2024 PA/MD/VA/DC AAOP Chapter Conference Presentation Abstracts

DAY 1

Dr. Sashwati Roy, PhD, MS, University of Pittsburgh, McGowan Institute for Regenerative Medicine

Title: Compromised Skin Barrier Function and Perfusion are Early Indicators of Poor Skin Health in Amputee Residual Limbs

Abstract: Socket design and fit are critical for successful prosthetic use. The prosthetic socket and interface are the most significant component for the overall rehabilitative success of the prosthesis use. Over 75% of patients with lower-limb prosthetics have skin problems. Because of uneven pressure-distributing anatomy due to boney prominences within socket. The residual limb is prone to issues such as elevated shear forces, stress risers, increased humidity, and prolonged moist environment within the prosthesis contribute to ulceration. Ulcers or pressure sores are the most commonly reported skin conditions in prosthetic users and can vary in size and magnitude requiring prolonged recovery time out of the prosthesis. Early indication of compromised skin health may result in re-evaluation of socket designs and thereby avoiding ulcerations. Our group has demonstrated that transepidermal water loss (TEWL) a reliable predictor of breach in skin barrier function and non-invasive spatial frequency domain imaging (SFDI) to assess skin oxygenation/perfusion are excellent early indicators of poor skin health in amputee residual limb health. Presence of failed skin (high TEWL) or 'leaky skin' with compromised skin perfusion are likely to be susceptible for ulceration and infection. An understanding of the mechanisms of loss of barrier function in the residual limb is of outstanding significance. Strategies to improve the barrier function and perfusion of residual limbs may prevent recurrent ulcerations and infections.

Bio: Dr. Sashwati Roy completed her PhD at the University of Kuopio, Finland, and post-doc at the University of California, Lawrence Berkeley National Laboratory. Before joining the McGowan Institute and the University of Pittsburgh, she was a professor of surgery and the Director of Clinical Research at Indiana University Health Wound Care.

Her research interests include wound inflammation, mechanisms of resolution of diabetic wound inflammation/infection, tissue repair, and cellular plasticity.

Dr. Roy's focus is on biofilm infection, inflammation, and macrophage biology in chronic wounds¾more specifically diabetic ulcers and has over 225 peer-reviewed publications. She has led multiple funded programs on prosthesis and residual limb health. Dr. Roy's research program is funded by the National Institutes of Health (NIH), specifically the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) and the National Institute of Nursing Research (NINR), as well as the U.S. Department of Defense (DoD).

Dr. Roy has served as a permanent member of the NIH's Surgery, Anesthesiology, and Trauma Study Section (SAT). In addition, she routinely serves as a reviewer for multiple other NIH, U.S. Department of Veterans Affairs (VA), and DoD study sections. She has also served the Wound Healing Society (WHS) in various capacities during the past decade, including as president from 2018 to 2019.

Todd O'Hare, CPO, PT, Clinical Specialist

Title: Tectus overview, Blatchford's new microprocessor KAFO.

Abstract: Tectus is a slim, lightweight hydraulic microprocessor-controlled knee joint that is used as part of a KAFO to assist those with weakness of their lower limb. It provides the capability of having separate hydraulic resistances for walking, stairs descent and sitting. The unique Knee Extension Spring Assist enables more control and security during swing phase. This life changing technology allows people with impaired mobility to regain their independence and walk again.

Bio: Todd O'Hare, CPO, PT began his career as a Physical Therapist after graduating from the University of Miami. He then spent 10 years treating pediatric patients in both the acute care and outpatient setting in Greenville, SC. Todd transitioned to the O&P field in 2007 after attending Northwestern University. He worked in both private practice and a hospital based setting as a CPO, with the last 10 years managing a hospital based O and P department. Currently he is a clinical specialist with Blatchford and also an adjunct faculty member at Anderson University DPT program.

Bari Diamond, OTR/L, CSRS

Title: Improving functional and return to work outcomes for people with finger and thumb amputations

Abstract: This talk delves into the crucial aspect of enhancing functional abilities and facilitating return to work for individuals coping with finger and thumb amputations, with a focus on the innovative solutions offered by Point Designs Prosthetics. The session will explore how these advanced prosthetic products, combined with tailored rehabilitation programs, can significantly improve rehabilitation outcomes.

