STE G words | TINA JOYCE Dr. Charles M. Zele Foot and Ankle Surga Anderson's feet prior to surgery.

Anderson with Dr. Zelen

INTO A ERFUTURE One Boy's Dream Becomes a Reality

A Roanoke team of professionals recently came together to enrich the life of one young boy and impact an entire community. Anderson Mambwe, a teenager from Zambia (a country in southern Africa), showed a sweet and sincere smile that warmed the hearts of many this past November when he prepared to travel home.



Just nine months prior, Anderson boarded his first plane and embarked on a 22-hour flight to see a place he had vaguely heard about through others—the United States. The U.S. was home to a team of healthcare providers and a mission-affiliated staff who offered his only hope for a life with mobility and less pain—a chance to walk. A Roanoke-based surgeon offered to attempt to correct the severe and progressive malformation of Anderson's feet.

Anderson, approximately age 17^{*}, was born with congenital macrodactyly, an extremely rare condition causing malformation in the hands or feet (as in Anderson's case). The disorder is characterized by the enlargement of both the soft-tissue and the osseous (bony) elements of the foot.¹ The condition is often progressive and accompanied by swelling and unremitting pain. Without surgery, in Anderson's case, walking became difficult and ultimately impossible.

Although several theories exist for the exact cause, Dr. Charles M. Zelen, a Roanoke foot and ankle surgeon, explains that the growth plates in Anderson's feet never closed, causing his feet to continually grow. Because of swelling and the massive size of his feet, Anderson was no longer able to walk for any length of time. His feet had grown to a size 17 EEEEEEE. Sadly, his impairment kept him from participating in youth activities and contributing to the daily needs of his family. If his growth plates were to remain open, his feet could continue to grow, causing further degeneration of the joints and severe pain.

Dr. Zelen explains that this condition would almost never go unchecked for a child in





Dr. Zelen performing surgery on Anderson

the U.S. because symptoms are diagnosed at a young age, and treated effectively. A local pediatric facility or Shriners Hospital² would, in most cases, take care of the child's needs regardless of the family's ability to pay. Unfortunately, medical providers in the landlocked country of Zambia offered no solution other than a risky, above-the-knee amputation of both legs.

The loss of both limbs would, more than likely, lead to a bleak fate for Anderson. If he survived, there would be little assistance for mobility and even less acceptance among his peers, causing more isolation. His widowed mother works in the fields to pay for Anderson's schooling and cares for him and his four siblings. The permanent loss of mobility would cause even greater hardship on the family.

Fortunately, Seeds of Hope Children's Ministry³ director, John Chalkias, learned of Anderson's needs. He invited Anderson to come to live at a Seeds of Hope residence in Zambia.

Chalkias had exhausted all of his options to find assistance for Anderson's medical needs through local hospitals. It was at that point he reached out to Karen ReMine, a Roanoke-based nurse and Orphan Medical Network International (ONMI) Co-founder and President. Since OMNI was founded to provide medical care, education, and community development for orphans and vulnerable children around the world, the partnership was ideal. "We knew how much potential Anderson had," explains a compassionate ReMine. "We were not going to let him have the drastic, amputation surgery."

If Anderson could obtain the proper medical treatment, not only would he survive, he might thrive in his environment and grow to be a well-educated, productive citizen of his community. His intellectual capacity is far above what one might expect, and healthy leaders in these communities are critical in assisting with the basic needs of families and the country's progression.

ReMine contacted Dr. Zelen for assistance. "Dr. Zelen had operated on our Zambian-adopted son 10 years ago and did an excellent job correcting his club foot, which he could not walk on, but in less than a year after surgery, he was running track," shares ReMine. She was confident Dr. Zelen's skills and expertise could

aid in this very rare case.

Dr. Zelen agreed to take Anderson's case completely sight unseen, making early assessments with the aid of only email x-rays.

"Because of my residency and training, my practice gravitates toward the most complex foot and ankle conditions for both limb salvage and deformity correction in diabetics, trauma patients, and pediatric patients with congenital deformities like club feet," shares Dr. Zelen. "However, Anderson's case took the cake because of its complexity and rarity."

ONMI and Seeds of Hope representatives were able to partner to obtain a medical Visa for Anderson. Dr. Zelen wrote letters on behalf of Anderson to help facilitate the process.

Seeds of Hope Children's Ministry³ is an educational facility for intellectually gifted children with physical disabilities. The ministry was started in 1995 after hearing about the plight of children orphaned because of disease. Seeds of Hope began several projects in Zambia hoping to break the cycle of poverty by providing children with education, mentoring programs, and homes for orphans.

> At Right: An x-ray following surgery shows 20 implants used to reconstruct the left foot.



Luthur Beazley III, MD, a pediatrician at LewisGale Physicians, also agreed to see Anderson to ensure he was healthy enough to undergo surgery. Ironically, because Anderson was isolated from his community due to his deformity, he was surprisingly healthy, despite his low body weight. "His mother took great care of him to the best of her ability," explains Dr. Zelen. "He never had any systemic issues to prevent surgery." Additionally, Dr. Zelen consulted with Muddasar Chaudry, MD, an infectious disease specialist at LewisGale Physicians, who recommended many tests to ensure Anderson had none of the unusual aliments often found in African countries. Dr. Chaudry also made recommendations to prevent infection after Anderson's surgery.

Anderson's first surgery took place in March 2012 and lasted nearly six hours. His second surgery, conducted in September 2012, lasted four hours. Following the second surgery and extensive recovery time, Anderson's foot fit into a size 14 New Balance shoe. Special orthotics, provided by Virginia Prosthetics, Virginia's oldest and largest prosthetic and orthotic services provider, were created to aid in his gait (the pattern of movement of the limbs).

Dr. Zelen remembers the week that Anderson left to return to Africa as an emotional time.

"Seeing Anderson walk out of my office was a true blessing," he shares. "He limped into our country with a dream of confidently walking out. His dream was realized. I am humbly honored to know him."

Anderson returned home with Karen ReMine and two members of OMNI's board of directors and in-country missionaries, Robert and Emily Krauss, accompanying him. His story received national attention in Zambia, and many officials are coming together to ensure his future success.

This past January, Anderson was able to walk to his classes for the first time at the Seeds



Anderson came to the U.S. in March 2012 and spent nine months with the ReMine family. The ReMine's provided all of his post-operative care. Karen served as his nurse and primary caretaker while her husband, a local physician, provided valuable consultation. During Anderson's stay, he gained 30 pounds and grew nine inches. The loving family atmosphere provided to Anderson was critical as he endured his two surgeries one on each foot.





of Hope Children's Ministry school where he will reside and continue his education.

During his stay in the U.S., Anderson gained much more than the ability to walk. He gained care, nutrition, connections, and most importantly, a newly found stride. The efforts of the team of dedicated professionals that volunteered time, funding and resources to assist Anderson helped more than one young person. They brightened the future for Anderson's family and those in his community and country that he will most certainly impact in the future.

*Due to rural Zambia's poor recordkeeping, the ages of children often have to be estimated based on their teeth.

Sources:

1. Macrodactyly of the Foot. The Journal of Bone and Joint Surgery, Inc. http://jbjs.org/data/Journals/JBJS/846/ JBJA084071189.pdf 2. www.shrinershq.org 3. www.seedsofhopecm.com

Local and Worldwide Experts Came Together to help Anderson Realize a Better Life

Stryker, one of the world's leading medical technology companies, donated the implants required for Anderson's surgeries. LewisGale Medical Center also donated more than \$100,000 in medical care for Anderson, and Dr. Zelen donated his clinical and surgery expertise.

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