

american prosthetics & orthotics

THE **apo** inc. **NEWS**

Ingenuity Provides a Prosthetic Solution for 13-Month-Old Patient Olivia, now 6, has progressed from handmade to commercially available componentry

It is said that fabricating a prosthesis is both art and science; the knowledge of biomechanics plus a flair for creativity help patients reach a comfortable level of mobility. Every patient is unique, of course, but some present more challenging situations. Such was the case of Olivia Cawley, who was only 13 months old when she made her first visit to Gary Cheney, CPO, FAAOP.

“At 13 months, she was pulling and standing very strongly on her good leg. The length of her residual limb was such that she could crawl around,” Gary said. “She was very active so even before we made a prosthesis for her, we made a protective device for her residual limb so she could crawl around and bear a little weight and do a little pushing.”

Componentry scarce for very young children

“The challenge in creating a prosthesis for Olivia was that at her age, there are no commercially available components. We had to hand-fabricate everything,” Gary explained. “Everything was made from scratch. We were able to obtain a SACH foot in the very smallest size and fabricated a knee unit from a block of wood and upper extremity elbow joints. At that young age, pediatric patients can’t control a prosthetic knee, so the knee was locked. That allowed Olivia to stand up and put weight on it without it buckling under her. She started with a walker to help her balance and within three or four weeks she was moving around without any external support.”

Gary continued to hand-craft the knee and shin for Olivia’s prosthesis until she grew into commercially available components. “We kept her in a locked knee until she was almost four years old,” he said. “Some prosthetists would question the validity of this, but we tried on several occasions unlocking the knee and letting her utilize it but she couldn’t grasp the function of ambulating with an unlocked knee. We felt for her safety and ability to get around it was best to keep the knee locked.

Pediatric patients are not just little adults

“It’s difficult to convey to a pediatric patient, even though Olivia is a bright little girl, just what she has to do,” said Gary.



“You can’t teach a child to use a prosthesis so you have to maximize the best alignment, the best fit for them and basically let them go on their own. When we went to an unlocked knee, we aligned the prosthesis so that it was in a safe mode and let her develop her own techniques. She took a few tumbles but within a few weeks she was going like a house afire.”

According to her father Ed, Olivia, now six, is a dynamo. “Olivia has always been full of life. She doesn’t let her leg stop anything,” he said. “She has no inhibitions at school and when she gets a new prosthesis, she likes to show it off.”

As Olivia grew, likewise did her options for prosthetics and her ability to walk and run not noticeably different from any other child. She is now fit with a total contact socket with a roll-on locking liner. The knee is an Ossur Total Knee® Junior and the foot is an Ossur Flex-Foot® Junior.

“When it comes to the products we are using, they are very functional for her,” said Gary. “The big issue is just keeping up with her growth. We have to make linear adjustments every three or four months because she is

growing so rapidly that we have to lengthen the prosthesis out. She gets circumferential growth over the course of time so it's necessary to replace the prosthesis or a major component like the socket every 14 to 16 months. Keeping up with her growth is a challenge but we've been able to do so."

Olivia blossoms within a strong family unit

Olivia became an amputee at the tender age of three weeks. Born premature she was still in her incubator when she developed an infection, necessitating emergency surgery. She also was given up for adoption by her birth mother.

"We were in the process of adopting our first child when we got a call about Olivia, who was about to lose her foster home," Ed explained. "The first time I saw Olivia my heart sank. She crawled right over to me, pulled herself up, climbed in my lap, and tucked her head on my chest. I said, 'wow.' When I got home that night, I told my wife, Julie, 'let's get them.'"

"Them" refers to Olivia and her brother, both up for adoption at the same time in 2006. The rapidly expanding family unit didn't end there. Explains Ed: "Julie and I were very close to finalizing the adoption papers when I got a call at work to see if I was interested in a baby sister to that sibling group. The next night we had the baby sister."

The Cawley family of Chariton now numbers six children ranging in ages from one to 12. All the children came to the Cawley's by way of adoption. Olivia is the only child with limb loss.

"You can't tell she has an artificial leg," Ed said. "With her first leg, she had to swing her leg way out to walk, but when she was old enough to get a knee, she continued to walk the old way until she learned to bend the knee. There was a certain amount of uncertainty and fear, but she's got that down now."



Olivia loves kindergarten, shopping, participating in Girl Scout Daisies, and chasing her sibs around the house. "That girl can run through the house and beat them with one leg," Ed said. "She is very fast and adapted easily both with and without a prosthesis."

"Olivia's done extremely well," said Gary. "It's been a real joy working with Olivia and her

family. Her parents are an excellent support system. They are very aware of her needs and really watch her. They encourage her to do everything she can.

