



National Ski Patrol
Outdoor Emergency Care Enhancement Seminar
Instructor Guide
October 2003

National Ski Patrol

Outdoor Emergency Care Enhancement Seminar

Introduction

The National Ski Patrol's Outdoor Emergency Care Enhancement Seminars are continuing education tools designed to enhance existing OEC skills for OEC technicians through an injury or illness-directed practice session selected from a series of pre-designed modules. Each session will be presented in an environment realistic to the injuries addressed in the selected module. Each module is formatted to include an introduction of topics and objectives, skills demonstrations, practice scenarios, summary and review, and a group discussion. This continuing education opportunity is not meant to replace or supercede existing OEC refresher requirements.

Prerequisites: Current OEC technician

Time Commitment: Approximately 3½ hours per module

Fees: National: None, Division/Region/Local: Varies

Credential: NSP Certificate of Achievement

Instructor of Record: Current OEC Instructor

Required texts: *Outdoor Emergency Care*, 4th Edition

Recommended References: *Outdoor Emergency Care Instructor's Manual* (4th Edition version)
Outdoor Emergency Care Student Workbook (4th Edition)
Outdoor Emergency Care Instructor's ToolKit 2003
Outdoor Emergency Care TestBank 2003
NSP OEC videos
www.OECzone.com

Goals and Objectives

- ❑ To improve OEC skills by providing OEC technicians the opportunity to learn, review, practice, question, and challenge themselves with OEC skills in a relaxed, non-evaluative, realistic environment that can be tailored to meet the needs of the individual OEC technician, the NSP patrol, or the ski area.
- ❑ To provide OEC instructors with a flexible tool for OEC continuing education opportunities.
- ❑ To improve patroller image within the ski industry, with the public, and with the ski area.

Instructor-to-Student Ratio: A maximum ratio of six students per one OEC instructor is recommended. If demonstration scenarios are offered, additional instructors may be needed.

How to Organize an Outdoor Emergency Care Enhancement Seminar

- ❑ Register the seminar with the education department at the national office prior to holding the event.

- ❑ Obtain participant information and attendance records for submission to the national office.
- ❑ Organize sufficient qualified instructor staff to accommodate the 1:6 instructor-to-student ratio, to help with demonstration scenarios if offered, and to act as possible victims for scenarios.
- ❑ Assemble the appropriate equipment for the number of participants enrolled. See the recommended equipment list for each seminar module.
- ❑ Review the objectives for the module being presented to instruct and challenge the participants. See selected module outline, patient assessment considerations, and recommended skills and skill guides to be included. For each module, the primary chapter references are listed, but the module may require reference from many other chapters, such as those including material on anatomy and physiology, patient assessment, use of oxygen and airway adjuncts, bleeding control, shock management, mechanism of injury, and rescue techniques.
- ❑ Choose appropriate activities for each particular session.
- ❑ Review the seminar content to ensure that the material is consistent with *Outdoor Emergency Care*, 4th edition. Area/patrol-specific protocols covered must also be consistent with *OEC* 4th edition.
- ❑ Advise participants to bring the first-aid belt/pack/equipment they usually carry, and to be dressed accordingly for all weather conditions that may occur at the seminar location.
- ❑ Evaluate safety risks for the selected module and prepare to manage the risks in order to keep the seminar safe for all instructors and participants.
- ❑ Limit the costs to the participants to actual direct costs associated with conducting the seminar.
- ❑ Encourage completion of course evaluations prior to leaving seminar. Forms can be found online or in the *OEC Instructor's Manual*.

OEC Enhancement Seminar Instructor-of-Record Notes

- ❑ This OEC Enhancement Seminar should simply be the best first-aid clinic the participants have ever attended. How an instructor conducts the teaching in the seminar is up to the individual and his or her personal style of teaching. However, NSP's goal is to ensure that all members participating in these events across the country receive consistent information. This is the reason for the recommended module outlines.
- ❑ Preface the day with a few motivational thoughts on improving and enhancing the participants' OEC skills. Encourage and motivate the participants to evaluate their own OEC strengths and weaknesses as they progress through the seminar
- ❑ Challenge the participants, and strive for a positive, safe training experience for the instructors and students.
- ❑ Strive to make the practice fun and meaningful. Plan ways to accommodate a variety of skill levels, providing review through problem-solving situations. Be sure that everyone gets individual feedback specific to their needs, as well as recommendations on how to continue to improve their skills with future OEC clinics in their region, NSP programs, NSP publications, and on-line at www.OECzone.com.

- Complete the course completion record for the seminar and forward it to the national office within 14 days of the completion of the seminar.
- It is strongly encouraged that an OEC instructor trainer attends and observe each session.

National Ski Patrol
Outdoor Emergency Care Enhancement Seminar
Module One
Injuries to the Lower Extremities

You are the Rescuer

(Note: You may substitute any applicable lower-extremity scenario as a lead-in to this module, such as a real incident that happened at your ski area.)

