







PROJECT OVERVIEW

Of the 30 million people in need of prosthetic limbs worldwide, only two percent currently have access to appropriate prosthetic care. To increase awareness and directly address this issue, Utah Valley University's Mobility Mission, directed by Julie Baker Bagley, manufactures high-quality, low-cost prosthetic limbs for amputees in developing countries.

Members of Mobility Mission include UVU faculty, staff, students, community members, certified prosthetists, orthopedic specialists, and mechanical engineers. The team works in-country to mold, build, and fit prostheses to each amputee's specifications. Training local healthcare professionals to continue this process is also provided by the members of Mobility Mission.

OUR MISSION

To reduce the psychological, physical, and economical burden associated with loss of limb worldwide, we will:

- Provide high-quality, low-cost prostheses to amputees
- Establish holistic healthcare for individuals and families
- Create sustainable programs in each country





AWARENESS

The lack of government, private, and public awareness is the root source of this debilitating issue. Mobility Mission is currently working with local governments, prosthetists, non-profit organizations, donors, and foundations in raising funds and awareness to provide high-end, low-cost prostheses to those in need.

DEMAND AND GROWTH

Mobility Mission has experienced enormous success and improvement since its inception in 2010. In order to create and distribute prosthetic limbs to individuals in need throughout the world, continuous growth and innovation are vital. Mobility Mission is committed to research and to develop high-quality, low-cost prostheses to meet the increased need of amputees while providing students valuable engaged learning experiences. Our global partnerships provide a mutually beneficial collaboration where education and service unite.

PATIENT OVERVIEW

This year, being Mobility Mission's fourth year in Guatemala, delivered **20 custom-made prostheses** for **18 patients, six of whom were children**.

The cause of amputation for our patients were diverse. Nearly one-quarter lost their limb(s) as results of accidents involving the workforce. Our patients lost limbs due to electric cables, city buses, trains, diabetes, cancer, and congenital births. Often in developing countries, healthcare is inaccessible and unaffordable. Therefore, health issues such as infections, tumors, and diabetes are exacerbated. Over time, these issues may lead to amputation and other complications. Several of our patients faced these exact health issues.























SPECIFICATIONS

Our prosthesis is made of durable and affordable co-polymer. Each of our manufactured prostheses cost as little as five percent of the average prosthetic device. A high-end device can range from \$14,000 to \$50,000.²

PROSTHETIC CARE

Mobility Mission works with in-country prosthetist Julio Fuentes, who chooses amputees that are in greatest need. By receiving a new prosthesis, employability is increased, health is enhanced, and financial means to upgrade the limb in the future become available.

RESEARCH

Mobility Mission joined with UVU Associate Dean of College of Science & Health, Jason V. Slack, to conduct extensive in-country research. Using high-speed digital recordings, Slack observes and measures the gait of prosthesis users. Mobility Mission will use this research to improve prosthetic design, development, and implementation.

^{2.} Turner, Rhonda, "Prosthetics Costs" Disabled World, May 30, 2009, http://www.disabled-world.com/assistivedevices/prostheses/prosthetics-costs.php (accessed June 7, 2013).

THE EXPERTS



Julio Cesar Fuentes Estrada CPO at Ortopedia Centroamericana, Guatemala City

Julio was born in Guatemala City on April 13,1970. His parents are Leopoldo Fuentes and Julia Aida de Fuentes. He is the fifth son out of six children. Julio's father passed away before he and his siblings were adults. The loss of their father gave all siblings a drive to work hard at an early age to help their mother with the household expenses.

Julio began working in a grocery store at age 13. One of the store owners motivated Julio to be a hard worker, responsible, and remain focused. He received the opportunity to travel to São Paulo, Brazil to study orthopedics and prosthetics at the age of 21. He could not let this opportunity slip by since he had received the financial help from the First Lady of Guatemala. Brazil was his first experience outside of Guatemala, marking the beginning of his professional career. The hospital professors noticed the ease with which Julio learned to speak Portuguese, almost to perfection within two months. Julio showed so much interest in learning quickly that the professors did not doubt his ability and quickly assigned him his first patients. After returning to Guatemala, Julio got started in a small galley made of wood and corrugated metal and began Ortopedia Centroamericana. He

married Nicte Ponce at age 26. They have three children named Camila, Daniela, and Julio Jose, who are his inspiration.

