O&P Care Offers Patients a Second Chance

(Continued from page 1)

Upper-extremity prostheses range from partial or complete finger replacements to systems addressing complete arm loss at or above the shoulder. Most common are transradial (below-elbow) limbs typically consisting of a socket, which fits over the remaining (or “residual”) human anatomy, and a hand or hook-type terminal device, sometimes with a functioning wrist component. Transhumeral (above-elbow) systems generally add a functioning elbow.

Traditional upper-limb prostheses are mechanically controlled and powered by cables actuated by residual limb motion. A newer option, myoelectric control, provides powered actuation of prosthetic hand and, possibly wrist and elbow components, using electrical signals generated in the remaining (or “residual”) human anatomy, and a hand or hook-type terminal device, sometimes with a functioning wrist component. Transhumeral (above-elbow) systems generally add a functioning elbow.

Orthoses
Orthotic devices are fabricated for all parts of the lower and upper extremities and the spinal and cervical regions. Orthoses are generally named and classified by the area of the body to which they are applied. For example, a TLSO is a spinal orthosis encompassing the thoracic, lumbar and sacral regions of the trunk. Likewise, a KAFO extends from the knee downward to include the ankle and foot.

Orthotic devices can be as minimal as a pair of foot orthoses for planar fasciitis or as involved as a cervical-spinal orthosis to protect and promote healing for a major spinal injury. Some are used for a limited time following an injury, others may be applicable throughout an individual’s lifetime for managing symptoms of diseases such as M.S., cerebral palsy and polio.

The list of different orthosis designs currently in use is exhaustive and backed by the experience and capabilities of our practice. We offer this information to enhance professional competency in the design, fabrication and fitting of orthotic devices.

Note to Our Readers
Mention of specific products in our newsletter neither constitutes endorsement nor implies that we will recommend selection of those particular products for use with any particular patient or application. We offer this information to enhance professional and individual understanding of the orthotic and prosthetic disciplines and the experience and capabilities of our practice.

We gratefully acknowledge the assistance of the following resources used in compiling this issue:
Becker Oregon • Boston Brace Inc. • Freedom Innovations Fillauer Inc. • Orthomerica Products Inc. • Touch Bionics OrthoCare Innovations LLC • Otto Bock Health Care
Standards of Our Profession: Education, Certification, Licensure

T he term “professional,” regardless of the field, evokes certain expectations—advanced, specialized education...demonstrated skill...proven experience. Professionals are measured by specific standards that help define their preparation, capabilities and competence for the patients they serve and the health care providers and facilities with whom they interact. This condition is ever bit as true for orthotics and prosthetics as for other health care professions. In 1993 the American Medical Association recognized orthotics and prosthetics as an allied health profession, culminating a steady evolution of the twin disciplines from medical-related craft to true patient care specialty. Like their counterparts in other allied health professions, O&P practitioners are evaluated against exacting standards of education, clinical experience, professional knowledge and demonstrated competence.

Education

Today nine accredited programs across the U.S. offer formal O&P education curricula to prepare the prosthetists and orthotists of tomorrow with credentials ranging from bachelor’s degrees to post-baccalaureate certificates, to master’s degrees. The instruction in these programs places particular emphasis on anatomy, physiology, patient management skills, clinical practices and professionalism, fabrication and fitting techniques.

Upon graduation from an O&P education program, many students seek to further their preparation with a year-long residency at an accredited site to gain clinical training and experience. The National Commission on Orthotic and Prosthetic Education (NCOPED) serves as the accrediting body for residency programs and participates with the Commission on Accreditation of Allied Health Education Programs (CAAHEP) in accrediting O&P education programs.

Certification

Board certification of practitioners establishes and promotes the highest standards of organizational and clinical performance in O&P service delivery. Since 1948 the American Board for Certification in Orhtotics and Prosthetics (Pedorthics was added in 2007) has set minimum standards for practitioners education and experience and tested their clinical knowledge.