You are dispatched from the ski patrol office at the top of the mountain to the terrain park. The report indicates that a snowboarder is down with a leg injury after colliding with a rail slide.

Module Objectives

- ❑ Locate and name the various bones, major muscle groups, and joints of the lower body, excluding the hip.
- ❑ Define and describe the various bone, joint, and soft tissue injuries which one might expect to see on the lower body, excluding the hip.
- ❑ Describe the principles of splinting bone and joint injuries, including open fractures.
- ❑ Demonstrate splinting and bandaging skills necessary to treat lower body injuries.
- ❑ Describe transportation options for patients with such injuries, including positioning in a toboggan.

OEC 4th Edition References

Primary References: *Outdoor Emergency Care*, 4th Edition, Chapters 24 & 25

Assessment of the Lower Extremity Injury

Scene Size-Up

Initial Assessment

Focused History and Physical Exam for Responsive Trauma Patients

Assessing Pulse, Motor, and Sensory Function

Caring for Musculoskeletal Injuries

Skill Drill 7-2: pg. 220

Skill Drill 24-1: pg. 586

Skill Drill 24-2: pg. 589

Injuries to the Femur

Traction Splinting

Sager Splint

Thomas Splint

Pp. 626-629

Skill Drill 24-6: pg. 598

Skill Drill 24-7: pg. 603

Figure 24-29, pg. 600

Injuries to the Knee

Pp. 629-634

Injuries to the Tibia and Fibula

Pp. 634-635

Skill Drill 25-2, pg. 636

Injuries to the Ankle

Pp.637-640

Injuries to the Foot

Pp. 640-641

Application of a Quick Splint

Skill Drill 24-3, pg. 591

Removal of Ski/Snowboard Boots

Skill Drill 24-8: pg. 607
Tables 24-2 and 24-3, pg.606

Review and Practice with Various Ski/Snowboard Binding Systems

Skill Guides that may be applicable

Patient Assessment – Rapid Body Survey	<i>pg. 845</i>
Patient Assessment – Responsive Trauma Patient	<i>pg. 843</i>
Patient Assessment – Detailed Physical Exam and Ongoing Assessment	<i>pg. 846</i>
Bleeding Control/Shock Management	<i>pg. 847</i>
General Management of Fractures	<i>pg. 848</i>
Management of an Open Fracture	<i>pg. 849</i>
Traction Splinting	<i>pg. 850</i>
Ski Boot Removal	<i>pg. 851</i>
Lifting Techniques	<i>pp. 856-860</i>

Note: Hip and pelvic injuries are covered in OEC Enhancement Seminar Module 4.

Choose Appropriate Equipment for the Lower Extremity Module

- Traction splints – various types used at local areas
- Oxygen equipment and airway adjuncts
- Quick splints/box splints/splinting and padding material
- Various other splints used at their area (e.g., vacuum splints, airplane splints, SAM splints)
- Ski/snowboard boots for patients for boot removal practice
- Spinal immobilization equipment: backboards, collars, webbing or strap systems
- Bandaging materials/tape
- Blankets/pads/tarps for scenarios
- Seminar student evaluation forms

Skills and Scenario Demonstrations

Instructors may demonstrate each of the individual skills for the scenarios to be practiced, or they may choose to demonstrate one or more full start-to-finish simulated scenarios.

Points to Ponder Regarding Lower Extremity Injuries

- There is always significant blood loss with fractures of the femoral shaft and a high probability of shock.
- Due to the loss of blood and high potential for shock, femoral shaft fractures may potentially be a life-threatening injury.
- Pediatric injuries near joints usually involve the weaker growth plates, and should be stabilized and transported in a timely fashion (see pg. 620).
- Angulated and/or rotated fractures of the tibia/fibula frequently must be realigned to their proper anatomic relationship prior to splinting (pp. 634-635, Skill Drill 25-2, pg. 636).
- Knee ligament sprains continue to be the most common injury in snowsports.
- Extremity injuries that impair circulation or nerve function distal to the injury are urgent situations that require careful assessment, prompt transport, and frequent reassessment of neurovascular functions.

- CMS functions below the injury site should always be monitored before and after splinting, and also during transport if possible.
- Provide immediate transport to any patient if you are unable to restore a pulse to a pulseless limb by re-alignment.
- Suspect a fracture in any older patient or child with even a mild injury.

Practice Scenarios

It is recommended that instructors arrange a minimum of two practice scenarios on lower extremity injuries for the participants to practice. These can be taken from the *OEC TestBank*, OEC textbook, *OEC Instructor's Manual*, or the *Ski Patroller's Manual*, or instructors may create their own scenarios. As a minimum, it is recommended that practice in the following skills be covered during the two scenarios:

- Complete patient assessment
- Traction splinting of a mid-shaft femur fracture
- Treatment of an open wound or open fracture in a lower extremity
- Treatment for shock
- Optional: One multiple-injury or multiple victim scenario

Summary and Review

After completion of the practice scenarios, a brief summary and review of the topics and skills covered in the seminar should be presented, and how these skills can be applied to and enhance their everyday patrolling experiences. This could be a question-prompted interactive session with the participants.

