

Preface

This book is concerned with human factors and ergonomics in health care and medical devices. 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, health care, 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, this book is organized into seven sections that contain the following subject areas:

- I. Healthcare Environment
- II. Patient Care Tools
- III. Employee Health
- IV. Human Factors in Healthcare
- V. Healthcare Systems Design
- VI. Human Factors in Medical and Surgical Settings
- VII. Human Factors in Medical Devices Design

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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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