The large number of American casualties in World War II and the polio epidemic of the 1950s greatly increased the need for orthotic and prosthetic care in America and with it the need for formalized education programs and scientific research. An explosion of innovation followed, accompanied by creation of university-based orthotic and prosthetic training programs. In 1970 the American Academy of Orthotists and Prosthetists was established to further the scientific and educational attainments of O&P practitioners. Increased demand for O&P services led to improved technology in components, materials and clinical skills beginning in the 1960s. Particularly noteworthy was the introduction of composite materials such as fiberglass and high-temperature thermoplastics in the 1970s.

Accelerated innovation in orthotic and prosthetic design has continued into the 21st century, driven by increased worldwide demand for microprocessor technology and government programs to provide top-quality prostheses and orthoses for military casualties of U.S. campaigns in Iraq and Afghanistan. Though still in their infancy, powered prosthetic limbs and electric orthoses promise to be the “next big thing” in our field; many other exciting concepts are also on the drawing board.

Although its roots are thousands of years old, the practice of orthotics and prosthetics may just now be coming into its own.

Facility Accreditation

ABC’s facility accreditation program evaluates O&P practices against exacting standards relating to governance, administration, staff qualifications, patient care, quality assessment, facility management and safety. ABC is recognized as an approved accrediting organization for suppliers of orthotic and prosthetic services and durable medical equipment by the Centers for Medicare and Medicaid Services. Full facility accreditation is good for three years.

An alternative pathway for individual certification and facility accreditation is offered by the Board of Certification/Accreditation, International (BOC), which was established as a second credentialing body in 1984.

Licensure

Despite the existence of national O&P certification and accreditation programs, various underqualified providers continue to deliver substandard orthotic and prosthetic care with resulting negative consequences for unsuspecting patients. To combat this practice, 14 states now require licensure for orthotists and prosthetists, and others have legislation under consideration.

As a profession we believe licensure requirements are in the best interests of our field, that prosthetic and orthotic care should be delivered by practitioners who have fulfilled requirements for certification and that state licensure laws should embody similar requirements.

Current licensure states include Alabama, Arkansas, Florida, Georgia, Illinois, Kentucky, Mississippi, New Jersey, Ohio, Oklahoma, Rhode Island, Tennessee, Texas and Washington.

O&P Has Come a Long Way, Baby

T he origin of orthotic and prosthetic practice is traceable back to ancient times. The first amputations were performed in response to injury, disease, and the need for prostheses. The first orthotics and prosthetics were fabricated from leather, textiles and the metals at their disposal to splint and bone-set. The earliest prosthetists emerged from mankind’s physical and spiritual need for functional and cosmetic wholeness in response to limb loss in battle or accident or a congenital absence. Evidence exists of prosthetic limbs being applied as far back as 2500 BCE.

Though those early practitioners were surprisingly innovative, their craft was extremely slow to develop through the 19th century CE. They learned their trade on the job and functioned in small independent workshops; there was no organized education, formal research or group collaboration for sharing ideas and experience.

That situation began to change in late-WW1 when representatives of the nation’s 10 leading prosthetic firms gathered to discuss the state of U.S. prosthetic practice and technology, which was still limited by lagging Europe. That meeting led to the creation of the Artificial Limb Manufacturers and Brace Association, an event now considered to be the turning point for O&P growth and development in this country.

By providing a national forum for the pooling of educational and scientific programs, ethical standards and building better relationships with other health and allied health professionals, the organization, the national organization (since renamed the American Orthotic & Prosthetic Association) shepherded the profession from the crafsmen to skilled clinicians providing direct care to patients. In 1948, the formation of the American Board for Certification in Orthotics and Prosthetics (ABC) set minimum standards for practitioner education and experience and tested their clinical knowledge.

For example, while the technically correct term for a molded shoe insert is a foot orthosis, that particular product is often called an “orthotic” by some podiatrists and sellers of prefabricated insoles. Moreover, providers of various devices that do not have an impact on the musculoskeletal fractures of the body — artificial eyes or appliances for the eyes, dental plates, and largely cosmetic ears and noses for example—like to call these items “prosthetics.” So it can be confusing. A few other terms pertinent to our specialties: O&P (or P&O) — Widely used abbreviation for orthotics and prosthetics. Pedorthist — An individual trained in the manufacturing, fitting and modification of foot appliances and footwear for the purposes of alleviating painful or debilitating conditions of the lower limb. Rehabilitation team — A group of allied health care professionals that frequently includes physician, surgeon, orthotist/prosthetist, physical therapist, occupational therapist, social worker and counselor assembled to help a delineated individual regain a functional life. Residual limb — The portion of an arm or leg remaining after amputation...sometimes referred to as a stump or residuum.

