POSTER SESSION B  
Tuesday, November 9  
7:30 AM - 10:00 AM and 2:45 PM - 3:45 PM

B1  MULTIMEDIA TRAINING IN RHEUMATIC DISEASES - AN INTERNATIONAL APPROACH  
1. BRAUER, Ampuol, Royal Dornwell Hospital, 2. TRACO, Ysim-suba, University of Lübeck, 3. LARIS, Universidade, University of Lübeck, 4. WOHLER, Medical Center, University of Lübeck, 5. DOLLMANN, Wissen Scientific, University of Lübeck.

Rheumatic diseases are a major cause of mortality and morbidity, and in most countries little time is given to teaching them. Consequently, most patients will be treated by primary care physicians who have little information or training in rheumatology. There are also inter-country differences in the management of rheumatic diseases and the need for treatment is recognized in view of the increasing number of patients. There is therefore a need for improved methods of teaching rheumatology at all levels that can be applied internationally. multimedia education programs are a new type of database that allows linking of videos, still pictures, graphic sound in an individual, interactive, problem-oriented format. DVI technology is a digital multimedia system that allows the compression of data as high as 60%. It allows the patient to watch video from a standard CD-ROM and PC, and the mixing of different media as required. We have developed a multimedia training program in rheumatology for primary care physicians using this multimedia technology that is applicable in different countries to meet these educational needs. A problem-oriented interactive approach has been taken to encourage the clinical use of such a system. A program on examination of the musculoskeletal system is demonstrated.

Supported by a grant from Southwest Research.

B2  AN INTERACTIVE MULTIMEDIA COMPUTER-SYSTEM FOR PATIENT EDUCATION AND INFORMATION IN RHEUMATOLOGY  
1. WOHLER, A., 2. TRACO, Y., 3. KOS, U., 4. WOHLER, A., 5. LARIS, M., 6. WOHLER, A.

There is a great need to educate and assist patients with rheumatic diseases in an effort to improve their quality of life because: 1) rheumatic diseases affect over 30 million Americans; and 2) these diseases have an enormous impact on the nation's health. The goal of this project is to develop and evaluate a computer-based educational program designed to enhance the quality of life of patients with rheumatic diseases who are medically and socially disadvantaged. This is designed to augment, not replace, existing programming.

Specific learner objectives have been developed in three areas: rheumatic disease education, medication knowledge and physical therapy reinforcement. A data base of educational material, consisting of multiple forms of media (text, voice instruction, photographic images, animation and video sequences) is related to specific learning objectives is used to deliver computer generated educational materials. The program operates on a Macintosh computer which is user-friendly and user superior. Great emphasis has been placed on interface design such that the use of the program is intuitive. Learners can use the program at any time in a self-paced and self-directed manner.

B3  A COMPUTER-BASED EDUCATIONAL PROGRAM TO ENHANCE THE QUALITY OF LIFE OF PATIENTS WITH ARTHRITIS  
1. ALEXANDER, A., 2. FISHMANN, D., 3. BELLISMA, M., 4. NOTZ, U.

The computer system is marketed by MicroMedical, Inc.

Dr. Horton owns fifty per-cent of this company.

B4  VISUALIZATION AND ANALYSIS OF RHEUMATIC DISEASES PROGRESSION OVER TIME.  
Joseph Bokor, Philip Lyle, Mark E. Begemann, Todd Forsman, U.C.A., Los Angeles, CA 90024, for the Cooperative Study of Rheumatic Disease (CoSRD).

Managing significant data from disease progression in a large patient population over time is often difficult. We recently studied a cohort of patients containing diaphoresis of disease subgroups over three time periods (1995-1997). For each disease subgroup, we track the number of patients who eventually develop another disease versus those who remain in the same disease subgroup. We have developed a visualization tool to view the progression of subgroups in an interactive fashion. This tool uses a new representation of rheumatic disease results that was a table of visit by visit patient subgroup changes. This table did convey a clear sense of our data due to the large number of cells, often sparsely populated data trends between adjacent rows and columns, and variation over multiple pages. To overcome this, a Visual Basic program was written to graphically represent the number of patients following each transition path. It was intended to allow interactive query of patient subpopulations by selecting disease subgroups. Using this tool, the interesting transitions for each disease subgroup over time were subsequently studied in the traditional clinical manner of box, square and catagorical models. The addition of visual and graphical visualization of these information models allowed the results of the complicated multivariate models to be summarized and presented in non-medical people.

We hope to extend this visualization tool to take advantage of the data analysis modeling, regarding and express because of the other existing tools. By specifically designing programs to facilitate analysis of rheumatic disease transition over time, we can statistically and graphically investigate the relationships present with greater ease, speed and completeness than is possible with non-interactive, non-visual systems.

B5  AUTOMATED MEDICAL RECORDS UTILIZING BAR CODE TECHNOLOGY FOR DATA ENTRY.  

Complete, accurate, and legible medical records are an important part of any medical practice. We have developed a medical record keeping system for a rheumatology practice utilizing bar code technology for data entry. The system is a private practice rheumatology office for the past three years with in excess of 20,000 patient encounters entered into the system.

By means of a bar code pan the author is able to generate prescriptions, progress notes, procedures, and x-ray interpretation. The progress notes consists of a history of physical examination. Following the initial visit, the system generates a joint examination quantifying each individual joint 0-4 for swelling, tenderness, or limitation of motion. The diagnosis, joint injections, procedure ordered with medical justification, written and printed are all presented to the patient, and clinical decision-making.

The system is very user friendly and can be changed or expanded very simply.

B6  REMOTE: MONITORING AND EVALUATION OF AN EXPERIMENT SYSTEM FOR INFECTIOUS ARTHRITIS AND COLLAGEN DISEASES.  

Medical aspects of systems (S) is a computer program designed to help the physician to make decision making. There are a wide variety of patients with high levels of uncertainty as is the case with rheumatology. We have been developing since 1951 5000 software that is able to help the rheumatologist to make diagnosis rheumatic and collagen diseases. MSK (medical software) is a software system designed to assist in the diagnosis and management of diseases such as rheumatoid arthritis and related rheumatic diseases. This software provides a computerized instrument for the critical thinking process. It is not intended to replace medical judgment but to aid in the decision making process. The software system is a computer program with a user-friendly interface.