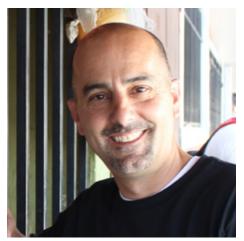
Julio knows that training is something that he needs to keep up since orthotics and prosthetics change often. He has participated in many seminars and courses in the United States and in other countries of Central and South America. Julio continues to keep current in his field of work. He also collaborates with students in the field as well as medical physiotherapists and other professionals in remote areas.







THE EXPERTS



Jason V. Slack, PhD ASSOCIATE DEAN, UVU College of Science & Health

Dr. Jason V. Slack completed his BA at Southern Utah University in physical education with an emphasis in exercise science and later was accepted to BYU to continue his education in pursuit of a Master's degree. While at BYU, he enjoyed exercise science and the opportunities to teach others.

After completion of a Masters in exercise physiology at BYU, he started a Ph.D program at the University of Utah in exercise and sport science with an emphasis in exercise physiology. In the fall of 2000, he started working as a full-time faculty member at UVU. In February of 2002, he was activated with the Utah National Guard to spend the next 17 months in Operation Iraqi Freedom; 12 months of which he was stationed at the Baghdad International Airport. Upon his return, he continued his position at UVU teaching several different exercise science classes. He now works as the Associate Dean in the College of Science & Health, where he assists the college to be successful in the many programs they are involved in.

Dr. Slack has 15 peer-reviewed publications and has been a part of 42 undergraduate research projects that have been presented at regional and national conferences. He is very involved in campus life at UVU. Dr. Slack has served on several committees and advisory boards on campus. He continues to look for opportunities to make a change and help students succeed.









RESEARCH & STATISTICS

LEADING CAUSES OF AMPUTATION:

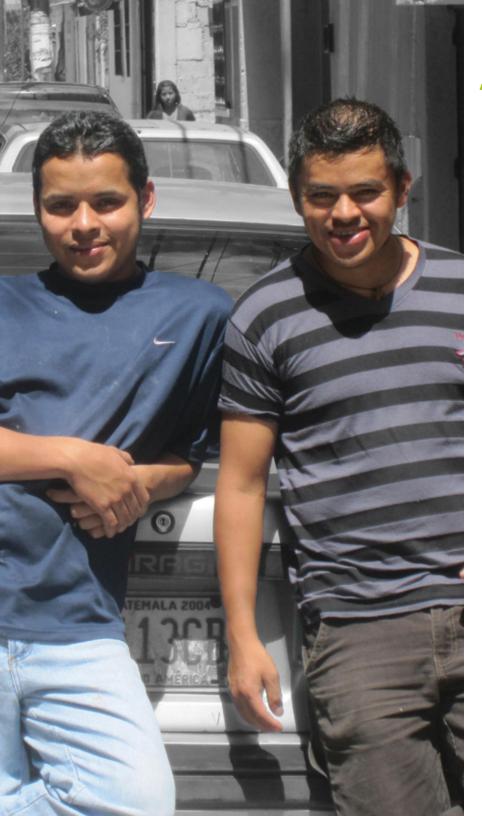
- 1) HEALTH RELATED

 Diabetes, birth defects, infection
- 2) AUTO RELATED ACCIDENTS
 Such as hit-and-run and basic
 driver negligence
- 3) WORK RELATED

 On-site construction accidents
 such as electrocution

LONG-TERM GOALS OF OUR STUDY:

- A) Monitor the growth and need for affordable prostheses
- B) Publish and raise awareness of amputees in Guatemala and other developing nations
- C) Compare affected and non-affected legs during the gait cycle



"This significant human impact and success benefits our international community..."