Group Discussion

The summary and review could lead into an instructor-led group discussion of the seminar module just presented, which may include, but is not limited to

- Encouragement of participants to evaluate their own OEC skills based on the practice sessions
- Participant's comments and ideas
- Recounting of actual difficult module-related incidents they have encountered and what made them difficult
- Ideas for future modules to be covered by their group
- Participant's evaluation of the module and its presentation (provide written evaluation form)
- Ideas for continuation of skills improvement, such as future OEC Enhancement Seminars in their area, OEC 4th edition Rescuer Skill Drills (Pg. XIX), OEC 4th edition Student Workbook, and on-line learning at www.OECzone.com

Conclusion

Instructors may issue the Certificate of Achievement at this time if pre-ordered, or inform participants that they will be mailed.

National Ski Patrol
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Module Two
Injuries to the Upper Extremities

You are the Rescuer

(Note: You may substitute any applicable upper-extremity scenario as a lead-in to this module, such as a real incident that happened at your ski area.)

You are on duty at the top of the race course when you receive a report that a racer has fallen after taking a jump and is complaining of arm and shoulder pain.

Module Objectives

- ❑ Locate and name the various bones, major muscle groups, and joints of the upper body.
- ❑ Define and describe the various bone, joint, and soft tissue injuries that one might expect to see on the upper body.
- ❑ Describe the principles of splinting bone and joint injuries, including open fractures.
- ❑ Demonstrate splinting and bandaging skills necessary to treat upper-body injuries.
- ❑ Describe transportation options for patients with such injuries, including positioning in a toboggan.

OEC 4th Edition References

Primary References: *Outdoor Emergency Care*, 4th Edition, Chapters 24 & 25

Assessment of the Upper-Extremity Injury

Scene Size-Up

Initial Assessment

Focused History and Physical Exam for Responsive Trauma Patients

Assessing Pulse, Motor, and Sensory Function

Caring for Musculoskeletal Injuries

Skill Drill 7-2: pg. 220

Skill Drill 24-1, pg. 586

Skill Drill 24-2, pg. 589

Injuries of the Clavicle and Scapula

Pp. 615-616

Dislocation of the Shoulder

Pp.616-617

Fractures of the Humerus

Pp. 617-619

Also see Table 25-1, pg. 618

Elbow Injuries

Pp. 619-621

Fractures of the Forearm and Wrist

Pg.621

Injuries of the Wrist Joint and Hand

Pp. 621-623

Skill Drill 25-1, pg. 623

Skill Drills applicable to many upper-extremity injuries

#24-4: Applying a Sling and Swathe

Pg. 594

#24-5: Forming and Applying a Blanket Roll Splint

Pg. 595

Skill Guides that may be applicable

Patient Assessment – Rapid Body Survey	Pg. 845
Patient Assessment – Responsive Trauma Patient	Pg. 843
Patient Assessment – Detailed Physical Exam and Ongoing Assessment	Pg. 846
Bleeding Control/Shock Management	Pg. 847
Vital Signs Determination	Pg. 836
General Management of Fractures	Pg. 848
Management of an Open Fracture	Pg. 849
Lifting Techniques	Pp. 856-860
Use of Oxygen and Airway Adjuncts	Pp. 837-841

Choose Equipment for the Upper Extremity Module

- Quick splints/box splints/splinting and padding material
- Various other splints used at local areas (e.g., vacuum splints, airplane splints, SAM splints)
- Oxygen equipment and airway adjuncts
- Bandaging materials/tape
- Blankets/pads/tarps for scenarios
- Seminar student evaluation forms

Skills and Scenario Demonstrations

Instructors may demonstrate each of the individual skills for the scenarios to be practiced, or they may choose to demonstrate one or more full start-to-finish simulated scenarios.

Points to Ponder Regarding Upper Extremity Injuries

- Pediatric injuries near joints usually involve the weaker growth plates, and should be stabilized and transported in a timely fashion (see pg. 620).
- Extremity injuries that impair circulation or nerve function distal to the injury are urgent situations that require careful assessment, prompt transport, and frequent reassessment of neurovascular functions.
- CMS functions below the injury site should always be monitored before and after splinting, and also during transport if possible.
- Provide immediate transport to any patient if you are unable to restore a pulse to a pulseless limb by applying traction.
- Suspect a fracture in any older patient or child with even a mild injury.

Practice Scenarios

It is recommended that instructors arrange a minimum of two practice scenarios on upper extremity injuries for the participants to practice. These can be taken from the *OEC TestBank*, *OEC textbook*, *OEC Instructor's Manual*, or the *Ski Patroller's Manual*, or instructors may create their own scenarios. As a minimum, it is recommended that practice in the following skills be covered during the two scenarios:

- Complete patient assessment
- Treatment for an open wound or open fracture in an upper extremity
- Splinting and immobilization of an upper extremity injury
- Treatment for shock
- Optional: One multiple-injury or multiple victim scenario

Summary and Review

After completion of the practice scenarios, a brief summary and review of the topics and skills covered in the seminar should be presented, and how these skills can be applied to and enhance their everyday patrolling experiences. This could be a question-prompted interactive session with the participants.

