



Noteworthy

The Return of the Noteworthy Newsletter

The NCOPE board of directors and staff are pleased to announce the return of the NCOPE Noteworthy Newsletter after a two-year hiatus. This is made possible by the leadership offered by the new editor-in-chief, Ruthie Dearing, MHSA, JD. Ruthie brings decades of health science education, communication, and clinical consulting experience which will enable the newsletter to be published three times per year. If at any point you wish to share your thoughts on the Noteworthy Newsletter or would be interested in generating content for the newsletter, please do not hesitate to contact Ruthie at the email address listed at the bottom right-hand corner of this page.

Managing by Measuring. It's not as hard as you think!

- Nathanael Feehan, LPO— Master's Orthotics and Prosthetics—Silverdale, WA

Metrics are a way to measure something. Business metrics measure areas, processes, or money within a company. These factors tell us how we are performing. Measuring something allows you to change or adjust it. Learn how Japanese manufacturing giants such as Toyota and Honda were able to produce a consistent, quality product at a much faster and cheaper and how their guiding principles can enhance your orthotic & prosthetic practice. **Read the full story on page 2.**

Working with the Paralympic Athlete

- Francois Van Der Watt, CPO— Van Der Watt Prosthetics & Orthotics — Greenwood, AR

Recognize that working with a Paralympian or a potential Paralympian, it is going to take commitment, dedication, time and money from both you and the athlete. Learn what it takes to win the gold when prosthetist/orthotist and athlete effectively collaborate. **Read the full story on page 3.**

Are You Leveraging NCOPE Tracker to The Fullest?

View the latest tutorials and resources for NCOPE Tracker users by visiting: <https://ncope.org/tracker>

NCOPE Hosts Multiple Live Events Each Quarter for O&P Stakeholders

View the calendar and learn how to participate by visiting: <https://ncope.org/events>

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Managing by Measuring

Early in the 1980's orthotics and prosthetics was an excellent business to be in. Even after Medicare locked in prices on January 1, 1989, the industry still had large profit margins due to low regulation, no Medicare audits and reasonable reimbursement. The industry was flush with money. This bounty has slowly diminished over the last 30 years to the place where we are today. Adjusted for inflation, Medicare reimbursement rates are now one-half of what they were in 1989 and, sadly, we are pressed on every side by increasing costs from wages, vendors, utilities, and landlords. How are we to survive in this environment?

This frenetic situation is the same type of position that faced the United States automobile manufacturers after post World War II growth ended. After WWII, auto manufacturers were living high with soldiers coming home, buying vehicles, and enjoying a booming economy. Conversely, although built on scarcity, the new Japanese economy was expanding quickly. In the 60s and 70s, Japanese auto manufacturers were able to surpass the efficiency of the United States automobile manufacturers and began to sell their automobiles at a great discount in the United States. To do so, the Japanese had to import raw materials while at the same time dealing with little land for warehouses filled with extra parts. This affront baffled the United States automobile establishment. How did the Japanese make such inexpensive, quality vehicles within these challenging constraints?

I am not about to dive into all the ways that Japanese giants such as Toyota and Honda were able to produce a consistent, quality product at a much faster and cheaper rate than their United States counterparts. Instead, I will focus only on one factor: business metrics. The ability to measure all areas of business, without covering-up weaknesses by large profit margins, allowed the Japanese to evaluate and analyze how their companies were doing. Just as the auto industry had to knuckle down and update processes to stay competitive and survive, so must we.

Metrics are a way to measure something. Business metrics measure areas, processes, or money within a company. These factors tell us how we are performing. Measuring something allows you to change or adjust it. Although the profit/loss and balance sheets are important, these factors do not measure staff productivity or show how or what you might do to ensure improvement.

“Just as the auto industry had to knuckle down and update processes to stay competitive and survive, so must we.”



About the Author

Nathaneal Feehan, LPO is the CEO of Master's Prosthetics & Orthotics located in Silverdale, WA. Nathaneal received his O&P education at the University of Washington and completed orthotic and prosthetic residencies at Oklahoma University Health Science Center.