Key topics include Point Designs' customized prosthetic solutions, such as the Adaptive Finger Prosthesis and Thumb MCP Driver, designed to restore dexterity, grip strength, and overall hand function. These prosthetic devices are complemented by personalized rehabilitation strategies, ergonomic considerations, and psychological support, creating a comprehensive approach to empower individuals in their journey toward regained functionality and occupational reintegration.

Bio: Bari Diamond, OTR/L, CSRS earned a BA in Psychology from Boston University and both a Bachelor's and a Master's in Occupational Therapy (OT) from Touro College. She spent nearly 7 years as an OT at NYU's Rusk Rehab in NYC, where her passion for the limb loss community deeply grew. She dove into amputee support programs, solidifying her desire to dedicate her career to this group. On her favorite holiday, Halloween in 2023, she jumped at the chance to join Point Designs in the prosthetic industry, working alongside a remarkable team to make a significant difference for those with partial hand loss. In her free time, Bari enjoys music, traveling, fitness, and exploring food.

Vince Decataldo, BOCPO/LPO, Clinical Service Manager

Title: Orthotic Design Criteria for Altered Tone Patterns

Abstract: The presentation encompasses a comprehensive review of materials, techniques, and considerations crucial for optimizing orthotic interventions in this patient population.

Key topics include an in-depth analysis of different types of altered tone patterns, ranging from spasticity to hypotonia, and how these patterns influence orthotic design decisions. Mr. Decataldo will share his expertise in selecting appropriate materials, such as thermoplastics and dynamic components, to address specific tone-related challenges while ensuring comfort, functionality, and durability.

Bio: Vincent DeCataldo has been active in the O&P community since 1986 as a BOCPO and New Jersey Licensed P& O practitioner. He has lectured for Allard USA on a national and international level for 10+ years and product manager for 4+ years. Vincent specialized in lower extremity gait biomechanics, evaluation, fabrication, and alignment of lower extremity prosthetics and orthotics. He was the clinical manager of Rinko Orthopedic Inc. for 20+ years and owner-operator of ROE P&O for several years.
During his employment at Rinko Orthopedic Inc., he was an advisor to St Joseph's Medical Center, Paterson, N.J. orthopedic residency program. He attended adult, and pediatric orthopedic clinics, and trauma and post-surgical prosthetic care. Professional positions also included orthotist for the New York Football Giants.

Vincent's current position is Prosthetics Products Manager and Conceptual engineer advisor at Orthomerica Products Inc. He works directly with new product engineering and Certified practitioners in the O&P community. His role as a prosthetics clinical advisor and educator gives him the ability to bridge the gap between practitioners and manufacturers.

Aman Haque, PhD

Title: A Lighter, Smaller, and Maintenance-free Goralgin PSA Version 2.

Abstract: Prosthetic legs are typically fitted under indoor conditions and walking straight, but the outdoors is uneven, with twists and turns. We'll present the design and testing of a unique prosthetic ankle that allows terrain adaptation without any bionics. We'll show the effectiveness of the new ankle by measuring socket moment (directly related to socket pressure) as the subjects walk in both indoor and outdoor conditions. We will show how Goralign expands the range of comfortable alignment, allowing the patient and prosthetist an increased range of motion across a wider range of terrains and forces.

Bio: Aman Haque is the chief technology officer of Impulse Technology with a part-time position. He received his PhD from the University of Illinois at Urbana Champaign. He is a professor of mechanical engineering at the Penn State University. His research interests include mechanical design to find simple solutions for complex problems to improve mobility and quality of life.

