CHAPTER

18

Senior Program

NSP's Senior Program is tailor-made for members who aspire to perform at the upper levels of skiing/snowboarding, emergency care proficiency, and other skills used while patrolling. The Senior Program is designed to provide a forum in which patrollers can enhance personal skiing/snowboarding and toboggan-handling proficiency, improve their ability to manage OEC-related problems, and expand their overall patrolling knowledge and skills. In addition, the program prepares patrollers for leadership roles within the NSP.

The Senior Program consists of core and elective requirements that must be completed within three years. It is designed for alpine, nordic, and auxiliary patrollers with appropriate variations in requirements for each.

Training is an essential part of the program. Senior candidates are expected to spend a significant amount of time reviewing senior criteria and using the required knowledge and skills to practice scenarios on challenging, senior-level terrain under various conditions in the patrolling environment. Senior candidates can also take advantage of clinics in which they receive constructive and corrective feedback on their performance.

Training varies throughout the system, depending on the resources of time, personnel, locations, equipment, etc., but its purpose is the same in all divisions: to provide suggestions for improvement, an understanding of the required level of performance, and increased awareness of advanced patroller skills. It is unrealistic and inadvisable to participate in any evaluation clinic and expect to pass without training.

Appendices E—H include study and training exercises for alpine, nordic, OEC, and auxiliary components of the Senior Program as well as application forms. Performance on key maneuvers and scenarios are scored by senior examiners, and these evaluations may either be conducted during a clinic held immediately after a training session for a particular skiing/snowboarding technique, toboggan maneuver, or OEC scenario, *or* at the end of the evaluation clinic process. Some divisions hold formal evaluation clinics to determine whether a senior candidate is able to fulfill the senior requirements.

Senior candidates are responsible for keeping their own records of completing core and elective requirements. Authorized instructors or region/division supervisors then verify the completion of core and elective modules and send course records to the national office. It is the patrol director's responsibility to submit to the national office a change of classification form when a member has completed all the senior requirements. Personnel at the national office then verify the request for a classification change against instructor course records.

Senior *auxiliary patrollers* may achieve senior *patroller* status by successfully completing the ski/snowboard and toboggan components of the Senior Program and all elective requirements. In other words, basic ski/snowboard patrollers are not eligible to achieve the senior patroller classification by way of the Senior Auxiliary Program.

Senior patrollers who wish to reregister as auxiliary patrollers will forfeit their senior ski/snowboard patroller classification. To become a senior auxiliary patroller, these individuals must complete the senior auxiliary core requirements and all elective requirements. Achievement of the senior auxiliary classification qualifies a person for a Leadership Commendation Appointment but does not qualify a person for a National Appointment.

Changes instituted in the Senior Program in 1992 have necessitated a few grandfather provisions. Alpine seniors who completed all the existing division senior requirements by June 30, 1992, are grandfathered into the new Senior Program. To maintain their senior status, all grandfathered seniors must participate in a skiing/snowboarding and toboggan-handling skill review in a division-authorized continuing education clinic (i.e., a skiing/snowboarding and toboggan-handling refresher on a senior-rated hill) by May 1, 1997.

Nordic and auxiliary seniors who completed the existing division senior requirements by June 30, 1993, are grandfathered into the Senior Programs for those disciplines. All nordic and auxiliary seniors must participate in a senior continuing education review meeting criteria for those disciplines (i.e., refresher) by May 1, 1998.

Senior Certification

Prerequisites

- NSP membership status—patroller (alpine and nordic)
- Patrol director's recommendation
- Senior Candidate Application (See form in appendix J.)

Time Commitment

- Each core component includes local and division training clinics
- Evaluation clinics—time commitment varies by division

Fees

National—none
Division—varies
Cost of materials

Credential

- NSP Certificate of Achievement (distributed by the instructor for each component)

Continuing Education/ Refresher

- Varies with component. (A patroller who does not complete the continuing education requirements for alpine ski and toboggan must retake those core components to regain senior status. The Senior OEC component need only be completed one time, but as part of membership requirements OEC is refreshed on an annual basis.)
- Completion of an on-the-hill/trail refresher at the senior-performance level on a senior-rated hill once every three years. Senior alpine and nordic skiing/snowboarding and toboggan-handling skills recertification (administered within the division).

Instructor of Record

- NSP division-trained senior instructors
- Division-trained senior evaluators

Required Text

- *The Ski Patroller's Manual,* National Ski Patrol, 14th edition

Senior Program Requirements

The following tables (18.1—18.3) list the core and elective requirements to become a senior alpine patroller, senior nordic patroller, and senior auxiliary patroller, respectively. Also listed are the requirements for maintaining senior status.

A senior candidate need only complete the senior OEC component one time. In other words, a candidate who completes the OEC component

Table 18.1 Senior Alpine (Ski/Snowboard) Patrollers

Core and Elective Requirements	Recertification
Alpine skiing/snowboarding	Continuing education review once every three years
Toboggan handling	Continuing education review once every three years
Senior OEC	Satisfied by completing annual OEC refreshers
Three electives from the senior elective list	Not required to maintain senior status

Table 18.2 Senior Nordic Patrollers

Core and Elective Requirements	Recertification
Nordic skiing	Continuing education review once every three years
Toboggan transport and belay	Continuing education review once every three years
Extended nordic ski tour	Continuing education review once every three years
Senior OEC	Satisfied by completing annual OEC refreshers
Advanced Mountaineering Course	Not required to maintain senior status
Two additional electives from the senior elective list	Not required to maintain senior status

Table 18.3 Senior Auxiliary Patrollers

Core and Elective Requirements	Recertification
Patroller Enrichment Seminar	Continuing education review once every three years (satisfied by fulfilling one of the following requirements): • Hold a leadership position. • Complete an additional senior elective. • Complete a special project (approved and documented by division leadership supervisor). • Retake PES.
One education course or one leadership course from the senior elective list	Not required to maintain senior status
Senior OEC	Satisfied by completing annual OEC refreshers
Three additional electives from the senior elective list	Not required to maintain senior status

but does not complete the skiing/snowboarding or toboggan-handling component need not repeat the OEC component in the next effort to achieve senior certification.