Improvement leads to increased profits. Improvement is a key reason to have business metrics or KPIs (Key Performance Indicators) as they are often called. How do we know we are doing better if we cannot measure our process? For example, if you are training for a 100m run, you will time yourself when you begin training and then again later in your training. With this information, or metrics, you can see if you are getting faster. You can determine if your training regimen is working or if you will even be competitive in running the race. These are metrics in your training. Similarly, in business, we need to have metrics, or KPIs, to tell us how we are doing or to track progress over time. Business metrics also help us measure ourselves against industry standards.

Recently I tried to see if anyone knew what the average time was for an AFO to be delivered, start to finish. How can I determine how our company measured against a national average? Seems like an easy question to ask right? Wrong. As I received answers back, I realized that not only did people have different views of what denoted start and finish; some did not realize why this question even mattered.

As an industry grows, it moves from a 'fly by the seat of your pants' or 'gut feeling' management style to measured and performance-based management. If you want to know how you stack-up against other clinics in your area or how much time it will take to go from initial evaluation to delivery of an AFO, how do you get this information? What can you do with this information? At the clinic where I work, one of our top ten referral sources stopped referring for a short time because they felt we were too slow. 'Were we?' I asked myself. I did not know the answer to this question.

I had a gut feeling, but no definitive answer. Does it take 10 days to deliver the average AFO or does it take 60 days? Answering this question only resulted in asking more questions as I explored for an answer. In the end I did the arduous work of looking into patient files, noting the date of the prescription, when we saw the patient, when the device was authorized by insurance or when we got amended notes, when the device was fabricated and when the device was delivered. This research generated actual date-based data showing that it takes X days to go from start to finish. Using this data, I created a metric (measure of the time it took to deliver the AFO). The resulting answer was much different than the one from my gut feeling. Now that I had a starting point, I set a goal to reduce this number by changing the process our company employed. Thru this examination, I was able to make a change which resulted in a 45 percent decrease in the amount of time it took to deliver an AFO, and we won back the referral source who had stated we were too slow.

This outcome leads to an obvious question: In what other areas can massive improvements be made? How do we identify these areas? What we realized...there are an endless number of options. What you measure depend upon your needs.

Working with the Paralympic Athlete (Cont.)

The 2020 Paralympic Games in Tokyo marked my 10 years of being the Prosthetist for the US Paralympic Track & Field Team and attending my 3rd consecutive Paralympic Games as part of Team USA. In the past 20 years, I have worked with a Paralympic Track & Field Medalist in each of the Paralympic Games since the Sydney Games in 2000.

I am often asked how I work with a Paralympic athlete? This prompts a first question to myself: "Am I working (going to work) with an athlete who became an amputee or rather with an amputee who wants to become an athlete?" The path for both will be much different. The amputee-athlete will require much more training, work, time, determination, and motivation than will the athlete-amputee.

Both paths can reach success to become a Paralympian, competing at the highest level. At the end of the day, only three athletes can make it to the podium and be known as Paralympic Medalists. Many factors will come into play to reach the medalist level. As a Prosthetist, you will play an integral part in the process, but you will also be part of a bigger team that can consist of the athlete's physician, coach, physical therapist, athletic trainer, massage therapist, chiropractor, manager, nutritionist, psychologist and or life coach.

My second question will be directed to the aspiring Paralympian. In what sport does h/she wish to compete? My personal experience and focus are on Para-Track and Field (T&F) events as well as some Para-cycling events. It is very important to familiarize yourself with the specific Paralympic sport in which the athlete wishes to compete. Is it a winter or summer Games sport? When is the next Paralympic Games year? The Paralympic Games are hosted every four years, typically a couple of weeks after the Olympic Games, using the same host city, village, and venues. The odd years in between Game years are allocated to World Championships and present another opportunity for the athlete to compete on the international level.

