

Expanding the Role of the iPad and Tablet Devices to Cosmetic Patient Consultations

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The iPad is a useful reference tool for patient education in cosmetic consultations. In this article, we plan to (1) discuss how the iPad can be implemented and used by patients and physicians in consultations, (2) compare the advantages and disadvantages of the iPad with other forms of technology, (3) discuss the optimal way of using the iPad for patient care, (4) see how this tool complies with privacy regulations, and (5) look at other uses of the iPad in the patient care setting. There has been positive feedback from both patients and physicians regarding the addition of the tablet computer during consultations. In addition to showing patients pictures of cosmetic procedures, the iPad also has various multimedia capabilities such as videos and drawing tools that are useful in optimizing patient satisfaction, increasing clinical efficacy, and improving the overall patient experience.

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The ever-expanding uses of portable tablet computers in the education of clinicians and medical students is a well-documented phenomenon.¹⁻² Additionally, these devices are increasingly seen in the clinical setting as a reference tool.²⁻⁵ However, there is limited literature of their use in the clinical setting for patient education. To practice in our technologically advancing society, we must constantly be on the lookout for and implement new methods of patient care, education, and treatment. Recently, the Dupage Medical Group has begun using a tablet computer, the Apple iPad (Apple, Inc, Cupertino, CA) to show patients before and after photographs of cosmetic procedures. With this, we hope to increase patient satisfaction and optimize the patient education process, increase clinic efficiency, and enhance the overall patient experience. In this article, we will discuss how the

iPad can be implemented and used by patients and physicians in consultations, compare the advantages and disadvantages of the iPad with other forms of technology, discuss the optimal means of using the iPad for patient care, see how this tool complies with privacy regulations, and look at other uses of the iPad in the patient care setting.

Tablet Computers: Implementation and Use for Patients and Physicians

In our clinic, we have been using a keyboard-less tablet computer, the iPad. The iPad is a flat rectangular computer that has a 9.7-inch touch screen, weighs 1.5 lbs, and is 0.5 inches thick. It was first introduced in the year 2010, and was the first tablet produced by Apple. The iPad has a battery life of 10 hours or 1 month on standby, and its screen resolution is 1024 × 768 pixels. It comes in 3 different storage capacities: 16, 32, and 64 gigabytes.⁶ The original iPad is used in our clinic and housed in a protective case to avoid damage with drops and falls. The iPad 2 adds the functionality of a camera, which could be used to snap and show a photo of the patient, and draw on that photo. The “new” iPad further adds a higher-resolution screen, but we found that the resolution of the previous versions was more than adequate for this application.

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Figure 1 An iPad displaying side-by-side before and after images of a patient who underwent a phlebectomy procedure.

We primarily use the tablet as a tool for patients to view before and after pictures of cosmetic procedures. Patients coming into the clinic for cosmetic procedures have questions, such as “What will I look like after the procedure?” and “Will there be scarring?” Instead of describing the result and fueling their imagination, we give them an iPad to browse through numerous before and after photographs that serve as examples of patients who have undergone the same procedure. Choosing a representative set of before and after pictures (not just the best results) sets the proper expectation. Patients are cautioned that there are many possible outcomes of these procedures, and that their results may differ from those seen in the photographs.

Photographs can be transferred and displayed on the iPad using various programs, including iPhoto. We selected Photo-Sort (version 1.4.2), which is an inexpensive program easily downloadable on the iPad from the Apple App Store. A personal computer is needed to transfer digital photographs to the iPad. The iPad 2 does have a camera; however, the quality of the photographs is inadequate for clinical photography use. Both the iPad and the computer must be directly connected by a wire or through the same Wi-Fi network to establish an FTP server connection, which allows the iPad to be viewed from the computer. From there, the photographs folder(s) can be copied into the iPad (Fig. 1).

Advantages and Disadvantages of the Tablet Compared to Other Forms of Technology

As with any technology, there are pros and cons to using the iPad. It is light weight and its size is well suited for patients to hold the tablet with one hand and use it while standing, sitting, or lying down. The touch-screen feature makes it easy for patients and physicians to scroll through and zoom while viewing before and after pictures. It also simplifies the categorization of photographs, allowing patients to review different examples of procedures based on location, size, gender, and ethnicity. Patients are able to search through a variety of procedure types, and find before and after pictures from procedures, which are of interest to them. Another advantage of

using the tablet for viewing of pictures is that it allows for the display of only pictures selected by the physician. This helps to keep the patients from browsing pictures or sensitive data that may be available if you were using a personal computer to browse the entire practice photo database or if browsing photos within an electronic medical record program.

Despite the tablet computer’s many advantages, there are some shortcomings. First, the portability and physical profile of the tablet computer come at a price. Traditional laptop/notebook computers, which have many more features and larger storage capacities, can also be used to display pictures. These notebook computers are often the same price or even less expensive than some tablets and have much greater capabilities. Some feel that the virtual keyboard of tablets makes typing much slower. The body and screen are more easily damaged compared with other computers because the screens are frequently touched to interface with the tablet computers and there is more risk of dropping the device during handling. This can be minimized by adding a protective casing around the tablet and a protective film over the screen. A distinct advantage of the tablets is that they are smaller and lighter than notebook computers and easier to handle for many patients, especially the young and elderly. Furthermore, using a touch pad or a pen is not nearly as convenient for scrolling through pictures as using one’s own fingers to swipe across the screen.

