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Noteworthy

Advancement in 3-D Printing for Orthotics and Prosthetics: Methods and Materials

- Jeff Erenstone, CPO

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Read the full story on page 2.

Encroachment ...Is it Happening in O&P?

- Gerald Stark, Ph.D., MSEM, CPO/L, FAAOP(D)

"Professional encroachment is a widely recognized and deeply felt concern among orthotists and prosthetists."

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Re-Stoking Your Passion in Orthotics and Prosthetics

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"I have been given the wonderful opportunity to write an article regarding my recently opened central fabrication facility describing my professional background and the services I provide."

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Unlocking Opportunities: Lessons from HCPCS Code Success at Click Medical

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Editor-In-Chief

Ruthie H Dearing, MHSA, JD

- rdearing@ncope.org

Thinking Advancements in 3D Printing for Orthotics and Prosthetics: Methods and Materials

- Jeff Erenstone, CPO

Introduction

The use of 3D printing in orthotics and prosthetics (O&P) has grown exponentially in recent years, revolutionizing patient care and device customization. This technology allows for rapid prototyping, enhanced design flexibility, and cost-effective production of medical devices. By integrating innovative materials and advanced manufacturing methods, clinicians and researchers are improving patient outcomes and expanding the capabilities of assistive devices.

"This article explores the key methods and materials employed in 3D printing for orthotics and prosthetics, highlighting their benefits, challenges, and future potential in clinical applications."

Methods of 3D Printing in Orthotics and Prosthetics

1. Fused Deposition Modeling (FDM)

FDM is one of the most widely used 3D printing techniques in O&P due to its affordability and accessibility. The process involves melting thermoplastic filament and extruding it layer by layer to form a three-dimensional object.

Advantages of FDM in O&P

Cost-Effectiveness: FDM printers are relatively inexpensive, making them accessible for clinics and research facilities.

Material Availability: A variety of thermoplastics, including polylactic acid (PLA), Polyethylene terephthalate glycol (PETG). Polypropylene (PP), and thermoplastic polyurethane (TPU), are some of the materials compatible with FDM printing.

Easy Customization: The method allows for personalized orthoses and prostheses quickly tailored to individual patient needs. FDM is particularly helpful in a prototype or diagnostic phase in which the specific shape of the design is workout and trial fit. Because FDM printers are reasonably easy to own and operate, these printers can be commonplace in-house fabrication facilities. When the design's morphology is confirmed, the device can be refabricated utilizing printers which are off-site into definitive devices.

Challenges

Layer Adhesion Issues: FDM parts may have weak interlayer bonding, affecting the durability of printed devices.

Surface Finish: The final product often requires post-processing to achieve a smooth surface.

See 3D Printing, page 3

About the Author

Jeff Erenstone, CPO

As founder of Operation Namaste and owner of Mountain Orthotic and Prosthetic Services, Jeff has devoted years to improving prosthetic care around the world, especially in low-income countries and conflict zones. He is a well-known innovator of digital technology for prosthetic care: especially 3D printing.

Jeff is educated as a Certified Prosthetist and Orthotist and has three offices in Northern New York. He is a member of the Board of Directors for American Orthotic and Prosthetic Association and is the chair of the Digital O&P Committee and Socket Guidance Workgroup.

Jeff believes that the future of O&P care is a combination of traditional techniques and modern digital technology and has devoted his life to assisting with this merger.

3D Printing (Continued)

2. Stereolithography (SLA) and Digital Light Processing (DLP)

SLA and DLP use photopolymerization to create detailed and precise 3D-printed structures. SLA employs a laser to cure liquid resin layer by layer, while DLP uses a digital projector to solidify entire layers at once.

Advantages of SLA/DLP in O&P

High Accuracy: Produces smooth, precise components suitable for intricate prosthetic designs and molds.

Wide Range Material Properties: Provides the broadest range of mechanical properties found in the commonly used 3D printing methods.

Challenges

Material Limitations: Resins can be brittle and may require reinforcement for weight-bearing applications.

Post-Processing: Requires washing and UV curing to finalize the printed object.

3. Selective Laser Sintering (SLS)

SLS involves using a high-powered laser to fuse powdered materials into a solid structure. This method is commonly used for producing durable and lightweight prosthetic components.

Advantages of SLS in O&P

Strong, Lightweight Parts: Ideal for prosthetic sockets and high-stress applications.

No Support Structures Needed: The powder itself acts as support, reducing material waste.