Fernando and Alex, Ortopedia Centroamericana Apprentices

Mobility Mission had no idea our presence at the Ortopedia Centroamericana clinic would have such a lasting impact on career and education. Prior to our partnership and project, both of Julio's apprentices, Fernando and Alex were responsible for orthotics with no exposure in assisting with custom prostheses. We had no idea they had not worked in prosthetics because they would pitch right in and help run the equipment and make modifications. The profound expression of gratitude from Fernando and Alex was incredible. They gave us credit for their exposure and interest. They expressed their desire in following Julio in his career. Julio also saw the vision and sent both Fernando and Alex to the local university. They are now in their second semester, and hope to gain credentials allowing them to continue to assist and carry on his profession. Mobility Mission did not expect to have such an educational impact on the entire staff. We found that all of them, including the receptionists, began to speak fairly fluent English during these past few years. This significant human impact and success benefits our international community, develops strong interpersonal relationships, and has a lasting impact on everyone involved.





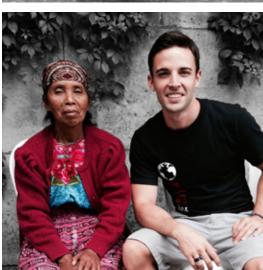


















STUDENT ENGAGEMENT

Mobility Mission has a strong emphasis on students. This emphasis magnifies students' ablity to learn while edifying academic careers, enhancing personal growth, and shaping the lives of patients served. Mobility Mission incorporates life-changing leadership opportunities and invaluable global service. Prior to the trip, all students are trained by prosthetist Lane Ferrin in the construction, engineering, and fitting of the prostheses. Students participate in research and hands-on experiences that foster a lifetime commitment to humanitarian service. As future alumni, students will take this experience as a credential for their resumés, building a stronger and wider set of skills for their careers.



"I've come to know of the importance and necessity of giving meaningful service"

JONATHAN LATHAM, POLITICAL SCIENCE, UVU GRADUATE

Nearly three and a half years ago, I came into contact with Julie Bagley and her amazing service program. It has been my privilege to watch Mobility Mission grow into an organic and flourishing organization. I was fortunate to be absorbed into such a selfless, giving organization, while in my freshman year. The group worked hard to secure the needed monies via fundraising grants, service projects, and community outreach. Mobility Mission has now grown from a few interested students to a plethora of prospective donors.

More times than can be counted, people from around the world will come to our office with the familiar plea to help their people. From Nepal to Cambodia to Haiti, these individuals know who they can trust. Their confidence in us is proof of the success of our mission(s). Much planning and responsibility goes into the details of setting up these excursions and realizing this call to action. Having served three successful missions to Guatemala, I've come to know of the importance and necessity of giving meaningful service. The people are beautiful, the journey is delightful, and the feeling of accomplishment is unforgettable.

My passion is travel. My satisfaction is service. As cliché as it may sound, you can do anything and become anyone with Mobility Mission at your back. There is a wide door that opens both academically and professionally when you go beyond the bounds and comforts of your own home. I am thoroughly convinced, if the world had access to such an engaging, structural, and proficient program, there would be little to no division among society. This can happen. This is happening! Do something for someone and forever be remembered. Enjoy life and give joy. What more could you want?











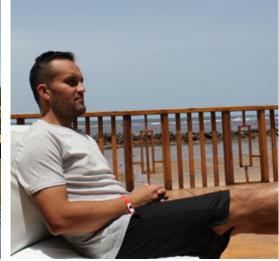


























"I've never seen a happier people."

KADE PARK, HEALTHCARE ADMINISTRATION STUDENT AT UVU

When I first became involved with Mobility Mission, I did not know exactly of what it entailed. I was looking for opportunities of service, and soon came to the conclusion that working with this project was the best way to help others. Instead of giving quick and momentary service, this organization provides help that leads to the improvement of health and employment; it allows Guatemalans to be completely mobile once again.

As I traveled with this organization to Guatemala in July, I had one of the greatest experiences. To be able to help one person walk again is a miracle and huge life-changer. Imagine how someone could feel after helping 18 people walk, and having the plan to continue to help many more individuals. Each Guatemalan had something special about them; I've never seen a happier people. They were unique in their own way and had hearts full of gratitude toward God and us.

With a desire to belong to a unified group and create everlasting bonds with students, faculty, professionals, and people in need of help, this is the organization to be a part of. The mission of this project is to provide engaged learning, and already has enhanced my degree, credentials, and university experience.





"We changed their lives; in return, they changed ours."

