



BY JARROD SHAPIRO, DPM

Learning from Failures

We can benefit more from our errors than our successes.

Practice Perfect is a continuing every-issue column in which Dr. Shapiro offers his unique personal perspective on the ins and outs of running a podiatric practice.

Learning something new is an important part of life (and a fun one). We spend so much of our time focused on certain aspects of our learning, but we often wonder if we're focused on the wrong aspects. For example, take a look at a recent success of your own. Maybe you sculpted a new statue or created a new culinary dish. Perhaps you're a clinician and obtained a good outcome for your patient. It feels great to have a success.

But do we really learn from our successes? As difficult as it is to accept, we actually learn more from our failures than our successes.

Here's one example. Each week during our resident academics, our residents review their surgical cases from the week. They show the pre- and post-operative radiographs, relate some of the patient history, and we discuss the particulars of the procedures: how they were done, how it went, and what was successful and what wasn't.

Typically, in the case where the procedure was completed flawlessly with an excellent result, we sit there

looking at the image with nothing to say!

"Looks good", one of the residents might say.

"Yup. Looks good," I might add.

The resident who did the case will beam happily for a moment, proud of his or her work (and rightly so). What do you think happens next? You guessed it. Nothing. There's very little to discuss, and the learning stops there (in fact, it never

This is where the learning occurs. Ray Kroc, of McDonald's fame, used to say, "If you're green you're growing. If you're ripe you rot."

Oftentimes, during these surgical discussions, take the devil's advocate position and ask, "So what could have been done differently or better?" Sometimes, ask this even in the cases where everything went well. Many times, it results in a blank stare from the residents, which shows that

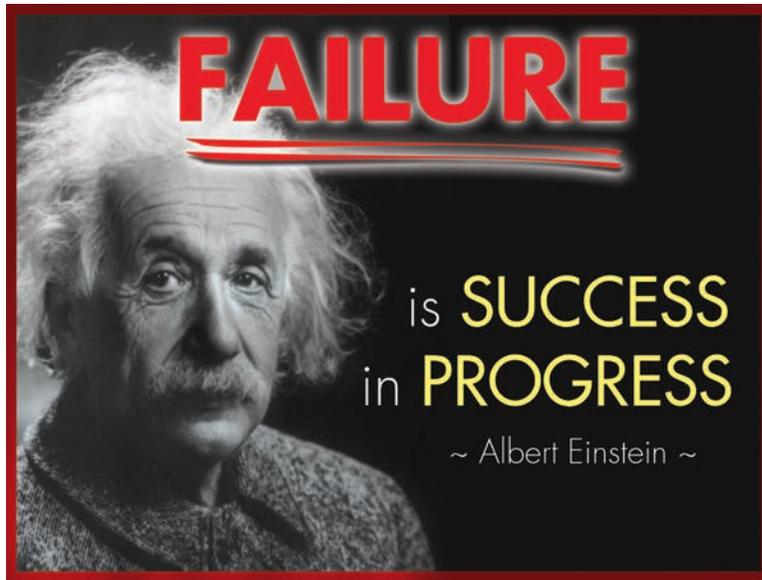
they hadn't considered that anything could have been done better.

This is where all of us go wrong. We focus on the wrong aspect of our experiences. Take the medical literature as another example. It is well known that there is a publication bias rampant throughout published literature. This bias is created when the outcome of a study influences a journal's decision whether or not to publish the

study. This bias most often falls toward the side of the positive study (the one with "significant" results). Studies with no or poor results are often relegated to unpublished status or the grey literature (documents produced outside of the normal publication routes).

In the foot and ankle literature, it's almost comically funny to note the number of studies that report

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started). We move on to the next case.

This is very different from the case where something didn't go according to plan or the result wasn't 100% optimal. In these situations, there's much to discuss, and the resident's learning is accelerated. We might discuss what went wrong and why, how that error could have been avoided, and what could be done next time to improve the outcome.