Complex Geometries: Enables the fabrication of intricate lattice structures for improved comfort and airflow.

Challenges

High Cost: SLS printers and materials are expensive, limiting accessibility.

Material Selection: Primarily relies on nylon-based polymers, restricting the range of available materials.

4. Multi Jet Fusion (MJF)

"(MJF) is an advanced powder-bed fusion technique that uses a combination of fusing and detailing agents..."

...to produce high-strength parts with excellent surface quality.

Advantages of MJF in O&P

Durability: Produces parts with strong mechanical properties which are similar to SLS prints.

Efficiency: Faster print times than traditional sintering methods.

Isotropic: MJF prints exhibit near-isotropic mechanical properties, meaning they have consistent strength and durability across all directions, unlike FDM prints, which tend to be weaker along layer lines.

Challenges

Material Costs: Although more efficient, MJF materials remain expensive.

Limited Material Choices: Primarily limited to polyamide-based powders but there have been some recent advances in TPU materials.

See 3D Printing, Page 4

3D Printing (Continued)

5. Direct Metal Laser Sintering (DMLS) and Electron Beam Melting (EBM)

These metal 3D printing methods can be used for fabricating strong, lightweight components, such as prosthetic joints and high-load-bearing structures.

Advantages of DMLS/EBM in O&P

Superior Strength: Enables the production of durable, weight-bearing prostheses.

Custom Metal Components: Allows for patient-specific high strength devices.

Challenges

Extremely High Costs: Metal 3D printing is among the most expensive methods.

Complex Post-Processing: Parts often require heat treatment and machining for optimal performance.

Materials Used in 3D-Printed Orthotics and Prosthetics

"The selection of materials in 3D printing significantly impacts the functionality, durability, and comfort of orthotic and prosthetic devices."

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1. Thermoplastics

Polylactic Acid (PLA)

Advantages: Affordable, biodegradable, and easy to print.

Limitations: Brittle and unsuitable for weight-bearing applications.

Acrylonitrile Butadiene Styrene (ABS)

Advantages: Stronger and more impact-resistant than PLA.

Limitations: Warping issues and the need for a heated print bed.

Polyethylene Terephthalate Glycol (PETG)

Advantages: Improved flexibility and chemical resistance compared to PLA and ABS.

Limitations: Slightly lower print precision.

Thermoplastic Polyurethane (TPU)

Advantages: High elasticity, ideal for flexible orthoses.

Limitations: Requires specialized print settings for optimal results.

2. Nylon and Composite Polymers

Nylon 12: Excellent strength, flexibility, and wear resistance, commonly used in SLS printing.

Carbon-Fiber-Reinforced Polymers: Offer high strength-to-weight ratios for prosthetic applications.

Glass-Filled Nylons: Improve stiffness for structural components.

3. Resins

Standard Resins: Used for aesthetic and non-load-bearing applications.

Flexible and Tough Resins: Provide improved durability for functional orthoses.

Biocompatible Resins: Safe for medical use, ideal for custom-fit devices.

See 3d Printing, Page 5

3D Printing (Continued)

4. Metals

Titanium Alloys: Lightweight, strong, and biocompatible, commonly used in prosthetic joints.

Stainless Steel: Provides cost-effective durability.

Cobalt-Chrome Alloys: Suitable for high-stress, long-term applications.

Clinical Applications of 3D Printing in O&P

1. Custom Orthotics
3D printing allows for the precise fabrication of insoles, braces, and splints tailored to individual patients. The technology ensures improved fit, comfort, and functional support.

2. Prosthetic Sockets
Custom prosthetic sockets are designed for enhanced comfort and weight distribution, reducing pressure points and improving user mobility.

3. Pediatric and Low-Cost Prosthetics
3D printing has enabled the development of affordable prosthetic solutions for children, allowing for frequent size adjustments as they grow.

4. Hybrid and Modular Designs

Combining traditional materials with 3D-printed components allows for more adaptable and functional prostheses.

5. Bionic and Smart Prosthetics

Integration with sensors and electronic components has led to the development of advanced, AI-driven prostheses that enhance user control.

Challenges and Future Directions

Despite its advantages, 3D printing in O&P faces several challenges:

Material Limitations: Further research is needed to develop stronger, biocompatible materials.

Regulatory Concerns: Ensuring patient safety and device reliability requires stringent validation processes.

Cost Barriers: High-end 3D printing technologies remain expensive for widespread adoption.

Training and Implementation: Clinicians and technicians require specialized training to optimize 3D printing workflows.

