



The Showdown: Smartphone vs. DSLR Cameras



Consistently capturing great photos can have a huge impact on your practice. Here's what to consider.

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>> While the most important part of your aesthetic practice is your team, showcasing your abilities with photos of your patients' results is essential. RealSelf notes that 83 percent of consumers researching cosmetic surgery said they would not consider a practice that does not display before and after photos. Consistently capturing great photos can therefore have a huge impact on your practice.

The quality of your photos depends to a great deal on the quality of your equipment and your technique. Herein, we compare mobile devices with the gold standard digital single-lens reflex (DSLR) cameras.

USING MOBILE DEVICES FOR PATIENT PHOTOGRAPHS

Mobile devices are increasingly popular for aesthetic practitioners. They boast a range of advantages. These include:

Ease of Use. Almost everyone is familiar with capturing photos on a smart phone or tablet. Rather than spending time educating staff on the basics of turning on the phone or tablet or accessing the photography app, you can instead immediately start teaching how to consistently capture great photos.

Mobile devices are highly portable. Staff can easily carry a device from one room to the next. This portability poses a significant advantage over clunky cameras that need specialized set-up and expert knowledge to use.

The ability to capture and review the photo(s) with your patient is immediate. A physician or healthcare provider can instantly consult with their patient while using the visual of the actual subject as the reference.

Mobile devices eliminate the need for customization by using AI to capture the best possible image. For example,

your handheld device stitches together several photos at different exposures (one that highlights you patient's face and one that highlights details of the background) to provide the optimal photo.

Cost. Most offices already have iPads or other tablets they are using for electronic medical records. As a result, there is often no need to purchase additional equipment.

While a dedicated photo room is always preferred, you may choose to make one area of each exam room a photo area. Always use the same color backdrop in each room. This backdrop may be as simple as a handheld cardboard piece held up by a team member behind the patient or may be a pull-down curtain or blind behind the exam room door.

Image Cataloging. With a mobile device, your photos are automatically stored and can easily be cataloged into a

Excellent photographs prove the results your practitioners achieve and highlight the efficacy of treatments patients have undergone or plan to undergo, and savvy patients look for providers who show before/after images. Mobile devices can be used to capture patient photos, but their use is not as simple as "point and click." A DSLR camera in very many cases can provide better images. For either camera, technique and consistency are key.

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folder or album. In addition, with cloud-based services, these photos can easily be accessed across multiple devices.

Mobile devices do have some disadvantages, as well, however. These include:

Lighting. One of the central issues with mobile device photography is ensuring consistent lighting. The iPhone's shutter speed is too slow to time perfectly with a burst of light, which allows other light sources such as overhead lights or reflections to creep into the lens. In contrast, a trained photographer can set up a dedicated photography room with softboxes that are perfectly timed with the shutter of a DSLR camera. The burst of light can overpower any light in the room, creating consistent lighting among photos captured over time. Even the built-in flash on a DSLR can provide consistent lighting in most spaces.

Inconsistent lighting can be overcome by using a constant light source rather than a flash burst. For example, at Refresh Dermatology, all overhead lights are placed at the same distance from the photo space in each exam room and all are 5000K LED lights. This color temperature is ideal for medical photography, as it gives the perception of daylight with white light, capturing details in the photograph with clarity.

Lens Focal Length. Another disadvantage of the auto mode of smartphones is the way the mobile device handles fields of depth measured in focal length—or in other words, how much of the scene is captured (Fig 1). Mobile device cameras have a fixed focal length that can distort the face depending on the distance from the photographer to the patient.

