



How to Improve Outcomes and Profits with Ultrasound

Are you taking advantage of this diagnostic tool?

BY DONALD PELTO, DPM

Introduction

This article will help those who:

- Are not used to performing ultrasounds and have difficulty explaining them to patients.
- Are considering obtaining an ultrasound but want to ensure they can afford it.
- Feel like they are underutilizing the ultrasound they own.

How to Learn to Perform an Ultrasound Exam

When starting with lower extremity ultrasound, you may not be familiar with performing this exam or seeing the anatomy on this modality. Start by obtaining review articles—these act as a primer for understanding how the anatomy and pathology look on ultrasound. However, the

sound block time. This will give you more training in a shorter block of time to help you learn how to use the machine and document. Increased practice will help you learn faster. The more you train, the more comfortable and confident you will become in your ability to operate and understand the scanning procedure. Also, many ultrasound companies have a physician on staff to teach you how to use the machine; therefore, it is recommended to line up a block of patients and have the more experienced clinician perform them with you.

Labelling Your Ultrasounds

Once you are comfortable performing the ultrasound exam, the challenge of labelling the images

company should give you the necessary training and set up your machine (Figure 1).

Ultrasound challenges—Battery Life and Wi-Fi Struggles

You may experience two difficulties with your ultrasound. The first concerns the battery life when not plugged in. The battery on the ultrasound is inadequate for a practice that moves an ultrasound from room to room, especially if you do not have a dedicated ultrasound room. The most frustrating part is when you are trying to perform an exam and the ultrasound shuts off due to a lack of battery power. To circumvent this problem, purchase an external battery that can be used, and keep the machine plugged into the wall.

The other challenge is to wirelessly link images to your PACS. After each exam, the machine connects to the Wi-Fi and sends the images to your PACS system, but this can sometimes be delayed. Therefore, in the beginning, you need to wheel the ultrasound next to your desk to document the ultrasound read in your EMR.

Selecting an Ultrasound Machine

It can be difficult to determine what ultrasound is best for your practice. First, it would be beneficial to determine if insurance covers ultrasound in your area. Next, you need to decide if you will use a mobile device or a PACS system. The price ranges from \$5,000 to \$25,000.

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When starting out using an ultrasound, you may consider having all patients come on the same day of the week.

best way to get used to performing them is by conducting “test” scans on every patient (with their permission) to learn to observe normal and abnormal anatomy.

Learning to Use an Ultrasound with Block Time

When starting out using an ultrasound, you may consider having all patients come on the same day of the week. For example, you can designate a Friday morning as an ultra-

comes. This requires a simple set-up to have the correct words available to make labelling easy. Of most importance is defining what axis you are reviewing, either longitudinal or transverse, as well as location, such as medial and lateral. Another aspect of ultrasound is measuring the tissue’s thickness. Initially, you can also measure tissue thickness on your picture archiving and communication system (PACS) machine, depending on your system type. Your ultrasound

CLINICAL CONCEPTS

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Arrange for different vendors to come to your practice and demonstrate all the bells and whistles of their particular ultrasound machines. This allows practitioners to do test runs on the machine, compare image clarity, and learn about software integration capabilities. They can then make their decision based on preferred outcomes and hands-on experience.

Consider buying an ultrasound that merges with your PACS system to show your patients in the same program as your x-rays.

How Ultrasound Can Improve Patient Care

For many conditions, you will find that ultrasound can help guide other treatments such as shockwave and Amnio injections. In the example of patients with plantar fasciitis, by performing an ultrasound bilaterally, you can show the difference in fascia thickness on the symptomatic versus non-symptomatic side. The symptomatic side will be thicker with an effusion or dark color on the ultrasound.

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Figure 1: Example of ultrasound with labelling and measurement

For many conditions, you will find that ultrasound can help guide other treatments such as shockwave and Amnio injections.