Group Discussion

The summary and review could lead into an instructor-led group discussion of the seminar module just presented, which may include, but is not limited to

- ❑ Encouragement of participants to evaluate their own OEC skills based on the practice sessions
- ❑ Participant's comments and ideas
- ❑ Recounting of actual difficult module-related incidents they have encountered and what made them difficult
- ❑ Ideas for future modules to be covered by their group
- ❑ Participant's evaluation of the module and its presentation (provide written evaluation form)
- ❑ Ideas for continuation of skills improvement, such as future OEC Enhancement Seminars in their area, OEC 4th edition Rescuer Skill Drills (OEC 4th edition, pg. XIX), *OEC Student Workbook* fourth edition, and on-line learning at www.OECzone.com

Conclusion

Instructors may issue the Certificate of Achievement at this time if pre-ordered, or inform participants that they will be mailed.

National Ski Patrol
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Module Three
Injuries to the Head, Face, Neck, and Back

You are the Rescuer

(Note: You may substitute any applicable head, face, neck, or back scenario as a lead-in to this module, such as a real incident that happened at your ski area.)

While skiing, a guest emerges from the forest and states that his companion has collided head-on with a tree while skiing the trees off the run.

Module Objectives

- ❑ Locate and name the anatomical features of the head, face, neck, and back, including the bones of the spine and back.
- ❑ Define and describe the various bone, joint, and soft tissue injuries which one might expect to see on the head, face, neck, and back.
- ❑ Discuss the factors that would impact the decision to place a patient on a backboard, including mechanism of injury, level of responsiveness, and motor and neurological factors.
- ❑ Describe the principles of splinting injuries to the neck and back.
- ❑ Describe the unique needs of patients with injuries to the head and face, especially soft tissue injuries in the areas of the mouth, nose, and eyes.
- ❑ Demonstrate splinting and bandaging skills necessary to treat head, face, neck, and back injuries.
- ❑ Describe transportation options for patients with such injuries, including positioning in a toboggan.

OEC 4th Edition References

Primary References: *Outdoor Emergency Care*, 4th Edition, Chapters 21 & 26

Assessment of Injuries to the Head, Face, Neck, and Back:

Scene Size-Up

Initial Assessment

Focused History and Physical Exam for Responsive Trauma Patients

Assessing Pulse, Motor, and Sensory Function

Skill Drill 7-2: pg. 220

Skill Drill 24-1, pg. 586

Controlling Bleeding from a Neck Injury

Skill Drill 21-1: pg. 545

Manual In-Line Stabilization

Skill Drill 26-1: pg. 653

Spinal Immobilization

Skill Drill 26-2: pp.655-656

Application of a Standing Backboard

Skill Drill 26-3: pg. 658

Application of a Cervical Collar

Skill Drill 26-4: pg. 666

Helmet Removal	<i>Skill Drill 26-5: pg. 670</i>
Review of the Signs and Symptoms of Brain Injury	<i>Pg. 662</i>
Review of Eye Injuries and Treatments	<i>Chapter 20</i>
Review of the AVPU Scale (<i>pg. 146</i>) and the Glasgow Coma Scale (<i>pp. 147 and 663</i>)	
Skill Guides, which may be applicable	
Patient Assessment – Rapid Body Survey	<i>Pg. 845</i>
Patient Assessment – Responsive Trauma Patient	<i>Pg. 843</i>
Patient Assessment – Detailed Physical Exam and Ongoing Assessment	<i>Pg. 846</i>
Bleeding Control/Shock Management	<i>Pg. 847</i>
Vital Signs Determination	<i>Pg. 836</i>
Spinal Immobilization	<i>Pg. 852</i>
Application of a Standing Backboard	<i>Pg. 853</i>
Helmet Removal	<i>Pg. 854</i>
Extrication from Difficult Positions	<i>Pg. 855</i>
Lifting Techniques	<i>Pp.856-860</i>
Use of Oxygen and Airway Adjuncts	<i>Pp.837-841</i>

Choose Equipment for the Head, Face, Neck, and Back Injury Module

- Spinal immobilization equipment: backboards, collars, webbing, or strap systems, including items used specifically for pediatric immobilization
- Oxygen equipment and airway adjuncts
- Bandaging materials/tape
- Blankets/pads/tarps for scenarios
- Seminar student evaluation forms

Skills and Scenario Demonstrations

Instructors may demonstrate each of the individual skills for the scenarios to be practiced, or they may choose to demonstrate one or more full start-to-finish simulated scenarios.