"Future advancements in materials science, AI-driven design, and hybrid manufacturing techniques will further enhance the capabilities of 3D-printed orthotic and prosthetic devices."

Conclusion

3D printing has revolutionized the orthotics and prosthetics field by making digital designs easier to actualize in the real world. Practitioners have broadened the personalized, cost-effective, and efficient solutions offered to patients. As research and technology continue to evolve, the integration of advanced methods and materials will further enhance the quality, accessibility, and functionality of assistive devices. By overcoming current challenges and embracing innovation, the future of 3D-printed O&P devices holds immense promise in improving mobility and quality of life for individuals worldwide.

Encroachment ...Is it Happening in O&P?

- Gerald Stark, PH.D., MSEM, CPO/L, FAAOP(D)

About the Author

Gerald Stark, Ph.D., MSEM, CPO/L, FAAOP(D)

Gerald Stark, Ph.D, MSEM, CPO/L, FAAOP(D) is the Director of Clinical Operations and Technical Support based in Soleto, Italy. He has written and presented numerous topics in O & P nationally and internationally. In his 32-year career, he has held various administrative positions in Engineering, Clinical Care, Product Development, and Education. As well as mechanical engineering degree and Masters of Engineering Management, he holds a Ph.D. in Organizational Learning and Leadership from the University of Tennessee of Chattanooga.
Dr. Stark has served as an instructor for Northwestern University, Georgia Tech, and University of Tennessee as well as a contributor for a number of O & P Programs. In his career Dr. Stark has served on the Board of Directors for ISPO, NCOPE, and the Academy where has been the Chair of the Research and Education Councils, and is currently the Academy Treasurer. He has been honored as one of the few to win both the Thranhardt and Hammontree Award, as well as Canadian Association P & O Award, as well as been named "Outstanding Engineering Alumni, "Outstanding Doctoral Student" and "Outstanding Clinical Educator" and Fellow with Distinction for his numerous academic lectures and contributions.

The Context Ripe for Encroachment?
Professional encroachment is a widely recognized and deeply felt concern among orthotists and prosthetists. The fear that other allied health professions—such as physical therapists, occupational therapists, cast technicians, rehabilitation engineers, sales representatives, nurse practitioners, physician assistants, podiatrists, and pharmacists—may be expanding into the O&P domain is a source of stress, frustration, and professional identity anxiety for many. This concern isn't just abstract; it's grounded in the very real disparity in the size, influence, and resources between O&P and these other healthcare fields.

As of 2022, the O&P market was valued at $6.6 billion. In stark contrast, PT and OT services collectively commanded $53.1 billion—eight times more. The American Physical Therapy Association (APTA) has around 100,000 members, and the American Occupational Therapy Association (AOTA) has about 63,000. Meanwhile, the O&P workforce includes only approximately 9,500 individuals, with about 3,500 of those being ABC-certified orthotists and prosthetists. This stark difference amplifies fears of being politically outmuscled, underrepresented, or marginalized in both legislative and clinical arenas.

What makes this disparity more alarming is that many of these other professions require doctoral degrees as their entry-level education. Even though their exposure to O&P-specific training may be limited, their higher academic credentials can give the impression of greater authority or competence—especially to patients, payers, and policymakers who may not understand the nuances of each discipline. This misperception is further fueled by media portrayals where orthotists and prosthetists are often misrepresented as "vendors" or "salespeople," rather than highly trained healthcare providers. Shows like *ER*, movies like *Downsizing*, and others often fail to accurately depict the complexity and expertise required in O&P.

Adding to the challenge,

> *"...some healthcare systems are increasingly turning to less qualified, lower-cost allied health assistants for tasks that fall within the traditional scope of O&P."*

In many cases, these roles involve taking measurements, capturing impressions, or modifying devices—tasks that are foundational to quality patient care but may not be clearly protected under licensure laws, particularly when it comes to off-the-shelf solutions. This practice can blur professional boundaries and further erode the perceived uniqueness of O&P services.

Professional Overlap or Encroachment?
The distinction between knowledge overlap and professional encroachment is a nuanced one, and opinions within the O&P community vary. Some clinicians—particularly those with dual credentials in O&P and PT/OT—argue that what is often labeled as "encroachment" may instead be shared knowledge and skillsets that could be leveraged collaboratively.

See Encroachment, page 6

Encroachment (continued)

Still, others maintain that this overlap opens the door for outside professions to slowly assume more of the roles and responsibilities that rightfully belong to orthotists and prosthetists.

