



Case Statement

“Amputation of an upper limb is a detrimental loss. Our hands are our tools with which we connect to the physical world. They clean and groom our bodies; they express our inner thoughts and feelings through sculpture, music, and art; they plant, harvest and prepare our food. Our hands serve and deliver that food to the nourishment of our needy bodies; they build, drive, and service our vehicles; they draw and construct the houses we occupy. Our hands are our connection with our closest loved ones through touch; they diaper, feed, and hold our children; they reach out in handshake to greet a new acquaintance or embrace an old friend. Our hands hold the rings that represent the most precious union of committed love. Loss of an upper limb means renegotiating simple and complex tasks that make us occupational and social human beings.”

~ Kathleen Yancosek, ABD, OTR/L, CHT



Steve, 39, lost arm and hand by electrocution; “Since I received my prostheses, I enjoy eating again. I’m even back to driving a race car!”

Organizational Profile

Established as a nonprofit organization in 2008, the Arms Within Reach Foundation's mission is to provide individuals in need of upper limb prosthetic rehabilitation an opportunity for the highest quality of upper limb prosthetic rehabilitation care and an enhanced quality of life.

The vision of the Arms Within Reach Foundation is to financially assist individuals in need of upper limb prosthetic rehabilitation, who cannot afford all or part of their treatment and are unable to receive sufficient support through insurance, workers compensation, veteran's benefits or other government support, and further, to support research for better prosthetic componentry, techniques, treatments and prosthetic rehabilitation services. Financial assistance can be provided for the prosthesis itself, for rehabilitation, and also for travel expenses related to the necessary visits to qualified prosthetic and orthotic facilities for upper limb prosthetic rehabilitation.

Limited Patient Numbers, Special Challenges

Each year, an estimated 18,500 people in the United States become upper limb patients because of a traumatic event, disease, or congenital difficulties. The use of appropriate prosthetics, with a properly designed rehabilitation program, helps upper limb amputees regain and maintain a higher quality of life.

Of these 18,500 patients, only about half receive prosthetic services from approximately 4,500 prosthetic and orthotic facilities nationwide. As a result, the average prosthetist sees only one or two upper limb amputees per year. Due to the limited numbers of upper limb patients (by comparison the number of new lower limb amputees in the United States is approximately 156,000 annually) and their unique needs, this patient population presents a unique challenge to care providers. For many prosthetists, caring for so few upper limb amputees annually does not justify the cost of advanced upper limb prosthetic training and the associated time away from their prosthetic facility.

For many upper limb patients, finding a local prosthetist with extensive knowledge of components, fitting and fabrication techniques, and rehabilitation treatment modalities is challenging, if not impossible. Even referral sources have a difficult time gathering the information



necessary to recommend appropriate upper limb prosthetic rehabilitation with a qualified and experienced prosthetic provider. As a result, patients must often travel long distances for rehabilitation, which necessitates overnight travel expenses, thereby increasing the overall expense of treatment.

Reimbursement for prosthetic rehabilitation is a tremendous challenge for many amputees, depending upon an individual's insurance plan and provider. The individual insurance plan may exclude prosthetics as a category, exclude myoelectric devices specifically, have minimal prosthetic coverage caps, or consider prosthetics a DME (Durable Medical Equipment) which typically has a reimbursement cap too low to assist with most prosthetic devices. Additionally, many patients simply cannot afford the co-pay or out-of-pocket expense associated with their individual insurance plan. Further complicating the rehabilitation process, some insurance plans do not cover the occupational therapy that is vital for the patient to learn to properly operate and integrate a prosthesis into functional tasks of daily living.

The cost of upper limb prosthetic rehabilitation varies widely, from \$6,500 to \$185,000, with most prostheses in the \$30,000 to \$80,000 range. The cost depends on the type of prosthetic device needed and the amputee's level of limb loss: partial hand, trans radial (below elbow), trans humeral (above elbow) or shoulder disarticulation.

Enhancing Lives

As illustrated by the following examples, successfully wearing a prosthesis can enhance the lives of a wide range of people:



“Having the prostheses has been great. You learn all over again. Less than a year after my accident, I was doing everything. I went turkey hunting a month after my accident. I killed a deer the same year. I have built deer stands, I drive, I dress myself, everything. Nothing is as easy as it was with hands or as fast, but until I got prostheses, I thought somebody would have to wait on me all the time. The most important thing to me is that I can still hold my little girls and to walk around and look down at them holding my hands has been very humbling. I know with all the research going on, prosthetics are only getting better. Living without hands, in my opinion, was impossible, but since I have them, anything is possible.”

- Jason Koger 33-year-old hunter, husband and father of two

“The day I received my functional prosthesis was one of the greatest days in my life. I started seeing all of the things that I could do again! Not having to use my teeth to open a bottle of water or anything else with a twist-off lid, opening a can of tomato soup, turning baseball bats on my lathe, building furniture and maybe one day returning to my career. The possibilities at that moment seemed endless as I felt a sense of being whole again. A prosthetic arm is not yet quite the same as what God gave me when I was born, but it provides a person with so many more things that you can do once you learn how to utilize this wonderful device. Another benefit that one receives unknowingly is a greater degree of acceptance in today’s society. Recently I was at a county political meeting wearing my prosthetic arm and silicone gloved hand and shocked everyone that I had an artificial limb. They could not tell and they felt very comfortable being around me. I guess it showed me how important it is for me to wear my prosthetic arm as it makes it easier for some people to deal with me.”

