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TRAUMA NURSING

The Art and Science

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with 272 illustrations



女子学院 0102872

**M Mosby
Year Book**

St. Louis Baltimore Boston Chicago London Philadelphia Sydney Toronto



Dedicated to Publishing Excellence

Executive Editor: Don Ladig
Managing Editor: Robin Carter
Project Manager: Patricia Tannian
Senior Production Editors: Betty Hazelwood, Kathleen L. Teal
Designer: Susan Lane
Illustrator: Mark Swindle

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Printed in the United States of America

Mosby–Year Book, Inc.
11830 Westline Industrial Drive
St. Louis, Missouri 63146

Library of Congress Cataloging in Publication Data

Neff, Janet A.

Trauma nursing : the art and science / Janet A. Neff, Pamela Stinson Kidd.

p. cm.

Includes bibliographical references and index.

ISBN 0-8016-6655-4

1. Wounds and injuries–Nursing. 2. Emergency nursing. I. Kidd, Pamela Stinson. II. Title

[DNLM: 1. Emergency Nursing. 2. Wounds and Injuries–nursing.

WY 154 N383t]

RD93.95.N44 1992

610.73'61--dc20

DNLM/DLC

for Library of Congress

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Preface

Trauma Nursing: The Art and Science was conceived several years ago when the editors realized that existing books did not address the nursing role in trauma care to its fullest extent. For example, prevention of injuries was rarely addressed. Nursing diagnoses were integrated but not discussed from an evolutionary perspective. Quality improvement issues were not discussed, nor were legal and forensic issues always delineated. The most blatant omissions were discussions regarding clinical controversies, integration of “cutting edge research,” and questions for the reader that could be answered through future research. Because the editors and contributors have practiced in a variety of roles in trauma care—trauma resuscitation nurse, trauma nurse coordinator, clinical researcher, and trauma care educator—we are aware of the rapid changes in technology, interventions, and expected outcomes that impact trauma nursing.

Organization

Trauma Nursing: The Art and Science is organized in a logical, nursing-oriented approach that simulates the realities of trauma nursing practice. We believe by mirroring reality we provide the most practical approach to presenting this content—both for students who must learn to apply this content to practice and for practitioners who must constantly evaluate, apply, and individualize the content. We like to think of this as a common sense approach to the trauma patient.

The content is conceptually based, to be consistent with nursing's role in treating the human response to injury. Chapter subheadings in the clinical care chapters use terminology generated by the North American Nursing Diagnosis Association (NANDA) to facilitate the selection of appropriate nursing diagnoses for patients experienc-

ing injuries discussed in the chapter. We hope this will facilitate use and documentation of nursing diagnoses in your present role.

The book is organized into six major sections: Unit I, Trauma and Society; Unit II, Professional Issues in Trauma Nursing; Unit III, Nursing Care of the Trauma Patient; Unit IV, Trauma Throughout the Lifespan; Unit V, Selected Trauma Sequelae; and Unit VI, Nursing Within the Trauma Continuum.

The trauma system is addressed throughout the book. It is discussed in the greatest detail in the following chapters: Evolution of Trauma Care (Chapter 1); Legal Issues (Chapter 4); and Trauma Quality Management (Chapter 6). The trauma system is further discussed in the appendixes: trauma care resources are outlined in Appendix A, and disaster planning is discussed in Appendix B. Guidelines from the American College of Emergency Physicians (ACEP) are presented in Appendix C, and organ donation is discussed in Appendix D.

Prevention of Traumatic Injury (Chapter 2) reflects the editors' philosophy that trauma is a disease. Thus there are risk factors that indicate one's susceptibility for this disease. Alleviating risk factors is another way that trauma nurses can decrease the morbidity and mortality associated with traumatic injury.

Nursing Diagnosis (Chapter 3) explains the history of nursing diagnoses, the rationale for the present classification system, and how diagnoses can enhance, not impede, nursing practice. Diagnoses that pertain specifically to the trauma patient are discussed.