Let’s Talk Terms

L ike our counterparts in other medical specialties, we who practice are guilty of using a somewhat specialized vocabulary pertaining to the work we do. The terms are not difficult but tend to be confusing to some folks. Take prosthetic...It will come as a surprise to more than a few people who use it frequently that the word is not a noun! It is correctly used only as an adjective, as in prosthetic rehabilitation. The proper term for what in past times was generally called an “artificial limb” is a prosthesis (pl. prostheses)...not a “prosthetic.” Similarly, an orthotic device (popularly termed a “brace” in past times) is correctly termed an orthosis (pl. orthoses).

Adding further confusion to the discussion are the words prosthetic and orthotic, which are nouns, as they refer to the science and practice of providing prostheses and orthoses. (Prosthetics are not used to term one replacement limb, nor are orthotics two or more orthopedic braces.)

Finally, the individuals who provide prostheses and orthoses: An orthotist is a practitioner who measures, designs, fabricates, fits and services orthoses to support or correct disabilities; likewise, a prosthetist is a practitioner who measures, designs, fabricates, fits and services prostheses for replacement of a missing limb (hand, fingers, toe) due to congenital or acquired limb loss.

Now, further muddying the water are different uses of these terms in other specialties. For example, while the technically correct term for a molded shoe insert is a foot orthosis, that particular product is often called an “orthotic” by some podiatrists and sellers of prefabricated insoles. Moreover, providers of various devices that do not have an impact on the musculoskeletal fractures of the body — artificial eyes or appliances for the eyes, dental plates, and largely cosmetic ears and noses for example—like to call these items “prosthetics.” So it can be confusing.
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The list of different orthosis designs currently in use is exhaustive and applicable throughout an individual’s lifetime for managing symptoms of diseases such as M.S., cerebral palsy and polio. Some orthoses are created for largely cosmetic reasons, the major focus of prosthetic practice is on restoration of function to compensate for the loss or congenital absence of a portion or all of an arm or leg.

Supporting, Protecting, Relieving, Replacing

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OrthoCare Innovations LLC • Otto Bock Health Care

O&P – Who We Are, What We Do

In the whole of American health care are many specialties, ranging from common to esoteric...from well-known to a mystery. But regardless of their size and the awareness they elicit, these unique disciplines are all important to the patients who require their respective form of specialized care and to the decision-makers who make the referrals for that treatment.

The twin rehabilitation fields of orthotics and prosthetics neither constitute a major slice of U.S. health care nor rank high on the typical American’s recognition scale; but to people with limb loss, a neurologic deficit, orthopedic abnormality, or one of various other physical disabilities, the knowledge, skill and experience embodied in these specialties can be nothing short of life-saving.

This issue of our newsletter steps back from the details of everyday practice to examine the roots of prosthetic and orthotic rehabilitation, the education and credentials O&P practitioners bring to the care of their patients, and the spectrum of physical challenges they are trained to alleviate, accommodate and overcome. We hope you find the presentation worthwhile.

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Alltech Orthotics & Prosthetics is pleased to announce the October opening of our new office in Burleson, Tex. We are now located at 2781 SW Wilshire Blvd., directly across the street from the newly built Texas Health Resource medical complex. This location is easily accessible for all our patients and provides us with additional space for growth.

Our primary patient care facilities and laboratory are now housed in this location, allowing us to offer comprehensive services from patient evaluation to fabrication and fitting of your finished device directly on our premises.

As always, Alltech is committed to quality and professional patient care at the highest level. Each of our clinicians and all of our facilities are licensed/accredited through the Texas Board of Orthotics and Prosthetics and the American Board of Certification in Orthotics and Prosthetics.

Thank you for your continued support of Alltech O&P. We look forward to assisting with all your orthotic, prosthetic, mastectomy and compression garment needs.