

Trends and Highlights During 1954 in the Prosthetic and Orthopedic Fields

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The writer has been privileged for the past two years to have published in the December issues of the *Orthopedic and Prosthetic Appliance Journal* summaries of the important trends and activities in the field. Included in such summaries were listings of the newly available devices and techniques as well as descriptions of other devices and techniques in various stages of research and development. It is proposed to limit this current article to a review of trends, activities, and highlights, exclusive of devices and techniques, with the thought that appropriate coverage will be given the latter as the need arises.

Perhaps the most significant activity during 1954 was the continuation of the upper extremity prosthetics training and field follow-up program. Four additional sections of the course were held at UCLA during the first six months of the year, making a total of ten sections conducted since the inception of the program in January, 1953. Interest in the program was so great that it was necessary to hold another course during October and November of 1954 and to schedule one or possibly two courses for next year. By the time all of the courses will have been held, the personnel from all the Veterans Administration Orthopedic and Prosthetic Appliance Clinic Teams throughout the country and from more than

50 private and military clinic teams will have received training in upper extremity prosthetics at UCLA. Some 120 prosthetists will have attended the course, thus assuring effective teamwork at the local level.

Another significant feature of this upper extremity prosthetics program has been the field follow-up project administered by the staff of New York University Prosthetic Devices Study. Field representatives, especially trained in upper extremity prosthetics, have been working closely with the clinic teams that have returned from UCLA. Reports of their activities have generally been to the effect that the field representatives have been helpful in aiding the clinic team personnel to put into practice what they learned at UCLA. Moreover, the field representatives have been collecting data which will be useful in further research in the area of upper extremity prosthetics.

In order to provide assistance to the personnel in the field concerned with upper extremity amputees, *armamentarium boards* were developed and sent to all of the clinic teams in the Veterans Administration. The prosthetic components and harnessing displayed on these boards are illustrative of the devices and techniques evaluated through the Artificial Limb Program. The items were fabricated by the Orthopedic Shop of the Veterans Administration Regional Office in New York in accordance with a joint undertaking of the Advisory Committee on Artificial Limbs, New York University Prosthetic Devices Study, and Prosthetic and Sen-

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sory Aids Service of the Veterans Administration. It is intended that these boards be considered available on a short-term loan basis to local interested organizations.

This training and follow-up program is probably the most comprehensive ever conducted in the history of prosthetics in this country. Undoubtedly, it will result, as has already been evident in a number of areas, in a great improvement in upper extremity prosthetic services, with higher standards and better techniques. Further, it will contribute greatly to the acceptance and furtherance of team-work philosophy and practice so essential in any rehabilitation undertaking.

The success of the upper extremity program has been responsible, in great measure, for current plans to develop other prosthetic training courses throughout the country. A Regional Schools Steering Committee, consisting of representatives from the Orthopedic Appliance and Limb Manufacturers Association, University of California in Los Angeles, New York University, American Board for Certification, and Veterans Administration, has had several meetings to determine the most effective methods of holding regional schools. Present thinking is to conduct short-term courses in cooperation with selected and interested universities. It has been agreed that the first schools will cover the principles and practices of above-knee fit and alignment. Tentatively, it is believed that such a course will be of two weeks duration for the prosthetists. It is planned to develop a group of instructors from industry, primarily, who will teach at the regional schools as they are developed. It is hoped that the first round of schools will be initiated in 1955.

A number of other significant educational developments took place during the year. In May, 1954 a meeting was held at New York University to discuss the desirability of developing

formal education courses at the college or university level for prosthetists and orthotists. Some twenty-five representatives from sixteen interested organizations, including spokesmen from OALMA, participated in this conference. Additional meetings are contemplated to explore the most appropriate type of training for the development of prosthetists and orthotists.

During the year plans were also being developed at the University of Buffalo to establish a school in Prosthetics extending over a four year period.

The decision by the American Board for Certification that applicants for certification after January 1, 1955 must be trained in accordance with formal apprenticeship standards or the equivalent represents a significant advance in industry's educational program. This policy will undoubtedly result in the establishment of additional educational programs throughout the country with more uniform curricula.

These activities reflect a constantly growing awareness on the part of industry and other organizations interested in prosthetic services to provide opportunities for the development of prosthetists and orthotists. The introduction of college or university level programs should serve to round out the diversified courses that are being sponsored by Orthopedic Appliance and Limb Manufacturers Association, Veterans Administration, and Advisory Committee on Artificial Limbs.

The Lower Extremity Prosthetics Clinical Study begun by University of California at Berkeley in 1953 was carried on throughout the year. Excellent physical facilities have been provided by the United States Naval Hospital in Oakland, California for this study. Generally speaking, the objectives of this Clinical Study are to determine the best prosthetic practices, devices, and techniques of fit-

ting and alignment. The Clinical Study will afford an excellent opportunity for the study of relevant medical and locomotion problems.