Chapter 5, Forensic Aspects, was included to increase the awareness of nursing responsibility in evidence collection. The assessment of trauma cases to determine index of suspicion and how fo-

rensic information has been used in injury prevention and detection are discussed also.

Trauma Quality Management (Chapter 6) illustrates strategies for measuring patient outcomes and the quality of a trauma system. The chapter reflects current issues in trauma care reimbursement in relation to case management.

Unit III, Nursing Care of the Trauma Patient, is organized in a uniquely functional way. This presentation differs from that of most trauma nursing books. For example, in books organized by body systems, facial injuries are usually discussed in a separate chapter or with head/ENT injuries. Since the primary nursing concern in treating a trauma patient with facial injuries is to maintain airway patency and ventilation, because of massive bleeding, edema, and unstable facial structures, in *Trauma Nursing*, facial injuries are discussed in Chapter 8, Ventilation and Gas Transport. Another example is Chapter 10, Sensory/Perceptual, which includes head and eye injuries. The eyes are frequently associated with head injuries and are examined as part of a neurologic assessment. Therefore this material is covered in the same chapter.

Tissue Integrity (Chapter 13) is addressed in a separate chapter. The correct cleaning, closure, and dressing of wounds are major priorities because of the growing incidence of sepsis and septic syndrome in trauma patients after stabilization and resuscitation. Chapter 15, Adaptation: Psychosocial and Spiritual, addresses psychosocial responses the nurse frequently encounters when caring for trauma patients. Why patients may respond in this manner and how healthcare providers can positively intervene are also discussed.

All individuals, regardless of their developmental age or state, are susceptible to traumatic injury-producing events. Thus Unit IV, Trauma Throughout the Lifespan, addresses the unique characteristics and treatment strategies associated with traumatic injury in children, pregnant women, and the elderly.

Unit V, Selected Trauma Sequelae (Chapter 19), comprises one chapter, which explains the interrelationships among trauma sequelae so the reader may obtain a greater appreciation of the consequences of hypoperfusion. Nutritional supplementation is also addressed.

The continuum of trauma care is addressed in Chapters 20 through 24: Air Transport of the

Trauma Patient, Emergency Department Care of the Trauma Patient, Perioperative Care of the Trauma Patient, Critical Care of the Trauma Patient, and Rehabilitation of the Trauma Patient. Information in these chapters assists the nurse to set priorities of patient needs, based on their point on the trauma trajectory, as well as to appreciate the practice perspective of colleagues.

Special Features

This book is clinically based. Each clinical chapter begins and ends with a case study and a series of interactive review questions, with answers designed to stimulate critical thinking by applying the most important concepts discussed in the chapter. These questions can also serve as a checkpoint for the reader to determine his or her degree of familiarity with chapter material or to examine retention. Objectives are presented in each chapter so the reader can anticipate major points.

Annotated bibliographies are provided at the end of each clinical chapter to assist the reader in making future reading selections. The reference lists in each chapter are comprehensive; they include classic as well as current material. For the visual learner, ample figures and tables are included to graphically illustrate information. Many of the illustrations have been newly created for this book. Because the current focus in trauma care is on patient outcomes, a Complications section is included in each clinical chapter to help focus the reader on the relationships among injury, treatment, and outcome.

Research questions are included in each chapter to stimulate each of us to approach trauma care with an inquisitive and questioning mind. We firmly believe that each one of us can contribute to generating a new knowledge base in trauma nursing. Our contribution may take various shapes and forms. Providing research questions is one way we hope to contribute and make "going back to school" a little easier.

The inclusion of competencies in the clinical chapters provides information that can be used in developing nursing evaluation and orientation forms. Continuing education sessions can be planned to address essential competencies. These serve to help delineate the "nice to know" from the "must know" material and focus on the psychomotor component of nursing.

Conclusion

Trauma Nursing: The Art and Science was written by experts across the country who have published numerous articles and books before contributing to this book. We are proud to be associated with these colleagues. Each of us can benefit from the knowledge of one another. These contributors are the “cream of the crop” in their fields. The diversity in geographic location of the contributors increases the applicability of the book’s content and provides a broader perspective.