Russell Hornfisher

Title: Amparo Direct Fit Prosthetic Sockets: Reshaping Rehabilitation

Abstract: The ResilienceSocket is a revolution in below-knee prosthetic socket technology. The Amparo System does not use plaster and the sockets can be immediately reshaped and remolded. All of this means that a finished,

high-quality, functioning prosthesis can be assembled in 1-2 hours max. Contrary to traditional methods, Amparo Socket Technologies are direct-fit; they mold onto the residual limb, like a second skin. This method simplifies the traditional fabrication process to just a few steps and minimizes the margin for error when making the socket - and provides immediate soft tissue feedback. Amparo Socket Technologies can be fitted anywhere. You do not require any specialist machinery, and all you need fits neatly into a specially designed bag. This means you can treat amputees at the hospital, at the patient's home, and even in remote locations.

Bio: Russell Hornfisher currently serves as the Sales Leadership for NuTech Synergies. He has spent over 40 years working for companies in a variety of industries. He has held positions ranging from District Sales Manager to President. In his spare time, during the most recent 30 years, he fostered, trained, showed and judged dogs. Prior to getting involved with dogs, Russell earned a Master's of Science Degree in Organizational Behavior and Leadership as well as an MBA.

Greg Steward, CPO

Title: Unlocking Medicare Coverage for Lymphedema Compression Products: A Must Know Update.

Abstract: This course informs attendees about the Lymphedema Treatment Act, a federal law effective since January 1, 2024. It transforms insurance coverage for vital, doctor-prescribed compression supplies essential in lymphedema treatment. Attendees will gain insights into LTA-based reimbursement mechanisms and showcase Thuasne's cutting-edge lymphedema and compression solutions.

Bio: Greg Steward, CPO, holds a Master's degree from Cal State Dominguez Hills. With over a decade of experience in the field, Greg began his journey as a clinician and has since evolved into a Key Account Clinical Education Manager with Thuasne North America, where he leverages his expertise to drive innovation and excellence in patient care.

DAY 2

Todd O'Hare, CPO, PT, Clinical Specialist

Title: Overview of Blatchford's Prosthetic Microprocessor Technology (Elan IC, Orion 3, & Linx)

Abstract: Blatchford has always been a leader in microprocessor technology in prosthetics. They were the first to develop a microprocessor controlled hydraulic ankle and the first to develop a true and fully integrated microprocessor controlled LE knee and ankle system in the LINX. We will provide an overview of the Elan IC, Orion3, and Linx; highlighting the benefits to the patient, the clinician, and the clinical practice.

Bio: Todd O'Hare, CPO, PT began his career as a Physical Therapist after graduating from the University of Miami. He then spent 10 years treating pediatric patients in both the acute care and outpatient setting in Greenville, SC. Todd transitioned to the O&P field in 2007 after attending Northwestern University. He worked in both private practice and a hospital-based setting as a CPO, with the last 10 years managing a hospital-based O and P department. Currently he is a clinical specialist with Blatchford and also an adjunct faculty member at Anderson University DPT program.

Ron Wilkinson, CPO/L, Senior Clinical Specialist, Orthotics

Title: Dynamic AFO Options to Maximize Patient Mobility

Abstract: This 30-minute course will cover a variety of AFO options from OTS to custom. Specifically, regarding custom AFOs, the Custom Carbon AFO and the Nexgear Tango ankle joint will be discussed along with the patient selection criteria. An attendee will leave with a clear understanding of what the differences are and when each type might be clinically appropriate

Bio: Ron began his O&P career in 1994 as an Orthotic Technician. Having already received his Bachelor of Science degree in 1991 and Master of Education degree in 1993 from Auburn University he attended Northwestern University Orthotic-Prosthetic Center for his O&P education. He received his Orthotic Certificate in 1997 and his Prosthetic Certificate in 1999. He worked for 22 years with Hanger Clinic in various roles from Technician to Clinic Manager. Most recently before joining Ottobock, he worked for 2 years serving our Veterans at the Atlanta VA. Now at Ottobock, he serves as an Orthotic Clinical Specialist primarily for the West Region. His responsibilities are customer education, product support, and technical liaison.

Jeff Freed, MBA, Director of Sales

Title: Cervical Motion Restriction Data from Cervical Collar to CTO

Abstract: Join us for an overview of modern cervical collars and cervicothoracic orthoses (CTOs) in this informative session. The presentation will encompass a review of biomechanical research related to cervical collars/CTOs, basic cervical spine injury statistics, and clinical indications and protocols for these orthotic devices. Attendees will gain valuable insights into the efficacy of these devices in managing cervical spine injuries, optimizing immobilization, and promoting patient comfort and compliance.

