



# Health Care Technical Group

The Healthcare Technical Group is interested in maximizing the contributions of human factors and ergonomics to medical systems' effectiveness, patient safety and the quality of life for people who are sick or functionally impaired. We seek to bring together people who share our interests.

The healthcare domain is a growing sector of HFES, with interest being spurred by the patient-safety movement, the growth of medical informatics, and the concerns for medical needs of the aging population.

Many human factors and ergonomics professionals routinely face human factors-related challenges in providing for the health and well being of people. Accordingly, our goal is to share new ideas that can help respond to these challenges.

All who seek quality health care can benefit from our work. Human factors and ergonomics practitioners in healthcare can find satisfaction in the process of applying their abilities and knowledge to help others.

## TECHNICAL FOCUS

### MEDICAL SYSTEMS AND PATIENT SAFETY

Medical systems are increasingly dependent on complex technology found in products like medical imaging devices, patient monitors, electronic medical records, or home-use patient care devices. However, the same technology that makes new therapies possible can also present barriers to easy and effective use by health care workers and receivers alike. Implications for poor design can be severe:

- Deficiencies in equipment design can induce operating errors with serious consequences.
- Individuals who depend on in-home health care devices to manage an illness can find such products hard to use and may make errors in self-diagnosis and treatment.

From studying specific medical devices, to the macro-ergonomic systems approach to safety culture, we believe that human factors methodologies and techniques have much to offer companies that design and manufacture medical products, as well as organizations that establish health care environments, systems, policies, and procedures.

### REHABILITATION

Many human factors specialists devote their careers to the needs of people who are functionally impaired as the result of a permanent or temporary disability.

Fundamental to the human factors specialist's work is an understanding of people's physical and mental characteristics and how this relates to system design. When teams are formed to couple HF expertise with the abilities of the health care practitioner and a physical therapist, new insights and approaches to health care can emerge. When successfully implemented, such teams can have direct effects on outcomes:

- New devices can be constructed that provide impaired individuals with an improved level of function and comfort.
- Work environments and tools can be adapted for improved accessibility and usability, aiding employers in compliance with the Americans with Disabilities Act (ADA).

## **MEMBERSHIP**

We are a multidisciplinary group with membership throughout the world. The group's membership includes engineers, psychologists, physicians, nurses, designers, educators, therapists, and others who have a personal interest in the health care area. Our members work in organizations, such as colleges and universities, engineering and design firms, manufacturing companies, government agencies, treatment centers, health care provider agencies, and hospitals. The only requirement for joining our group is your interest.

## **BENEFITS OF MEMBERSHIP**

Our technical group sponsors sessions at the Annual Meeting of the Human Factors and Ergonomics Society, generally held in the fall. We conduct special conferences on topics of interest to members. Additionally we collaborate with other HFES Technical Groups on areas of common interests. We publish a newsletter twice a year that includes member-authored as well as guest-authored articles.