ALYSSA CHAMBERLAIN, DIGITAL MEDIA AND PHOTOGRAPHY STUDENT AT UVU

No one could have ever prepared me for the impact and emotions I felt when stepping off the bus that first day. The gratitude patients expressed at the clinic changed me forever.

As a graphic art and photography major, I had the opportunity to be the designated photographer. Mobility Mission gave me the chance to enhance my career portfolio. This exposure to the patients and their families gave me the confidence I needed to finalize my photography career.

The emotions of this project really had an effect on me; I was fortunate enough to be the observer while serving as the videographer and hear each story. I was able to capture their first step in their new prostheses. Not only did it bring tears in to their eyes, but mine as well.

What an amazing experience to be a part of these patients lives for that spare moment when they were able to share their story. The people who touched me the most were those who previously never had a prosthesis.

This experience in Guatemala is one that will stick with me forever. I never knew how much I could change another person's life for the better until I went on this humanitarian trip and met these amazing people. We changed their lives; in return, they changed ours. I will always be grateful for this tremendous experience and the impact it will have on me, as I continue to serve others.







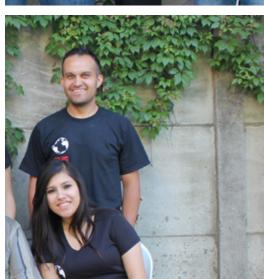




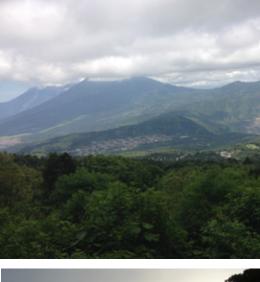








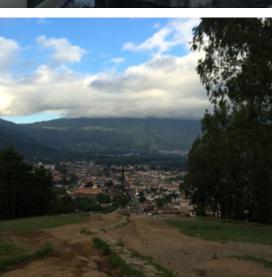




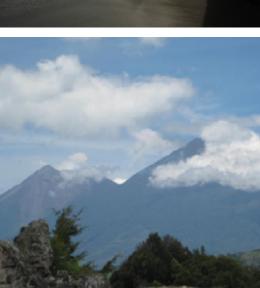














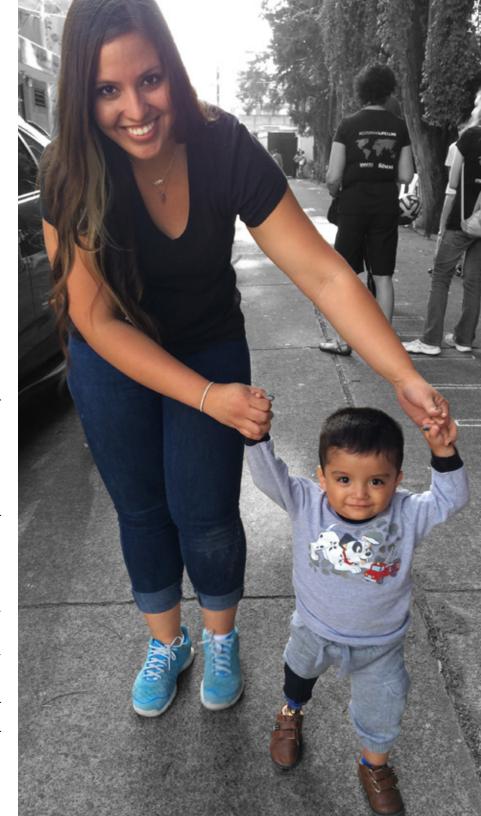
"I did not just help these people walk; I actually helped them restore their independence."

CINDY LOPEZ, NURSING STUDENT AT UVU

When I became familiar with Mobility Mission, I was giving tours of UVU and in my training I learned about this project. I would talk about Mobility Mission as if I had actually participated with them for years. Everything about the project had drawn me in.

As a mentor for the First-Year Experience program, I was fortunate to assist Jordan Doman as his student mentor in the classroom; he explained the details of Mobility Mission and introduced me to Julie. From there, things just seemed to align. As a team, we worked throughout the academic year to raise funds to provide the means to serve international amputees. There is no way to explain or to have anticipated the impact this experience would have on me or how much it was going to change my life. My life is now enriched with the exposure of serving others and I realized the value of service and appreciate the blessings that come with it. Witnessing a person walk for the first time and seeing the joy of their family creates a better quality of life.