Plantar Fasciitis and Heel Spur

Male: 3.3-3.8mm
Female: 2.8-3.2mm

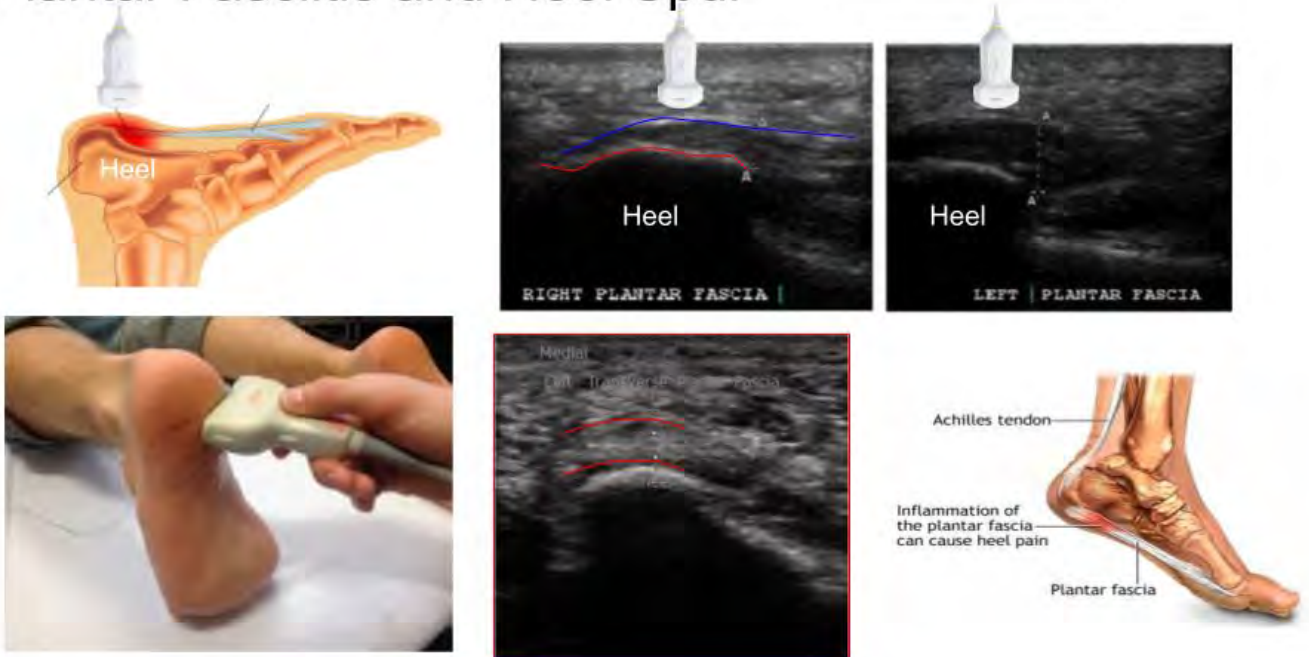


Figure 2: Plantar Fasciitis example slide to show the thickness of the fascia

Ultrasound (from page 82)

Figure 2 is an example slide shown to patients in the treatment room displaying the thicker fascia on the left side and the thinner one on the right. This image is shown during a patient encounter via a slide presentation to emphasize the benefit of ultrasound in helping guide treatment.

Wording to Explain Ultrasound

In your presentation to the patient, you may consider saying, “Here is a picture of a normal plantar fascia on the image on the left, and on the right, you can see the other fascia as being thicker and darker in color.” Also, “While x-rays only show the bone, you can see soft tissue on an ultrasound. It is less expensive than an MRI and can be done in the office today.”

Finally, because repeat ultrasounds can be helpful, you may want to follow up by explaining that “ultrasound can help guide our treatments, and we can compare the improvement of the tissue at the beginning and after your course of treatments.”

Recommendations for Self-Pay Ultrasound Evaluation

Talking about self-pay treatments can be challenging. In our state of Massachusetts, only a few major insurance carriers pay for ultrasounds; therefore, we must become comfort-

Figure 3: Foot Treatment Checklist example

If paying out-of-pocket, we find it helpful to include repeat exams without charge and inform the patient of that in advance.

able addressing the cost with our patients.

Consider different costs for evaluation vs. injection. If they just need an ultrasound-guided cortisone injection, we feel a reasonable amount is \$50, but if an evaluation is needed, the amount is \$100 per location.

If paying out-of-pocket, we find it helpful to include repeat exams without charge and inform the patient of that in advance. Rarely do we have to perform repeat scans, but they are not time-consuming, and they help show the tissue before and after treatments such as shockwave therapy.

It is recommended to have patients take a picture with their phone when they have an ultrasound. This will help them to explain to other family members the need for the ultrasound and the plan of care based on the ultrasound.

Case Study—Plantar Fasciitis

One use of ultrasound in private practice is helping to explain and treat plantar fasciitis and then packaging the treatments. In an effort to help the patient understand, it can be worthwhile to show the abnormal anatomy before treatment with ultrasound and then offer a treatment

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DIAGNOSTIC ULTRASOUND

- [Achilles Tendon](#)
- [Arthritis](#)
- [Ganglion Cyst](#)
- [Hallux Limitus/Turf Toe](#)
- [Metatarsalgia](#)
- [Neuroma](#)
- [Peroneal Tendon](#)

- [Plantar Fascia](#)
- [Plantar Fibroma](#)
- [Plantar Plate Tear](#)
- [Posterior Tibial Tendon](#)
- [Sesamoid and Flexor Hallucis](#)
- [Bursae](#)