In either case, the fear remains potent. For many, collaboration sounds good in theory but raises questions about referral patterns, billing authority, and long-term job security. If allied health professionals are seen as "good enough" to deliver orthotic and prosthetic care—particularly at a lower cost—then what is to stop healthcare organizations from shifting services away from O&P clinicians?

Insights from a 2020 Survey

This fear is not just anecdotal. In 2020, a survey titled *"Is the Current Population of Practitioners Serving the Overall Need for Orthotics & Prosthetics?"* collected responses from 396 O&P professionals. When asked whether professional encroachment was a real issue, 46% agreed and 24% strongly agreed. That's a total of 70% who believed that other professional groups are moving into the O&P space—an overwhelming majority in a profession often known for its diversity of opinion.

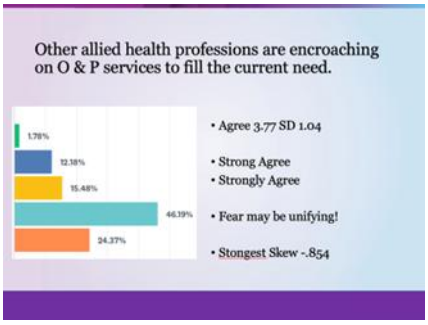

Figure 1: 46% Agree and 24% Strongly Agree that Encroachment is Real.

The comments accompanying the survey provided deeper insight. Many respondents expressed concern that other profession's view O&P as an untapped revenue stream, not a specialized discipline requiring unique expertise. Others noted that patients often come to them after receiving substandard care elsewhere—care that, while technically legal, lacked the sophistication or customization that defines the best O&P practices.

Managed care environments came under criticism for prioritizing cost over quality. In such settings, even well-meaning therapists or assistants may be incentivized to provide "good enough" solutions that fall short of ideal care. Respondents also flagged the growing role of manufacturers in simplifying devices to such a degree that less skilled personnel can perform fittings. CAD, 3D printing, and algorithm-driven systems were all mentioned as enabling factors for potential encroachment.

Another recurring theme was the role of insurers and funding bodies. Because reimbursement is often tied to time or price rather than outcomes, clinicians feared that low-cost providers would be favored, even if patients ultimately suffered from lower-quality care. Patients, unaware of what proper O&P care entails, may simply accept whatever is offered at the lowest cost.

See Encroachment, page 8

Encroachment (continued)

The Elusive Nature of Encroachment

"Interestingly, while fear of encroachment is high, concrete examples remain somewhat elusive. "

Clinicians often struggle to cite specific cases of lost patients or services due to other professionals overstepping boundaries. Some mention attempts by PT and OT groups to be included in licensure discussions or the creation of basic splints by OTs, but these are usually one-off instances rather than sustained patterns.

Veteran clinicians have observed that the bulk of actual encroachment seems to be limited to off-the-shelf devices. In high-volume, low-margin settings, such as hospital systems or outpatient clinics, custom solutions may not be viable. As a result, orthotists and prosthetists are often relegated to the background unless a complex or high-stakes case demands their expertise.

These trends reinforce the idea that the O&P profession must refocus on its strengths: high-skill, high-margin, highly customized care. This is where value is demonstrated, and where the profession can clearly differentiate itself from less specialized providers.

Porter's Five Forces: Competitive Pressures

The well-known Porter's Five Forces model provides a helpful lens to examine the pressures facing the O&P profession. The "Threat of New Entrants" is especially relevant. For a new player—whether it's an OT, PT, or assistant—to enter the O&P market, they must overcome significant barriers: education and training, equipment and facilities, compliance with licensure and certification, and the ability to deliver care profitably.

Figure 2: Porter's Five Forces – New Entrants Add Competitive Pressure.

In other words, it's one thing to learn how to fit a device; it's another to do so profitably, efficiently, and in compliance with audit and billing regulations. These systemic pressures serve as a protective barrier, but they are not foolproof. As more technologies lower the bar to entry, the risk of encroachment grows. Those who control referral streams, funding, and public perception may not fully understand—or value—the complexities of the O&P process.

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Encroachment or Overreaction?

Despite the broad fear, some argue that the concern may be exaggerated. Therapists themselves often express confusion when asked about encroachment. A common response is, “Why would we want to add more to our already overflowing plates?” Most therapists report receiving only one to three weeks of general O&P education in school. Far from seeking to dominate the field, many actively reach out to orthotists and prosthetists for help, particularly on complex cases.