Knowing the Spanish language emphasized my experience because I was able to connect to our patients. I was able to laugh, cry and really get to know them personally. I did not just help these people walk; I actually helped them restore their independence. The gratitude I felt from each patient is hard to convey to the point that words cannot even describe it. Participating in Mobility Mission has been one of the best things that I have ever experienced.



Alan Saquic, 8

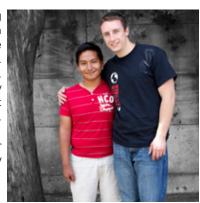


One day, six-year-old Alan was playing with his cousin and accidentally stepped on a loose electric cable on a terrace. The cable burned his leg and conditions worsened until his family made the decision to amputate. Alan, now eight years old, is the oldest of three children. His family lives five hours away from Guatemala City in Quiché. They traveled far to receive medical attention. Alan received his first prosthesis from Mobility Mission.

Douglas Castillo, 15

Douglas was born with deviation of his spine, absence of the left fibula, shortened left tibia, along with other deformities. He soon was led to connect with an organization in the USA called Children of the Americas. Douglas traveled to Kentucky and received recommendations of ways he could cope with life; he made the decision to have his left leg amputated and soon walked with a prosthesis. Children of the Americas referred Douglas to Julio Fuentes, the local prosthetist in Guatemala City. After many years of having difficulties in school, not being able to play sports, and being judged by others for the way he was, Douglas found a new perspective on life. He said, "I have learned that there are never limits for anyone, limits are only in the mind. I have striven to overcome my trials. I have always been a fighter, and with the help of God I have always been lifted up."

Douglas is known for his humility, willingness to improve the lives of others, and gratitude for his 22,000-dollar leg. He has a positive view about everything in life and is an inspiration to many people.



Milagros Hernandez, 5



Milagros is a five-year-old girl who was born without her left leg and had a deformity on her right hand as well. She received her first prosthesis when she was two years old and recently had to have it replaced because she outgrew it. Her family was not able to afford buying a new prosthesis for her, but was blessed to receive help when they met Julio Fuentes. Traveling by bus, it took them three hours to arrive to the clinic, costing them a lot of time and money, with only a 15 day advanced notice. Milagros' parents are willing to sacrifice anything to make her life comfortable and enjoyable.

Agustin Hernandez, 61



On September 30, 1990 Agustin found out that he was diabetic. He continued living his life to the best he could until six years ago when he had to have his legs amputated. He has received prostheses before, though constantly breaking because they were not built well. Now that he is able to walk again, he plans to continue working in the food industry of a business he started. Agustin says that he prefers walking, even with crutches. Being in a wheelchair has been difficult for him to commute. Now that he is on his feet, he feels that life cannot get any better.

Klayvin Jefferson Rabanales, 18

Klayvin is an 18-year-old boy who once worked as a bus helper, and at the same time going to school. On April 25, 2014 Klayvin was lowering himself down from the bus to help an older woman get on. While doing so, the bus did not come to a complete stop and Klayvin's leg was caught under the tire and shattered. After some time of healing, he was referred to Julio Fuentes to receive a prosthetic leg. His goals in life are not changed; he wants to continue to walk, learn, and work. Like before, he is a boy with a big heart and enjoys helping strangers. He plans to continue to serve throughout the community.



Jose Adolfo Lopez, 42



Jose, 42, developed a condition called osteomyelitis, which is an infection on the bone. He suffered with this condition for many years and had developed a cyst on his right leg the size of an orange. After many surgeries, doctors suggested he should have his leg amputated. He took their advice and went through with the procedure. After his amputation, there was a mix of emotions among the family. Soon after the surgery, he was able to receive his first prosthesis from Mobility Mission. The gratitude that comes from this family is immense. Everyone in the family has a deep love for one another and for God. They have shown patience through difficult trials and have been examples of hope for others.

Cedi Gonzalez, 59



As Cedi was nearing a train that was coming to a stop, someone had pushed him toward the train and his leg was caught underneath. His leg was run over and broke. He was sent to the hospital and operated on, removing the distal end of his leg. Cedi mentioned that he had no hard feelings, just realized that things occur for certain reasons.

