



Prosthetic Technology in the Affordable Care Act Era

by: Ted Snell, CP
President of CFI Prosthetics Orthotics

Typically, advancements in prosthetic technology come about when researchers go down a specific path to develop more efficient devices for the high functioning patient. However, over time the results of these designs are often found to be appropriate for lower functioning amputees, as well. An early example of this is the introduction of carbon fiber composition and acrylic materials in the 1980's. These lightweight, super strong materials came into use in order to decrease the dependent weight of the prosthesis, and to combine high strength and flexibility into the device for active amputees. Once the technology was widely accepted, however, these benefits were found to be equally, if not more, beneficial for lower functioning amputees.

In the years since, prosthetic technologies have been advancing at a rapid rate, but many of these advancements still only apply to a small percentage of patients. These advancements have largely been powered by microprocessor and computer technologies. Again, the new designs were originally targeted towards high functioning patients, but over time, have proven to be equally advantageous for the larger population of less functional amputees. The problem with fitting these prostheses on lower functioning individuals is that of "justifying" their use on a lower functioning patient, for reimbursement purposes.

CFI has been, and continues to be, an alpha and beta testing site for many major componentry manufactures that design and develop microprocessor and powered devices. However, the new trend is improving and advancing mechanical designs as a means to help control exploding component costs. This trend is a reaction to several assumptions, brought about by ACA:

- A larger population base will be seeking care
- Funding to treat these patients will be low
- This population will be much sicker with more complicated co-morbidities

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- Amputations are being performed much later in the disease process than ever before, due to the intensification of risk to the physician
 - CMS requirements continue to escalate, including additional face-to-face evaluations from the physician in order to provide prosthetic care
- CFI is currently working with engineers and manufacturers to alpha test the newest, most advanced mechanical foot. This team is the same team that launched a small Icelandic company into one of the major providers of microprocessor powered feet and knees, worldwide. Their team has taken a unique approach to creating today's mechanical foot—their vision is to use the same engineering principles that made them successful in the "bionic" world to re-inventing the mechanical device. The foot itself provides a specific motion at different phases of the gait cycle, while creating inherent stability that we don't usually see in mechanical feet. Another difference is that the foot was created as a prosthetic system. It has on board gait step analysis and data collection. In the future, this information can be downloaded from remote sites so that patients' function can be analyzed and monitored at a distance.

Given the added complexity in the delivery of healthcare and health care reimbursement, another practice from the past is being revisited in the Memphis area. Baptist Rehab Hospital in Germantown, with the help of CFI, recently started a regional amputee clinic so that these issues can be more easily addressed. The clinic is held on the second and fourth Fridays monthly, and uses a team approach with a physiatrist, prosthetist, wound care specialist and physical therapist seeing each amputee in order for the team to be able to confer about treatment options together.

Ted Snell is a Certified Prosthetist and President of CFI Prosthetics Orthotics. He represents the 4th generation in his family in the Prosthetics and Orthotics profession.