"It makes you feel good when you see a child that progresses like that. When you're a prosthetist, you see progression with adults, but you see it much more rapidly with a child, and that makes you feel pretty good."

Fall Product Showcase

Ossur Total Knee® Junior

Lightweight and extremely durable, the Total Knee® Junior has all the technology of the award-winning Total Knee at two thirds the size. Fluid extension resistance for quick motion, flexion control to minimize heel rise and an adjustable flex stance feature provide optimal control, shock absorption. The knee is designed for an active lifestyle with daily activities that include walking on level and uneven ground. Due to low build height, the Total Knee Junior is useful for long limbs or knee disarticulation.



Ossur Flex-Foot® Junior

A proper foot gives a child the ability and flexibility to engage in a wide range of activities. Flex-Foot® Junior is an energy-storing, carbon-fiber foot specially designed for children. The Carbon-X® Active Heel stores energy and absorbs shock loads while the full-length toe lever contributes to stability and even stride length. Deflection of the forefoot from mid-stance to toe-off is proportional to the child's weight and is designed to tolerate the high levels of impact generated by children. A sandal toe design with an anatomically correct foot cover makes the foot look cosmetically appealing.



Certified Orthotist and Iowa City Office Manager Tom Ham Retires After 40 Years with APO

The staff of American Prosthetics & Orthotics bids a fond farewell to our long-time orthotist and Iowa City office manager since 1990, Tom Ham, CO, who retired this fall.

"We all wish Tom the very best. He is a consummate professional who has earned the respect and admiration of the entire APO team," said Ron Cheney, president of APO. "He will be sorely missed by staff and patients alike."

Tom leaves a legacy of finding solutions for challenging cases, guiding residents, and serving as a resource to staff and physicians for technical or application issues.



However, when Tom was growing up, he never considered orthotics as a profession. "I grew up on a farm, but since my dad got out of farming when I was 15, it would have been too costly to attempt to start from scratch. I was considering either teaching algebra or going into computer programming," he recalled.

But after deciding to take a year off of school before applying to college, he was introduced to the O&P profession by Sue Gough, a family friend and employee of APO.

"The business I was working for closed and Sue contacted me about an opening at APO. I had never heard of the O&P business before and she tried to describe it to me. What she relayed mostly centered on shoe work. It sounded more like being a cobbler than building braces," he said.

But Tom followed up and interviewed with the late Harold Miller, CPO. "I had an interview with Harold at 8:30 a.m. and started working at noon the same day, so it was by chance I entered the O&P field," he said.

Tom quickly became immersed in orthotics, learning on-the-job. "Growing up on a farm had instilled the desire to work with my hands," he said. "Early in my career, the challenge of learning how to fabricate various types of braces was very motivating. During these early years of fabricating, when everything was metal and leather, Ron Strebe was my mentor. He

was very good working with the materials. As time went on, I began seeing patients to measure and fit orthoses. Harold Miller was instrumen-



tal with encouragement and training by holding educational meetings for staff after hours in the evening."

After taking many night courses while maintaining full-time employment, Tom received his certificate in orthotics from Northwestern University in 1993 and became ABC-certified in 1996. He is a member of the American Academy of Orthotists and Prosthetists and the Iowa Prosthetic, Orthotic and Pedorthic Association.

From mentee to mentor – the go-to guy

Tom has served as a mentor and resource to younger staff members throughout his career. He has passed on knowledge to ensure that the fundamentals of the industry and quality products and services have been maintained. He has also addressed the most difficult patient cases and has been the person that physicians and staff members turn to with questions or issues.

"I would like to be remembered for helping new practitioners starting out in the profession learn what reality is once they are out of school. These last years I have had the pleasure to work with a fine group of young people in the Iowa City office. I only hope I have been able to teach them one or two things along the way," he said. "The new people we hired recently have been a pleasure to work with and a great inspiration to teach the things school can't and only experience can."

National Clinical Commitment Award

Tom's dedication and concern for quality patient care was recognized in 2009 with the National Clinical Commitment Award from the American Academy of Orthotists and Prosthetists. The award recognizes Academy members who have demonstrated a

commitment to The Code of Professional Responsibility and to improving the professional image of the orthotic and prosthetic profession to patients, co-

workers, and colleagues. "Anyone who doesn't understand the meaning of orthotist or the phrase clinical commitment need only watch Tom in action. He is the epitome of the word commitment," said Don Shurr, CPO, PT, in his nomination statement for the award.

Tom was not aware he was even nominated for the award until he received a phone call informing him of his



selection. "I have never been one for a lot of fanfare so knowing my colleague noticed and appreciated what I had done through the years is what the award meant to me," he said.

