

Rationale for Orthotic Residency Programs

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Although not yet required by the American Board for Certification in Orthotics and Prosthetics (A.B.C.), a formal orthotic residency is extremely important in continuing the education of a prospective orthotist for several reasons. First of all, while attending the orthotics certificate program at Northwestern University Medical School's Prosthetic-Orthotic Center (NUPOC), the student spends only five and one-half months attending lectures, clinics and working in the lab. This represents a total of 678 hours, as compared to the 430 hours required by A.B.C.

The student spends time learning basic principles, biomechanics, characteristics of available components, fabrication methods and pathologies as they relate to spinal, upper-, and lower-limb orthotics. But how much can be digested and integrated in that short time period? This five and one-half months is of necessity only an introduction to the field of orthotics. Upon graduation, the student needs a structured environment in which he may feel secure to practice those basic skills learned without the pressure of producing devices and making money for a facility or institution.

Secondly, a shift in orthotic education has produced a need for the orthotic residency. In 1967, NUPOC began teaching short term orthotic courses. Students

came with orthotic technician experience and some patient contact; few had clinical experience. Few knew the biomechanics necessary to design an orthosis, and that is what they came to learn. They needed to find a rationale for what they were doing in the laboratory.

The short term orthotic education changed when, in 1972, A.B.C. issued the statement saying that by 1983 short term courses by themselves would no longer be acceptable in fulfilling requirements towards orthotic certification. NUPOC then began offering long term orthotic certificate courses where, in five and one-half months, orthotic academic education would be complete. The certificate program attracted many students with no previous orthotic background, although some came from such related fields as occupational and physical therapy.

The residency program was begun in 1977 by James Russ, C.O., Director of Orthotics at NUPOC in order to ease these students into the world of clinical orthotics. The residency was designed as an option to give the student work experience under actual clinical conditions, away from the shelter and control of the school. It was established to give the student with no prior orthotic experience a chance to gain supervised experience in the areas of spinal, upper and lower limb

orthotics. It was designed to give students patient contact, and to familiarize them with clinical situations as well as working with other members of the rehabilitation team. The residency also gave the student work experience needed to meet A.B.C. requirements for the orthotic certification exam.

Considerations in Placement

There are four basic considerations when placing a student into a residency site. First, the student's preference for geographic location is considered, for this is often conducive to maintaining a good mental attitude. Secondly, the residency site must be able to absorb the cost of a resident. It must be clear to all involved that the resident is there to learn and contribute whatever he can, but not make money for the employer. Thirdly, the resident must be supervised by a certified orthotist working in an accredited facility or institution, the ideal ratio of supervisor to student being one to one. Finally, the ideal supervisor may be a person who himself received orthotic education in a clinical university setting versus a technical program. This academic mutuality allows the supervisor to empathize with the resident's experience in academia as well as to remind him how little one really knows upon leaving school!

Once the geographic location is established, it becomes a matter of selecting a residency site within those confines that meets the three criteria previously described. This process involves conversations between NUPOC, prospective supervisors and the student. Calls are made to hospitals, private facilities and rehabilitation centers in order to assure the student the most balanced orthotic experience possible in that particular location.

Residency Program Objectives

After the residency site is established to everyone's satisfaction, the final details are worked out, with both supervisor and student being informed of the program objectives, time allotments, remuneration and residency content structure.

Program objectives help assure that the resident is exposed to extensive patient contact and patient evaluation experience, clinical contact with emphasis on the clinic team approach as well as technical skills and fabrication techniques. Patient management with concentration on biomechanical and pathological considerations should also be addressed.

Time allotment for the residency is usually one year following successful completion of the orthotic certificate program, with time off for standard holidays as recognized by the employing facility or institution. Remuneration for the year's residency may range from ten to eleven thousand dollars, varying with the geographical location.

Residency content will vary. The first established residency program was at Mary Free Bed Hospital in Grand Rapids, Michigan. This program, under the auspices of Greg Fryling, C.O., involves extensive work in the hospital orthotics laboratory and attendance at a variety of local clinics.

By contrast, four NUPOC residents yearly undergo an intensive residency program under the direction of Thomas Lunsford, M.S.E., C.O., at Rancho Los Amigos in Downey, California. The residents rotate through six specialty areas including strokes, post-polio, muscle disease, spinal injury/deformity, cerebral palsy and fractures. They are responsible for their caseloads as well as the supervision of other students. There is also a 120-hour lecture series which has been assembled to acquaint residents with advanced biomechanics, pathologies, and

orthotic designs. Residents are required to give frequent oral presentations to staff and other residents as well as to conduct research. A certificate is awarded at the end of the residency program.

Other formal placements have included the University of Kansas Medical Center, under the direction of Paul Trautman, C.P.O., where residents gain experience with a hand rehabilitation program, and a six-month residency in pediatrics at Gillette Children's Hospital in St. Paul, Minnesota, supervised by Martin Carlson, C.P.O.

Regardless of how it is achieved, each residency should afford the residents extensive patient contact, and opportunities to deal with other members of the clinic team. They should attend special clinics and grand rounds at institutions and hospitals in the surrounding area, increasing their own involvement in such clinics as the year progresses. Clinical content of the residency must allow the resident to become proficient in patient evaluations, taking measurements and impressions, cast modifications and general fabrication techniques used in designing spinal, lower- and upper-limb orthoses. It is important that the resident achieve a level of competency in all of these areas and be instructed, when necessary, in any special techniques in patient management or fabrication. Regularly scheduled meetings between resident and supervisor should provide feedback in meeting these goals.

Follow-Up

In an attempt to both follow-up NUPOC residents and provide an on-file information for future students, a four-page form was adapted and sent to supervisors at residency sites. The form includes such information as the type of facility or institution involved, profes-

sional/experiential background of employees, types of field experiences offered other than orthotics, types of services to which orthotics residents may be exposed, as well as work hours, dress code, reimbursement, medical and insurance policies. Any behavioral objectives and additional comments that the supervisor wishes to make may be included on this form.

Whether the residency site is established through NUPOC or independently by the student himself, most students do take advantage of some residency program. They find that even though the income is minimal, the residency structure provides them with an opportunity to continue the clinical portion of their academic education in a relatively low-key environment. After the year's residency, some residents are given a promotion and join the staff, while others move on to a different setting and new challenges. Either way, both the employer and resident have gained new information and insights into the practice of orthotics from both an academic and clinical point of view.

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Footnotes

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