In contrast, a candidate who completes the skiing component, for example, but does not complete the toboggan-handling and OEC components must retake all three in his or her next effort to achieve senior certification. Furthermore, a senior auxiliary patroller need not complete the senior OEC component when attempting to earn senior patroller certification.

Senior Electives

Each division has the option to require one of the following electives of its members. These electives represent the approved education* and leadership** credentials.

- Instructor Development: Phase I*
- Phase II Instructor Development courses* (all modules required for a specific discipline)
- Basic Mountaineering*
- Advanced Mountaineering*
- Basic Avalanche*
- Advanced Avalanche*
- National Avalanche School (classroom and field sessions)
- Powderfall* (with documented attendance)
- Patroller Enrichment Seminar**
- Professional Ski Instructors of America (PSIA) full certification (Level III)**
- NSP Instructor Certification (any discipline)**
- NSP Instructor Trainer Appointment (any discipline)**
- American Heart Association Basic Life Support CPR instructor or instructor trainer** (documentation required)
- American Red Cross BLS CPR instructor or instructor trainer** (documentation required)
- Equivalent education programs or division-option elective (submitted in advance through an NSP board-approved application process with review by the National Education Committee)

Disciplines include Alpine Toboggan, Avalanche, Instructor Development, Mountaineering, Nordic, Outdoor Emergency Care, and Patroller Enrichment Seminar.

Senior Core Component: Alpine Skiing/Snowboarding

The senior alpine skiing/snowboarding component is a national education program that allows patrollers to participate in skiing/snowboarding exercises that require edging, weight transfer, and upper and lower body movements.

The emphasis in the skiing/snowboarding component is to help the senior candidate identify and practice skiing/snowboarding fundamentals related to patrolling in a variety of conditions and on a variety of terrain. Moreover, this component enables the evaluation of the senior candidate's ability to perform specific skiing/snowboarding maneuvers while incorporating good skiing/snowboarding fundamentals under specified conditions and on specified terrain.

Prerequisites

- Training clinics (local, region, division)
- Warm-up exercises before the evaluation clinic

Recommended References

- Alpine Exercises (appendix E)
- PSIA American Teaching System materials:
  - *PSIA Alpine Manual*
  - *PSIA Alpine Handbook*
  - *PSIA Alpine References* video
  - *The American Teaching System: Snowboard Skiing*
  - *Snowboarding Images* video

General Terrain Requirements

To host senior alpine training and evaluation activities, an area should have a slope that averages 40 percent grade (22 degrees) for at least 800 feet. Senior training and evaluation clinics may be on a shorter slope if it is steeper and if the hill is configured in such a way that many repetitions are reasonably possible. Terrain should be both smooth and moguled. (Moguls may be unexpectedly unavailable because of last-minute grooming, snowfall, etc., but every effort must be made to select ski areas that meet terrain requirements under normal operating conditions.)

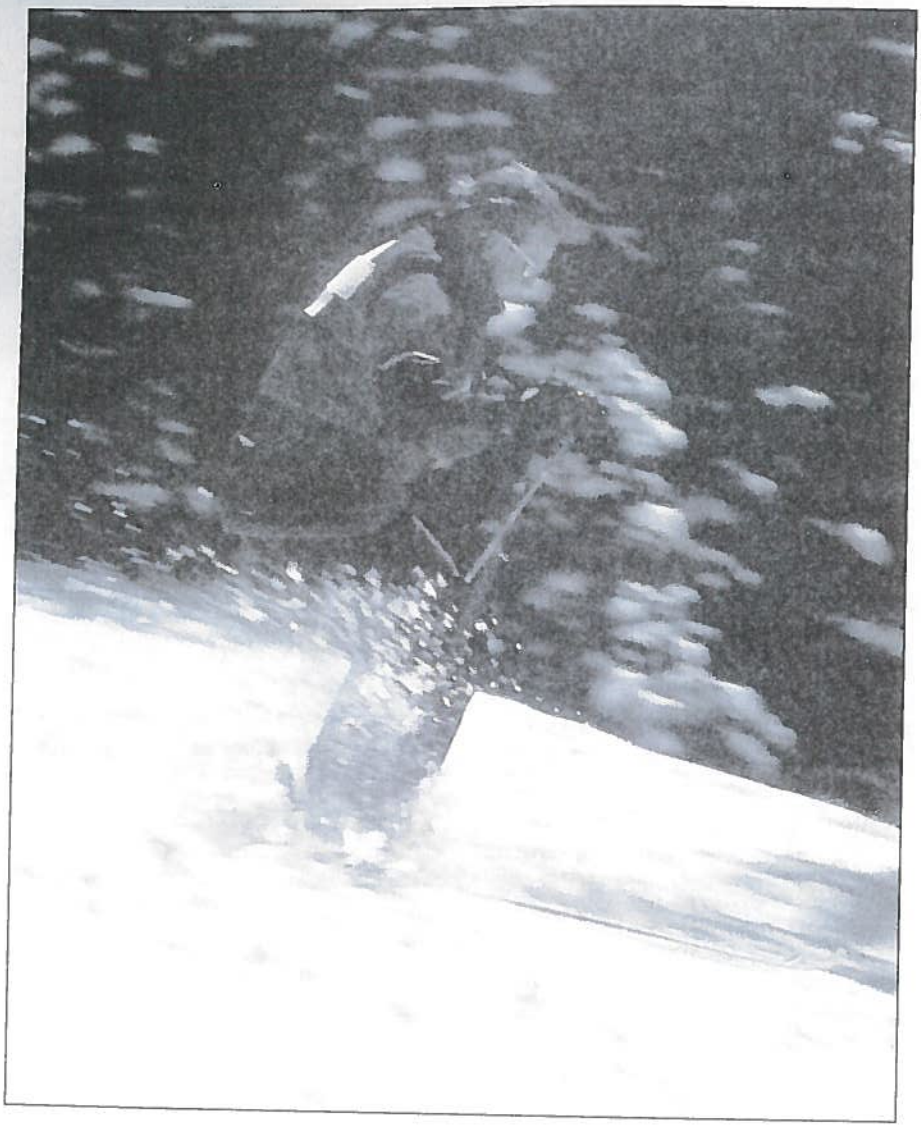
In the demonstration and evaluation criteria, terrain is described as "easy," "difficult," and "more difficult" to correspond with the terminology used at most ski areas.