Points to Ponder Regarding Injuries to Head, Face, Neck and Back

- Injuries to the face and throat may impair breathing, so it is important to assess and treat these potentially life-threatening injuries quickly.
- Blunt and/or penetrating injuries to the neck may cause subcutaneous emphysema (air leaking from the airway into the subcutaneous tissues of the neck and/or chest), which is characterized by a crackling sensation upon palpation. This usually indicates an injury to the airway that could quickly progress to complete obstruction, so it is important to monitor the airway and transport rapidly.
- If a vein in the neck has been lacerated, be alert for the possibility of an air embolism. This may cause cardiac arrest by air being sucked into the heart chambers. Keeping patients in a head downhill position and never elevating the head above the heart will help prevent an air embolism with this injury.
- Protecting the brain and spinal cord from further damage is vital to the patient's future ability to live a normal life, so lean toward caution and overprotection in assessing and treating these injuries. Even small movement can significantly injure the spinal cord.

- Assessment of motor and sensory functions both before and after immobilizing the patient and observation of level of responsiveness throughout your care is essential for these patients.
- Assess pupil size and reaction and level of responsiveness with the AVPU or Glasgow scale initially and every 5 minutes in an unstable patient and every 15 minutes in a stable patient, recording all observations.
- If you suspect a skull fracture, do not apply excessive pressure to an open scalp wound as you may increase intracranial pressure or push bone fragments into the brain.
- Skull fracture is a possibility if you observe ecchymosis (discoloration) around the eyes (raccoon eyes) or behind one ear over the mastoid process (Battle's sign). These signs may typically be delayed.
- Pediatric patients may need additional padding under the shoulders and along their sides for proper immobilization when placed on an adult size backboard (pg. 671).

Practice Scenarios

It is recommended that instructors arrange a minimum of two practice scenarios on injuries to the head, face, neck, and back for the participants to practice. These can be taken from the *OEC TestBank*, *OEC Textbook*, *OEC Instructor's Manual*, or the *Ski Patroller's Manual*, or instructors may create their own scenarios. As a minimum, it is recommended that practice in the following skills be covered during the two scenarios:

- Complete patient assessment
- Complete spinal immobilization
- Helmet removal
- Use of oxygen and airway adjuncts
- Treatment for shock
- Optional: One multiple-injury or multiple victim scenario

Summary and Review

After completion of the practice scenarios, a brief summary and review of the topics and skills covered in the seminar should be presented, and how these skills can be applied to and enhance their everyday patrolling experiences. This could be a question-prompted interactive session with the participants.

Group Discussion

The summary and review could lead into an instructor-led group discussion of the seminar module just presented, which may include, but is not limited to

- Encouragement of participants to evaluate their own OEC skills based on the practice sessions
- Participant's comments and ideas
- Recounting of actual difficult module-related incidents they have encountered and what made them difficult
- Ideas for future modules to be covered by their group
- Participant's evaluation of the module and its presentation (provide written evaluation form)
- Ideas for continuation of skills improvement, such as future OEC Enhancement Seminars in their area, *OEC 4th edition Rescuer Skill Drills* (*OEC 4th edition*, pg. XIX), *OEC Student Workbook* fourth edition, and on-line learning at www.OECzone.com

Conclusion

Instructors may issue the Certificate of Achievement at this time if pre-ordered, or inform participants that they will be mailed.

National Ski Patrol
Outdoor Emergency Care Enhancement Seminar
Module Four
Injuries to the Hip and Pelvis

You are the Rescuer

(Note: You may substitute any applicable hip/pelvic scenario as a lead-in to this module, such as a real incident that happened at your ski area.)

You are leaving the aid room when you hear a report on your radio of a child who has fallen from the chairlift in the beginner area not far from you.

Module Objectives

- ❑ Locate and name the bones of the pelvis and hip, including their articulation points with the spine and femur.
- ❑ Define and describe the various bone, joint, and soft tissue injuries that one might expect to see associated with the hip or pelvis.
- ❑ Demonstrate the principles of splinting hip/pelvic injuries, including the preferred method of lifting/moving this patient.
- ❑ Describe transportation options for patients with such injuries, including positioning in a toboggan.

OEC 4th Edition References

Primary References: Outdoor Emergency Care, 4th Edition, Chapters 24 & 25

Assessment of Injuries to the Hip and Pelvis

Scene Size-Up

Initial Assessment

Focused History and Physical Exam for Responsive Trauma Patients

Assessing Pulse, Motor, and Sensory Function

Skill Drill 7-2: pg. 220

Skill Drill 24-1, pg. 586

Manual In-Line Stabilization

Skill Drill 26-1: pg. 653

Spinal Immobilization

Skill Drill 26-2: pp.655-656

Skill Guides that may be applicable

Patient Assessment – Rapid Body Survey

Pg. 845

Patient Assessment – Responsive Trauma Patient

Pg. 843

Patient Assessment – Detailed Physical Exam and Ongoing Assessment

Pg. 846

Bleeding Control/Shock Management

Pg. 847

Vital Signs Determination

Pg. 836

Spinal Immobilization

Pg. 852

Extrication from Difficult Positions

Pg. 855

Lifting Techniques

Pp.856-860

Use of Oxygen and Airway Adjuncts

Pp. 837-841

Choose Equipment for the Hip/Pelvic Injury Module

- ❑ Spinal immobilization equipment: backboards, collars, webbing, or strap systems
- ❑ Blankets or pillows for immobilization
- ❑ Oxygen equipment and airway adjuncts
- ❑ Bandaging materials/tape
- ❑ Blankets/pads/tarps for scenarios
- ❑ Seminar student evaluation forms

Skills and Scenario Demonstrations

Instructors may demonstrate each of the individual skills for the scenarios to be practiced, or they may choose to demonstrate one or more full start-to-finish simulated scenarios.

