
Sports Medicine has evinced increasing interest in recent times. The speciality that started as one addressing the needs of a niche group has now expanded to include interest of the general practitioner, who has to find convincing answers for the aware clientele, the surgeon-orthopaedician-in-training who has to deal with this group more often, and in recent times, doctors dealing with the geriatric age group and women in sports. Towards addressing these target audiences, the second edition of this popular book adds on Chapters on ‘Sports Medicine in the female athlete’, ‘Osteoporosis in the older female athlete’ and ‘Sports and exercise in the geriatric population’.

The chapters follow a systematic progression and the specifics are dealt with in a comprehensive manner, necessary references are included for the more detail-seeking reader. The language is clear and illustrations/charts/flow-diagrams help reinforcing the take-home message. The aspects of rest and recuperation in sports injuries have been adequately stressed upon in a separate chapter on the same, as well as dealing with the specific conditions. The responsibility of the team physician, legal and medico-legal aspects of Sports Medicine have also been brought out lucidly. The book achieves what it sets out to in terms of providing a reference to the primary care provider as well as the orthopaedician-in-training on aspects of Sports Medicine. The price however, shall preclude the inclusion of the book for individual practitioners. It would be a useful addition to the libraries of medical institutions, hospitals, research centres and medical universities.

Contributed by:
Wg Cdr Vipin Sharma
Graded Specialist (Aviation Medicine)
Institute of Aerospace Medicine, IAF
Vimanapura, Bangalore- 560017


Shappell and Wiegmann are the original developers of the Human Factors Analysis and Classification System or HFACS. This accident investigation and data analysis tool, based on Reason’s (1990) “Swiss cheese” model of accident causation, has found favour with several military and civil aviation organisations worldwide. In India, the IAF has accepted the need to analyse human factor accidents based on the HFACS template and the requirement for the same has
been implemented. At least two independent studies applying HFACS on civil accident data as well as Naval aviation have been completed in India.

The book is divided into seven chapters. In the first, the authors introduce the reader to human error. They then highlight the importance of data-driven research and intervention strategies to reduce accidents due to specific human factors. The second chapter discusses various human error perspectives including cognitive, ergonomic and aeromedical aspects. The relevance and shortcomings of all such perspectives are analysed.

The meat of the matter comes in the next two chapters wherein the HFACS template is first described in detail, followed by discussion of aviation case studies using HFACS. The authors had been conducting a workshop on HFACS for some years where they used similar case studies to train participants. Based on feedback, the authors have, over the years, been adding to or deleting “boxes” to the HFACS format. There has been a recent addition under the ‘Pre-conditions for unsafe acts’ where ‘Environmental Factors’ have now been included, further subdivided into ‘physical environment’ and ‘technical environment’. Readers of the book can certainly understand the nuances of HFACS, but it is recommended that case studies be discussed and findings compared in small groups of interested personnel to practically understand the process of analysis.

The chapter titled “Exposing the Face of Human Error” is an eye-opener and of great relevance to convince the sceptics. How results from an HFACS analysis actually helped to implement an intervention strategy and achieve obvious benefits for the US Navy/Marine Corps is remarkable. Of course, the hierarchy in the entire organisation is to be convinced and then suitable strategies have to be devised to remedy the situation to achieve a reduction in human factor accidents of any type. The last two chapters address the validity of the HFACS framework and frequently asked questions about HFACS.

The book is well indexed and has a thorough bibliographic reference. Contributions of Wg Cdr Narinder Taneja (currently on faculty at Dept of HE & HF, IAM, IAF) in analysing accident data to validate HFACS while on study leave to University of Illinois have been graciously acknowledged by the authors. Indian readers of the book who wish to clarify doubts regarding HFACS may find it simpler to contact the home-grown expert.

The book is recommended for reading and reference by all students and practitioners of aerospace medicine. Medical members of Courts of Inquiry into aircraft accidents would do well to recommend the same to other investigators.

Contributed by:

Wg Cdr D Gaur
Associate Professor (Aviation Medicine)
Institute of Aerospace Medicine, IAF
Vimanapura, Bangalore- 560017