

5th Edition Changes

Outline

This outline will provide the instructor with new material, additional information expanding the 4th edition, and vocabulary and terminology, for the new 5th. It will provide you with the level of preparation needed prior to attending the 5th Edition instructor update and is not intended as a substitute to reading and learning the new 5th edition. Please review the changes prior to the 5th edition update and be familiar with them. Some of these changes may be discussed during our update. Any questions regarding this outline can be sent to either Leslie Carter or Bob Brewster, prior to the update or brought up during a question answer session during the update. Included is a vocabulary sheet that you will need to complete prior to the update.

Chapter 1 – Introduction

New Material:

Additional Material:

Expanded History of NSP taken from the Patroller's Manual (pages 1-3 to 1-18)

Terminology and Vocabulary

Assumption of Risk (pages 18 to 1-19)

Documentation (pages 19 to 20)

Joint Statement of Understanding (page 21)

Judgement (page 24)

EMS System Regulation (page 25)

Privacy Laws (page 25)

Much of the above information is dependent upon your state laws and local patrol protocols.

Chapter 2 – Emergency Care Systems

New Material:

This is a new chapter with a lot of new information, but is typically taught as local protocols. It should be reviewed and compared with the local protocols and resources for your area. It provides an excellent understanding of the EMS system and how it relates to us on the patrol level.

Chapter 3 – Rescue Basics

Additional Material:

Similar to Chapter 2 in the 4th edition. Goes more in-depth about the "Well being of the rescuer". Again, much of this material will be dependent on how it relates to local protocols.

Correct procedures for sharps handling (page 82)

Chapter 4 – Incident Command and Triage

New Material:

Federally mandated NIMS (National Incident Management System) explained, the new standardized framework for responding to, and managing, emergencies or situations involving multiple jurisdictions. NIMS is a national “all hazard” model, federally mandated for use by all government and civilian organizations which extends to ski patrols and OEC technicians. ICS (Incident Command Systems) is part of NIMS. (pages 101-113)

Additional Material:

ID-ME/New name for Triage System, acronym for 4 specific triage categories. Immediate (RED) Delayed (Yellow) Minimal (Green) Expectant (Black) (pages 114-115)

Chapter 5 – Moving Lifting and Transporting Patients

New Material:

Basic Helicopter Safety – How act around and load a helicopter, setting up an LZ (landing zone) etc. (pages 154-157)

Additional Material:

New Bridge Lift Acronym BEAN (page 144)

New Direct Ground Lift Acronym BEAM (page 144-145)

Local protocols;

CPR Sled Method –how to perform CPR on a sled(pages 158-159)

Chapter 6 – Anatomy and Physiology

New Material:

Body Cavities defined (pages 171-173)

Lymphatic System (pages 206-207)

Mostly changes in terminology;

Circulatory system now the Cardiovascular System

Musculoskeletal system now the Muscular system

Genital System now the Reproductive System

Skin System now Integumentary System

Terminology and Vocabulary:

Semi-Fowler position (page 171)

High-Fowler (page 171)

Chapter 7 – Assessment

New Material:

New blood pressure procedures (239-241)

Orthostatic BP test (pages 242-244)

New Skill:

Use of stethoscope for breathing sounds (pages 232-233)

Additional Material:

Return to primary (pages 217-226) and secondary assessment (pages 226-235)

New flow of assessment (pages 217-235)

BSI now covered under Standard Precautions and not introduced until physical exam

New Terminology and vocabulary:

Decorticate and Decerebrate posturing (page 224)

Cultural Diversity (page 245)

Chapter 8 – Medical Communications

New Material:

Medical documentation including refusal of care, communication methods and NSAA forms will all fall under local protocols

Terminology and Vocabulary:

SOAP (page 277)

CHEATED (page 278)

FACTUAL-OEC (pages 278-279)

SAILER (page 269)

HIPAA (page 268)

Chapter 9 – Airway Management

New Material:

Gravity/Finger Sweep (pages 297-298)

Pre oxygenation prior to suction (page 299)

Use of OPA as a bite block (page 302)

Additional Material:

Discussion of face shield use in ventilation (pages 304-305)

Protocol for O₂ delivery – legality (page 306)

Improved and detailed instructions for application of a nasal cannula (pages 300-302)

Reset flow rate by observing reserve bag when using non-rebreather (pages 312-313)

New pulse ox information (page 315)

Terminology and Vocabulary:

HAINES Recovery Position (page 300)

Chapter 10 – Shock Management

New Material :

5th Edition lists only 4 types of shock as opposed to 6 with very different terminology and causes of shock from the 4th edition. The categories have changed including new Obstructive and Distributive, that are then broken out into subsets.