Points to Ponder Regarding Injuries to Hip and Pelvis

- Extremity injuries that impair circulation or nerve function distal to the injury are urgent situations that require careful assessment, prompt transport, and frequent reassessment of neurovascular functions.
- Fractures of the pelvis may be accompanied by life-threatening loss of blood into the pelvic space, often with no visible signs, so treatment for shock should begin immediately.
- Patients with pelvic fractures will likely feel most comfortable supine with their knees partially flexed, or on their side in a fetal position. They should be immobilized using a bridge lift on a backboard in this position and transported rapidly.
- Patients with hip dislocations will likely feel most comfortable supine or on the side opposite the dislocation, with the injured hip partially flexed, internally rotated, and adducted across the opposite thigh. Immobilize the patient in this position on a long backboard and transport rapidly.
- Assessment of circulation, motor, and sensory functions both before and after immobilizing the patient and observation of level of responsiveness throughout your care is essential for these patients.
- Suspect a fracture in any older patient or child with even a mild injury.
- Pediatric injuries near joints usually involve the weaker growth plates, and these fractures should be stabilized and transported in a timely fashion (see pg. 620).
- Pediatric patients may need additional padding under the shoulders and along their sides for proper immobilization when placed on an adult size backboard (pg. 671).

Practice Scenarios

It is recommended that instructors arrange a minimum of two practice scenarios on injuries to the hip and pelvis for the participants to practice. These can be taken from the *OEC TestBank*, *OEC textbook*, *OEC Instructor's Manual*, or the *Ski Patroller's Manual*, or instructors may create their own scenarios. As a minimum, it is recommended that practice in the following skills be covered during the two scenarios:

- ❑ Complete patient assessment
- ❑ Complete spinal immobilization
- ❑ Use of oxygen and airway adjuncts
- ❑ Treatment for shock
- ❑ Optional: One multiple-injury or multiple victim scenario

Summary and Review

After completion of the practice scenarios, a brief summary and review of the topics and skills covered in the seminar should be presented, and how these skills can be applied to and enhance their everyday patrolling experiences. This could be a question-prompted interactive session with the participants.

Group Discussion

The summary and review could lead into an instructor-led group discussion of the seminar module just presented, which may include, but is not limited to

- ❑ Encouragement of participants to evaluate their own OEC skills based on the practice sessions
- ❑ Participant's comments and ideas
- ❑ Recounting of actual difficult module-related incidents they have encountered and what made them difficult
- ❑ Ideas for future modules to be covered by their group
- ❑ Participant's evaluation of the module and its presentation (provide written evaluation form)
- ❑ Ideas for continuation of skills improvement, such as future OEC Enhancement Seminars in their area, *OEC 4th edition Rescuer Skill Drills* (*OEC 4th edition*, pg. XIX), *OEC Student Workbook* fourth edition, and on-line learning at www.OECzone.com

Conclusion

Instructors may issue the Certificate of Achievement at this time if pre-ordered, or inform participants that they will be mailed.

National Ski Patrol
Outdoor Emergency Care Enhancement Seminar
Module Five
Injuries to the Chest, Abdomen and Genitalia

You are the Rescuer

(Note: You may substitute any applicable chest or abdomen/genitalia scenario as a lead-in to this module, such as a real incident that happened at your ski area.)

You are working in the aid room when a guest is escorted into the room by his friends. He has an impaled tree branch protruding from his abdomen. The friends state he impaled himself on a tree while snowboarding near the bottom of the mountain.

Module Objectives

- ❑ Locate and name the various bones, muscles groups, and organs associated with the chest, abdomen (four quadrants), and genitalia.
- ❑ Define and describe the various bone and soft tissue injuries that one might expect to see associated with the chest, abdomen, or genitalia.
- ❑ Define and describe signs and symptoms one might expect to encounter with closed soft tissue injuries to the abdomen.
- ❑ Describe and demonstrate the principles of emergency care for injuries to these areas, including bleeding control and splinting.
- ❑ Describe transportation options for patients with such injuries, including positioning in a toboggan.