The book ends with an epilogue written by a retired emergency department nurse who provided nursing care for trauma patients over a 40-year period, before these patients were known as “trauma patients.” She reminds us that the best form of nursing is based on the blending of the art and science of our discipline. How easy it is to forget the art for the sake of the science when the science is evolving so quickly! However, within each of us the art is also evolving. The epilogue leaves us with a mission that is a challenge to complete.

It is our sincere hope that you will be able to (1) find the information you need in a timely fashion, (2) understand the rationale behind strategies, (3) link important concepts together in a meaningful manner, and (4) develop a greater appreciation of your contribution to trauma patient outcomes from reading this book. We invite you to write to us in care of the publisher if you have comments on the book.

Acknowledgments

We sincerely thank Don Ladig for his vision in acquiring this work, Robin Carter for her developmental expertise and stamina, Betty Hazelwood for her meticulous and talented editing, Susan Lane for her excellent design, Mark Swindle for his highly original illustrations, the many other members of the Mosby–Year Book family who contributed to this book, and our contributors for their sustained efforts and creativity.

Janet A. Reff

Penelope Stinson Kidd

To my parents and sisters, who supported me from the time the book was just an idea until its final form, who patiently waited for the often-promised life "after the book," and who were a constant source of encouragement, keeping the goal always in sight.

To those who labor to publish and those who share their knowledge in practice.

To the students and colleagues who challenge me with questions of "why" and stimulate me to find the answers.

*To my other sanity-keepers:
the felines, equines, and canine.*

J.A.N

J.A.N
To my parents and family, who gave me such a firm foundation; there are no shifting sands, only new mountains to climb.

*To my "Bogs," you make a pattern out of chaos and solving the puzzle fun.
I love you both.*

*To our contributors, their family, and friends,
thanks for your perseverance.
Together, we make a great team.*

P.S.K.

*We thank our fellow trauma nurses
for being there at all hours of the day and night,
when they are tired, understaffed, and overwhelmed.
We must continue to uphold our patient care standards,
and we must support one another in the process.*

Contents in Brief

UNIT I

TRAUMA AND SOCIETY

- 1** *Evolution of Trauma Care, 3*
Joan Andrews Snyder
- 2** *Prevention of Traumatic Injury, 21*
Pamela Stinson Kidd

UNIT II

PROFESSIONAL ISSUES IN TRAUMA NURSING

- 3** *Nursing Diagnosis, 37*
Gail Mornhinweg
- 4** *Legal Issues, 51*
Sarah D. Cohn
- 5** *Forensic Aspects, 61*
Lori D. Taylor
Allen Jones
- 6** *Trauma Quality Management, 79*
Patricia A. Southard
Lynn E. Eastes

UNIT III

NURSING CARE OF THE TRAUMA PATIENT

- 7** *Assessment of the Trauma Patient, 115*
Pamela Stinson Kidd
- 8** *Ventilation and Gas Transport, 143*
Pulmonary, thoracic, and facial injuries
Elizabeth A. Henneman
Philip L. Henneman
Kathleen S. Oman

- 9** *Perfusion*, 195
 Cardiac and vascular injuries
 Janet A. Neff
- 10** *Sensory/Perceptual*, 263
 Responsiveness and vision
 Michelle Lucatorto
 Joe E. Taylor
- 11** *Mobility*, 325
 Spinal and musculoskeletal injuries
 Jean A. Proehl
- 12** *Elimination, Metabolism, and Sexuality*, 365
 Gastrointestinal and genitourinary
 Diane M. Sklarov (Gastrointestinal Trauma)
 Pamela Stinson Kidd (Genitourinary Trauma)
- 13** *Tissue Integrity*, 413
 Surface trauma
 Judy L. Larsen
 Judie Wischman
- 14** *Tissue Integrity*, 449
 Burns
 Susan Engman Lazear
- 15** *Adaptation*, 477
 Psychosocial and spiritual
 Karen Kidd Lovett