Factors that exacerbate evolution of shock (pages 344-345)

Additional information:

Detailed protocols for respiratory support and supplemental O₂ delivery (pages 347 to 348)

Further information on shock is found in later chapters

Vocabulary and Terminology:

Cardiac Output (page 332)

Stroke Volume (page 332)

Hematocrit (page 334)

Chapter 11 – Altered Mental Status

New material:

Entire format of the chapter is changed

Chapter organized by AEIOU –TIPS (pages 360-363)

Diabetic Treatments (pages 378-379)

Vocabulary and Terminology:

New Terminology on classifications of seizures (pages 365-365)

Chapter 12 – Substance Abuse and Poisoning

New Material:

Bodily distribution (page 389)

Additional information:

Antipsychotics and antidepressants (page 391)

Designer drugs/club drugs (page 391)

Aspirin overdose (page 393)

Iron overdose (page 394)

Methane poisoning (page 394)

Poison Control, HAZMAT and CHEMTREC phone numbers (page 401)

Terminology and Vocabulary:

Absorption, formally transdermal (pages 387-388)

Chapter 13 Respiratory Emergencies

New Material:

Use of stethoscope (pages 421-422)

Pulse ox false readings (page 423)

Additional information:

Pediatric respiration rate change (page 412)

Common medications (page 420)

Hypoxic drive and COPD have been removed from this chapter

Chapter 14 – Allergies and Anaphylaxis

New Material:

Prevention (pages 440-442)

Signs and Symptoms of reaction categories (pages 444-445)

Additional information:

Removal of tight fitting articles (page 447)

Epinephrine dosing (page 447)

More detail for epinephrine administration (page 447-449)

Terminology and Vocabulary:

Antigen (page 436)

Mild allergic reaction (page 439)

Moderate allergic reaction (page 440)

Severe allergic reaction (page 440)

Chapter 15 – Cardiovascular Emergencies

New Material:

2010 guidelines for BLS CPR and AED administration are included , but will most likely be taught as a separate certification unit.

Hypertension (page 465)

Thromboembolism and pulmonary embolism (pages 468-469)

Abdominal aortic aneurysm, AAA (pages 469-470)

Thoracic aortic aneurysm (pages 468-469)

Heart valve disorders (page 470)

Emphasis on assisting patients with administration of nitroglycerin and aspirin, including indications and side effects (pages 485-487) *

*check state and local laws pertaining to administration

Additional information:

Addition of a link in CPR Chain (pages 476-477)

Terminology and vocabulary:

Sudden cardiac arrest, SCA (page 468)

Return of spontaneous circulation (page 477)

Cardiovascular disease, CVD (page 464)

Chapter 16 –Gastrointestinal and Genitourinary Emergencies

New Material :

Palpating bladder (page 509)

Additional information:

Abdominal aortic aneurysm, AAA (page 504)

Terminology and vocabulary:

Pyelonephritis (page 502)

Nephrolithiasis (pages 502-503)

Hematochezia (page 504)

Bowel obstruction (page 503)

Perforated bowel (page 503)

Chapter 17 – Principles of Trauma

New Material:

Trauma system roles (pages 526-528)*

Three phases of injury (pages 525-526)

*check your local hospital levels

Additional material:

Terminology and vocabulary:

Kinematics (page 517-520)

Index of suspicion (page 526)

Chapter 18 – Soft-Tissue Injuries

New Material:

Physiology of bleeding and clotting (pages 540-542)

Management of bleeding changed in principal and practice (pages 552-564)

Additional material:

Tourniquets (pages 553-555)

Pressure dressings (page 561)

Hemostatic dressings (pages 561-562)

Terminology and vocabulary:

Subungual hematoma (page 543)

High pressure injection (pages 548-549)

Mechanical tattooing (page 549)

Chapter 19 – Burns

New Material:

Radiation burns (page 564)

Cool wet vs. dry sterile dressings (page 592)

Additional material:

New categorie of burns; thermal, chemical, electrical and radiation (pages 581-584)

Early ALS intubation and airway management (page 588)

Discussion of Carbon Monoxide (page 589)

Who gets transported to a burn center (page 595)

Terminology and vocabulary:

4th degree burn (page 586)

Chapter 20 – Musculoskeletal Injuries

New Material:

Wilderness rescue tip. Bone protruding through skin (page 648)

New Skill:

Figure 8 splint for fractured Clavicle (page 652)

Management of posterior sternoclavicular dislocation (pages 652-653)

Additional Material:

General principles of splinting long bone fractures (pages 646-648)

