



**IN THE NAME OF ALLAH,
MOST GRACIOUS, MOST MERCIFUL**

Trauma Care Systems in Saudi Arabia

An Agenda for Action

Mohammad Y. Al-Naami
Maria A. Arafah
Fatimah S. Al-Ibrahim

College of Medicine and University Hospitals
King Saud University
Riyadh, Saudi Arabia



Academic Publishing and Press, King Saud University
P.O. Box 68953, Riyadh 11537, Saudi Arabia

© King Saud University, 2013

King Fahd National Library Cataloging-in-Publication Data

Al-Naami, Mohammed Y.

Trauma care system in Saudi Arabia: an agenda for action. / Mohammed Y Al-Naami; Maria A Arafah; Fatimah S Al-Ibrahim – Riyadh, 2013

204 p., 21 x 28 cm

ISBN: 978-603-507-153-6

1- Traumatology 2- Trauma centers – Saudi Arabia

I-Maria A Arafah (co.author) II-Fatimah S Al-Ibrahim
(co.author) III-Title

617.156 dc

1434/7656

L.D. No. 1434/7656

ISBN: 978-603-507-153-6

This book has been refereed by a specialized committee appointed by the Academic Council of the University. After the reports of the referees, the Council authorized its publication in its 13th session of the academic year 1433/1434 H., which was convened on 29-3-1434 H. (10-2-2013)



Academic Publishing and Press, 2013 (1434H)

{Courtesy}

To families

*Who lost their beloved ones or struggling with
disabled members*

&

To public sectors and societies

Who are burdened by trauma and trauma care

Acknowledgment

The Authors would like to thank Mrs. Hadeel Alhumayed for computer editing, Mrs. Sameera Khalid for English language revision.

Preface

Since the introduction of modern machines and world civilization, humans are privileged by the ease of transportation and the daily use of different technologies; but endangered by a higher risk of death or injury. Trauma mortality and morbidity rates are climbing to a degree that prevention and management of trauma may look impossible at this stage. Human errors have been shown to be a major factor for trauma deaths and injury followed by machinery default and environmental factors. Fortunately, human errors can be prevented and minimized simply by following safe driving instructions. These instructions, however, are missing at times, not complete, and not easy to implement and enforce upon users.

After going through many reports and articles addressing this issue, more is needed to understand the human psychology for accepting safe driving instructions and use of different tools and machines. Education, believe, and self-satisfaction of these instructions were found very effective than anything else. However, low enforcement, periodical checking of machinery safety, and checking roads safety are also important in preventing and minimizing trauma deaths and injuries. Efforts for trauma prevention and proper care started early in the 19th century after World War I, developed within and after World War II, and refined at the end of the century. Recently, international reports encourage planning and implementation of trauma care systems that encompass most if not all aspects of trauma prevention and management. Implementation of such systems in the US resulted in a decreased mortality from trauma by 50% and in disabilities by 85% in some reports.

A trauma system is a pre-planned, comprehensive, and coordinated region-wide and local injury response network that includes all facilities and sectors with the capability to care for the injured. It is the system's inclusiveness, of pre-planned trauma centers and non-trauma centers resource allocation that offers the public a cost-effective plan for injury management. In such an effective system, trauma care delivery is organized through the entire spectrum of care delivery, from injury prevention to prehospital, hospital, and rehabilitative care delivery for injured persons. The system begins with a region's authority to designate various levels of trauma and burn centers and, through data collection and analysis processes, demonstrates its own effectiveness from time to time.

In this book we will try to make use of others' documented experiences, research, and outcomes of trauma care systems. Our goal is to reflect upon successful trauma care system programs, and to plan a similar implementation in Saudi Arabia, with what is available and feasible. Although planning and implementation of such a system is going to be a difficult mission, we are looking forward that this document will highlight the process that makes it possible for all sectors involved in the system. It is of importance to note that all scientific

tables and figures present in this book are referenced within the text. Clip art images were retrieved from freely accessible internet sites or downloaded via an account in “Flicker” and other image-sharing websites.

Mohammed Y. Alnaami
FRCS, FACS, M Ed.
Riyadh, Saudi Arabia

Contents

Preface	ix
Chapter 1: Introduction	1
Chapter 2: System Administration	17
Chapter 3: Injury Prevention	35
Chapter 4: Prehospital Care	47
Chapter 5: Hospital Care	65
Chapter 6: Rehabilitation	115
Chapter 7: Management of Disasters & Mass Casualties	125
Chapter 8: Education and Training	149
Chapter 9: System Evaluation and Quality Improvement	155
Chapter 10: Public Participation (Saudi Trauma Society)	167
Chapter 11: Research	175
Appendix A	181
Appendix B	185
Appendix C	187
Appendix D	195
Appendix E	197
Subject Index	199