Course Objectives

The skiing/snowboarding portion of the Senior Program consists of training clinics and evaluation on the following turn variations on varied terrain. In the following descriptions, specifications for the size of long-, medium-, and short-radius turns are *approximations*. Rather than focus on these specifications, the candidate should concentrate on the rounded or elliptical shape and comparative size of each turn. Variations in these descriptions will be necessary for the snowboarder to accomplish the course objectives.

Long-Radius Turns

Long-radius turns have an arc of more than 40 feet long and a cord length (the length straight down the fall line) of more than 30 feet. Long-radius turns emphasize lateral movements and balance over the whole foot. Fine adjustments in the feet and ankles and gross adjustments in the



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knees and legs improve gliding. Positive edge engagement is achieved during the turn to maximize the benefits from the design of the ski. Weight transfer begins with edge release, and weight increases over the outside ski, or snowboard heel or toe, with edge engagement.

For the following segments of the clinics and evaluations, long-radius turns should be performed on the terrain indicated.

- Demonstration and practice: smooth terrain on easy to more difficult slopes
- Evaluation: smooth terrain on more difficult slopes

Performance Objectives for Long-Radius Turns

When performing long-radius turns, the candidate must demonstrate the following.

- Turns with consistent size and rounded shape
- Parallel turns
- Consistent, controlled speed
- An ability to carve turns (with weight centered over inside edge of the outside ski/snowboard)
- An ability to skid turns
- Balance
- Stability
- Fluid vertical motion
- An appearance of ease and control
- Turns that are long, connected arcs, rather than short arcs connected by traverses
- A quiet upper body

Medium-Radius Turns

The arc of a medium-radius turn is approximately 40 feet long and the cord is about 30 feet long. When initiating the turn, the skier's upper body faces the center of the arc of the turn. He or she then projects the body downhill toward the center of the turn by extending (rising up on and straightening) the outside leg, pushing the knees and hips toward the center of the turn, and using rotary movements to guide the ski tips across the fall line. To complete the turn, the skier flexes to pressure the inside edge of the outside ski with the weight centered on that ski. The completion should lead smoothly to the next turn without a traverse in between. Maintaining consistent, rounded, carved turns while absorbing moguls requires excellent edging, pressuring, and balancing skills.

For the following segments of the clinics and evaluations, medium-radius turns should be performed on the terrain indicated.

- Demonstration and practice: smooth terrain on easier slopes; smooth and moguled terrain on more difficult slopes
- Evaluation: smooth and moguled terrain on more difficult slopes

Performance Objectives for Medium-Radius Turns

When performing medium-radius turns, the candidate must demonstrate the following.

- Turns with consistent size and rounded shape
- Parallel turns
- Consistent, controlled speed
- Weight transfer to the outside ski or snowboard heel or toe

- Turn completion, in both carved and skidded turns
- Balance
- Stability
- Fluid vertical motion
- Turns that are connected arcs without traverses
- Smooth absorption of moguls (between turns)
- Adaptability to terrain changes

Short-Radius Turns

The arc of short-radius turns is approximately 15 to 30 feet long, and the cord is about 15 feet long. Turns should be made consistently down the fall line except when the skier/snowboarder encounters terrain irregularities or changes in pitch.

The proper short-radius turn is mostly carved with little skidding. At the initiation of the turn, the skier transfers 90 percent or more of his or her weight to the outside ski, steers both skis into the turn, and changes edges. He or she then increases the edge angle as the weighted outside ski controls the arc of the turn. The skier actively steers the inside ski as well. The upper body faces the predominant direction of travel (e.g., downhill if making fall-line turns) while the skis turn back and forth. The snowboarder needs to adjust the weight on the heel and toe edge to accomplish the same maneuver.

The turning action of the legs is separate from the upper body, and the turning rhythm is faster than in long- or medium-radius turns. When performing short-radius turns, the skier/snowboarder emphasizes consistent speed, control over change of direction, and rounded turns.

Speed control is achieved by completing the turn. The skier/snowboarder concentrates on carving through the arc of the turn rather than setting edges at the end of the turn. Rounded turn shape is achieved by the proper blending of edging, pressure control, and rotary movements throughout the arc of the turn. The skier/snowboarder experiments with each of these movements to vary the shape of the turn. The upper body in the short-radius turn should face down the fall line.

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For the following segments of the clinics and evaluations, short-radius turns should be performed on the terrain indicated.

- Demonstration and practice: smooth terrain on more difficult slopes; smooth and moguled terrain on most difficult slopes
- Evaluation: smooth terrain on more to most difficult slopes; moguled terrain on most difficult slopes

Performance Objectives for Short-Radius Turns

When performing long-radius turns, the candidate must demonstrate the following.

- Turns with consistent size and rounded shape
- Parallel turns
- Consistent, controlled speed
- Carved turns with little skidding
- An upper body that faces downhill in fall-line turns
- Balance
- Stability
- A lower body in almost continuous motion while the upper body

remains relatively quiet
- Weight transfer to the outside ski or snowboard heel or toe
- Use of edges and pressure to complete turns
- Control over direction changes
- Adaptability to terrain changes

Unpacked Snow and Icy Conditions

Senior candidates will be expected to ski/snowboard any slope in almost any type of snow condition.

If crud, powder, or icy conditions exist only in isolated places along the slope, the instructor may place bamboo poles to create a corridor through these areas and ask the senior candidates to ski/snowboard within it. Senior candidates should be able to stop within a short distance at any time.

Turns may be short, medium, or long radius. Candidates should avoid long traverses between turns, turning continuously as they progress down the hill.

For the following segments of the clinics and evaluations, proficiency in unpacked snow or icy conditions should be demonstrated on the terrain indicated.

- Demonstration and practice: more difficult
- Evaluation: more difficult

Performance Objectives for Unpacked Snow and Icy Conditions

When skiing/snowboarding in unpacked snow and icy conditions, the candidate must demonstrate the following.

- Balance
- Stability
- Control
- Rounded, linked parallel turns
- Moderate, constant, safe speed for his or her ability level
- An appearance of ease and confidence

Equipment Carry

Patrollers are often asked to carry equipment on the ski hill. Due to logistics and liability, inclusion of this maneuver during the senior clinic should be limited to asking the senior candidates to transport items routinely carried during patrol duty, such as toboggan packs, skis, and poles. The senior candidates may select the position to carry the equipment.

