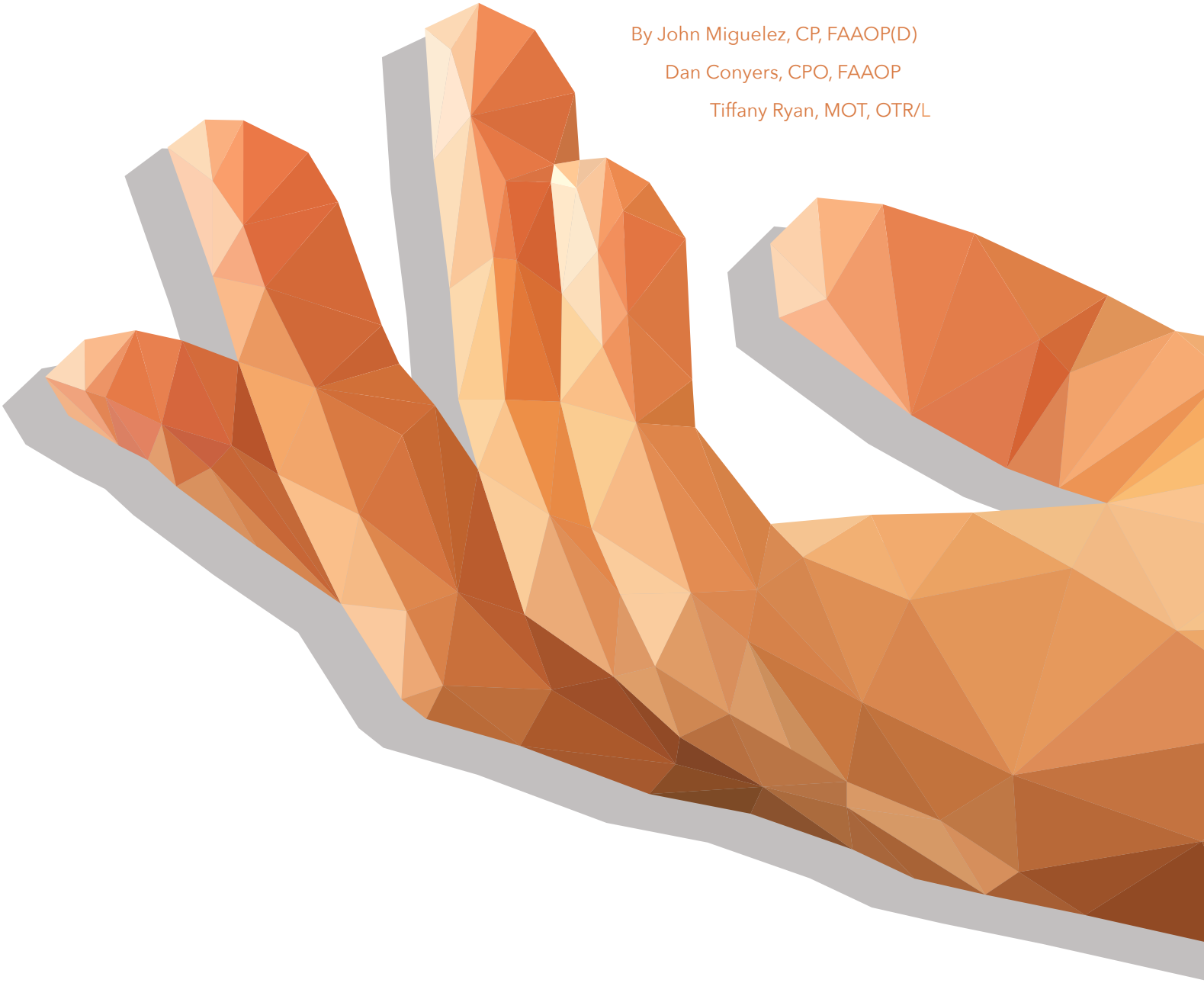
SCULPTING PROGRESSIVE PRACTICES in the Business of Upper-limb Prosthetics

By John Miguelez, CP, FAAOP(D)
Dan Conyers, CPO, FAAOP
Tiffany Ryan, MOT, OTR/L



The process of collaborating on progressive best practices within SCULPT has supported and enhanced the AAD clinical team's mission to provide specialized upper-limb prosthetic rehabilitation. *Photographs courtesty of Advanced Arm Dynamics.*

ACHIEVING success in the business of O&P has always depended on a blend of core competencies, including excellent hand skills, an affinity for interacting with and listening to people, reasoned clinical judgement, and sound business practices. Over the past decade, the steady emergence of new technologies against the backdrop of an evolving healthcare and reimbursement environment is challenging O&P professionals to devise new and progressive best practices.

As specialists in upper-limb prosthetic rehabilitation, Advanced Arm Dynamics (AAD) has chosen to collaborate with international clinicians, researchers, and business managers to craft innovative approaches to business. The unifying factor among the participants is an exclusive focus on serving people with upper-limb amputation or limb difference, a patient population that has complex needs and comprises less than 10 percent of all potential prosthesis users. The Strategic Consortium for Upper Limb Prosthetic Technologies (SCULPT) is an international group of representatives from AAD (United States), Ottobock (Germany/Austria), Pohlig (Germany), Fruehauf (Germany), Norsk Teknisk Ortopedi (Norway), and Instituto Nazionale Per L'Assicurazione Contro Gli Infortuni Sul Lavoro (Italy). The group was established in 2010 and has met twice each year. By harnessing the collective intellect of an array of professionals, SCULPT is improving patient outcomes by optimizing care, and creating an eclectic educational opportunity for clinicians. Since AAD manages and supports upper-limb prosthetic rehabilitation business from eight regional locations, it has broad clinical knowledge with which to offer the consortium knowledge of emerging trends in the United States. In return, we collect and apply information shared by our international partners to broaden our knowledge base and expand our influence on U.S. policy and rehabilitation processes.

