

NANCYMARIE PHILLIPS

BERRY & KOHN'S

OPERATING ROOM TECHNIQUE

THIRTEENTH EDITION



B0050894

ห้องสมุดวพบ.นครราชสีมา

ELSEVIER



EVOLVE STUDY RESOURCES FREE WITH TEXTBOOK PURCHASE
EVOLVE.ELSEVIER.COM

Contents

Section 1: Fundamentals of Theory and Practice

- 1 Perioperative Education, 1**
 - The Art and Science of Surgery, 2
 - Perioperative Learner, 2
 - Perioperative Educator, 5
 - Application of Theory to Practice, 10
 - Expected Behaviors of Perioperative Caregivers, 10
 - Realities of Clinical Practice, 12
- 2 Foundations of Perioperative Patient Care Standards, 15**
 - Surgical Conscience, 15
 - Patient Rights, 16
 - Accountability, 16
 - Standardization of Patient Care, 16
 - Recommended Practices, 19
 - Professionalism, 25
 - Professional Perioperative Nursing, 25
 - Evidence-Based Practice, 26
 - Nursing Process, 26
 - Standards of Perioperative Nursing Practice, 28
 - Clinical Competency of the Perioperative Nurse, 32
 - Scope of Perioperative Nursing Practice, 32
 - Surgical Technology, 32
 - Standards of Practice for Surgical Technologists, 33
 - Clinical Competency of the Surgical Technologist, 33
 - Continual Performance Evaluation and Improvement, 34
- 3 Legal, Regulatory, and Ethical Issues, 36**
 - Legal Issues, 36
 - Liability, 37
 - TJC and Sentinel Events, 40
 - Consent, 41
 - Documentation of Perioperative Patient Care, 45
 - Legal Aspects of Drugs and Medical Devices, 48
 - Ethical Issues, 49

Section 2: The Perioperative Patient Care Team

- 4 The Perioperative Patient Care Team and Professional Credentialing, 53**
 - Dependence of the Patient on the Qualified Team, 53
 - Credentialing of Qualified Caregivers, 54
 - Perioperative Patient Care Team, 54

- 5 The Surgical First Assistant, 61**
 - First Assistant's Knowledge and Skill Level, 62
 - What Does the First Assistant Do?, 63
 - Disciplines Associated with First-Assisting in Surgery, 69
- 6 Administration of Perioperative Patient Care Services, 75**
 - Establishing Administrative Roles, 75
 - Interdepartmental Relationships, 80
 - Patient Care Departments, 80
 - Patient Services Departments, 81
 - Departmental Service Divisions, 82
 - Coordination Through Committees, 83
 - Surgical Services Management, 86
 - Budgeting and Financial Responsibility, 90
 - New Product and Equipment Evaluation, 92

Section 3: The Patient as a Unique Individual

- 7 The Patient: The Reason for Your Existence, 94**
 - The Patient as an Individual, 94
 - The Patient with Individualized Needs, 97
 - The Patient with Cancer, 104
 - The Patient with Chronic Comorbid Disease, 111
 - The Patient Who Is a Victim of Crime, 113
 - End-of-Life Care, 116
 - Death of a Patient in the Operating Room, 116
- 8 Perioperative Pediatrics, 118**
 - Indications for Surgery, 118
 - Considerations in Perioperative Pediatrics, 119
 - Perioperative Assessment of the Pediatric Patient, 120
 - Preoperative Psychological Preparation of Pediatric Patients, 127
 - Pediatric Anesthesia, 128
 - Intraoperative Pediatric Patient Care Considerations, 132
 - Common Surgical Procedures, 134
 - Postoperative Pediatric Patient Care, 151
- 9 Perioperative Geriatrics, 153**
 - Perspectives on Aging, 153
 - Perioperative Assessment of the Geriatric Patient, 156
 - Intraoperative Considerations, 165
 - Postoperative Considerations, 166

Section 4: The Perioperative Environment

- 10 Physical Facilities, 167**
Physical Layout of the Surgical Suite, 168
Transition Zones, 169
Peripheral Support Areas, 170
Operating Room, 173
Special Procedure Rooms, 183
Construction or Renovation of the Surgical Suite, 184
- 11 Ambulatory Surgery Centers and Alternative Surgical Locations, 187**
Ambulatory Surgical Setting, 187
Alternative Sites Where Surgery Is Performed, 195
- 12 Care of the Perioperative Environment, 200**
Standards for Cleanliness in the Surgical Environment, 200
Establishing the Surgical Environment, 200
Room Turnover Between Patients, 202
Daily Terminal Cleaning, 205
- 13 Potential Sources of Injury to the Caregiver and the Patient, 207**
Environmental Hazards, 207
Physical Hazards and Safeguards, 208
Chemical Hazards and Safeguards, 220
Biologic Hazards and Safeguards, 222
Risk Management, 224