Traction versus Tension (page 646)

Alignment of dislocated elbow time change (pages 654-656)

Distal femur fracture alignment time change (pages 660-665)

Terminology and vocabulary:

Removing the boot recommended after moving indoors is dependent on local protocols(page 630)

Chapter 21 – Head and Spine Injuries

New material:

Coup-countre-coup injury (pages 703-704)

Diffuse Axonal Injury (page 710)

Additional material:

Added to Common Medical Injury bullets Electrical injury/including lightning strike (pages 702-703)

Pediatric considerations (page 710)

Removing shoulder pads (page 725)

Terminology and vocabulary:

Neuron (page 700)

Jefferson fracture (page 711)

Hangman's fracture (page 711)

Atlas axis injury (pages 711-712)

Halo test (page 717)

Bull's eye (page 717)

Chapter 22 – Face, Eye and Neck Injuries

New Material:

Prosthetic eye management (page 762)

Additional Material:

Elimination of eye irrigation time limitations (page 761)

No discussion of removing contacts if more than three hours from hospital (page 762)

Do not apply pressure to both sides of the neck (page 763)

Terminology and vocabulary:

Chapter 23 – Thoracic Trauma

New Material:

LAP – look, auscultate, palpate (pages 783-784)

Additional Material:

Terminology and Vocabulary:

Chapter 24 – Abdominal and Pelvic Trauma

New Material:

Pelvic and abdominal assessment (pages 801-803)

New Skill:

Pelvic Binder (page 806)

Additional Material:

More specifics on organ injuries (pages 798-801)

More detail on abdominal/pelvic assessment (pages 801-803)

MOI Fx pelvis > full spinal immobilization???

Terminology and Vocabulary:

Kehr's sign (page 802)

Straddle injury (page 801)

Chapter 25 – Cold Related Emergencies

New Material:

Treatment for burial victim (page 831)

Additional Material:

Only 4 mechanisms of heat loss (pages 816-817)

Stages of Hypothermia (page 821)

Changes in core body temps. (page 825)

Rewarming Temperatures changed (page 828)

Application of Aloe Vera (page 828)

Full body immersion no longer acceptable (page 830)

Terminology and Vocabulary:

Frostnip, partial thickness and full thickness Frostbite (page 825)

Three types of Hypothermia changed to two (pages 819-820)

Afterdrop (page 820)

Active and passive rewarming (page 828)

Chapter 26 – Heat Related Emergencies

New Material:

Assessment of heat related illnesses (pages 850-852)

Full body immersion for heat stroke (pages 853-854)

Additional Material:

Change in core temp for heat stroke (page 842)

4 types of heat related illness, heat related syncope new (page 843)

Stretching for management of heat cramps (page 843)

Heat-related illness prevention (page 845)

Change in SPF for sunburn (page 846)

Pediatric use of SPF (page 846)

Expanded information for lightning (pages 848-849)

Change in salt amounts for heat exhaustion (page 853)

Terminology and Vocabulary:

Heat Index (page 840)

Chapter 27 – Plant and Animal Emergencies

New Material:

Mushrooms and Morels (pages 870-871)

Alligators and Crocodiles (page 879)

Additional Material:

Expanded plants (pages 863-869)

Expanded marine animals (pages 880-881)

Expanded terrestrial mammals (pages 882-884)

Terminology and Vocabulary:

Bullae (page 864)

Chapter 28 – Altitude-Related Emergencies

New Material:

Khumbu cough treatment (page 913)

Additional Material:

Terminology and Vocabulary:

Khumbu cough (page 906)

Radial Keratotomy blindness (page 906)

Peripheal edema (page 906)

Chilblains (page 907)

Gammow bag (page 913)

Chapter 29 – Water Emergencies

New Material:

Original water emergencies was four pages in the 4th edition. This has been expanded to a 21 page chapter. Much of the chapter is new material greatly expanded on the 4th.

Additional Material:

Common water emergencies (pages 924-931)

Injuries by aquatic animals (pages 930-931)

Aggravation of existing medical conditions (page931)

Preventing water emergencies (page 931)

Patient assessment in a water related emergency (pages 933-934)

Patient signs and symptoms AGE (page 934)

Patient signs and symptoms DCS (page 934)

Divers Alert Network (page 936)

Cold water submersion, unresponsive (page 936)

Terminology and Vocabulary:

Wet vs. Dry drowning (page 922)

Mammalian diving reflex (page 922)

What is an atmosphere (page 922)

Boyles Law (page 923)

Henry's Law and partial pressure (page 923)

Dalton's Law (pages 923-924)