You need to know the sport specific events available for the athlete. What is the sport specific classifi-

"You will only ever be done when your athlete retires or changes providers as athlete's bodies and limbs change over time and pending the athlete's training schedule during competition and/or off-season."



About the Author

Francois Van Der Watt is the founder of Van Der Watt Prosthetics in Greenwood, AR. He received his O&P education at the Tshwane University of Technology in South Africa. His expertise in working with athletes has been shared as part of the Academy's 1-Day Certificate Programs.



cation criteria for the athlete's level of disability? Not all sports are treated equally and not all events are available for all athletes. Some events are only for Unilateral or Bi-lateral athletes and some events are combined. Bi-lateral athletes must meet the MASH (Maximum Allowable Standing Height) formula requirements to compete. What is the sport specific Team selection criteria and what is the Team selection process? In T&F, an athlete needs to meet a specific "Standard" (Time or Distance) to be eligible for Team selection. Help yourself and your athlete by getting familiar with local or regional events that can be used to meet or set a qualifying standard. Know your athlete's standards and his or her MASH formula as different formulas are applied to different levels of amputation.

Now you must address the elephant in the room. Cost. As most prosthetic providers already know, commercial insurance providers are very reluctant to provide coverage for activity specific prosthetics, especially and foremost High Performance and Sport specific prosthetic care. Depending on the sport specific needs and the athlete's ambitions, you must determine how far you, or your facility, is willing and can afford to provide care to the potential Paralympian? You need to consider the labor, materials, and time costs involved in providing a 2nd and sometimes 3rd sport specific prosthetic. The athlete might want to sprint and do long-jump as a second event. Although one prosthetic device can be used for both events, the prosthetic setup and components available are very event specific as the running and jumping mechanics in the events are very different.

We normally see a change in product properties within 12-18 months of use. Based on this knowledge, future component replacement costs must be determined and factored into consideration, as wear and tear and component breakdown will take place from using only one sport specific prosthetic for training and competition.

Regarding costs, options available to minimize cost might be sport specific grants from non-profit organizations like the Challenge Athlete Foundation (CAF) or Amputee Blade Runners (ABR). The very few gifted athletes might receive financial support from component manufacturers in the form of donations or as members of Team Ossur or Team Ottobock. Most of the cost will fall on the prosthetist or the athlete and h/her willingness to pay out-of-pocket for your services. You will not be reimbursed for the extra time required in setting up and alignment of the sport specific prosthetic. It will take more time compared to what is needed for a regular prosthetic setup. And, to gain the experience needed to be efficient will take some trial-and-error to get it right the first time around.

You will only ever be done when your athlete retires or changes providers as athlete's bodies and limbs change over time and pending the athlete's training schedule during competition and/or off-season. Although sport



Paralympic athlete running with an activity specific prosthesis

Working with the Paralympic Athlete (Cont.)

specific component manufacturers will provide base set-up and alignment recommendations, they have very limited clinical knowledge and experience on some sport specific alignment recommendations specific to your individual athlete. Almost all manufacturers are in the business of develop, make, and sell products. They are sometimes not able nor willing to provide clinical expertise in sport specific prosthetics as it is a very small portion of their product offerings.

Lastly, you need to recognize that working with a Paralympian or when you consider working with a potential Paralympian, it is going to take commitment, dedication, time and money from both you and the athlete. Things are not always going to work the way you think. Be prepared to expect the unexpected and make changes or adapt to an alternative plan when prosthetic socket design and suspension methods fail completely. If you can endure and prevail, you will be one of only a very few Prosthetists in the country that has experienced the feeling of seeing their athlete on the podium receiving a Paralympic medal during the Paralympic Games. To me it is worth it.