Mobile device manufacturers know that their devices are used in social settings, and a major goal of their consumers is to fit as much of the scene or as many people as possible from a relatively close distance. Current mobile devices run about 28-30mm of focal length (individual devices vary)

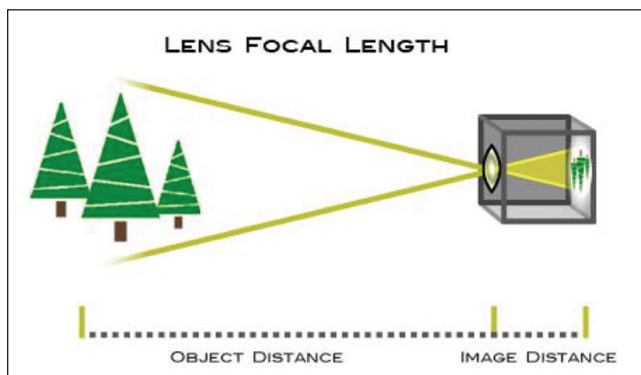


Fig 1.

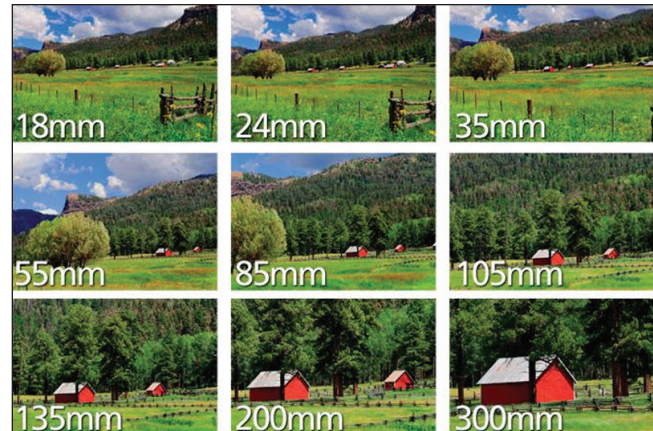


Fig 2.

whereas a DSLR can have 800mm or more. As evident in the differences in focal length shown by Nikon above, the shorter the focal length, the wider the angle (Fig 2).

WHY DOES THIS MATTER?

When you capture an image from your mobile device, it automatically tries to capture everything in the frame rather than a specific object. As a result, objects are subtly distorted. Many medical photographers recommend a lens with a 35mm focal length for most accurately capturing faces. In contrast, the Apple iPhone X's fixed focal length lens is equivalent to 28mm in DSLR lens terms and the telephoto lens is equivalent to 51mm. Several mobile devices have released auto-focus mechanisms which help you focus on a specific item rather than the entire frame. Another method of addressing the issue, although it may seem counter-intuitive, is to stand farther away from the subject, so the automatic settings of the mobile device can focus more easily on the subject without trying to fit so much in the frame.

DIGITAL ZOOM: THE DEATH OF PROPER CLINICAL PHOTOGRAPHS

Many physicians and health care providers try to overcome the inadequate focal length of mobile devices by standing farther away from the patient and using their fingers to zoom in. Depending on the device and the amount of zoom used, this will enable digital zoom.

There are two types of zoom: optical zoom (true zoom), and digital zoom (which essentially enlarges the image and crops it, hurting image quality). Digital zoom is ineffective and inappropriate for medical photographs.

Get acquainted with your current mobile device so you only select optical zoom. For example, when inside the iPhone camera app, press on the (1x - 2x) circle text near the

camera shutter button (Fig 3) to ensure 2x Optical Zoom. Medical-grade photography software services such as RxPhoto actually disable digital zoom to ensure the highest resolution of the image

USING DIGITAL SINGLE LENS REFLEX CAMERAS (DSLR) FOR PATIENT PHOTOGRAPHS

DSLR cameras offer many benefits, such as high resolution, interchangeable lenses, and camera settings that allow a trained photographer to overcome any inconsistencies in the frame (See examples from Dr. Chilukuri, at right). Essentially, all the negatives and limitations associated with mobile devices can be overcome using a DSLR camera. Benefits of DSLR include:

Reduced distortions. DSLR cameras also reduce the likelihood of distortions due to the superior focal length and interchangeable lenses. The ideal focal length for medical facial photography is 35 mm.

Consistent lighting. One of the most substantial advantages of a DSLR camera is that the flash is able to overpower the external light in a room due to the precise timing of the shutter of the camera. DSLR cameras can compensate for less-than-ideal lighting situations.