In hospital settings, O&P professionals often report positive working relationships with therapists and physicians. Collaboration, not competition, is typically the norm. Yet the fear of being replaced persists. It’s a fear amplified by past experiences, occasional policy proposals, and the ever-present pressure to cut costs.

Encroachment and the Mandela Effect

Could this collective fear be, in part, a “Mandela Effect”? The term refers to widely shared false memories, such as the belief that Nelson Mandela died in prison in the 1980s, when he actually lived until 2013. In the O&P world, myths and misattributions abound—from the origins of specific techniques to the development of major devices.

Figure 3: The Berenstain Bears is the correct spelling, but many remember "Berenstein."

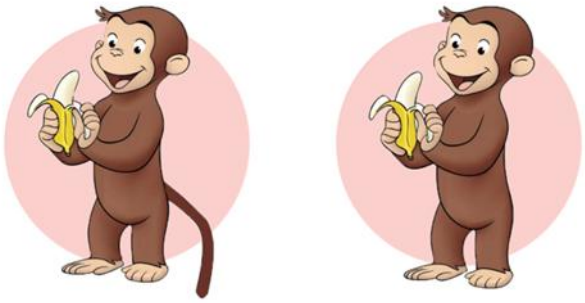

Figure 4: Curious George was never drawn with a tail, but many "remember" him with one.

See Encroachment, page 10

Encroachment (continued)

Figure 5: Fruit of the Loom has never had a cornucopia on the label.

Figure 6: C3PO has always had one silver leg, but many forget this.

Might professional encroachment be similarly misunderstood or misremembered?

"Could the fear stem more from O&P's small size and relative invisibility than from actual data? "

Or is it a psychological response to broader uncertainty and change in healthcare?

Technology: Friend or Foe?

Perhaps the more imminent threat is technological disruption. As devices are marketed as faster, cleaner, and simpler to fit, the perception grows that anyone can do it. Digital scanning, automated fabrication, and one-day fittings are becoming common talking points in product pitches.

History shows this isn't new. Similar fears surfaced with the advent of endoskeletal components, Pelite liners, thermoplastics, and positive plaster molds. Each innovation prompted concern that it would lower the skill threshold and open the door to less qualified providers.

However, seasoned practitioners point out that tools don't define outcomes—people do. A 2023 survey titled *"Clinical Use of Hand Cast, Scanned, Direct Formed & Prefab Sockets"* revealed that most clinicians choose their methods based on context: patient goals, rehab setting, mobility level, and past experience. They respected alternative approaches and expressed a willingness to learn new techniques when appropriate.

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Encroachment (continued)

Final Thoughts: Fear as a Unifier

Encroachment may not be happening everywhere, or in the way some fear, but the perception of threat is very real. And perhaps that's the most important takeaway: fear—justified or not—has become a unifying force in a small, specialized profession that often feels overlooked.

"The future of O&P depends not just on defending scope of practice, but on articulating and demonstrating value. Innovation will continue."

Costs will remain a concern. Other professionals may show interest in the field. But success in O&P comes from doing the job right—with care, skill, and integrity.

Rather than fear collaboration, many leaders in the field now call for a renewed focus on interdisciplinary teamwork. In a system that rewards outcomes and patient satisfaction, those who deliver consistent, high-quality results will always be essential. O&P professionals must continue to differentiate themselves not by gatekeeping, but by excelling. In doing so, they don't just survive professional encroachment—they render it irrelevant.

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Re-Stoking Your Passion in Orthotics and Prosthetics

- John Wamhoff, CPO

I have been given the wonderful opportunity to write an article regarding my recently opened central fabrication facility describing my professional background and the services I provide. I had to sit and think exactly about how I wanted to write this article and realized that my career in O&P mimics many other changes that have come into O&P during the last 10-20 years. I entered the field with a burning desire to help people, to create innovative devices, and to improve the mobility and lives of people seeking my care. At no point has that desire diminished for me and others in the field, but that fire frequently burns cooler and cooler as our careers progress. Worries of hitting financial quotas, keeping management happy, responding to Insurance denials, and fear of failure continue to bear down on O&P professionals. These factors, paired with an increased cost of entering the field, have led to high rates of early burnout with many professionals leaving the field early in their careers.

How do we fix this? There will always be issues and pressures arising out of our individual control, but there are many things that we still control. As I often tell my high school cross country team, “control the controllables.”