Alternatively, instructors should consider asking the senior candidates to carry their ski poles over their shoulders or in front of them.

Instructors should not ask senior candidates to carry extremely heavy or cumbersome loads. On steep, moguled terrain, the equipment carry may involve some sideslipping or stem turns.

For the following segments of the clinics and evaluations, equipment carries should be performed on the terrain indicated.

- Demonstration and practice: more to most difficult slopes
- Evaluation: more to most difficult slopes

Performance Objectives for Equipment Carry

When performing equipment carries, the candidate must demonstrate the following.

- Balance
- Stability
- Control
- Rounded, parallel, linked turns*
- Consistent, moderate speed
- Some sideslipping on steep or moguled terrain
- Equipment securely held

*These turns may be less polished than in the free-skiing/snowboarding portion of the clinic, but the senior candidates should continue to exhibit sound skiing/snowboarding fundamentals.

Evaluation

The senior candidate must pass each of the five evaluated performance objectives (short-, medium-, and long-radius turns, unpacked snow and icy conditions, and equipment carry) to successfully complete the skiing/snowboarding component of the Senior Program. The following is a general definition for evaluating alpine skiing/snowboarding in each category on the score sheet.

Above Senior Level (+)
The senior candidate demonstrates outstanding skill, ability, and technique in skiing/snowboarding (as measured by the program's performance objectives, using the applicable criteria). The senior candidate consistently demonstrates exceptional stability and control in difficult terrain and snow conditions. He or she makes efficient and effective use of equipment and skiing/snowboarding technique to produce a fast, safe, smooth, and consistent run. The senior candidate displays confidence in adapting his or her skiing/snowboarding skills to varying terrain and conditions.

At Senior Level (=)
The senior candidate demonstrates the ability to ski/snowboard in a safe and efficient manner using an effective combination of skill, ability, and technique (as measured by the program's performance objectives, using the applicable criteria). The senior candidate demonstrates better-than-average stability and control in all terrain and snow conditions, producing a safe, smooth, and consistent run.

Below Senior Level (-)
The senior candidate is inconsistent in meeting the minimal skiing/snowboarding requirements (as measured by the program's performance objectives, using the applicable criteria). The candidate

makes critical or frequent errors in speed, control, stability, route selection, communication, or equipment usage. The senior candidate performs skills at a level below that expected of a senior patroller.

Continuing Education

The skiing/snowboarding portion of the senior continuing education program consists of both clinic training and evaluation in the following five maneuvers on varied terrain:

1. Long-radius turns
2. Medium-radius turns
3. Short-radius turns
4. Skiing/snowboarding in unpacked snow and icy conditions
5. Equipment carry

To qualify for senior continuing education, the skiing/snowboarding review must be conducted by a qualified instructor and contain instructional components followed by evaluation and direct feedback that correspond to senior skiing/snowboarding guidelines. It is preferable but not mandatory to run the continuing education session on a senior-rated hill. The continuing education session may be sponsored by one or more patrols, or by a section, region, or division of the NSP. Continuing education may be conducted for groups or on an individual basis.

Senior Core Component: Alpine Toboggan Handling

Good toboggan handling is closely tied to good skiing/snowboarding technique. The senior alpine toboggan-handling component covers the mechanics and components of various rescue toboggans. It also addresses the fundamental principles for operating loaded and unloaded toboggans from the front and rear positions in a variety of conditions and on slopes with different degrees of difficulty.

Toboggan-handling criteria vary with the wide range of equipment used across the country and the differences between alpine and nordic techniques. However, the focus is on improving the patroller's ability to safely, smoothly, and efficiently bring an ill or injured skier down the hill in a controlled toboggan run. Instructors should incorporate into their training sessions strategies for approaching and managing incident sites.

Prerequisites

- Training sessions (local, region, division)
- Warm-up exercises before evaluation clinic

Recommended References

- Alpine Exercises (appendix E)
- *Ski and Toboggan Training Manual*, National Ski Patrol, 1994

General Terrain Requirements

To host senior alpine toboggan-handling training and evaluation activities, an area should have a slope that averages 40 percent grade (22 degrees) for at least 800 feet. Senior training and evaluation clinics may be held on a shorter slope if it is steeper and if the hill is configured in such a way that many repetitions are reasonably possible. Terrain should provide both smooth and moguled terrain as specified in the skiing/snowboarding and toboggan-handling clinic sections. (Moguls may be unexpectedly unavailable because of last-minute grooming, snowfall, etc., but every effort must be made to select ski areas that meet terrain requirements under normal operating conditions.)

In the demonstration and evaluation criteria, terrain is described as "easy," "difficult," and "more difficult" to correspond with the terminology used at most ski areas.

Course Objectives

The toboggan-handling portion of the Senior Program consists of training and evaluation clinics (held on varied terrain) on three main skills: operating the front of an unloaded toboggan, operating the front of a loaded toboggan, and operating the rear of a loaded toboggan. Strategies for

approaching and managing an incident site are also part of the program.

If a senior candidate wants to use a particular type of toboggan for the clinic/evaluation, it is the candidate's responsibility to have that toboggan on the hill and available for his or her use. The candidate should coordinate this effort with the person responsible for running the clinic and evaluation. If no such effort is made, candidates will be expected to use whatever toboggan is available at the time of the clinic and evaluation.

Unloaded Toboggan—Front Operator Skills

Clinics and evaluation on unloaded toboggan operations should cover skiing to a simulated incident site (using appropriate route selection) while senior candidates perform the following skills.

- Straight running
- Short-, medium-, and long-radius turns
- Direction changes (transitions) while keeping the toboggan in the fall line
- Sideslips (fall line and falling leaf)
- Traversing left and right on more difficult terrain
- Linked, rhythmic parallel turns, smoothly executed
- Emergency stops
- Recovery techniques (at least one)

For the following segments of the clinics and evaluations, toboggan-handling maneuvers should be performed on the terrain indicated.

- Demonstration and practice: more to most difficult—smooth and moguled
- Evaluation: more to most difficult—smooth and moguled

Performance Objectives for Front Operator of an Unloaded Toboggan

When operating the front of an unloaded toboggan, the candidate must do the following.