Unfortunately, DSLR cameras do have some disadvantages. These include:

Cost. The initial cost of the camera and lens can range from \$500 to \$4,000+ depending on the camera body and the lenses needed to optimize your clinical photography. Remember that you do not need the most expensive camera body to have excellent medical photos, since your subject is not in motion and lighting can be consistent in your exam rooms.

Training is required. Purchasing an expensive DSLR camera does not guarantee that you or your staff will capture perfect before-and-after photos. Proper use of DSLR requires training to include the best focal distance for face vs. body

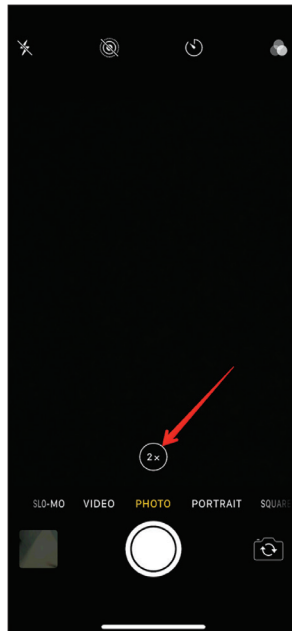


Fig 3.

photographs. Without training, the superior capabilities of a DSLR camera can be wasted.

Photo Cataloging & Security. Photos captured with a DSLR are stored on an SD card, which means that a physician or their team member will have to spend significant time daily uploading and cataloging patient photographs to the patient record. Those photos may also be stored on your clinic's server, incurring costs to ensure secure storage of those images. Recent stories of plastic surgery clinics becoming victims of cyber-attacks underline the immense responsibility of safe and secure storage due to the sensitive nature of the data. Services such as RxPhoto, which have a DSLR integration, can catalog patient photos automatically within their HIPAA-compliant secure cloud.

PRACTICAL PEARLS FOR ALL PHOTOGRAPHY

Have a Backdrop Plan. Use a consistent monochlor backdrop. Some inexpensive options include using a por-

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table backdrop that can cost \$35 to \$200 depending on size. Another option is to order a pull-down shade from Amazon, Three Day Blinds, or your local hardware store.

Focus on Subject Placement. While a DSLR camera does offer auto-mode, removing the need to customize the camera shots, auto-mode cannot ensure that the patient's positioning is the same in the before photo as in the after image. The American Society of Plastic Surgeons and The Plastic Surgery Educational Foundation released a great reference to help aesthetic clinics capture consistent pre and post-treatment images. (Access the guidelines here: <https://hubs.ly/H0j3clH0>.)

Install a positioning mat on the floor and train staff how to accurately capture the patient within the frame. Remember to have the patient move his or her entire body when capturing a 45 degree face or body shot (don't just let your subject turn his head to the side, as this will distort the neck).

Practice Consistent Positioning. The goal of proper patient photography is for the patient's eyes to be drawn to the results of the procedure, not the inconsistencies in the photography. Remove earrings and other jewelry, use a headband to pull back hair, remove make up, and use a black or white drape to hide clothes.

Consider using a photo system that ghosts or overlays the original photo with the photo being taken after a procedure was performed.

IN FOCUS

Whether you opt for using a mobile device or a DSLR camera, know that professional, high-quality patient images are instrumental to your clinic's success. The use of proper systems results in the creation of patient photos that can be used to help illustrate patient results and manage expectations. The quality of photos from either mobile devices or DSLR cameras will depend on your photographer. In the future, we will provide five tips to train your team to take quality pictures. Excellent photographs prove the results your practitioners achieve and highlight the efficacy of treatments patients have undergone or plan to undergo.

If you want to capture new clients and retain your existing clients, make a point of showing them before and after photos at every consultation. Patients are looking for assurance that the money they spend will result in beautiful outcomes. If you can demonstrate results with images, you can turn them into loyal clients, and encourage word-of-mouth referrals with no additional marketing work required. We will discuss the use of before and after photos for internal and external marketing in a future article. ■

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