see any lower teeth in this
photo. To accurately capture this photo, use a mirror with a handle, ask the patient to lift their head with their chin up to relax the tongue, and push the mirror a little further back to capture the last molars. You can keep the mirror from fogging it up by running it under hot water or blowing air across it. Avoid the facial surface being cut off in the frame and keep the patient’s nose out of the frame.

**LOWER ARCH: OCCLUSAL VIEW: 1:2**

To accurately capture this photo, you’ll follow the same steps as you did in the upper arch occlusal view. The only real difference here is not allowing the mirror to rest on the lower posteriors because this will cause the upper posterior to be in the frame.

**CONCLUSION**

Proper digital photography is crucial for the esthetic dental office and practices striving to reach the next level of care. Without photography, patients can forget how they used to look; I know that I did when I had my own teeth done. There is no better record than photography and should become part of your everyday routine.