Fermin Benito Osorio, 42

Fermin a 42-year-old male was working for a construction company three years ago. All he remembers is an electrical wire hitting the back of his neck. The electric wire burned the skin and the bone. There was no way for Fermin's legs to heal from such a tragic shock. His legs were amputated. Fermin lost the ability to work and provide for his family. "There are days that my kids do not eat any food because we cannot afford it."

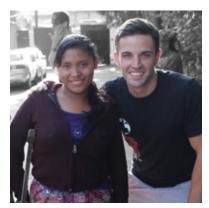


Angel Moises Perez, 3



Angel is an orphan at God Bless the Children. His mother tried to abort, but was not successful. She used a different name and address while giving birth to him in a local Guatemala hospital. Angel was born without his right foot and some deformities on his left leg. After many surgeries, doctors were able to save his left foot. Even though Angel was born without his right foot he doesn't let that stop him. He still crawls through the halls of the orphanage. With his very first prosthesis, he was able to take his first steps outside the clinic.

Ana Cristina Marroquin, 20



Ana Cristina Marroquin is 20 years old. She has worked all of her life with her mother in the fields, except she does it with one leg. She has learned to do things that each one of us does on a normal day. She has maneuvered around with one crutch for as long as she can remember. Having a fitted prosthesis will help her accomplish more than she can imagine.

Cesar Agusto Lopez Donis, 9

Cesar Agusto Lopez Donis is nine years old and was born without his right leg. He had always seen kids on the street playing soccer and wished he could join them. As soon as we put on his new prosthesis, he was able to walk and was even kicking a soccer ball around like a natural. He is very excited that he will be able to walk around without his father's help.



Jose Ruben Marroquin, 63



Jose Ruben Marroquin is a 63 year old who was not always an amputee. He lived his life working in his fields, which he loved to do everyday. When he was 46, he developed osteosarcoma on his right foot. He never went to see a doctor because he did not have the money to afford it, so he let days pass by. When he could no longer tolerate the pain, he decided to go to the hospital and the doctor told him he had a tumor, and that his leg needed to be amputated.













Jose Adolfo Lopez (Patient)

It is a pleasure for me to write these words, which probably do not fully describe the magnitude of appreciation for the labor you loyally perform. I could not pass on telling you the feelings that my family and I had after observing the attitude of service that each of you have. I had the opportunity to observe in every moment your intention to serve your neighbor was done with excellence and humility. Thanks to the work performed by you, I can assure you that through the thousands of miles between us, we have felt a closeness and warmth. Through this work we have found a hope for a better life.

I am a witness of a mother seeing her son walk for the very first time; elderly believing once again that they can commute from one place to another, and children enjoying their right to play, run, and feel equal to other humans. My own satisfaction is knowing that through your help I will be able to continue sustaining my family.

The help received motivates me to be a better human being, and opens my eyes to trust in people who are found to be in greater living conditions. It also motivates me to help those who are at a disadvantage and make this a better world.

Also, I cannot fully express my gratitude and admiration for this group of Guatemalans at Ortopedia Centroamericana. I am proud to be Guatemalan, even in this country that has been beat by violence and poverty. You have shown us that there is hope, and there is need of many more people like you.

I am sure that the blessings of the Supreme Being will be with you. Those who love and help their neighbor are as well loving Him.

Conie Lopez (Daughter)

First of all, I wanted to thank you for this amazing chance that you have given my dad so that he could walk again. You have no idea of how big this action has been for us. When I found out that my dad would not have his leg anymore (due to amputation), I thought I was going to die. I did not think I was able to live with the thought of seeing my dad suffering. When I first saw his (amputated) leg, I started to cry. I told myself, 'you have to support him and be there for him every single day, no matter what'. To see him smile every day made me realize that life goes on, no matter how hard it is.

Please thank your team and anyone who helped us take one more step. Keep giving faith to people.







A Special Thank You

Lane Ferrin

Lane is a CPO at Northwest Orthotics in Provo, Utah, and has dedicated over 20 years in helping amputees walk. His passion for this work extends to volunteering abroad. Lane is highly appreciated for collaborating with Mobility Mission in training, donating, ordering parts, and occasionally traveling with the team.