Failures (from page 25)

positive or successful results. It's so common that one can predict before reading an article that a particular procedure will be considered successful by the authors.

Here's a quick example of one. In the most recent *Journal of Foot and Ankle Surgery*, the third study listed on their webpage is by Prissel and colleagues¹ reporting on the outcomes of a direct plantar approach to plantar plate repairs. Here are the reported results:

- Well-aligned toe in 87.1%
- Recurrence rate of 7.6%
- Revision rate of 2.8%
- Statistically significant improvement in the modified Foot Function Index and individual sub-scores.
- Median post-operative visual analogue scale of 2.0.
- Patient satisfaction questionnaire with mixed results

The authors conclude, "Our modified Foot Function Index results demonstrated that this approach provides excellent post-operative pain relief, improvement of associated dis-

procedures, is replete with this type of result.

But more important, there's a more significant number that gets to the point of our conversation today: 12.9%. That's the number of poorly aligned toes after the surgery. For that matter, the 7.6% recurrence

TV, radio, phones, and a host of other technologies).

Successful athletes and business people have this in common. They focus little time on the parts they do well and spend much more time on their deficiencies. This is the way students are taught to study: track

Similarly, each of us should focus on our failures and areas of ignorance rather than what we did successfully.

and 2.8% revision rate are also important. These numbers imply that there's something we don't know about this surgical procedure. Here is the opportunity for improvement.

If 12.9% of patients had a poorly aligned toe, that means there's something incomplete about the procedure. There must be a better way to do some aspect of it. Perhaps there's another reason for the failures? Maybe the initial recovery needs to be conducted differently? Maybe certain splinting methods would help?

the info you know and quiz yourself on what you don't know.

In fact, it's well known in educational circles that passive study techniques, such as passively reading, leads to an unrealistic and false sense of the amount of knowledge one has. The reason testing is so successful as a study method is because it provides us a realistic view of what we know and what we don't know. Focusing on the "don't knows" then allows us to move forward.

Similarly, each of us should focus on our failures and areas of ignorance rather than what we did successfully. Maintaining what we do well and focusing our attention on what can be done better is the key to truly advancing our individual and collective knowledge. For medicine in general, I suggest the creation of a new journal called *The Journal of Failures* (or something a little more positive perhaps) where the emphasis is not on the successful procedure but rather the failures. For the rest of us, we should remain cognizant of the importance of our successes and embrace our failures for what they are: our best opportunity to grow. **PM**

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ability, and improvement in activity limitations"¹.

Now, not to dispute or criticize the study itself (this isn't a journal club where we pick apart studies for methodological problems), this is a potentially useful study that may provide assistance for those of us figuring out the best approach to plantar plate issues. However, this does bring up a couple of interesting points.

First, what are the chances that this study would have been published if the results were a failure rate of 87.1% instead of a success rate of 87.1%? Likely a lot lower. The literature, especially that discussing

Perhaps there's some deficiency in the procedure execution.

We are looking here into the rhetorical dark corner, under the rug, so to speak. This is where medical science has an opportunity to step forward. The history of science is full of individuals who looked at what came before them, saw a deficiency of some type, and asked the right question. If Einstein thought Newton had all the answers, we wouldn't have general or special relativity. If our other great physicists thought Einstein had it completely right, then we wouldn't have quantum mechanics and the standard model of particle physics (much less

Reference

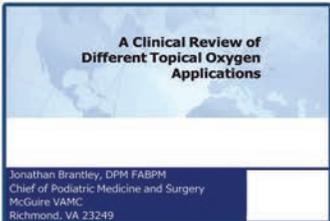
¹ Prissel MA, Hyer CF, Donovan JK, et al. Plantar Plate Repair Using a Direct Plantar Approach: An Outcomes Analysis. *J Foot Ankle Surg.* 2017 May—Jun; 56(3):434-439.

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Dr. Shapiro is editor of PRESENT Practice Perfect. He joined the faculty of Western University of Health Sciences, College of Podiatric Medicine, Pomona, CA in 2010.

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