Water tonicity (page 927)

Barotrauma (page 927)

Decompression sickness, DCS (pages 927-928)

Arterial gas embolism (page 928)

Squeeze and reverse squeeze (page 928)

Nitrogen Narcosis (page 929)

Swimmer's ear (page 929)

Chapter 30 – Pediatric Emergencies

New Material:

Pediatric Triangle (pages 963-965)

Anatomy and Physiology (pages 943-945)

Human growth and development (pages 946-950)

Additional Material:

A&P airway and larynx of a child (pages 943-944)

Common Pediatric Illnesses and Injuries (pages 950-962)

Pediatric trauma (pages 957-958)

Head injuries (page 958)

Pediatric trauma MOI (page 958)

Reporting child abuse (pages 960-961)

Shock (pages 961-962)

Expanded assessment information (pages 963-975)

Expanded patient management (pages 975-977)

Terminology and Vocabulary:

Surfactant (page 947)

Status epilepticus (pages 953-954)

Meningitis (page 954)

Comotio cordis (page 958)

Chapter 31 – Geriatric Emergencies

New Material:

There is no geriatrics information in the 4th edition, other than a minor reference to hypothermia.

Additional Material:

Terminology and Vocabulary:

Osteoporosis (page 989)

Scoliosis (page 989)

Kyphosis (page 989)

Lordosis (page 989)

Chapter 32 – Outdoor Adaptive Athletes

New Material:

Assessing athletes with intellectual and physical disabilities (pages 1029-1031)

Removal of disabled athlete from specialized equipment (page 1033)

Additional Material:

Expanded Adaptive Equipment (pages 1019-1026)

Paralympics Games listing (page 1020)

Warm weather sports equipment (page 1025-1026)

Terminology and Vocabulary:

Intellectual disabilities (pages 1012-1013)

Autonomic Dysfunction (page 1013)

Ski bra (page 1024)

Sliding Board (page 1022)

Tether (page 1023)

Service animals (page 1032)

Chapter 33 – Behavioral Emergencies and Crisis Response

New Material:

Chemical Exposures (page 1043)

Paranoia (pages 1044-1045)

Bipolar disorder (page 1045)

Restraints (pages 1058-1059)

Additional Material:

Hallucinations (page 1044)

Anxiety (page 1044)

Schizophrenia (page 1045)

Abuse (page 1046)

Terminology and Vocabulary:

Neurosis (page 1043)

Psychosis (pages 1043-1044)

Livor mortis (page 1048)

Dependent lividity (page 1048)

DNR page (1048)

Positional asphyxia (page 1059)

Chapter 34 – Obstetric and Gynecologic Emergencies

New Material:

Cystitis (page 1074)

Ovarian cysts (page 1074)

Pelvic inflammatory disease, PID (page 1074)

Vaginal bleeding, normal and abnormal (page 1075)

Sexual assault (pages 1075-1076)

Additional Material:

Pregnancy: Normal Physiological Changes (page 1077)

Trauma during pregnancy (pages 1088-1089)

Newborn BPM rates for CPR (page 1086)

Assesment of a pregnant patient (pages 1089-1090)

Management of a pregnant patient (page 1091)

Terminology and Vocabulary:

Gestation (page 1071)

Gestational period (page 1071)

Dysmenorrhea (pages 1073-1074)

Chapter 35 –Special Operations and Ambulance Operations

New Materials:

All new material. Most of which will be dependent upon state, local and area protocols.

Additional Materials:

Terminology and Vocabulary:

Chapter 36 – ALS Interface

IMPORTANT EDITOR'S NOTE

At this point you have completed the official National Ski Patrol Outdoor Emergency Care Certification program.

Chapter 36 is **NOT** is not part of that certification program. This chapter is only approved for use by patrols that have received management's approval to take this class, have instructors who are ALS certified to teach the program, have treatment protocols in place to use these skills, have a Physician Medical Director and are authorized to use these skills in accordance with that states EMS regulations.

The final chapter of this text discusses Advanced Life Support that is performed by advanced providers, and not by OEC technicians. Various procedures are explained and the role of the responder who is trained as an AEMT, paramedic, physician or other provider with advanced training is explained. The OEC technician is not permitted to perform these procedures.. This information is provided so that you first will understand what the advanced providers are doing and why, and also so that you can provide some assistance to them as they are setting up their equipment and treating the patient.

There are some resorts that may allow OEC technicians to *assist* an ALS responder. When the OEC technician assumes the role of helper for an ALS provider, there may be additional liability for the OEC technician. Special training *beyond the scope* of an OEC technician is required to *perform* the activities in Chapter 36.