Reflecting back, facing the future

Tom has had many special moments and experiences through the course of 40 years, and he recounted several that were especially meaningful, including:

- *Patient relationships:* "The patients themselves have been a major factor of motivation. Several I have had the opportunity to see develop from children into adults. Many are more than just patients, they have become good friends."

- *Challenging cases:* "There is no way I can single out one specific case. Perhaps distinguishing a specific group of patients may be easier. I would have to say the post-polio patients were the most challenging group to work with, even though there were more unique braces I have made through the years."

- *Important accomplishments:* "It is hard to choose after 40 years. I would consider attaining status of Certified Orthotist since I took all of my prerequisite college courses

at night while maintaining full-time employment as one accomplishment. Working my way up within the company to become branch manager in Iowa City was very important, but most of all being able to address difficult cases and pass some of this information along to the young practitioners was most satisfying"

- *Co-workers:* "As the years passed and our profession evolved with new advancements, our staff requirements also changed. One of the staff additions was Don Shurr. I give credit to Don for unequalled support and additional knowledge during the second half of my tenure with APO. And over the course of my whole career, I have to thank Ron Cheney for his continued support."

- *Advice to young practitioners:* "A young practitioner must enter the field with the mindset that they're here to help the patient. They must be prepared to continue their education and maintain quality care."

- *Family:* Tom and his wife, Sharon, have four children and two grandchildren. "I have to thank Sharon for her inspiration and support over the past 30 years. She has been by my side to help me cope with several tragic losses, especially that of my daughter. Presently we are facing our biggest challenge dealing with my ALS."

APO Welcomes Four Residents

In June 2011, American Prosthetics & Orthotics (APO) welcomed four residents. APO residents have the opportunity to create patient relationships, have hands-on experiences, and continue their education in the profession.

Theresa Bonnema, C.Ped, C.Fo, joined APO in 2008 as a certified pedorthist and certified orthotic fitter. After completing prosthetic studies at Chicago's Northwestern University Prosthetic-Orthotic Center, she began her prosthetic residency at the Iowa City Hospital office. Theresa enjoys the atmosphere of the hospital setting and has learned more about traumatic amputations.

Theresa graduated summa cum laude from Marquette University, Milwaukee, Wis., in 2003 with a bachelor of science in biomedical engineering.

A native of Iowa City, Theresa currently resides in Solon with her husband, Adam, and daughter, Olivia. She is expecting their second child.

Matt Husnik, CO, ATC, is working to add certified prosthetist

to his credentials, completing his residency requirements at the Iowa City Hospital office. He enjoys the team atmosphere of APO and the strong communication between physicians and patients.

Prior to his residency, Matt was a Certified Athletic Trainer. He received his bachelor of science degree in integrated physiology with an emphasis on athletic training from the University of Iowa in 2007. He studied prosthetics and orthotics at Chicago's Northwestern University Prosthetic-Orthotic Center and received his certification in orthotics in 2011.

A native of Vinton, Matt currently resides in Iowa City.

Evan Ross also joined the Iowa City Hospital office as an orthotic resident. Evan enjoys the hands-on experience of working with doctors and patients.

Prior to joining APO, Evan completed clinical hours at Actra Orthotics and Prosthetics in Milwaukee, Wis. He received his bachelor of science degree in

biomedical engineering from St. Louis University in 2005 and graduated from Drexel University in Philadelphia with a master of science degree in biomedical engineering in 2007. He completed his prosthetics and orthotics programs at Chicago's Northwestern University Prosthetic-Orthotic Center.

A native of Milwaukee, Evan currently lives in Coralville.

Kelvin Lee is a prosthetic resident at APO's Davenport office. In May 2011, he completed the Prosthetic Practitioner program at Century College in White Bear Lake, Minn. Kelvin has enjoyed learning the business side of the industry as well as interacting with patients and gaining a greater understanding of prosthetic options and fittings. In the future, he would like to work towards his certification in orthotics.

Kelvin received his bachelor of arts degree in physical education from Coe College, Cedar Rapids, Iowa, in 2009.

A native of Solon, Kelvin currently resides in Davenport.

American Prosthetics & Orthotics Practitioners Attend AOPA National Assembly

APO staff members Rod Cheney, CPO, FAAOP, Brent Cheney, CO, Tom Ham, CO, Andy Besser, CPO, and Jeff Palmer, CPO, attended the 2011 American Orthotic & Prosthetic Association (AOPA) National Assembly held in

September at the Mirage Resort and Casino in Las Vegas.