“I want to share the story of my O&P career identifying what has led me to opening a central fabrication facility. ”

My goals remain to help invigorate individuals looking for ways to combat their burnout and restoke their passion for orthotics and prosthetics.

The initial start to my journey in orthotics and prosthetics likely matched many others with an initial spark where a relative/friend required orthotic and/or prosthetic care. As a high schooler, a family friend was involved in a farm equipment accident that led to him becoming a transtibial amputee. I was impressed with his resilience and ability to return to work on the farm. I recognized how impressive this feat was knowing the level of manual labor that was required daily, and he was returning with a prosthetic leg. Around this time the London Paralympics occurred, what seemed like Paralympic athletes received mainstream media attention for the first time. I was awestruck and wanted to be involved.

I attended undergraduate education at Indiana Tech in Fort Wayne, Indiana earning a biomedical engineering degree. At that time, I was impassioned to be on the design end of prosthetic feet. As I would learn throughout my undergraduate career, I was not destined to be behind a computer and delayed design process. I needed to have direct involvement in the prosthetic and orthotic process. I job-shadowed at a local O&P clinic and knew it was the right match for me.

See Passion, page 13

About the Author

John Wamhoff, CPO

John Wamhoff is a certified prosthetist orthotist who graduated from Northwestern University Prosthetics and Orthotics Center in 2019. John has experience as a technician for 3 years prior to O&P school. He worked at several clinics following graduation seeing a wide array of prosthetic and orthotic patient populations. In 2024 he opened the central fabrication company, Wamhoff Mobility Lab, provide custom prosthetic and orthotic fabrication.

In John’s spare time he is the head cross country and track & field coach at his alma mater high school. John is married to his beautiful wife, Julia, who is a CPO at Mary Free Bed. John and Julia have two adopted 3-legged dogs and spend their spare time renovating their 1890 farmhouse.

Passion (Continued)

I took a minimum wage summer job at that clinic to "help out" which turned into full-time tech work. I worked full-time during summer and school breaks and part-time during the school year. And I loved it. I was able to use my hands to create orthoses and prostheses that real patients were benefitting from. Practitioners in the office pulled me into interesting appointments where a second set of hands was needed. Being able to see how my work was helping patients and to learn about all the varying interventions led me to the next logical step: orthotic and prosthetic education to become a practitioner.

I went on to Northwestern to receive my MPO in 2019 and was excited to enter the world of clinical care, but not without a trip to Guatemala first. I was able to be a part of a ROMP trip in Guatemala allowing me to dispense technical experience and O&P training through my work. In just over one week we casted, fabricated, and fitted over 30 prosthetic sockets. On that trip, my technical experience was allowed to shine while putting in a large amount of fabrication work. I loved every second of it.

Now it was time to complete my orthotic and prosthetic residencies. My orthotic residency occurred at a pediatric clinic where I observed a large array of diagnoses and interventions. Upon completion of my orthotic residency, I did a brief stint working construction while COVID-19 shut the country down. I completed my prosthetic residency at two different clinics observing a vast spread of amputation presentations of prosthetic interventions.

At the completion of my prosthetic residency, the family-owned clinic where I worked was purchased by a national company. I decided to return to where I completed the first half of my prosthetic residency with the plan of opening an office near where I grew up. Amidst delays and frustration, the building for the office was purchased and I began building my referral sources and patient base. As with any new office, it was a slow build, but progress was being made, and referrals were growing.

"This was everything I thought I wanted but the reality was I was losing my passion."

As the only employee, I was responsible for every step in the process. I realized that promotion and marketing to doctors while keeping them happy was not something I enjoyed. Now that I was a full-fledged CPO, I had responsibilities for understanding the insurance approval process, for managing payroll and financials issues, and for general office management. These and all the other administrative duties were not tasks I enjoyed. But fabricating devices for the patients was what gave me joy. The passion for everything else had diminished, but I was in my element when I was fabricating.

However, I felt trapped. The company I was working for had bought the building specifically for my practice. Since the building owners had no method of replacing me, it would be unacceptable to leave after only two years. I dreamed of starting a central fabrication facility as I realized this was my best fit in the field and would give me the greatest joy. I kept plodding along doing my best while providing care for patients and helping grow the office. Until, out of the blue, the company decided to close the office and another satellite office. Oddly enough, losing my position was a relief! Now I could do whatever I wanted.