Bio: Jeff has been in healthcare since 1990 and in the orthopedic/spine industry since 2003. At Aspen, he's held diverse roles from sales, sales management, to director of clinical education. In his current role, Jeff is responsible for leading a dedicated sales team, shaping the current sales strategy, and strategically increasing Aspen's market presence. Jeff also serves as a clinical resource to the marketing department, product management, and the development of CEU programs.

Jonas Ljung, MSPO, CPO – NCOPE Presentation

Title: Bridging O&P Practice and Education

Abstract: The orthotic and prosthetic professions and the higher education landscape are evolving rapidly. Given the dynamic needs of employers of O&P program graduates, residency directors/mentors, educators, and students, NCOPE hosted an education summit in 2023 to gather their unique perspectives and ensure that educational standards align with stakeholders' needs. This summit has catalyzed the development of updated residency and technical education program standards and identified opportunities to support the profession via more effective education. Learn about NCOPE's current initiatives and how you can help share the future of the orthotic & prosthetic profession.

Bio: Jonas Ljung is a Certified Orthotist Prosthetist practicing as a pediatric specialist, in Washington DC. He also serves as Secretary for NCOPE's Board of Directors and has been a board member since 2020. Jonas is committed to advancing the field through innovative, compassionate care as well as academic and clinical education.

Brad Scott, CP, Clinical Education Specialist

Title: Ossur Solutions Featuring Digital Socket Design

Abstract: Discover the cutting-edge innovations in prosthetic technology with Ossur Solutions, highlighting their revolutionary Digital Socket Design. This session provides an overview of the techniques and benefits of digital socket technology, showcasing how it enhances comfort, functionality, and overall performance for prosthetic users.

Key topics include the precision of digital scanning and modeling in creating custom-fit sockets, the integration of biomechanical insights for optimal alignment and support, and the seamless adaptability of digital sockets to accommodate changes in residual limb volume and shape. Attendees will gain insights into the transformative impact of digital socket design on prosthetic outcomes, including increased comfort, reduced socket-related issues, and improved mobility.

Bio: Brad Scott is an ABC certified Prosthetist and Regional Clinical Manager for Ossur. He has been working for Ossur over the past 13 years. He has presented locally and nationally educating clinicians and patients on the benefits of Ossur products to improve their quality of life.

Dr. Mary Ann Miknevich

Title: Orthotic & Prosthetic Jeopardy

Abstract: An engaging and educational session led by Dr. Miknevich, where the world of Orthotics and Prosthetics (O&P) meets the excitement of Jeopardy! This interactive presentation combines the thrill of a game show with in-depth knowledge about O&P practices, technologies, and patient care.

Participants will have the opportunity to test their O&P expertise across various categories, from orthotic design principles to prosthetic innovations. Dr. Miknevich's dynamic hosting style ensures a lively and informative experience for all attendees, whether seasoned professionals or newcomers to the field.

Bio: Dr. Miknevich is a Clinical Assistant Professor in the Department of Rehabilitation Medicine, University of Pittsburgh School of Medicine; and an Amputee Clinic Chief, Pennsylvania State Office of Vocational Rehabilitation.

She is the Associate Program Director of the Physical Medicine and Rehabilitation Residency Program at UPMC (University of Pittsburgh Medical Center).

She has affiliations with numerous other hospitals and facilities in the Pittsburgh area and has been featured as a “Top Doctor” in Western Pennsylvania Hospital News, as well as recognized as a “Top Doctor” and “Best Doctor” for Pittsburgh Magazine from 2010 through 2016. She has also been named to the Castle Connolly list of “America’s Top Doctors” for 2011 through 2016. She has been recognized with the “Patient’s Choice Award” by Vitals.com as well as a “Most Compassionate Physician Award”

for the past several years, she received a Distinguished Service Award from PARF (Pennsylvania Association of Rehabilitation Facilities) for her work with people with disabilities.

