

by far our most successful meeting to date. Over 50 hours of continuing education presented at one meeting, a program so complete that it was impossible for any one individual to attend all the sessions. This Academy program was the most ambitious ever, and contained presentations by the Veterans Administration, the Heart Association, supplier members of A.O.P.A., physical and occupational therapists, orthotists, prosthetists, and physicians. A truly enjoyable professional experience and another indication of Academy growth and development.

Also, and I think the most significant of my experiences was to meet with and to talk to many of the participants in Newport. The chance to greet old personal friends

and past officers of the Academy allowed me a renewed realization of past A.A.O.P. accomplishments. But the opportunity to meet and to get to know the newer, younger academicians gave me an insight into the future of the Academy and its direction. The development of a truly professional association has attracted a serious group of young people who are better educated, professionally motivated and technically capable of continuing the leadership and direction successfully established in our first decade. I'm extremely confident in the realization that the hard work and vision of past leaders will perpetuate a new leadership increasingly more aware and capable of continuing the Academy's growth and development. Our past has been, and

the foundation is set, in my view our future is secure in the new academicians.

However, if I may I would urge you all, in developing your own philosophy regarding your Academy, to contemplate the past relative to the decisions made by prior Academy leaders and to programs developed, and to project the future with a view towards anticipating the type of Academy and programs you want. Each of us has this responsibility to our profession.

My thanks to the Newsletter for this opportunity to write.

My best wishes for continued editorial success.

Edward P. Van Hanswyk
President, A.A.O.P.

Prosthetic Knee Mechanisms

A Guide for the Prosthetist

Introduction

A function of the Veterans Administration Prosthetics Center (VAPC) is to assist VA Clinic Teams nationally in prescribing prosthetic devices, including, of course, prosthetic knees. Prescribing knee mechanisms, however, is a complex task because of the large variety available. Most often these devices differ not that much in function but in size, type of material used for the setup, and additional characteristics related more to assembly and installation processes than prescription rationales.

All too often clinicians prescribe either limited numbers or certain types of knee mechanisms found to be reliable in the past. Another inhibitor may be a lack of specific information on the full range and variety of all available systems. The clinician rarely has an opportunity to compare the relative merits of one knee with another.

In 1972, the Veterans Administration, through the Department of Medicine and Surgery, Washington, D.C., published a program Guide (M-2, part IX, G7) on "The Selection and Application of Prosthetic Knee Mechanisms." The guide was slightly modified and updated in 1976. A new Program Guide, reflecting developments of recent years and incorporating most commercially available knee mechanisms, will soon be published. This later Program Guide will provide a summary description of the various knee mechanisms thus far evaluated by the VAPC. It is intended to help maximize patient benefits.

Description of Program Guide

The Program Guide comprises six sections: Knee Function, Definitions, Classification, General Requirements, Prescription of Prosthetic Knee Mechanisms, and Catalog of Knee Mechanisms.

1. **Knee Function:** Here are described the normal function of the anatomical knee, specifically the relationships of its various parts during the gait cycle, and alignment stability as a key factor in prosthetic fitting. Discussion centers on the TKA line relative to the center of the knee in maintaining stability during the stance phase. Understanding these relationships and utilizing the special features of knee mechanisms for the patient's benefit is an asset for the prosthetist. The Clinic Team thereupon must strive to provide the patient with the specific knee mechanism whose features most closely match his individual needs.
2. **Definitions:** Reference terms are given to describe the variety of knee functions.
3. **Classification:** A chart classifying all types of commercially available knee

mechanisms is provided. The chart shows functional criteria, specifically swing phase control and stance phase control. Additional topics in this section include extension aids, extension stops, mechanical locks, mechanical friction, and fluid resistance of hydraulic and pneumatic knees.

4. General Requirements: This section consists of a checklist on knee mechanism requirements.

5. Prescription: Prescription rationale is discussed, emphasizing the needs of the individual patient. Although the Program Guide concerns knee mechanisms, socket, shank, foot and suspension are also discussed to achieve the best type of prosthesis available. A chart shows the type of prosthesis best suited for different types of amputees. A classification chart of knee mechanisms is also included. To further assist the clinician, variations of basic prescriptions are given, i.e., for a short residual limb, a very long residual limb, and differences based on level of activity.

6. Catalogue of Knee Mechanisms: this section, the heart of the Program Guide, lists most commercially available knee mechanisms. Illustrations furnished by the manufacturers are included. A chart lists type of knee mechanisms, materials, exact dimensions, and types of control offered.

Conclusions

The new Program Guide on "The Selection and Application of Prosthetic Knee Mechanisms," will be available on or about June 1, 1980. It should prove to be of significance to all clinic teams. To obtain a copy of this publication, please write to the Veterans Administration Prosthetics Center, Attention: Mr. Bert Goralnik, 252 Seventh Avenue, New York, New York 10001.

I wish to thank Mr. Max Nacht, Technical Writer/Editor, VA Prosthetics Center, for his aid in preparing this article.

by
Bert Goralnik, C.P.

Summary of responses to Newsletter

Prosthetics and Orthotics Clinic, Vol. 3, Nos. 2 and 3, 1979.

"The Clinic Team"

The Summer, 1979, issue of the Newsletter presented a questionnaire asking, "Do you believe that the presently practiced and taught clinic-team concept meets all patients' needs?" This question was prompted by widespread opinion among practitioners who believe that traditional clinic team approaches do not effectively address the profound issues of the patients' problems. It is also believed that the privacy of the individual is not fully respected in most clinics.

The results of the questionnaire support these beliefs. The majority of the respondents indicated that they felt current clinic-team concepts do not meet all patients' needs. We welcome additional comments from you on this and other issues.

"Checkout"

The Autumn, 1979, issue of the Newsletter asked for opinions in response to questions regarding checkout procedures and terminology. The responses were excellent in terms of numbers and quality. Three are printed in full in this issue.

Every respondent, except one, said they felt checkout procedures are NOT appropriate as presently practiced. The overwhelming majority also indicated their support for changing the term "Checkout" to something more professional such as "prosthetic evaluation," "patient functional evaluation" or "prosthetic followup evaluation." It is interesting to note that the word "evaluation" was used in each suggested revision. In general, it was agreed that the universities are

largely responsible for existing checkout procedures and terminology, and thus, appropriate changes should be initiated by them.

The more advanced institutions and facilities do not appear to have problems regarding checkout procedures. In fact, the checkout sheet seems to have been replaced in many instances by progressive clinic teams that utilize a more professional approach. Hopefully, this trend will continue to the point where it becomes the rule rather than the exception.

The Academy would like to thank all those readers who responded to previous Newsletter questionnaires. We would appreciate continued support.