Since I did not know exactly what to do, I accepted substitute teaching and construction work while I decided if I wanted to stay in the field. The dream of starting my own central fabrication facility never left my brain. And the more I researched and pondered, I knew it was the right move for me. I knew it was where my passion existed and where I could find the most career happiness.

See Burnout, page 14

Passion (Continued)

I began renovating the pole barn on my property and slowly acquired equipment from local O&P contacts.-In 2024, I began operating Wamhoff Mobility Lab located in Southwest Michigan providing custom fabrication of all thermoplastic and carbon/composite orthotic and prosthetics. I have found the exact fit for myself in orthotics and prosthetics. Now, I enjoy fabricating custom orthoses and prostheses every day for practitioners using my services.

The field of orthotics and prosthetics can wear down professionals, whether it be practitioners, technicians, or administrative staff. The financial pressures will not go away, and those are issues and factors out of our control. But as O&P professionals, we can take back control of the controllables. We control what we have passion for, and we have control of the positions we chase in the field.

"Our lives and our careers are too short to not do what we want and dream to do."

If you are an O&P professional who feels that fire for O&P is cooling down, have a conversation with yourself or with those you are closest to (former classmates, close co-workers, family members and friends), and hear their input and suggestions. Be introspective and honest. Ask yourself which part of orthotics and prosthetics do you genuinely enjoy, and which parts do you truly dislike? Identifying the simplest things and saying them out loud can help you understand where you are mentally in the field. This action will highlight what you enjoy and what makes you enthusiastic about the field. Focus on and determine the parts and activities that provide the most enjoyment of what you each day. For some, this may be doing exactly what you are doing. But notice that by making simple changes to your everyday operations, you can devote more time doing what you most enjoy. These changes may require making a position change or location change. While this is always a scary undertaking, I have not found many people regretting a tough decision that created a better work scenario.

There is nothing wrong with being someone who feels burnt out and has a loss of passion. But remember you have control over you. Ensuring that your O&P career is fulfilling and brings happiness may empower those around you to do the same. The best places to work are the places where everyone is in a position about which they are passionate while surrounded by others who share that feeling. Take pride in what you do and show to everyone the passion you have for orthotics and prosthetics!

To Learn About the Wamhoff Mobility Lab and receive a detailed description of the services provided for practitioners throughout the U.S., please contact: Email: john@wamhoffmobilitylab.com (269)-615-1643

Unlocking Opportunities: Lessons From HCPCS Code Success at Click Medical

- Brian Simmons, VP of Business Development, Click Medical

At Click Medical, we believe providers are the true heroes driving meaningful change within the orthotic and prosthetic (O&P) industry. You are the ones who see firsthand how innovative products impact patient lives through every detail, every success, and every challenge. That is why we want to share our journey to secure HCPCS codes L5783 and L7406.

Our goal? To inspire you to champion and advocate for codes that support the tools and technologies you believe in.

Traditionally, manufacturers have led the push for new HCPCS codes, but what if there is a better way**?** Providers, with intimate knowledge of patient outcomes and product performance, are uniquely positioned to lead the charge. You have the full story—from prescription to outcomes—and can collaborate with industry partners to ensure reimbursement for the innovations that truly make a difference.

"So, how can providers work together to challenge the status quo and influence the future of this industry?"

Below are the steps, strategies, and lessons we have learned.

Reimbursement Challenges

When considering reimbursement challenges, it is important to understand your options. If a product fits within the description of an existing code (or a combination of codes), pursuing PDAC (Pricing, Data Analysis, and Coding) approval is the best route. However, if no existing code adequately describes the product, the next step is to request a new HCPCS code. This process requires substantial research, compelling evidence, and a clear distinction from other products on the market.

Before pursuing new coding, be sure to assess whether the product is truly distinct and gather extensive history, evidence, and research to support your case.

The good news?

"You will never know what is possible until you try."

See Unlocking, Page 16

About the Author

Brian Simmons,
VP of Business Development
Click Medical

Brian Simmons, VP of Domestic Business Development at Click Medical, specializes in adjustable prosthetic and orthotic technologies. With nearly 30 years in healthcare consulting, including leadership at North Highland, Arthur Andersen, and Andersen Consulting, Brian brings deep expertise to his role.

Simmons is dedicated to expanding patient access to innovative O&P solutions, believing that better patient care drives both clinical and business success. He played a key role in securing new HCPCS codes, ensuring broader access to adjustable technology. A passionate advocate for healthcare innovation, he advises and invests in companies that share his vision for improving patient outcomes and quality of life.