- Select an appropriate route.
  - Pick the safest, fastest, and smoothest route possible.
  - Generally stay to the side of the run and in the fall line as the terrain dictates.
- Operate at an efficient, safe, controlled speed appropriate to the terrain and skier/snowboarder traffic, yet quickly reach the incident site.
- Perform smooth, parallel turns as needed.
- Maintain proper body position.
  - Exhibit solid skiing/snowboarding stance with balance and stability.
  - Hold the toboggan handles waist high with the hands in front of the body.
  - Do not hit the toboggan with the tails of the skis.
- Perform appropriate transitions.
  - Change the direction of the skis while keeping the toboggan in the fall line.
- Perform sideslips.
  - Maintain a consistent speed.
  - Keep the toboggan in or close to the fall line.
  - Overcome the buildup of snow, if any.
- Perform traverses (left and right).
- Ensure minimal bouncing or slipping of the toboggan.
  - Be at ease and in control over the speed and direction of the toboggan under all conditions.
- Perform emergency stops.
  - Stop the toboggan in a short distance on command while keeping the toboggan in the fall line.
- Demonstrate at least one recovery technique.

Approaching and Managing an Incident Site

Incident site approach and management is not part of the final evaluation, but candidates should nevertheless be given the opportunity to demonstrate, discuss, and practice (as time permits) incident site approach and management on varied terrain and snow conditions. Practice should include toboggan approaches and positioning (front and back), various methods of securing and anchoring toboggans, putting on handles, placing the tail rope, checking rescue package details, etc. Techniques for marking incident sites should also be included in practice time.

Loaded Toboggan—Front Operator Skills

The local ski area management or public lands administration sets the policy for operating a loaded two-handled toboggan, with or without a tail rope, although some strategies are generally left to the discretion of the patroller. Under most circumstances, two-handled toboggans are designed to be run by a single operator, with assistance at the tail rope position only when requested by the front operator.

Since the ability of a senior candidate to operate the front of a loaded toboggan in the terrain and conditions required at the senior level is an unknown until final evaluation, certain safety considerations are warranted during training and evaluation. Thus, a capable patroller should assist with the tail rope or rear handles during loaded-toboggan maneuvers.

The rear operator acts as a safety reserve with a slack rope and will only assist the front operator if the front operator requests assistance or if safety considerations make assistance necessary (or during traversing maneuvers). If the person at the rear is not competent, he or she should be replaced with someone who is, so that the front operator has a fair chance to be evaluated on his or her own skills.

The rear operator actively assists

senior candidates who choose to use a four-handled toboggan. Four-handled toboggans should be operated under standard procedures over the same terrain as two-handled toboggans. If candidates usually have access to both two- and four-handled toboggans, they may be required to be trained and evaluated on both types as the rear operator.

While descending the fall line, senior candidates should require little assistance from the tail rope operator on terrain categorized as "most difficult—smooth" and "more difficult—moguled." The toboggan generally should stay in or close to the fall line unless terrain or skier traffic dictates otherwise.

Maneuvers that require two-handled toboggans and a tail rope are referred to as "single operator with safety tail." Senior candidates may rely on the tail rope as needed for braking, stability, or traversing terrain categorized as "most difficult—moguled." The front operator must be aware of the rear operator at all times, and the two should work as a team to communicate and coordinate speed, route selection, and change of direction.

Training clinics and evaluation on operating the front of a loaded toboggan should cover the following topics.

- Route selection that is appropriate to terrain, skier traffic, and patient injury
- Fall-line maneuvers
  - Wedges
  - Transitions
  - Straight running
- Traversing left and right on more difficult and most difficult terrain
  - Candidate trains with and without active assistance from tail rope or rear operator.
  - Candidate chooses whether to use active assistance of tail rope or rear operator during evaluation.
- Braking techniques
  - Front operator
  - Chain brake and other control surfaces of toboggan
  - Rear operator
- Maneuvering toboggan through moguls
- Crossing flat terrain
- Techniques in soft or deep snow (if available)
- Static and moving direction changes
- Communication with patient and rear operator
- Emergency stops
- Smooth starts
- Ride-smoothing techniques
  - Lifting front of toboggan
  - Lifting toboggan over terrain (This maneuver is for four-handled toboggans only.)

For the following segments of the clinics and evaluations, these toboggan-handling maneuvers should be performed on the terrain indicated.

- Demonstration, practice, and evaluation for single operator with safety tail: smooth terrain on most difficult slopes, moguled terrain on more difficult slopes
- Demonstration, practice, and evaluation for front operator with tail operator: moguled terrain on most difficult slopes

Performance Objectives for Front Operator of a Loaded Toboggan

When operating the front of a loaded toboggan, the candidate must do the following.

- Select appropriate route.
- Control speed while skiing/snowboarding safely and expediently.
- Provide a smooth, safe, and comfortable ride for the patient.
- Ski/snowboard in a balanced and stable position.
- Control descent with a wedge or sideslip.
- Control direction with turns and falling-leaf maneuver.
- Brake toboggan as needed.
- Communicate as necessary with the patient and tail rope operator.
- Perform effective wedge, sideslip, and transition maneuvers with stability and control as appropriate.
- Avoid slipping during traverses.

Loaded Toboggan—Rear Operator or Tail Rope Skills

The rear operator should be able to assist with braking and traversing the toboggan as requested by the front operator, use one or more safe belay techniques, and communicate with the patient and the front operator. In addition, the rear operator should use sound rope management and skiing/snowboarding skills, help move the toboggan across flat terrain, and be able to stop the toboggan in an emergency.

There are at least three basic methods of tail roping:

1. Holding the tail rope in the hands in front of the body
2. Using a belay across the front of the body and over the uphill thigh
3. Using a climbing belay around the waist

Each of these techniques has its advantages and disadvantages, and there are times when one is more appropriate than another. A senior-level patroller should operate the front of the loaded toboggan during the rear-operator training and evaluation portions of the Senior Program.

Training clinics and evaluation on operating the rear of a loaded toboggan should cover the following topics.