Judy Basset

Judy Basset of Finland was in a skydiving accident and lost both distal ends of her legs. Now, with the help of Lane Ferrin, she is able to walk again. She noticed his contribution and desired to help as well. Judy is now a greatly appreciated financial contributor to Mobility Mission.

Dennis Farnsworth

Dennis Farnsworth is a selfless and admired professor at Utah Valley University with a passion in teaching Political Science. He has been a dedicated supporter and contributor to Mobility Mission from the beginning.

Doug Wright

Doug Wright is an honored mechanical engineer for Merit Medical. While he was enrolled at Utah Valley University, he developed a low-cost highly-effective prosthesis. His affordable device now has a great impact on many amputees globally. Merit Medical has been a supporter and contributor to Mobility Mission due to the efforts of Doug.

dõTERRA

Rob Young who is the co-founder and vice president of dotERRA, Pete Tidwell, Tim Valentiner, and Mckay Brown learned about the success of Mobility Mission and offered to assist in raising awareness through their Healing Hands Foundation. Not only have they assisted in raising awareness, but have also made significant contributions.

Sénuvo

The CEO of Sénuvo, Bryan Davis, and President Dorine Rivers have been great supporters of Mobility Mission. They actively spread the word about our cause.

PROJECT FOUNDER



Julie Baker Bagley Director

Julie has served at Utah Valley University (UVU) for over 27 years. She has had a very strong impact on students in assisting them with the completion of their degrees while providing student engagement, scholarly excellence, and creative works. During the last five years, she has facilitated several humanitarian service projects in Thailand, Guatemala, and Samoa which have been lifechanging experiences for students and community members. She received her Bachelors' Degree from Utah State University and a Master's of Public Administration from Brigham Young University.

Education and service have always been an integral part of Julie's life. She first started her career assisting students with finding financial aid and available scholarships. Her passion for education extends to her current position as an advisor at UVU where she works tirelessly to create opportunities for many dedicated UVU students and community members.

Julie is the director and founder of UVU Mobility Mission. She oversees the coordinated efforts by directly interacting with patients and their families to ensure their personal needs are met. By coordinating Mobility Mission with local, national, and international partners, the program has doubled the number of patients that are treated each year. Julie's optimism and passion inspires team members to collaborate and unify program outcomes.

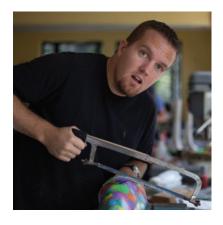
Julie's devotion to service can be seen throughout many aspects of her life because she deeply believes the same as Aristotle, that, "Educating the mind without educating the heart is no education at all."







PROJECT FOUNDER



Douglas Turley Wright Mechanical Engineer

Doug was born in Orem, Utah near Utah Valley University. He grew up with a desire to take things apart and learn how things work. At a young age, Doug learned the value of service. For a few years, he and his family served the people in Bolivia. Doug recalls seeing the impact of his family's efforts in the eyes of those served and has committed his life in efforts that improve quality of life globally.

Upon graduating high school, Doug served the people of Argentina for two years while serving a religious mission. Upon his return, he studied at Utah Valley University and received his Associates of Science degree with honors. He then continued his education at Brigham Young University, where he studied Mechanical Engineering. While at BYU, Doug joined other engineers to design and develop an inexpensive below-the-knee prosthesis that would benefit the lives of people in need. Doug joined forces with Mobility Mission and for several years has donated many prostheses to people in Guatemala.

During his education, he met his sweetheart, Stasha Lee Kemp. They have been married for eight years and have three beautiful children. Doug currently works for Merit Medical based in South Jordan, Utah and resides in San Diego, California. His work takes him to Tijuana, Mexico where he oversees the production of a contract manufacturer who manufactures many of his company's devices.









Team Members - Julie Baker Bagley, Jason Slack, Wendy Peck, Taylor Colvin, Jonathan Latham, Cindy Lopez, Kade Park, Carrie Chappell, Thomas Hall, Alyssa Chamberlain, and Jocelyn Rios

Photography by Alyssa Chamberlain Viewbook Design by Austin Bagley







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