The team had the opportunity to participate in business and clinical education programs as well as visit exhibitors



showcasing the latest technology for the prosthetics and orthotics profession.

The event included the keynote address by Melissa

Stockwell, CP, a paralympic swimmer and former U.S. Army officer. A first lieutenant, Stockwell was the first woman soldier to lose a limb in the Iraq War.

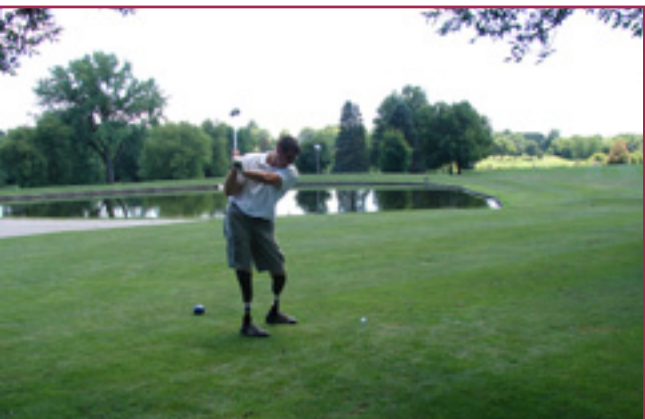
In addition, Rod and Brent teamed up with Dan Cox and Mike Curtis of American Prosthetic Components to golf in the 2011 Fall Thranhardt Golf Tournament benefiting the inspiring efforts of OPAF and the legislative, research and



education efforts of the Capitol Connection to further the O&P policy agenda. This foursome won the golf tournament and bragging rights for the next year!

IAGA Tourney Celebrates 20 Years at Annual Outing

The 20th annual Iowa Amputee Golf Association (IAGA) Tournament was held in July, at the Willow Creek Golf Course in West Des Moines.



and Conner Wood was the only youth participant in the amputee tournament. IAGA is urging more participation by females and youth.

There were five new participants this year: Connor Wood, Andy Yohe, Matt Anderson, David Livingston, and Brian Johnson.

Recognition was given to Jim Crosman, Chuck Kruse, and Craig Lonning for perfect attendance at all 20 Iowa Amputee Golf Tournaments. Bob Mayes also was included as he only missed one year. These men also served on the board for many years. All four were given engraved putters.

There were 74 participants in a best ball scramble and along with golfing all enjoyed a box lunch and everyone received a door prize.

Since 1999, the IAGA has given \$33,000 in scholarships to eligible Iowa residents seeking post-high school education who are amputees or the immediate family member of an amputee.

APO was the major sponsor for

the 16th consecutive year. Special thanks to this year's other corporate sponsors: Willow Wood, Knit-Rite, oandp.com, Otto Bock, Motion Control, College Park, Freedom Innovations, and Ossur.

The IAGA 2012 event will be held July 13-15 at Willow Creek Golf Course.



Overall winner of the amputee tournament was Bob Wiechelmann. For his first-time championship win, Bob had a score of 150 for the two-day event.

There were 39 amputees participating in the tournament and all received a cap and shirt inscribed with the IAGA logo and 20th Anniversary at the Saturday night banquet. Mary Stark was the only female participant

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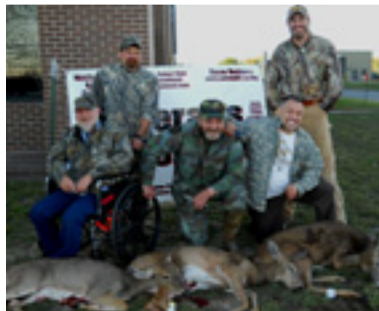
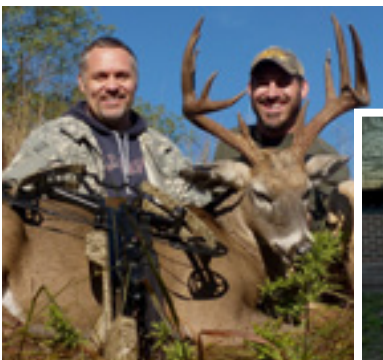
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The Veterans Honor Hunt, a free, guided hunt for disabled veterans, was held successfully the first weekend of October in Muscatine. The event was sponsored by Serve Outdoors and MidAmerican Energy, which also provided the guides to assist hunters. Several APO patients as well as Nick Ackerman, CP, participated in the two-day outing, including John Husemann, who took a monster trophy buck and a fine doe; Marty James, an experienced Serve Outdoors participant, who made a 42-yard shot (his first deer with a crossbow) with help from his sighter, Rodney Walker; John Beukenhorst, who hadn't been hunting in over 15 years; and Joe Jess, who also shot a fine doe.

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