

# Preface

This book is concerned with human factors and ergonomics in healthcare. The utility of this area of research is to aid the design of systems and devices for effective and safe healthcare delivery. New approaches are demonstrated for improving healthcare devices such as portable ultrasound systems. Research findings for improved work design, effective communications and systems support are also included. Healthcare informatics for the public and usability for patient users are considered separately but build on results from usability studies for medical personnel.

Quality and safety are emphasized, and medical error is considered for risk factors and information transfer in error reduction. Physical, cognitive and organizational aspects are considered in a more integrated manner so as to facilitate a systems approach to implementation. New approaches to patient handling ergonomics, emergency and operating rooms, healthcare, medical device design, human factors and ergonomics measurement and model validation are included. Recent research on special populations, collaboration and teams, as well as learning and training, allows practitioners to gain a great deal of knowledge overall from this book.

Explicitly, the book is organized into nine sections that contain the following subject areas:

- I. Human Factors and Ergonomics in Surgery
- II. Healthcare Professionals
- III. Healthcare Systems
- IV. Healthcare Safety
- V. Medical Device Design
- VI. Healthcare Testing
- VII. Environmental Design
- VIII. Healthcare Communications and Logistics

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This book would be of special value internationally to those researchers and practitioners involved in various aspects of healthcare delivery.

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