Decreasing Health Risks in the Lab

- Matt Perkins — President/CEO of Coyote Design — Boise, ID

Like many sons of prosthetists, I was in my father's lab at a young age, and as a congenital amputee, I was probably there more frequently than most might be. One of my first tasks was learning to make "gunk." Mixing a resin with sawdust and then "gunking" a test socket to a wood block, and ideally doing so fast enough that you weren't standing over the resin when it finally kicked off and started to smoke. Ventilation was limited and the best way to avoid the bad smell was to walk into another room with no concerns that the smoke might be bad for you. If you happened to get any of the resin or gunk on you, it was simply cleaned off with acetone. From there I learned to sand foam for orthotic pads, break out casts of plaster, mix and pour plaster. At this point, I was laminating sockets with carbon, or Kevlar, or whatever new and exciting materials we happened to be using in the lab. A gain, it was best to be done laminating before the resin started to smoke, spills were simply cleaned with acetone, and all of the sockets were ground and finished with the router or Sutton with limited to poor dust collection.

OPRESCAS Updates

Remember that **all residency programs accredited or re-accredited after July 1, 2017 are required to advertise and accept residency program applications using the OPRESCAS WebAdMIT system.**



- Applications are only visible when the residency program staff submit a program configuration, which must be done **for each OPRESCAS cycle**, which runs from Sept through August of the follow calendar year.
- When a prospective resident applies with the OPRESCAS system, they are **provided a CAS-ID, which is needed for that individual to register for residency** if hired at a residency site.
- To learn more about how residency sites can best leverage OPRESCAS in their hiring practices, please visit: <https://oprescas.liaisoncas.org/>

Decreasing Health Risks in the Lab (Cont.)

Such was the lab in which I grew up and I suspect that most of us have either started in or maybe still operate in such a space. Our health or awareness of health risks seemed to be non-existent or maybe we simply did not care.

Fast forward, a few years and we settled into using carbon in all of the sockets and even in the AFOs. To combat the annoyance of the itch while finishing carbon, we upgraded to a much better dust collector that attempted to keep the carbon dust from attaching to our skin. We would also suit-up in hazmat gear to reduce the risk of the itch. Yes, that's right! We were only worried about the itch, not the fact that carbon could get into our lungs, and once there, stay forever.

This was and in many cases is the norm in prosthetics and orthotics. I would like to tell you that we had some sort of epiphany or wake-up call to the potential hazards of the materials we were using, but that just would not be true. We found healthier alternatives more by accident than by design. After developing our Summit Lock, and the urethane attachment to be glued to the liner, we found a glue that turned out to be fast setting, easy to use, and without a dreadful, lingering scent. Remarkably compared to other glues and resins in our lab, this glue was much safer and easier for us to use. No more dodging that smoking resin!

A few years down the road, we were working on adding more flexibility and toughness to the sockets and the AFOs we were

About the Author

Matt Perkins is a second generation O&P business manager, accomplished para-triathlete, and advocate for O&P manufacturing best practices. Matt currently serves as the President/CEO of Coyote Designs which operates a clinical practice, central fabrication facility, and component manufacturing facility.



laminating. While doing so, we discovered that we could use our basalt braid in place of carbon fiber. Low and behold, it was not only tougher and more flexible, but it did not itch when ground and was not an inhalant risk.

At this point....a wakeup call! We decided to purposely look for healthier alternatives

rather than just hoping to accidentally find materials that were safer to use. With this change in thinking, we began using safer resins for our laminations and strategically placed fans to help remove fumes from the lamination and gluing areas. With more research, we found a good hand-cleaner to use instead of acetone and we mandated the use of masks, and eye protection. We made sure the dust collection devices were grabbing as much of the dust as possible and our Kleenaire Air Purification Systems were removing even more nasty air particles from our lab.

When I look back, it baffles me at all the absurd things we were doing and using that were serious health risks. Now as I travel the country, I am continually amazed that many of these same behaviors and practices are still employed and used. You may not notice anything right away or even for years and can happily say, "Hey, this is the way we have always done it." A common theme that kept us from changing for way too many years. However, we all need to wake-up to the reality that many materials, behaviors, and practices are not good for our employees and us. We each need to make an effort to do all that we can to reduce the number of negative factors in our labs while increasing safety and improved health-oriented behaviors.