The Child Amputee Research Program, started in 1953, was continued during 1954. This has involved the University of California, Los Angeles group with the Marion Davies Clinic, and the staff of the New York University Prosthetic Devices Study with the Michigan Crippled Children Commission. Studies of rate of growth on the amputated side as compared to the normal side are indicated as is the development of prostheses that can be made larger as the child grows. It is hoped that the coordinated efforts of the University of California in Los Angeles, New York University, Army Prosthetic Research Laboratory, Michigan Crippled Children's Commission, Marion Davies Clinic, industry and other interested agencies will bring about improved prosthetic services for children.

A new and welcome publication reached the field during the year. "Artificial Limbs—A Review of Current Developments" is being published three times a year by the Advisory Committee on Artificial Limbs and is being widely distributed. This journal is meeting a real need.

WILLIAM M. BERNSTOCK

Mr. Bernstock has been Chief of the Prosthetics Education Section of the Veterans Administration's Prosthetic and Sensory Aids Service since October 1951. For five years prior to this assignment he served as Chairman of the Rehabilitation Board of the New York Regional Office and was also in charge of the advisement and guidance of seriously disabled veterans. His activities over the past 17 years have been closely identified with problems of the disabled and have included selective placement, testing, counseling, training, and manpower utilization.

He is currently serving as Representative from New York to Region II of the National Rehabilitation Association. Mr. Bernstock has been pursuing a Ph.D. at Teachers College, Columbia University the hard way—evenings and week-ends—and is on the last lap.

The long awaited book, "Human Limbs and Their Substitutes" by Klopsteg, Wilson et al was published in November by McGraw Hill. It is the considered opinion of the writer that this book will become the outstanding text in the field of prosthetics. Prepared under the sponsorship of the Advisory Committee on Artificial Limbs of the National Research Council, the book summarizes and correlates the artificial limb research program supported by the Department of Medicine and Surgery of the Veterans Administration and the Office of the Surgeon General of the Department of the Army. The contributions of some thirty experts from the several professions concerned with amputation surgery, design and development of artificial limbs and their components, fabrication, fit, and evaluation of prostheses, and care and training of amputees have made for a comprehensive coverage of the various facets of prosthetics. The material is presented in a manner which will be of much value not only to the doctor, therapist, engineer, prosthetist, psychologist, and other interested specialists, but to the amputee himself. "Human Limbs and Their Substitutes" is an outstanding contribution in the field of artificial limbs.



Another formidable undertaking has been initiated by the Advisory Committee on Artificial Limbs in the compilation of a comprehensive, fully annotated prosthetics bibliography. It is planned to include in this bibliography all the books, manuals, pamphlets, reports, articles, patents, etc. that are related to the various aspects of prosthetics. A bibliography of this type would be a tremendous contribution to the field.

An arm bracing project was started recently involving the Prosthetic Testing and Development Laboratory, other staff members of the Prosthetic and Sensory Aids Service, and the New York Regional Office of the Veterans Administration. It was felt that a large body of knowledge about artificial arms had been developed, much of which could be transferred to arm bracing. The number of people who do not have the use of an upper extremity, because of trauma or disease, is held to be much larger than the number of arm amputees. For various reasons less emphasis has been placed on the development of prostheses for this larger group of disabled people. It is hoped that this new arm bracing project will focus attention on this need and perhaps stimulate other research and development activities by interested organizations.

A new movie, "Upper Extremity Prosthetic Principles" is being produced by the Prosthetic and Sensory Aids Service. It is anticipated that this film will be available for showing in February, 1955. This new film will deal with rationale underlying research and development efforts in the area of upper extremity prosthetics. It is a 16 millimeter, color and sound film and will run for approximately 25 minutes. When completed, the film will be available on loan from the Central Office Film Library, Veterans Administration, Washington, D. C.

Space limitations of this article do not permit adequate coverage of the many other significant activities which took place during the year — the National Assembly of the Limb and Brace Profession, the Regional OALMA Assemblies and Seminars, the working conferences involving all the agencies participating in the Artificial Limb Program, the exhibits and demonstrations conducted by the Prosthetic and Sensory Aids Service and the Advisory Committee on Artificial Limbs, the visits abroad by prosthetists and researchers, and a host of other important activities. Suffice it to say this past year was highly eventful and forward-looking, portending even greater advances in our efforts to serve the disabled.

JERRY LEAVY PROMOTED

The many friends of *Jerry Leavy* will be happy to learn that he has just purchased partial ownership in the *A. J. Hosmer Corp.* In joining Noel J. Brown, Lloyd W. Brown and A. A. Tilton, the present owners, Jerry will continue to work in the same capacity as in the past except that he has been made Vice-President of the company and will therefore serve on the board of directors.

Mr. Leavy works in the experimental end of the Hosmer business while at the plant. He also handles much

of the public relations work as well as the problems of Hosmer customers. During 1954 Jerry traveled over 40,000 miles in visiting limb shops throughout the United States.

With his wife and two children Jerry has just moved into a new home within ten minutes drive of the plant. With the children approaching school age his wife reports her happiness in their choice of settling down in the Santa Clara Valley, considered by many to be the perfect living spot of the United States.