Jim Lawson, Outreach Development Manager

Title: Best Business Practices to Keep Your Facility and Staff on Top of their Game: Remain Compliant with Medicare and ABC Standards

Abstract: Join us to learn how you can remain compliant with Medicare and ABC standards throughout the year.
Learn best business practices to keep your facility and staff on the top of their game and ready for any
challenges. We'll also discuss how ABC's extensive set of accreditation resources will help you perform
at your best.

Bio: As ABC's Outreach Development Manager, Jim devotes his time to helping business owners navigate the accreditation process and improve their businesses. Jim is a big part of ABC's successful podcast and webinar series providing additional best business practices and industry trends for the profession. With over 23 years' of experience in partnership building, public outreach, and business development, Jim brings a unique perspective to O&P business owners.

WORKSHOPS

Brad Scott, CP, Clinical Education Specialist

Title: Socket Technologies by Ossur: Featuring the New Icepro- Ossur's Alternative to Direct Socket

Abstract: Join us for an illuminating session, featuring the latest advancements in socket technologies, focusing on the innovative Icepro as an alternative to direct socket designs. This discussion will highlight the unique features, benefits, and clinical applications of Icepro in prosthetic care. Key topics include the biomechanical advantages of Icepro's design, its adaptability to various residual limb shapes and sizes, and the impact on user comfort, stability, and mobility. Attendees will gain insights into the rationale behind Icepro's development, its integration of cutting-edge materials and engineering, and the clinical evidence supporting its effectiveness.

Bio: Brad Scott is an ABC certified Prosthetist and Regional Clinical Manager for Ossur. He has been working for Ossur over the past 13 years. He has presented locally and nationally educating clinicians and patients on the benefits of Ossur products to improve their quality of life.

Ron Wilkinson, CPO/L, Senior Clinical Specialist, Orthotics

Title: Clinical Optimization of Stance Control and Microprocessor KAFO Technology

Abstract: For patients with paresis or paralysis of the quadriceps and other knee-stabilizing muscles, locked knee-ankle-foot orthoses (KAFOs) have been the standard of care for a long time. Improvements in KAFO technology, such as posterior offset KAFOs and stance control orthoses (SCO), have improved functionality for patients with free swing but work reliably and safely on level ground only. The C-Brace is the first microprocessor stance and swing control orthosis (MP-SSCO) that makes the benefits of microprocessor-controlled prosthetic knees including stumble recovery now available to patients who are dependent on a KAFO to restore walking capability.

Bio: Ron began his O&P career in 1994 as an Orthotic Technician. Having already received his Bachelor of Science degree in 1991 and Master of Education degree in 1993 from Auburn University he attended Northwestern University Orthotic-Prosthetic Center for his O&P education. He received his Orthotic Certificate in 1997 and his Prosthetic Certificate in 1999. He worked for 22 years with Hanger Clinic in various roles from Technician to Clinic Manager. Most recently before joining Ottobock, he worked for 2 years serving our Veterans at the Atlanta VA. Now at Ottobock, he serves as an Orthotic Clinical Specialist primarily for the West Region. His responsibilities are customer education, product support, and technical liaison.

Russ Hornfisher

Title: Innovative Solutions: Hands-On Workshop on Direct Fit Prosthetic Socket Technologies with Amparo

Abstract: The Resilience Socket is a revolution in below-knee prosthetic socket technology. The Amparo System does not use plaster and the sockets can be immediately reshaped and remolded. All of this means that a finished, high-quality, functioning prosthesis can be assembled in 1-2 hours max. Contrary to traditional methods, Amparo Socket Technologies are direct-fit; they mold onto the residual limb, like a second skin. This method simplifies the traditional fabrication process to just a few steps, and minimizes the margin for error when making the socket - and provides immediate soft tissue feedback. Amparo Socket Technologies can be fitted anywhere. You do not require any specialist machinery, and all you need fits neatly into a specially designed bag. This means you can treat amputees at the hospital, at the patient's home, and even in remote locations.