UNIT IV

TRAUMA THROUGHOUT THE LIFESPAN

- 16** *Trauma in Pregnancy*, 499
 Linda K. Manley
- 17** *Trauma in Childhood*, 527
 Renee Semonin-Holleran
- 18** *Trauma in the Elderly*, 555
 Rodney Newman

UNIT V**SELECTED TRAUMA SEQUELAE****19***Relationships between Physiologic Processes, 591**Anticipating complications*

Kathleen B. McLeod

Wayne C. McLeod

Janet A. Neff

UNIT VI**NURSING WITHIN THE TRAUMA CONTINUUM****20***Air Transport of the Trauma Patient, 625*

Renee Semonin-Holleran

21*Emergency Department Care of the Trauma Patient, 643*

Christine May

22*Perioperative Care of the Trauma Patient, 659*

Jody Foss

Nancy Feistritzer

23*Critical Care of the Trauma Patient, 677*

Karen Johnson

24*Rehabilitation of the Trauma Patient, 707*

Karma Klauber

Epilogue, 743**APPENDIXES****A***Hospital Criteria, 745**Resources for optimal care of the injured patient***B***Disaster Planning, 751*

S. Marshal Isaacs

C*American College of Emergency Physicians (ACEP) Guidelines, 759**Emergency department equipment, instruments, and supplies**Guidelines for trauma care systems***D***Organ Donation, 767*

Peggy Devney

Contents

.....

UNIT I

TRAUMA AND SOCIETY

1 Evolution of Trauma Care, 3

Mortality and morbidity peaks, 3
Origination of trauma care, 4
Trauma services, 5
Trauma care continuum, 9
Trauma care evaluation, 16
Research questions, 17

2 Prevention of Traumatic Injury, 21

Risk perceptions, 21
Driving as a social phenomenon, 25
Adolescent injuries, 26
General assessment and interventions, 27
Protection strategies, 27
Media, 29
Role modeling, 29
Cultural views, 30
Educational programs, 30
The trauma nurse and injury prevention, 30

4 Legal Issues, 51

Patient consent issues, 51
Patient medical information, 54
Professional relationships, 55
Emergency department transfers, 55
Professional liability in trauma care, 56
Documentation in trauma care, 57
Clinical risks in trauma nursing, 58

5 Forensic Aspects, 61

Scope of forensic medicine, 61
Trauma prevention: An outcome of forensic involvement, 63
Autopsy findings and predictable injuries, 63
Role of the trauma nurse in evidence preservation, 72
Postmortem care and issues, 75
Research questions, 77

6 Trauma Quality Management, 79

Historical perspective, 79
Future trends in JCAHO, 80
Quality improvement versus traditional quality assurance, 80
Designing a trauma quality management (QM) process, 82
Implementing quality improvement, 101
Trauma managed care, 102
Trauma registries, 106
Regional quality management, 107
Research questions, 110

UNIT II

PROFESSIONAL ISSUES IN TRAUMA NURSING

3 Nursing Diagnosis, 37

Medical versus nursing diagnosis, 38
Standards, 38
Nursing diagnosis, 39
Nursing diagnosis and the nursing process, 43
New diagnoses, 46
Validation in trauma nursing, 46
Research questions, 50