Decreasing Health Risks in the Lab (Cont.)



While we have accomplished many improvements, we know there is much more to do. Every day we search for new materials, supplies, tools, and equipment to help create a safer work environment. This outlook must be continuous and ongoing. We should not have to wait for a real health issue or crisis to decide that we need a cleaner lab and a cleaner planet.



Appreciating the Patient Perspective

- Dan Kiesecker, CTPO — Independent O&P Technical Professional

If you're like me, you didn't enter the O&P field by throwing a dart at a list of random occupations. We technicians are usually drawn to this industry in some way, having a curiosity about the many unusual tools and materials used to fabricate these fascinating and unique devices. I've always had a knack for exploring and understanding mechanical systems, and always enjoyed learning how they work and how to fix them. If you and I are alike in this way, we might also be a little less adept in a different area: understanding people. People, unlike machines, are more nuanced and variable. They can be, at best, delightfully surprising and, at worst, frustratingly unpredictable. As a technician, it can be tempting to put our heads down, focus on the mechanics and engineering involved in our daily work, and avoid dealing with the oftentimes frustrating human aspect of the field. I've certainly experienced this, but occasionally we get a jarring reminder that ultimately, people are at the center of everything we do.

I experienced one of these reminders during the summer of 2020, when two beloved family members of mine were each diagnosed with terminal illnesses (ALS and cancer respectively). This experience came at a pivotal time already filled with many other chaotic circumstances, most obvious being the ongoing pandemic, and it dramatically altered the course of my life and career. As tragic as these circumstances were, I am honestly thankful for the opportunity to experience what patients go through in a way I hadn't really been able to appreciate before. Coming out of that experience, I decided I wanted to take a more active role in learning from patients and listening to their personal perspectives – even if they weren't all rosy, positive, or heartwarming. Sometimes, sitting with a person and listening with an open mind is a difficult process if the person is in great pain or misery, but it's still an important and valuable learning experience that can certainly help the listener grow as both a person and healthcare worker. As both my uncles underwent their respective treatments, I developed a far deeper and more personal admiration for what patients' must endure, and how impactful the smallest considerations and accommodations can be. I am proud to say that, even after years of working in the field, I learned many new and important lessons about healthcare from my uncles right up to the very end.

As some of the dust settled, I wanted to do some independent surveying of patients not connected to my place of work, just as a personal interest project. Bear in mind, my profession is fabrication, not social research, so take anything I write on the subject with a grain of salt. However, that is sort of my point; you don't need to be a sociologist to talk to people, to listen and learn from their experiences while gaining insight into how you may help them as a healthcare worker. Initiating these kinds of conversations is useful for anyone providing patient services, and I strongly encourage you to do something similar. As people become more and more comfortable sharing stories and perspectives through various mediums, it is easier than ever to reach out and learn new insights from the populations we serve.

Appreciating the Patient Perspective (Cont.)

What I did was rather simple. I went online, sought out several social media peer groups, blogs, and subreddits that catered to an array of patient populations served by the O&P industry. I contacted support groups for stroke survivors, forums for patients with cerebral palsy or post-polio, discussion boards for living with amputation for example. I made sure that these groups were spaces which welcomed professionals and caregivers in the field (some are, understandably, exclusive to patients only). After confirming that my inquiries were welcome, I posted some simple questions and kept an open mind regarding what kind of responses I might get.

Generally people in these groups were enthusiastic about my project. They seemed pleased that I would reach out to them directly, and several individuals said they wished O&P professionals would ask for their honest opinions more often. Some had positive things to say about their experiences or their healthcare team, while others were more critical and raised salient points. The phrase I heard most often, again and again, was 'listen to us.' As I received more responses, the consensus seemed to be that most of these patients did not doubt the skill and expertise of the clinicians and technicians working with them – rather, they doubted the professional's personal investment in the care they were providing. In short, these patients did not feel listened to, or cared for. Responses like 'my clinic treats me like a paycheck, not a human being' or 'they think their few years of school automatically cancel out my lifetime of experience' were common. The main critique was not



“Connecting with our patients in a more meaningful way can be very helpful for everyone involved in the rehabilitation process.”