Section 5: Surgical Asepsis and Sterile Technique

- 14 Surgical Microbiology and Antimicrobial Therapy, 227**
Microorganisms: Nonpathogens Versus Pathogens, 228
Types of Pathogenic Microorganisms, 232
Antimicrobial Therapy, 242
- 15 Principles of Aseptic and Sterile Techniques, 248**
What Is the Difference Between Aseptic and Sterile Techniques?, 249
Transmission of Microorganisms, 250
Human-Borne Sources of Contamination, 250
Nonhuman Factors in Contamination, 251
Sources of Infection, 252
Environmental Controls, 252
Standard Precautions, 254
Principles of Sterile Technique, 256
No Compromise of Sterility, 261
- 16 Appropriate Attire, Surgical Hand Hygiene, and Gowning and Gloving, 263**
Appropriate Operating Room Attire, 264
Surgical Hand Hygiene, 273
Gowning and Gloving, 275

- 17 Decontamination and Disinfection, 283**
Central Processing Department, 283
Central Service Personnel, 284
Instrument Cleaning and Decontamination, 284
Disinfection of Items Used in Patient Care, 289
Methods of Disinfection, 289
Disposable Products, 297
- 18 Sterilization, 300**
Sterilization versus Disinfection, 301
Sterilization, 301
Assembly of Instrument Sets, 302
Packaging Instruments and Other Items for Sterilization, 304
Thermal Sterilization, 307
Chemical Sterilization, 313
Radiation Sterilization, 320
Control Measures, 320
Custom Packs, 322

Section 6: Surgical Instrumentation and Equipment

- 19 Surgical Instrumentation, 324**
Fabrication of Metal Instruments, 324
Classification of Instruments, 325
Handling Instruments, 342
- 20 Specialized Surgical Equipment, 346**
Using Specialized Equipment in Surgery, 347
Electrosurgery, 347
Laser Surgery, 350
Microsurgery, 357
Ultrasonosurgery, 362
Integrated Technologies, 363

Section 7: Preoperative Patient Care

- 21 Preoperative Preparation of the Patient, 364**
Hospitalized Patient, 364
Preoperative Preparation of All Patients, 364
Transportation to the Operating Room Suite, 374
Admission to the Operating Room Suite, 375
- 22 Diagnostics, Specimens, and Oncologic Considerations, 379**
Diagnosing Pathology, 380
Specimens and Pathologic Examination, 380
Radiologic Examination, 383
Magnetic Resonance Imaging, 388
Nuclear Medicine Studies, 389
Ultrasonography, 390
Sensory Evoked Potential, 391
Plethysmography, 391
Endoscopy, 392
The Patient with Cancer, 392

Section 8: Pharmacology and Anesthesia

- 23 Surgical Pharmacology, 403**
 Pharmacology Baselines, 404
 Considerations in Surgical Pharmacology, 407
 Surgical Drug and Pharmaceutical Sources, 409
 Pharmacologic Forms Used in Surgery, 410
 Potential Complications Caused by Pharmaceuticals and Herbal Medicine, 412
- 24 Anesthesia: Techniques and Agents, 414**
 The Art and Science of Anesthesia, 415
 Choice of Anesthesia, 415
 Anesthesia State, 415
 Knowledge of Anesthetics, 416
 Types of Anesthesia, 416
 Alternatives to Conventional Anesthesia, 445

Section 9: Intraoperative Patient Care

- 25 Coordinated Roles of the Scrub Person and the Circulating Nurse, 447**
 Division of Duties, 447
 Efficiency of the Operating Room Team, 475
- 26 Positioning, Prepping, and Draping the Patient, 479**
 Preliminary Considerations, 479
 Anatomic and Physiologic Considerations, 484
 Equipment for Positioning, 486
 Surgical Positions, 492
 Physical Preparation and Draping of the Surgical Site, 498
- 27 Physiologic Maintenance and Monitoring of the Perioperative Patient, 514**
 Monitoring Physiologic Functions, 514

Section 10: Surgical Site Management

- 28 Surgical Incisions, Implants, and Wound Closure, 529**
 The Surgical Incision, 529
 Surgical Landmarks, 534
 Wound Closure, 537
- 29 Wound Healing and Hemostasis, 559**
 Mechanism of Wound Healing, 560
 Types of Wounds, 561
 Factors Influencing Wound Healing, 562
 Hemostasis, 565
 Wound Management, 574
 Complications of Wound Healing, 579
 Postoperative Wound Infections, 581
 Wound Assessment, 582
 Basic Wound Care, 582

Section 11: Perianesthesia and Postprocedural Patient Care

- 30 Postoperative Patient Care, 585**
 Postanesthesia Care, 585
 Admission to the Postanesthesia Care Unit, 587
 Discharge from the Postanesthesia Care Unit, 589
- 31 Potential Perioperative Complications, 591**
 Potential for Complications During and After Surgery, 591
 Respiratory Complications, 592
 Cardiovascular Complications, 595
 Fluid and Electrolyte Imbalances, 606
 Blood Volume Complications, 608
 Shock, 615
 Metabolic Crises, 616
 Iatrogenic Injury, 619