Optimal Use of the Tablet for Patient Care

Although the tablet is a good tool, if it is not set up correctly, it may not be efficient for patient use. In the case of before and after pictures of cosmetic procedures, the tablet should have separate folders for each procedure, which makes it easier for clinicians to find specific examples to show patients. Also, one could set up additional folders within these procedure folders for different ethnicities and genders. Because results could differ owing to skin color and texture, we try to provide at least 3 sets of before and after photographs for each folder. With a simple “swipe” motion, the patient can scroll from one set of photographs to the next. Lastly, we have juxtaposed the before and after photographs on one page as JPEG files so that they are easy to compare in a side-by-side format (Fig. 1).

The iPad is generally presented to the patient by the physician during the consultation. The photographic examples help the patient to better understand the conditions treated by the procedure being described, and can also be used as a presentation aid by the physician to highlight areas of benefit by a particular procedure. If the patient asks the staff about certain procedures when being checked in, the staff could also show the patient the iPad pictures before the physician enters the room. This can help the patient narrow down the procedures that are of most interest to the patient, leading to a more focused discussion with the physician. This works best if there are too many procedure options that would make it untimely to scroll through the photographs during the consultation process (Fig. 2).

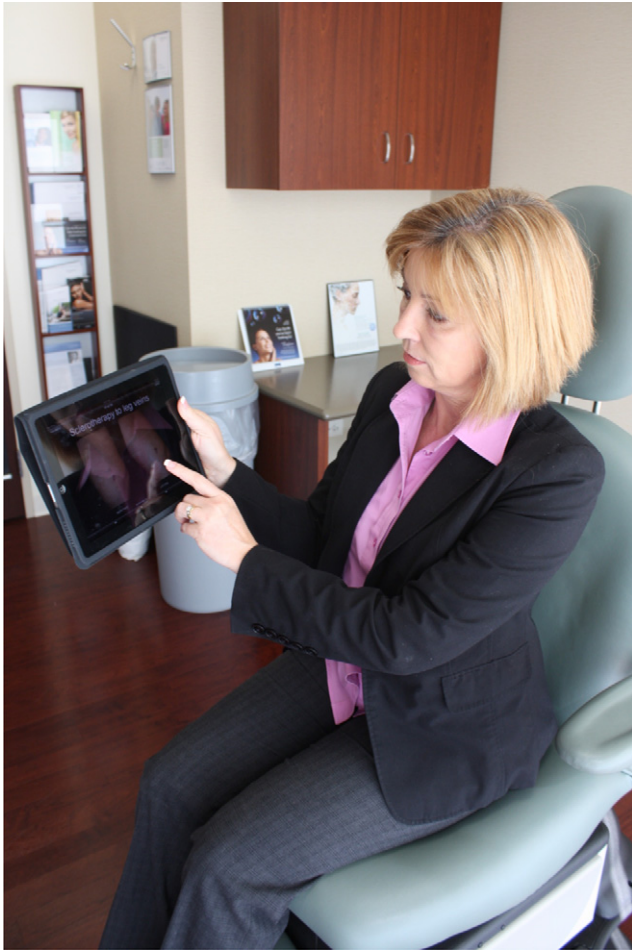


Figure 2 A patient using the iPad to scroll through before and after images of sclerotherapy treatments.

Privacy and Security

Patient privacy is of utmost importance. Regardless of the method used to display the pictures, informed consent for using a patient's pictures for educational purposes must be obtained before displaying the pictures. All of our patients are given the opportunity to consent for their pictures to be

used for patient education purposes. We also crop the pictures to display only the area of treatment. As an additional precaution, in the unlikely event that the iPad is lost or stolen, the tablet is password protected. Because the pictures are locally stored on the iPad, no network access is needed, avoiding any risk of breaching the office network via the iPad.

Beyond Before and After Photographs

Not only can iPads be used for showing patients pictures of cosmetic procedures, we can also take advantage of their various multimedia capabilities. Clinicians can ask patients to watch short informational video clips introducing different techniques and procedures. Patients can watch movies on tablet computers while waiting for topical anesthetics to take effect or while passing time during longer procedures such as hair transplants. Sharing reconstructive surgery before and after pictures with Mohs surgery patients may put them at ease knowing that their defect can be repaired with minimal scarring. Drawing programs can be used to sketch out specific examples of concepts for patients.

We have had positive feedback from patients regarding the addition of the tablet computer during consultations. However, as technology is ever changing, we will continue to adapt and adopt the latest technology to optimize patient satisfaction, increase clinical efficacy, and improve the overall patient experience.

References

1. Kiser K: The iPad project. *Minn Med* 94:12-14, 2011
2. Kubben PL: Neurosurgical apps for iPhone, iPod touch, iPad and android. *Surg Neurol Int* 1:89, 2010
3. Savel RH, Munro CL: Scalpel, stethoscope, iPad: The future is now in the intensive care unit. *Am J Crit Care* 20:275-277, 2011
4. Lacquiere DA, Courtman S: Use of the iPad in paediatric anaesthesia. *J Anesth* 66:629-630, 2011
5. Mashman W: The iPad in cardiology: Tool or toy? *JACC Cardiovasc Interv* 4:258-259, 2011
6. Costello S: What is the ipad? Available at: <http://ipod.about.com/od/glossary/g/ipad-defintion.htm>.