Several participants in SCULPT are collecting outcome measures, which may include patients performing everyday tasks, and then combining their data to create statistically relevant patient samples.

Collaboration Over Competition

SCULPT's overarching intention is to support its members in developing progressive best practices for our respective businesses across the globe. Forming clinical and research partnerships with professionals from other countries eliminates potential competitive barriers between companies and allows for open sharing of ideas, techniques, challenges, and successes. For example, at AAD's Centers of Excellence, we work to develop protocols and programs to create shared success for patients, employees, the business, and reimbursement agencies. SCULPT meetings provide an ideal platform to evaluate how these protocols and programs impact business. Collectively, the group analyzes information, shares opinions, and refines ideas that can benefit all participants. Topics have included patient care case studies, prescriptive recommendations, reviews of reimbursement scenarios, practices for incorporating new technology and materials, the integration of outcome studies, and specific types of patient treatments. Andreas Hahn, PhD, MSc, corporate vice president of clinical research and services with Ottobock-Austria, notes that from its inception, SCULPT has been focused on improving results for patients by providing better components and support. "The dialogue within SCULPT has led to many adaptations of systems, some of which were surprisingly simple but most effective," he says.

SCULPT is focused on evaluating and testing new technologies, clinical techniques, and surgical interventions specific to our patient population. In recent years, the availability of numerous multiarticulating hands has transformed upper-limb prosthetic options, and many SCULPT participants are collecting patient outcomes data to compare the efficacy of these devices. Historically, due to the small percentage of upper-limb prosthesis users worldwide, it has taken multiple years of data collection to accrue statistically relevant patient samples. With SCULPT, we combine the patient populations of each organization and quickly achieve a statistically relevant patient sample to support research on rapidly advancing technologies and techniques.

Key topics, such as pattern recognition systems, implantable electrodes, targeted muscle reinnervation surgery, and osseointegration of upper-limb prostheses, provide SCULPT participants with an opportunity to discuss their direct experiences and clinical perspectives. Martin Schoeppl, head of the upper-limb prosthetics business unit at Ottobock-Austria, says the new technologies SCULPT is evaluating are critical to upper-limb prosthetic rehabilitation. "Advanced control systems, in combination with new prosthetic-body interface technologies, will significantly improve upper-limb prosthetics in the near future," he says. "Future fitting standards need to be evaluated and developed through experienced [certified prosthetists] in collaboration with leading research and development engineers."

The group has discovered striking similarities in the challenges faced by individual participants, though specific circumstances vary by country. It is becoming increasingly clear that outcome studies and the resulting data

SCULPT's ongoing evaluation of new prosthetic technologies has a direct and positive impact on patients, especially those like Kate Joergenson with transhumeral or shoulder level amputations.

are fundamental in justifying reimbursement for the prosthetic solutions and services provided in the upper-limb prosthetic niche of the healthcare market. Michael Schäfer, a certified prosthetist/orthotist in Germany, and CEO of Pohlig, an O&P provider with eight facilities, sees the importance of outcome studies accelerating as upper-limb prosthetic options become more complex. "Outcome data shows the benefits of specialized treatment and products to insurance payers," he says. "In the abstract, outcome measures illustrate how our patients feel and how their daily lives improve."

To that end, the collaborative group has researched which validated outcome measures can contribute to ongoing business success, and how to develop new outcome measures to positively impact patients, payers, and other stakeholders in each organization. SCULPT participants collaborate on scientific studies that encompass outcome data from multiple prosthetic care centers in various countries. The inclusion of different clinical approaches and data collection on a larger aggregate number of patients will improve patient care, help validate prescriptive recommendations, and support the reimbursement justification process.

Conclusion

O&P businesses that seek to thrive in today's challenging healthcare environment can increase their odds of success by innovating new best practices within their organizations. For AAD and our SCULPT colleagues, working with international businesses that serve the same patient population in a collaborative way is proving to be an effective strategy. Participants gain insights for shaping agile and responsive organizations, and become proficient in navigating the evolving healthcare sector of upper-limb prosthetic rehabilitation. SCULPT's next meeting coincides with the American Orthotic & Prosthetic Association World Congress in Las Vegas, September 6-9. O&P EDGE

John Miguelez, CP, FAAOP(D), is the president and senior clinical director of Advanced Arm Dynamics (AAD), which he founded in 1998. He has specialized in upper-limb prosthetics for 27 years, and is engaged in national and international research and development. He has been a member of SCULPT since 2010.

Dan Conyers, CPO, FAAOP, is the national clinical director at AAD, managing a nationwide team of upper-limb prosthetic specialists. He is engaged in national and international research and development, and has presented at international symposiums. He has been a member of SCULPT since 2010.

Tiffany Ryan, MOT, OTR/L, is the national director of therapeutic services at AAD, managing a nationwide team of therapists who provide patient training and collect outcomes data. She is a key contributor to the development of the company's novel outcome measures assessments. She has been a member of SCULPT since 2011.