OEC 4th Edition References:

Primary References: *Outdoor Emergency Care*, 4th Edition, Chapters 19, 22, & 23

Assessment of Injuries to the Chest, Abdomen and Genitalia

Scene Size-Up

Initial Assessment

Focused History and Physical Exam for Responsive Trauma Patients

Skill Drill 7-2: pg. 220

Review of Open Chest Injuries

Pneumothorax

Pg. 553

Sucking Chest Wound

Pg. 553

Tension Pneumothorax

Pg. 554

Hemothorax

Pg. 555

Hemopneumothorax

Pg. 555

Flail Chest

Pg. 555

Sealing a Sucking Chest Wound

Skill Drill 19-2: pg. 508

Stabilizing an Impaled Object

Skill Drill 19-3: pg. 509

Review of DCAP-BTLS

pp. 211 and 565

Review of the AVPU Scale (pg. 146) and the Glasgow Coma Scale (pp. 147 and 663)

Skill Guides that may be applicable

Patient Assessment – Rapid Body Survey	Pg. 845
Patient Assessment – Responsive Trauma Patient	Pg. 843
Patient Assessment – Detailed Physical Exam and Ongoing Assessment	Pg. 846
Bleeding Control/Shock Management	Pg. 847
Vital Signs Determination	Pg. 836
Lifting Techniques	Pp.856-860
Use of Oxygen and Airway Adjuncts	Pp. 837-841

Recommended Equipment for the Chest, Abdomen, and Genitalia Injury Module

- ❑ Oxygen equipment and airway adjuncts
- ❑ Bandaging materials/tape
- ❑ Blankets/pads/tarps for scenarios
- ❑ Seminar student evaluation forms

Skills and Scenario Demonstrations:

Instructors may demonstrate each of the individual skills for the scenarios to be practiced, or they may choose to demonstrate one or more full start-to-finish simulated scenarios.

Points to Ponder Regarding Injuries to Chest, Abdomen and Genitalia

- Both open and closed chest injuries may be life-threatening situations that may not be readily apparent during assessment.
- Blunt abdominal trauma may cause rapid hemorrhagic shock from associated internal injuries—even with minimal physical signs or symptoms which present during initial assessment.
- If a penetrating object is still in place, do not remove the object. You should apply a stabilizing bandage to control external bleeding and minimize movement, and transport the patient immediately.
- Injuries and wounds to the external male and female genitalia are very painful soft tissue injuries and may bleed heavily. They are usually not life threatening, but the patients should be transported to the hospital for careful evaluation.
- Treat soft tissue injuries by applying R.I.C.E.S.: rest, ice, compression, elevation of the injured part and splinting.

Practice Scenarios

It is recommended that instructors arrange a minimum of two practice scenarios on injuries to the chest, abdomen, and genitalia for the participants to practice. These can be taken from the *OEC TestBank*, *OEC* textbook, *OEC Instructor's Manual*, or the *Ski Patroller's Manual*, or instructors may create their own scenarios. As a minimum, it is recommended that practice in the following skills be covered during the two scenarios:

- ❑ Complete patient assessment
- ❑ Use of oxygen and airway adjuncts
- ❑ Immobilization of a penetrating object in the abdomen
- ❑ Bleeding control methods for chest, abdomen, and genitalia injuries
- ❑ Treatment for shock

- ❑ Optional: One multiple-injury or multiple victim scenario

Summary and Review

After completion of the practice scenarios, a brief summary and review of the topics and skills covered in the seminar should be presented, and how these skills can be applied to and enhance their everyday patrolling experiences. This could be a question-prompted interactive session with the participants.

Group Discussion

The summary and review could lead into an instructor-led group discussion of the seminar module just presented, which may include, but is not limited to

- ❑ Encouragement of participants to evaluate their own OEC skills based on the practice sessions
- ❑ Participant's comments and ideas
- ❑ Recounting of actual difficult module-related incidents they have encountered and what made them difficult
- ❑ Ideas for future modules to be covered by their group
- ❑ Participant's evaluation of the module and its presentation (provide written evaluation form)
- ❑ Ideas for continuation of skills improvement, such as future OEC Enhancement Seminars in their area, *OEC 4th edition Rescuer Skill Drills* (*OEC 4th edition*, pg. XIX), *OEC Student Workbook 4th edition*, and on-line learning at www.OECzone.com

Conclusion:

Instructors may issue the Certificate of Achievement at this time if pre-ordered, or inform participants that they will be mailed.

National Ski Patrol

Outdoor Emergency Care Enhancement Seminar

Module Six

The Unresponsive or Altered Guest

You are the Rescuer

(Note: You may substitute any applicable unresponsive/altered guest scenario as a lead-in to this module, such as a real incident that happened at your ski area.)

While sweeping the mountain at the end of the day with your partner, you notice just below you down the run a lifeless figure lying in the snow. The person does not have skis or a snowboard on, but seems to be dressed for cold weather.