Unlocking (continued)

A positive decision can mean game-changing access to products for patients and providers alike. However, there are risks, including PDAC denial, which could highlight the need for a new code but might also hinder short-term progress. HCPCS denial could relegate a product to "miscellaneous" codes, resulting in low reimbursement rates or limited coverage that stalls adoption. Even success can come with caveats, as approval might include constraints such as limited beneficiary groups or poor reimbursement rates. Despite the challenges, the journey is worth it—and we have proof.

Click Medical is thrilled to announce that the Centers for Medicare and Medicaid Services (CMS) have approved two critical HCPCS codes: L5783 and L7406. These two codes expand coverage and reimbursement for the Click Medical innovative RevoFit technology to BOTH lower and upper extremity prosthetics. These approvals are the result of years of effort and collaboration, made possible by the unwavering support of our community. We are excited to share the valuable lessons learned along the way.

L5783, effective April 1, 2024, applies to custom adjustable lower-extremity sockets with RevoFit, allowing users to manually adjust socket volume throughout the day for improved comfort and fit. With a reimbursement value set at $3,088.30, L5783 represents a significant milestone in making advanced prosthetic solutions accessible to more individuals.

Building on the success of L5783, CMS also approved L7406, effective April 1, 2025. This code brings RevoFit adjustability to upper-extremity prosthetics, with reimbursement set at $3,088.30. This approval further solidifies RevoFit as a comprehensive solution for individuals with limb loss or limb difference, addressing volume fluctuations, atypical limb shapes, redundant tissue, and limb sensitivities.

What we learned about building and constructing a compelling case.

- Acquire help by leveraging industry consultants and advisors to navigate the complexities of the process.
- Collaborate with providers and technicians to gather real-world evidence.
- Simplify your message by communicating in clear, concise, and visual language that resonates with decision-makers.
- Above all, be persistent! Coding and reimbursement processes require patience and perseverance, so do not give up.

"Your expertise and real-world perspective give you the credibility to advocate for new codes."

By collaborating with manufacturers, consultants, and other providers, you can drive innovation in O&P care, ensure reimbursement for products that improve patient outcomes, and impact the industry for the better.

Do you believe in a product that is not yet covered? Take the first step today: research the coding and reimbursement process, build partnerships with manufacturers and other providers, and advocate for the tools that transform patient care.

"At Click Medical, we're here to support you on this journey. Together, we can make adjustability and other groundbreaking solutions more accessible to all. Let's reshape the future of O&P—one code at a time."

EAST TENNESSEE STATE UNIVERSITY

Orthotics and Prosthetics

The East Tennessee State University Department of Rehabilitation seeks a full-time laboratory technician with a broad spectrum of skills and experience to manage laboratory operations, new technology development, device fabrication, and fabrication instruction in the Master of Science in Orthotics and Prosthetics (MSOP) program.

The successful candidate is expected to participate as a full member of the department with all relevant duties, responsibilities, and benefits. The individual is expected to be responsible for the organization, coordination, and supervision and some instruction of laboratory operations in the MSOP program. The core and specific duties and application portal can be accessed here: https://jobs.etsu.edu/postings/30862 or by scanning the QR code below.

Virginia Prosthetics & Orthotics

Do you enjoy working with your hands? Do you have a passion for providing excellent service and empathetic care? If so, you may be a great fit for our full-time Technician role!

- As a Technician, you'll handle the fabrication, service and repair of O&P devices, ensuring the best fit for our patients!
- This position is at our Roanoke, VA location, currently operated under Virginia Prosthetics & Orthotics, which is part of our ForMotion global network of O&P clinics.
- If you want to make a difference with award-winning mobility solutions and cutting-edge treatments, visit www.ossur.com/careers to apply today!

Align Clinic, a growing orthotics and prosthetics medical office and fabrication facility in San Matero, CA is seeking a new Orthotic Fabrication Technician in our lab.

Responsibilities:

- Fabrication, adjustment, and repair of orthotic and prosthetic devices according to quality standards.
- Maintenance of inventory, organization, and cleanliness of the laboratory area.

Requirements:

- Knowledge and ability to operate safely and effectively a variety of hand tools and basic machinery.
- Good organizational and time management skills to ensure completion of all jobs in a timely manner without sacrificing quality.

Pay: $26.00 - $28.00 per hour. Benefits: Health & Dental; 401 (k) matching contribution after 1 year; Vacation and Sick PTO. Schedule: Monday to Friday 9am-6pm

Send resume to: info@align-clinic.com