Figure 4: Diagnostic Ultrasound slide deck

CLINICAL CONCEPTS

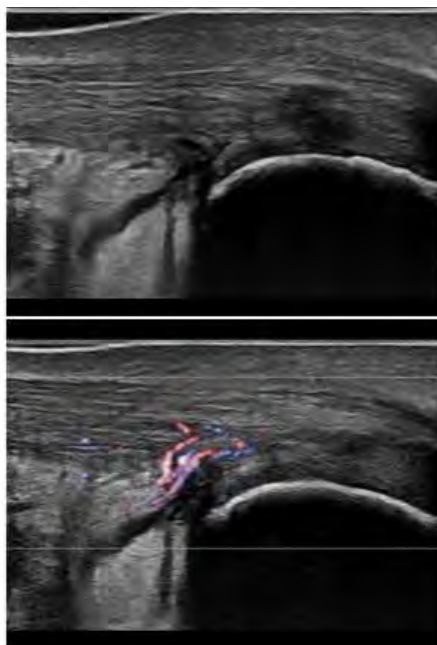
Ultrasound (from page 84)

package. In our hands, this includes three (3) sessions of shockwave with

an ultrasound-guided amnio injection after the second shockwave session. There is a six-week break after the third session of shockwave, where

patients go to physical therapy. At the follow-up appointment, a repeat ultrasound can be performed to show
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Achilles Tendon



Male: 4.6-5.3mm
Female: 4.0-4.8mm

Figure 5: Anatomy slide example

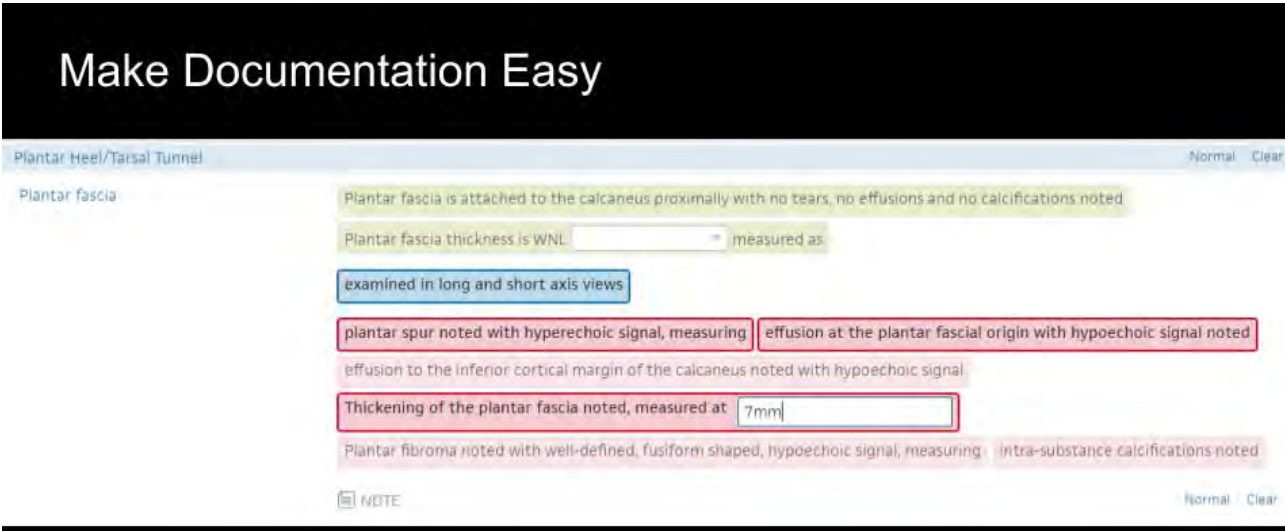


Figure 6: Documentation slide example

Ultrasound (from page 85)

the reduction in effusion.

All of these treatments can be confusing for patients, and because of that, we developed a Foot Treatment Checklist. Figure 3 is an ex-

ample of this checklist filled out for plantar fasciitis. Some of the boxes have an “X” while others are circled. This is how to prepare a patient for having an ultrasound on the follow-up visit. Rarely will you do an ultrasound on the first visit. Start with x-rays and, depending on their

Ultrasound Slide Deck

progress with treatment, perform an ultrasound on the follow-up visit. Many anatomic areas can be evaluated with ultrasound. Using an ultrasound slide deck is helpful before

sound. An efficient workflow is to show the slide deck as the patient signs consent for the procedure. It can be helpful to say, “Many patients do not understand what they see on ultrasound because it looks like black and white TV. Looking at the pictures before the examination will help you understand what you are looking at.” Then, you can show them the anatomy slide (Figure 5).

Documentation for Ultrasound

Documentation for ultrasound can be time-consuming both in the ultrasound device and your EMR. Figure 6 shows an example of a click-through list used in our medical records to simplify documenting ultrasounds. Other doctors prefer documenting the report of findings in a report. If so, have your scribe document the ultrasound results while you review them with the patient in the treatment room.

Patient Consent

Obtaining patient consent is done before performing an ultrasound. **PM**

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doing the exam. This slide deck links ultrasound examples and treatment recommendations for the different conditions (Figure 4).

This slide deck allows you to show the normal and abnormal anatomy and help review the treatment options after completing the ultra-

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