- Thomas Hudspeth 50-year-old family man, woodworker and political activist



Amputees who choose not to wear a prosthesis are at a higher risk for developing chronic medical problems such as carpal tunnel syndrome, nerve entrapment, and tendonitis in their remaining sound upper limb. These conditions develop primarily due to overuse and strain elsewhere in their bodies causing possible secondary issues to the limb loss such as imbalance and/or gait compensations for a missing upper limb.

Application Process

The Arms Within Reach Foundation serves upper limb amputees who are legal residents of the United States. Persons seeking assistance must submit an application in its entirety to the Foundation. Individuals are evaluated on the basis of their need, and their perceived desire to complete training and therapy that is required to successfully wear a prosthesis and integrate it into appropriate activities of daily living. The Foundation Board reviews the application and verifies that other resources have been exhausted and are not fully sufficient for the rehabilitation help that is being requested.

To allow the Foundation to assist as many patients as possible, a patient may receive assistance only once in a 36-month period. Financial assistance is awarded directly to the qualified clinic and not to the individual. Financial assistance will be awarded based on the funds that are available within the Arms Within Reach Foundation at any given time.

Arms Within Reach Foundation endorses the philosophy of equal opportunity, maintaining compliance with federal and state laws and guidelines regarding the same. Applicants are accepted without regard to race, creed, religion, sex or age.

Treatment Plan and Process

A comprehensive treatment plan is developed for each individual the Arms Within Reach Foundation assists. Each component is critical for success. The treatment plan includes:

Education, and a decision on the prosthetic option that will best serve the patient's needs and help him or her return to vocational and avocational activities.

There are several prosthetic options for the upper-limb:

- Cosmetic Restoration
- Body-Powered Prosthesis
- Electrically-Powered Prosthesis
- Hybrid Prosthesis
- Activity-Specific Prosthesis



Occupational therapy, which allows the patient to achieve optimal function with the prosthesis in his or her daily life.

Through the collaborative effort between prosthetist and occupational therapist, the amputee re-learns to accomplish every day, life-sustaining tasks again (cooking, eating, bathing, grooming, toileting, etc). Through prosthetic and rehabilitative care, the amputee is trained to integrate a prosthesis into everyday movements. The goal is to learn smooth, coordinated, precise, and accurate movements with the prosthesis to facilitate dexterity and return the amputee to the highest possible level of hand function. Restored hand function promotes a return to independent living! Early and appropriate prosthetic and rehabilitative care is enabling and empowering for the upper limb amputee.

- Kathleen Yancosek, ABD, OTR/L, CHT

Psychosocial support in the form of support groups or counseling, depending on the patient's needs.

At least three visits to a prosthetic provider are required to ensure a proper prosthetic fit and to optimize an individual's ability to wear a prosthesis. The first visit, completed in three to six hours, is an evaluation to assess the patient's needs. The second visit, over the course of a week, is for the patient to be fitted with a preparatory prosthesis and to complete occupational therapy to begin utilizing the device. After a period of wearing the prosthesis at home, the patient makes a return visit, usually for an additional week, for adjustments to the prosthesis and additional occupational therapy. During this third visit, a transition from preparatory to definitive materials will typically be made with the prosthesis.

The Arms Within Reach Foundation creates a follow-up plan with each patient to help ensure prosthetic success. The Foundation and the prosthetic facility will document patients' prosthetic usage from the start of their fitting throughout their lives for research purposes.

Governance and Support

Arms Within Reach Foundation is a private, nonprofit agency qualified as a 501(c)3 organization under the Internal Revenue Code and registered as a charitable corporation in the State of Nebraska. The Foundation has an Advisory Board of a panel of experts, including:

John Miguelez, CP	Certified Practitioner, upper limb prosthetics
Dan Conyers, CPO	Certified Practitioner and Orthotist, upper limb prosthetics
Shawn Johnson, OTR/L	Occupational Therapist
Carrie Johnson	Authorizations / Billing / Coding
Misty Carver	Business Development
Creighton Uyechi, CPA	Accountant

The Arms Within Reach Foundation is supported by donations from individuals, other foundations, private businesses, groups, trusts, estates, and corporations. Donations are tax-deductible to the extent allowed by state and federal law.

Promoting the Highest Quality of Care

Through its holistic approach to upper limb prosthetic rehabilitation, the Arms Within Reach Foundation seeks to have a life-changing impact on as many upper limb patients as possible without sacrificing the quality of care. By concentrating on upper limb patients, the Arms Within Reach Foundation strives to ensure the highest standard of care for those it assists, affecting the prosthetic fit, function and success of the wearer for living a more independent, meaningful and productive life.