Module Objectives

- ❑ Review the levels of responsiveness on the AVPU scale and/or the Glasgow Coma Scale.
- ❑ Define and describe unresponsiveness, including causes both traumatic and medical.
- ❑ Discuss and demonstrate the differences in the assessment of an unresponsive patient, as compared with a responsive patient.
- ❑ Define and describe ways in which a guest might be considered “altered,” including levels of responsiveness less than alert, alcohol and/or drugs influences, and medical conditions that may contribute to “altered” behaviors.
- ❑ Discuss ways in which a patroller may modify his or her own behavior when dealing with the various causes of altered behavior in a guest.
- ❑ Demonstrate splinting, bandaging, and other care skills necessary to treat the unresponsive or altered guest.
- ❑ Describe transportation options for patients with such injuries or behaviors, including positioning in a toboggan.

OEC 4th Edition References

Primary References: *Outdoor Emergency Care*, 4th Edition, Chapters 5, 7, 12, & 18

Assessment of Unresponsive Guests or Guests with Altered Responsiveness

Scene Size-Up

Initial Assessment

Rapid Body Survey

Skill Drill 7-1: pg. 214

Rapid History and Physical Exam

Assessing Pulse, Motor, and Sensory Function

Skill Drill 24-1, pg. 586

Review of the AVPU Scale (*pg. 146*) and the Glasgow Coma Scale (*pp. 147 and 663*)

Review of DCAP-BTLS

pp. 211 and 565

Review of the Signs and Symptoms of Brain Injury

Pg. 662

Review Table 7-11: Some Causes of Unresponsiveness

Pg. 212

Manual In-Line Stabilization	<i>Skill Drill 26-1: pg. 653</i>
Spinal Immobilization	<i>Skill Drill 26-2: pp.655-656</i>
Application of a Cervical Collar	<i>Skill Drill 26-4: pg. 666</i>
Skill Guides that may be applicable	
Patient Assessment – Unresponsive Patient	<i>Pg. 842</i>
Patient Assessment – Rapid Body Survey	<i>Pg. 845</i>
Patient Assessment – Responsive Trauma Patient	<i>Pg. 843</i>
Patient Assessment – Responsive Medical Patient	<i>Pg. 844</i>
Patient Assessment – Detailed Physical Exam and Ongoing Assessment	<i>Pg. 846</i>
Bleeding Control/Shock Management	<i>Pg. 847</i>
Vital Signs Determination	<i>Pg. 836</i>
Spinal Immobilization	<i>Pg. 852</i>
Lifting Techniques	<i>Pp.856-860</i>
Use of Oxygen and Airway Adjuncts	<i>Pp.837-841</i>

Choose Equipment for the Unresponsive or Altered Guest Module

- ❑ Spinal immobilization equipment: backboards, collars, webbing, or strap systems
- ❑ Oxygen equipment and airway adjuncts
- ❑ Bandaging materials/tape
- ❑ Blankets/pads/tarps for scenarios
- ❑ Seminar student evaluation forms

Skills and Scenario Demonstrations

Instructors may demonstrate each of the individual skills for the scenarios to be practiced, or they may choose to demonstrate one or more full start-to-finish simulated scenarios.

Points to Ponder Regarding Caring for Unresponsive or Altered Guests

- A guest may be unresponsive due to something as simple as a fainting spell or due to something as urgent as a major medical or traumatic emergency.
- A thorough scene size-up, paying close attention to possible mechanisms of injury, can sometimes give you clues as to why the guest is unresponsive or has an altered mental status.
- Unresponsive guests or guests with an altered mental status are definite candidates for immediate transport.
- If an unresponsive guest becomes responsive during your patient assessment, you should begin the assessment again in order to obtain the most reliable information.
- The most common causes of altered responsiveness are hypoglycemia, intoxication, drug overdose, and poisoning.
- Prompt transport and frequent monitoring of vital signs are imperative with unresponsive or altered guests.
- Assess pupil size and reaction and level of responsiveness with the AVPU or Glasgow Coma scale initially and every 5 minutes in an unstable patient and every 15 minutes in a stable patient, recording all observations.

- In some cases, a SAMPLE history may be obtained from friends, family, or bystanders if the patient/guest cannot communicate with you.
- Protecting the brain and spinal cord from damage is vital to the patient's future ability to live a normal life, so err toward caution and overprotection in assessing and treating these injuries. Even small movement can significantly injure the spinal cord.
- Assessment of circulation, motor, and sensory functions both before and after immobilizing the patient and observation of level of responsiveness throughout your care is essential for these patients.

Practice Scenarios

It is recommended that instructors arrange a minimum of two practice scenarios dealing with the unresponsive or altered guest for the participants to practice. These can be taken from the *OEC TestBank*, *OEC* textbook, *OEC Instructor's Manual*, or the *Ski Patroller's Manual*, or instructors may create their own scenarios. As a minimum, it is recommended that practice in the following skills be covered during the two scenarios:

- Complete patient assessment
- Complete spinal immobilization of an unresponsive guest
- Use of oxygen and airway adjuncts
- Treatment for shock
- Optional: One multiple-injury or multiple victim scenario

Summary and Review

After completion of the practice scenarios, a brief summary and review of the topics and skills covered in the seminar should be presented, and how these skills can be applied to and enhance their everyday patrolling experiences. This could be a question-prompted interactive session with the participants.

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