UNIT III

NURSING CARE OF THE TRAUMA PATIENT

- 7 Assessment of the Trauma Patient, 115**
Mechanism of injury, 116
General assessment, 124
Research questions, 140
- 8 Ventilation and Gas Transport, 143**
Pulmonary, thoracic, and facial injuries
Mechanism of injury, 145
Anatomic and physiologic considerations, 146
General assessment, 152
Diagnostic and monitoring procedures, 161
Assessment and interventions related to specific injuries, 166
General interventions, 178
Complications, 181
Weaning the trauma patient, 182
Research questions, 191
- 9 Perfusion, 195**
Cardiac and vascular injuries
Mechanism of injury, 196
Anatomic and physiologic considerations, 198
General assessment, 207
Diagnostic and monitoring procedures, 214
General interventions, 226
Assessment and interventions related to specific injuries, 240
Research questions, 255
- 10 Sensory/Perceptual, 263**
Responsiveness and vision
Responsiveness, 264
Vision, 299
Research questions, 319
- 11 Mobility, 325**
Spinal and musculoskeletal injuries
Spinal injuries, 326
Musculoskeletal injuries, 343
Research questions, 359
- 12 Elimination, Metabolism, and Sexuality, 365**
Gastrointestinal and genitourinary
Gastrointestinal trauma, 366
Genitourinary trauma, 383
Research questions, 409

13 Tissue Integrity, 413

Surface trauma
Anatomic and physiologic considerations, 414
General assessment, 421
Assessment and interventions related to specific injuries, 422
General interventions, 435
Research questions, 446

14 Tissue Integrity, 449

Burns
Mechanism of injury, 450
Anatomic and physiologic considerations, 451
General assessment, 455
General interventions, 459
Assessment and interventions related to specific injuries and populations, 466
Evaluation, 468
Complications, 469
Research questions, 473

15 Adaptation, 477

Psychosocial and spiritual
Anxiety, 477
Body image, 488
Spiritual adaptation, 489
Sudden death, 490
Control, 492
Research questions, 494

UNIT IV

TRAUMA THROUGHOUT THE LIFESPAN

16 Trauma in Pregnancy, 499

Mechanism of injury, 500
Anatomic and physiologic considerations, 506
General assessment and interventions, 514
Research questions, 524

17 Trauma in Childhood, 527

Pediatric trauma systems, 527
Trauma susceptibility, 528
Prevention of trauma in childhood, 530
Anatomic and physiologic considerations, 531
General assessment and interventions, 534
Assessment and interventions related to specific injury, 543
Transport of the injured child, 546
Research questions, 551

18 Trauma in the Elderly, 555

Trauma susceptibility, 556
Anatomic and physiologic considerations, 558
General assessment, 568
General interventions, 570
Research questions, 585

UNIT V**SELECTED TRAUMA SEQUELAE****19 Relationships Between Physiologic Processes, 591**

Anticipating complications
Mechanism of injury, 592
Anatomic and physiologic considerations, 592
Diagnostic and monitoring procedures, 596
Assessment and interventions related to specific conditions, 597
General assessment and interventions, 606
Research questions, 620

UNIT VI**NURSING WITHIN THE TRAUMA CONTINUUM****20 Air Transport of the Trauma Patient, 625**

Flight nursing, 626
Ethical aspects, 629
Air transport, 630
Anatomic and physiologic considerations, 633
General assessment and interventions, 637
Research questions, 640

21 Emergency Department Care of the Trauma Patient, 643

Trauma care as a part of emergency nursing, 644
Care of the trauma patient: An emergency nurse's approach, 645
Special considerations, 651
Research questions, 655

22 Perioperative Care of the Trauma Patient, 659

Perioperative nursing role, 660
General assessment and interventions, 660
Research questions, 675

23 Critical Care of the Trauma Patient, 677

Assessment, 678
Planning care for the ICU trauma patient, 684
Nursing care of the ICU trauma patient, 692
Impact of critical care on the trauma patient, 696
Research questions, 702

24 Rehabilitation of the Trauma Patient, 707

Scope and philosophy of rehabilitation, 708
Rehabilitation continuum, 711
General assessment: Functional level, 713
Assessment and interventions related to specific injuries, 714
Impaired physical mobility, 723
Research questions, 739

Epilogue, 743**APPENDICES****A Hospital Criteria, 745**

Resources for optimal care of the injured patient

B Disaster Planning, 751**C American College of Emergency Physicians (ACEP) Guidelines, 759**

Emergency department equipment, instruments, and supplies
Guidelines for trauma care systems

D Organ Donation, 767

UNIT

I

TRAUMA AND SOCIETY