Bio: Russell Hornfisher currently serves as the Sales Leadership for NuTech Synergies. He has spent over 40 years working for companies in a variety of industries. He has held positions ranging from District Sales Manager to President. In his spare time, during the most recent 30 years, he fostered, trained, showed and judged dogs. Prior to getting involved with dogs, Russell earned a Master of Science Degree in Organizational Behavior and Leadership as well as an MBA.

Steve Kulifaj, CO, BOCP, LO, Education Consultant

Title: Seeking Stability and Sensory Input in the Sagittal Plane: Surestep AFO Solutions for Functional Outcomes.

Abstract: Surestep has been providing pediatric patients with dynamic stability since the invention and patenting of the Surestep SMO in 2000. Along the way, we have taken this idea of Dynamic stability and combined it with the need for additional sagittal plane stability at the ankle, knee, and hip to create a line of unique AFOs to meet the needs of pediatric patients with both high and low tone to have better function, gait development and participation in their childhood. This workshop introduces orthotists to Surestep's unique pediatric AFOs and shares case studies and outcomes to demonstrate the benefits of dynamic stability, optimal alignment and increased sensory input on patients requiring an AFO for optimal LE stabilization.

Bio: Steve Kulifaj is a certified and Licensed Orthotist-Prosthetist with more than 25 years of clinical experience. Steve's passion for pediatrics began early in his residency at Detroit Children's Hospital. He went on to establish a pediatric specialty team in Minnesota, co-founded a three-facility O&P practice in Minnesota, and provided pediatric care in
Minneapolis and Hennepin County Medical Center's pediatric specialty. He also provided both clinical and practice leadership in Oregon, California, and Nevada. Steve is a passionate educator and speaker who has given many presentations both nationally and internationally. His special focus is on the importance of a multi-disciplinary approach to pediatric care. Constantly looking to push the envelope of advancing clinical treatment techniques and as a lifetime learner, Steve seeks to share ideas and gain knowledge wherever he travels.
With nearly a decade of commitment to sharing Surestep innovations and education, Steve currently serves as an Education Consultant for Surestep.

Introduction: Steve is a Certified and Licensed Prosthetist-Orthotist with more than 25 years of clinical experience. He was a lead orthotist for a pediatric specialty team in Minnesota, co-founded a three-facility O&P pediatric practice in Minnesota, and is recognized in several states for his scoliosis treatments and lower extremity bracing.

Joshua Mullins, Vice President of Business Development

Title: Research on early ambulation and the many psychological and physiological benefits

Abstract: Early ambulation after amputation can provide important benefits for persons with limb loss that are both psychological and physiological. The latest prosthetic technologies feature immediate fitting capabilities that help expedite the rehabilitation process. Getting persons up walking earlier has been shown to promote blood flow, maintain muscle tone and strength, and aid in joint flexibility. Walking soon after amputation can facilitate feelings of independence, improved mood, and self-esteem. This lecture will also discuss case studies where the iFIT system has played a role in wound healing and improving skin conditions on the residual limb after amputation. Several case studies will also be presented where challenging limbs that cannot be accommodated by conventional prosthetic techniques were fit successfully with the iFIT system.

Bio: Joshua Mullins is the Vice President of Business Development for iFIT Prosthetics. He has focused his attention on the O and P field for the past 13 years specializing in business and strategic sales management. He has successfully brought new and innovative products to the market while helping practices maximize their revenue opportunities. Josh speaks at international, national, regional, and state O and P meetings as well as

individual practices and healthcare systems. He believes that every amputee should be provided the freedom to control their healthcare choices.

Greg Steward, CPO

Title: Thuasne's SpryStep Vector AFO and KAFO

Abstract: Explore cutting-edge AFO and KAFO clinical theory with a comprehensive approach to patient assessment and lower limb biomechanics in our SpryStep Vector AFO and KAFO product course. Delve into the intricacies of design, prescription, and product theory, highlighting their direct connection to patient assessment.

Bio: Greg Steward, CPO, holds a master's degree from Cal State Dominguez Hills. With over a decade of experience in the field, Greg began his journey as a clinician and has since evolved into a Key Account Clinical Education Manager with Thuasne North America, where he leverages his expertise to drive innovation and excellence in patient care.