- Traversing left and right on more difficult and most difficult terrain with minimal sideways slipping of the toboggan
- Running the toboggan in the fall line while using a safe technique for the terrain
  - Active braking assistance and passive reserve
  - Wedge
  - Sideslips (fall line and falling leaf)
  - Transitions

- Moving direction changes (turning)
- Positioning
  - The rear operator's skis generally face the same direction as front operator's skis.
  - The tail rope should run down the fall line from the rear operator to the toboggan or forward over the front of the rear operator's skis/snowboard to the toboggan (not backward over the rear operator's heels or the back of his or her skis/snowboard to the toboggan).
  - The tail rope need not always be in the fall line.
- Belay techniques
  - Moving belay
    - Hands only
    - Uphill thigh
    - Climber's waist belay
  - Static belay
- Rope management
  - Using knots in rope
  - Different length of rope on different types of terrain and during moving direction changes
  - Tension versus slack as appropriate
  - Movement up and down the length of the rope
  - Handling extra rope
- Coordination with front operator
  - Communication
  - Speed
  - Obstacles
  - Direction changes
  - Active versus passive role of tail rope
- Communicating with and monitoring patient
- Techniques for crossing flat terrain
- Considerations for special snow conditions
  - Powder
  - Ice
  - Windcrust or crud
  - Heavy slush
- Emergency stops (Front operator should always remain in position with hands on toboggan handles ready to stop the toboggan if this becomes necessary.)
- Four-handled toboggan use
  - Special skill techniques for rear operator

The terrain for demonstration, practice, and evaluation should be more to most difficult—smooth and moguled.

Performance Objectives for Rear Operator of a Loaded Toboggan

When operating the rear of a loaded toboggan, the candidate must do the following.

- Traverse left and right with minimal slipping of the toboggan.
- Assist with braking as needed.
- Brake the toboggan with edge and pressure movements.
- Control speed using wedge, sideslip, and transitions.
- Make smooth and controlled turns and transitions.
- Coordinate changes of direction with the front operator.
- Generally sideslip in the same direction as the front operator.
- Maintain the rear of the toboggan in a stable position.
- Control the rope with the hand or belay position
- Ski with stability and control.
- Adapt to terrain and condition changes.
- Monitor the condition of the patient.
- Maintain a safe distance from the toboggan.

Evaluation

The senior candidate must pass each of these three evaluated areas (operating the front of an unloaded toboggan, operating the front of a loaded toboggan, and operating the rear of a loaded toboggan) to successfully complete the toboggan component of the Senior Program. If a division has had ample opportunity to conduct pretraining in rear operation of both types of two- and four-handled toboggans, the division can require evaluation of each. The following is a general definition for evaluating toboggan handling in each of the categories on the score sheet.

Above Senior Level (+)

The senior candidate demonstrates outstanding skill, ability, and technique in operating a toboggan (as measured by the program's performance objectives, using the applicable criteria). The candidate consistently demonstrates exceptional stability and control in difficult terrain and snow conditions. He or she makes efficient and effective use of equipment and skiing/snowboarding technique to produce a safe, smooth, expedient, and consistent run. The candidate displays confidence in adapting his or her skiing/snowboarding or toboggan-handling skills to varying terrain and conditions.

At Senior Level (=)

The senior candidate demonstrates the ability to operate a toboggan in a safe and efficient manner using an effective combination of skill, ability, and technique (as measured by the program's performance objectives, using the applicable criteria). The candidate demonstrates above-average stability and control in all terrain and snow conditions, producing a safe, smooth, and consistent run.

Below Senior Level (-)

The senior candidate is inconsistent in meeting the minimal toboggan-handling requirements (as measured by the program's performance objectives, using the applicable criteria). The candidate makes critical or frequent errors in speed, control, stability, route selection, communication, or equipment usage. The candidate fails to meet one or more critical standards for toboggan handling or performs skills at a level below that expected of a senior patroller.

Continuing Education

All seniors must complete this review once every three years to maintain senior status. It is preferable but not mandatory to run the continuing education session on a senior-rated hill. Here are the four components for continuing education reviews (refreshers) of toboggan handling.

1. Operating the front of an unloaded toboggan
2. Approaching and managing an incident site
3. Operating the front of a loaded toboggan
4. Operating the rear of a loaded toboggan