About the Author

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necessarily of the professional institutions themselves, but of the relationship dynamic between the professionals providing care and the patients.

For me, this was all another collective reminder of how important it is to occasionally step back from the fabrication aspect and see the patient as a whole, as a complex person. It's not always practical to have this deep of an appreciation, but it can serve us well in moments when we need to re-center ourselves in our very unique profession. It is a tempting and very common tendency to treat our field as any other profit-focused business, with the patients being our customers and the devices we make our products. But in reality, it is so much more than that.

Our patients are not mere customers in search of a product, they are persons seeking therapeutic restitution. And we, the technicians, do not just provide products for sale, we provide a profound service, a pathway toward restoration and healing. Another thing I heard patients express again and again, was an appreciation for our skills and contribution to their healing. "You have the power to make us whole, to give us our lives back." One patient said. "So please, just listen, and we can work together."

While this is a very condensed version of my project, I hope that the essence is clear. Patients are complex individuals, as are the professionals serving them. Connecting with our patients in a more meaningful way can be very helpful for everyone involved in the rehabilitation process. I especially encourage students in the technical programs to consistently reach out and connect with patient and to keep an open mind as you listen and learn. Because no matter how our daily work may change, people will always be the center of our field. If we want to successfully help them, we need to listen to what they have to say.

Meet the NCOPE O&P Residency Staff



Ms. Claire Doyle

- Residency Program Assistant
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- Residency Program Coordinator
- Primary Contact for Future/Current/Past O&P Residents
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Springing Into Your O&P Career

- Chris Robinson, MS, MBA, CPO, ATC, FAAOP(D)

Spring symbolizes many things, but from my perspective it has always represented growth. Much like the blooming trees and flowers common to the Midwest region I call home, growth is something easily recognizable with the developing O&P professionals that are part of CAAHEP and NCOPE accredited education/residency programs. Most O&P education programs graduate students in the Spring demonstrating growth from a student into a novice O&P professional. Furthermore, the Spring is the final quarter for most O&P residents, the final quarter where many residents are serving as independent but supervised clinicians providing comprehensive O&P patient care. The same way sun, water, and fertilizer can ensure a flower blooms to its fullest; it is important that students, recent graduates, and residents continue to nurture themselves as growth should continue well beyond the Springtime.

- Recent practitioner-level graduates and residents can benefit from a refreshed on the NCOPE Residency Essentials to ensure that they not only maximize their opportunities to grow, but also know the key goals and milestones that must be attained along the way. <https://ncope.org/residency-essentials>
- Current students at all levels can grow their professional networks by updating their LinkedIn profiles and adding connections at organizations that they might be interested in working at upon graduation. Start by adding people you might already know to help identify their related connections: <https://www.linkedin.com/help/linkedin/answer/a545653>
- Current O&P technician students and recent graduates can connect with prospective employers seeking entry-level technicians by participating in the O&P Technician Employer Meet and Greet webinars: <https://ncope.org/meet-greet>
- Current O&P practitioner students can connect with past residents who were trained at residency sites they might be interested in working at in the future by searching the NCOPE Resident Networking Directory: <https://ncope.org/network-directory>
- Future residency directors/mentors can begin learning about the NCOPE accredited residency and earn PCE credits from ABC by taking the NCOPE Online Residency Development courses: <https://ncope.org/development>
- Future/Current residents and residency directors/mentor can learn about NCOPE residency, OPRESCAS, NCOPE Tracker, and more by visiting and subscribing to the NCOPE YouTube channel: <https://www.youtube.com/channel/UCuqp6p3Jkp1IWMF9RAnV1yw>

With a bit of effort to encourage growth, I'm confident everyone can Spring into their O&P careers not only for their own benefit, but the countless patients each O&P professional serves today and tomorrow.

The National Commission on Orthotic & Prosthetic Education

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