Section 12: Surgical Specialties

- 32 Endoscopy and Robotic-Assisted Surgery, 621**
 Eight Essential Elements of Endoscopy, 621
 Knowledge and Skill for a Safe Endoscopic Environment, 629
 Types of Endoscopic Procedures, 629
 Hazards of Endoscopy, 631
 Care of Endoscopes, 631
 Considerations for Patient Safety, 632
 Duties of the Assistant for Flexible Endoscopy, 633
 Robotic-Assisted Endoscopy, 633
- 33 General Surgery, 637**
 Special Considerations for General Surgery, 637
 Breast Procedures, 639
 Abdominal Procedures, 643
 Liver Procedures, 646
 Splenic Procedures, 647
 Pancreatic Procedures, 648
 Esophageal Procedures, 649
 Gastrointestinal Surgery, 650
 Intestinal Procedures, 654
 Colorectal Procedures, 659
 Abdominal Trauma, 661
 Anorectal Procedures, 663
 Hernia Procedures, 665
 Amputation of Extremities, 666
- 34 Gynecologic and Obstetric Surgery, 669**
 Anatomy and Physiology of the Female Reproductive System, 670
 Gynecology: General Considerations, 673
 Diagnostic Techniques, 674
 Vulvar Procedures, 678
 Vaginal Procedures, 679
 Abdominal Procedures, 683
 Perioperative Obstetrics, 686
 Complicated Birth, 690
 Assisted Reproduction, 694
 Nonobstetric Surgical Procedures and the Pregnant Patient, 696

- 35 Urologic Surgery, 701**
 Anatomy and Physiology of the Urinary System, 701
 Special Features of Urologic Surgery, 704
 Surgical Procedures of the Genitourinary System, 708
 Male Reproductive Organs, 719
 Endocrine Glands, 728
 Transsexual Surgery (Sex Reassignment), 728
 Postoperative Complications of Urologic Surgery, 729
- 36 Orthopedic Surgery, 730**
 The Art and Science of Orthopedic Surgery, 730
 Anatomy and Physiology of the Musculoskeletal System, 731
 Special Features of Orthopedic Surgery, 734
 Extremity Procedures, 739
 Fractures, 739
 Joint Procedures, 744
 Repair of Tendons and Ligaments, 752
 Cast Application, 753
 Complications After Orthopedic Surgery, 756
- 37 Neurosurgery of the Brain and Peripheral Nerves, 758**
 Anatomy and Physiology of the Brain, 758
 Special Considerations in Neurosurgery, 760
 Patient Care Considerations for Craniotomy, 763
 Surgical Procedures of the Cranium, 766
 Peripheral Nerve Surgery, 773
- 38 Spinal Surgery, 776**
 Anatomy and Physiology of the Spinal Cord and Vertebral Column, 776
 Special Considerations for Spinal Surgery, 780
 Pathology of the Vertebrae and Spinal Cord, 784
 Surgical Procedures of the Spine, 787
- 39 Ophthalmic Surgery, 794**
 Anatomy and Physiology of the Eye, 794
 Ophthalmic Surgical Patient Care, 795
 Special Features of Ophthalmic Surgery, 797
 Ocular Surgical Procedures, 800
 Eye Injuries, 811
 Ophthalmic Lasers, 812
- 40 Plastic and Reconstructive Surgery, 814**
 Special Features of Plastic and Reconstructive Surgery, 814
 Skin and Tissue Grafting, 817
 Head and Neck Plastic and Reconstructive Procedures, 824
 Plastic and Reconstructive Procedures of Other Body Areas, 827
 Burns, 833
- 41 Otorhinolaryngologic and Head and Neck Surgery, 839**
 General Considerations in Ear, Nose, and Throat Procedures, 839
 Ear, 842
 Nose, 847
 Oral Cavity and Throat, 851
 Neck, 854
 Face and Skull, 862
- 42 Thoracic Surgery, 869**
 Anatomy and Physiology of the Thorax, 869
 Special Features of Thoracic Surgery, 872
 Thoracic Surgical Procedures, 880
 Chest Trauma, 882
 Intrathoracic Esophageal Procedures, 883
 Complications of Thoracic Surgery, 884
- 43 Cardiac Surgery, 886**
 Anatomy of the Heart and Great Vessels, 886
 Physiology of the Heart, 888
 Special Features of Cardiac Surgery, 888
 Cardiac Surgical Procedures, 896
 Mechanical Assist Devices, 903
 Complications of Cardiac Surgery, 907
- 44 Vascular Surgery, 909**
 Anatomy and Physiology of the Vascular System, 909
 Vascular Pathology, 911
 Diagnostic Procedures, 912
 Special Features of Vascular Surgery, 914
 Conservative Interventional Techniques, 917
 Vascular Surgical Procedures, 919
- 45 Organ Procurement and Transplantation, 930**
 Types of Transplants, 930
 Tissue Transplantation, 930
 Organ Transplantation, 933