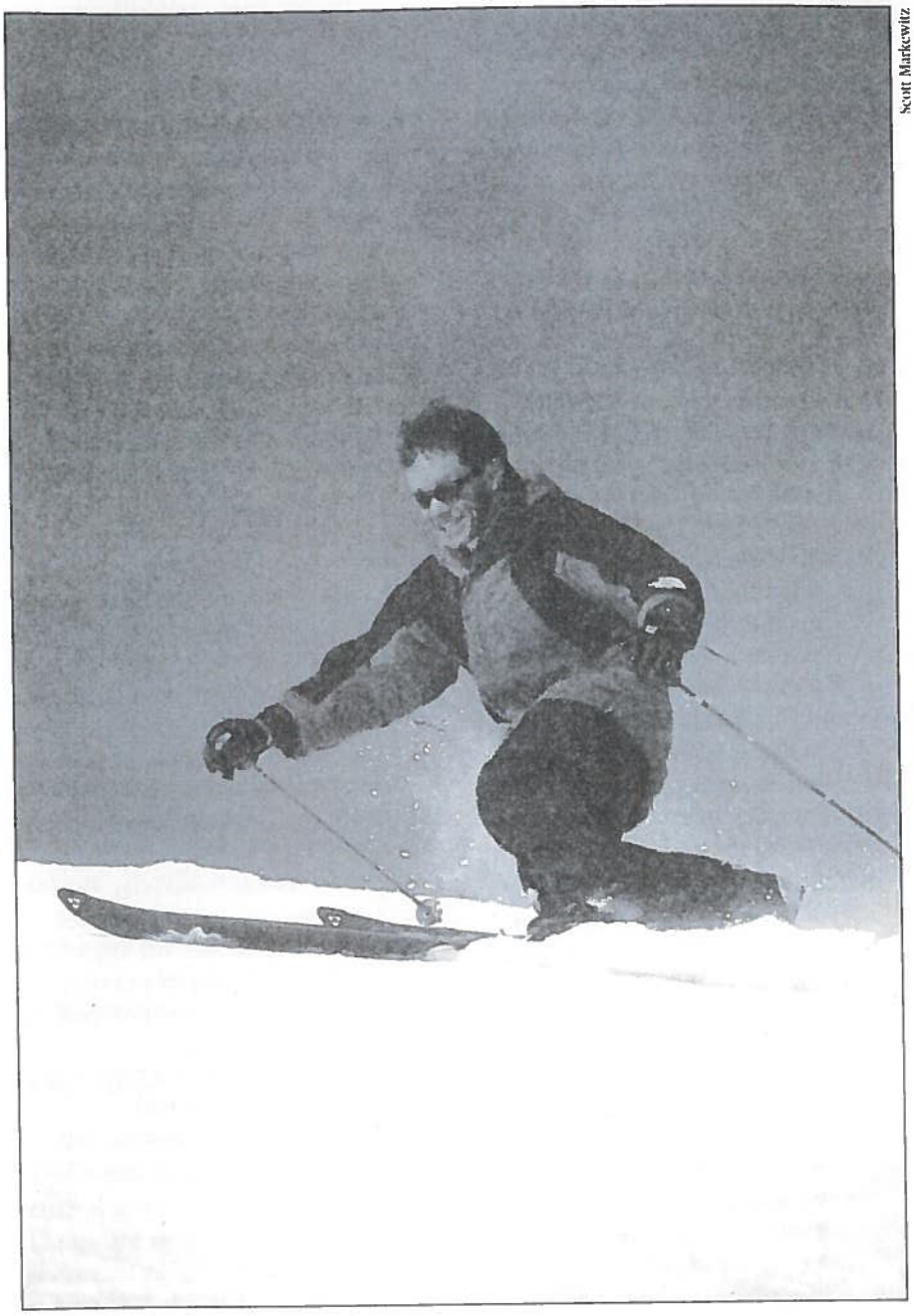
Senior Core Component: Nordic Skiing

Prerequisites

- Training clinics (local, region, division)
- Warm-up exercises before evaluation clinic
- Daypack containing equipment and materials normally used in the patrol environment

Recommended References

- Nordic Exercises (appendix F)
- *Nordic Training Manual,* National Ski Patrol, 1998
- PSIA American Teaching System materials:
  The American Teaching System: Nordic Skiing
  ATS Nordic Handbook



Scott Markewitz

The skiing portion of the Nordic Senior Program consists of using good nordic skiing fundamentals to demonstrate effective skiing maneuvers in all varieties of terrain and conditions. Nordic skiing clinics emphasize maneuvers used in traditional, skating, and nordic downhill skiing; specifically, the diagonal stride, the double-pole with and without kick, skate turns, uphill traverses, kick turns, the herringbone, cross-country downhill turns, step turns, the pole drag, and nordic skiing in unpacked snow and icy conditions.

During evaluation, elegant, stylistic technique is not necessary; however, the candidate is expected to demonstrate proficiency equivalent to that of a PSIA Certified Level II instructor (advanced intermediate).

Diagonal Stride and Double Pole

A clear understanding of the technical components of diagonal stride and double pole methods are necessary for a successful evaluation. The weight shift, timing, and balance required for proper rhythm and flow are essential.

For the following segments of the

clinics and evaluations, diagonal stride and double pole maneuvers should be performed on the terrain indicated.

- Demonstration, practice, and evaluation: mildly rolling, track or prepared smooth surfaces

Performance Objectives for Track or Prepared-Surface Techniques

When performing diagonal stride and double pole techniques, the candidate must demonstrate the following.

- An emphasis on correct body position
- Balancing movements
  - An ability to move from ski to ski with rhythm and flow
  - An ability to balance on gliding skis during upper-body propulsion movements
- Rotary movements
  - Active guidance of the unweighted ski to complement steering the weighted ski during the diagonal stride
  - Complementary arm/leg movements
  - Active guidance of both skis during the double pole
- Edging movements
  - An ability to maintain a flat, sliding ski
  - Use of knee/ankle control for edge angle control
- Pressure-control movements
  - Smooth, effective weight shift from ski to ski (kick)
  - Effective compression guided by abdominal muscles
  - Refined pole use and timing
  - Movement of weight to the heels during double-pole push, then toward the balls of the feet as the arms swing forward after pole push

Double Pole With Kick

The nordic senior candidate is expected to combine foot propulsion with proper double-pole technique.

For the following segments of the clinics and evaluations, double poling with a kick should be performed on the terrain indicated.

- Demonstration and practice: easier, set track, flat, or slight downhill; more difficult, rolling set track
- Evaluation: more difficult, rolling set track

Performance Objectives for Double Pole With Kick

When performing a double-pole-with-kick technique, the candidate must demonstrate the following.

- Balancing movements
  - Coordinated movement of one foot with both arms
  - Timing combined with dynamic balance
- Rotary movements
  - Active guidance of the unweighted ski to complement steering of weighted ski
- Edging movements
  - An ability to maintain flat, gliding skis
  - Use of knee/ankle control for edge angle control
- Pressure-control movements of the skis and poles
  - Smooth, effective weight shift from ski to ski (kick)
  - Effective poling due to compression guided by abdominal muscles

Skating

For the following segments of the clinics and evaluations, skating maneuvers (V-1 Skate, V-2, and V-2 Alternate) should be performed on the terrain indicated.

- Demonstration and practice: flat terrain to mild rolling trails
- Evaluation: mild rolling to more difficult trails

Performance Objectives for V-1 Skate

When performing V-1 skate techniques, the candidate must demonstrate the following.

- Balancing movements
  - Effective ski-to-ski movement that maintains glide and contributes to propulsion
- Rotary movements
  - Active foot/leg steering of the unweighted ski
  - Maintaining a "v" relation with the skis
  - Aligning the body to face the gliding ski
  - Maintaining the skis' divergent relationship; the size of the "v" depends on the skier's speed and steepness of terrain
- Edging movements
  - Edged ski to push; flat ski to glide
  - Refinement of edge angle on push ski and appropriate adjustment on glide ski
- Pressure-control movements
  - Complete weight transfer from push ski to glide ski
  - Skate push begins with the foot under the hips
  - Upper body and hips align with push ski before a smooth weight transfer, then move toward glide
  - Timing of pole plant, pull, and push becomes more refined

Performance Objectives for V-2, V-2 Alternate

When performing V-2 and V-2 Alternate skate techniques, the candidate must demonstrate the following.

- Balance movements
  - Makes effective ski-to-ski movements that maintain glide and contribute to propulsion.
  - Shows ability to maintain extended glide, balanced on one ski.
- Rotary movements
  - Aligns body to face the gliding

ski after weight transfer.
  - Maintains the skis' divergent relationship, yet the size of the "v" is smaller due to gliding nature and higher speed of the maneuver.
- Edging movements
  - Maintains a flat ski during poling and recovery phases.
  - Uses fine edge-angle control to enhance the gliding nature of the maneuver.
- Pressure-control movement
  - Maintains propulsion by poling, effective pole push, and upper body compression.
  - Begins poling before skating.
  - Prepares body for compression with forward lean of body before pole plant.

Skate Turns

For the following segments of the clinics and evaluations, skate turns should be performed on set nordic track on the terrain indicated.

- Demonstration and practice: easier, flat or gentle downhill, groomed trail; moderate, gentle downhill groomed trail
- Evaluation: moderate, gentle downhill groomed trail

Performance Objectives for Skate Turns

When performing skate turns, the candidate must demonstrate the following.

- Powerful extension of the leg from a firm platform
- An edged ski for the push; a flat ski for the glide
- Simultaneous use of both poles with each skating motion
- Timing—weight is transferred to the divergent ski as the extension of the pushing leg is complete
- Rhythm achieved by smooth, sequential motion
- Marked acceleration out of turn

Uphill Traverse

The uphill traverse is an important maneuver for travel on and off track. This maneuver should be practiced and evaluated during the extended ski tour. For the following segments of the clinics and evaluations, the uphill traverse should be performed on slopes with the terrain indicated.

- Demonstration and practice: more difficult, open moderate slopes (30 to 45 percent grade); most difficult, moderate slopes with obstacles
- Evaluation: most difficult, moderate slopes with obstacles

Performance Objectives for Uphill Traverse

When performing uphill traverses, the candidate must demonstrate the following.

- Definite weight transfer at push-off to front ski
- Shortened stride and arm swing as pitch increases
- Forward body lean, eyes looking forward
- Proper rhythm, position, and recovery of poles
- Effective use of terrain

Kick Turns

A kick turn is a stationary turn of 180 degrees for the purpose of changing direction when other techniques are undesirable or ineffective. It is often executed in confined areas such as woods. Practice and evaluation should take place during the extended ski tour while performing an uphill climbing traverse and a downhill traverse. For the following segments of the clinics and evaluations, kick turns should be performed on slopes with the terrain indicated.

- Demonstration and practice: easier, open gentle slopes (less than 30 percent grade); more difficult, moderate slopes with obstacles
- Evaluation: more difficult, moderate slopes with obstacles

Performance Objectives for Kick Turns

When performing kick turns, the candidate must demonstrate the following.

- Balance with effective use of poles
- The tail of the ski clearing the snow
- The tail of the ski planted well forward
- The poles clear of the skis
- Complete change of direction while remaining in the same spot

Herringbone

Demonstration of this maneuver should occur on a section of flat groomed track with a gentle uphill grade (5 percent). Practice and evaluation should occur on a slope with a more moderate to steep section of flat groomed terrain (8 to 10 percent) to clearly demonstrate strong edge set. For the following segments of the clinics and evaluations, herringbone maneuvers should be performed on groomed, nordic tracks with the terrain indicated.

- Demonstration and practice: easier, gentle uphill set track; more difficult, moderate uphill set track
- Evaluation: more difficult, moderate uphill set track

Performance Objectives for Herringbone

When performing the herringbone, the candidate must demonstrate the following.

- "V" stance sufficient to maintain forward motion
- Weight on inside edge of holding ski with knees and ankle flexed
- Diagonal poling technique with poles planted well behind and out to the side

- A quick ankle, knee, and hip extension to help maintain uphill momentum
- Head up, body committed forward

Cross-Country Downhill Turns

The purpose of performing advanced cross-country downhill techniques is to refine turning skills, rhythmically link turns on open slopes, and employ a variety of techniques that are dictated by snow conditions and terrain. Skiing control and stability are necessary to ski safely and rapidly to an incident scene.

Accepted cross-country downhill maneuvers include wedge turns (snowplow), stem turns, parallel turns (three to four linked) and telemark turns (three to four linked). For the following segments of the clinics and evaluations, cross-country downhill maneuvers should be performed on slopes with the terrain indicated.

- Demonstration and practice: easier, open, packed slope (less than 30 percent grade) more difficult, open, groomed and ungroomed slopes (30 to 45 percent grade)
- Evaluation: more difficult, open, groomed and ungroomed slopes (30 to 45 percent grade)

Performance Objectives for Cross-Country Downhill Turns

When performing cross-country downhill turns, the candidate must demonstrate the following.

- Balancing movements
  - An ability to maintain a stable, relaxed stance through a broad range of speed, terrain, and snow conditions
- Rotary movements
  - Earlier matching and active guidance of the inside leg
  - An ability to accurately steer the legs sequentially and simultaneously
  - Round turn shape with improved accuracy and control
- Edging movements
  - Smooth increase or decrease of edge angles (progressive edging)
  - Minimized braking, which encourages gliding through the turn
  - Developed timing of edge change movements
- Pressure-control movements of skis and poles
  - Smooth weight shift
  - Movement of the center of mass in the direction of the turn

Step Turns

Step turns are a moderate- to high-speed maneuver. The nordic senior candidate needs to demonstrate the ability to change direction on gradual downhill grades and in varying snow conditions.

For the following segments of the clinics and evaluations, steps turns should be performed on set track with the terrain indicated.

- Demonstration and practice: easier, set track; more difficult, rolling set track
- Evaluation: more difficult, rolling set track

Performance Objectives for Step Turns

When performing step turns, the candidate must demonstrate the following.

- Balancing movements—moving from foot to foot
- Rotary movements—development of foot/leg steering as sequential movements
- Edging movements—stepping sequentially from ski to diverging ski using enough edging on push ski to prevent sideslipping
- Pressure-control movements of skis and poles
  - Moving from foot to foot, while standing on whole foot
  - Using poles for balance and propulsion

Pole Drag

The pole drag is a survival skiing technique used when terrain, obstacles, or snow conditions make other cross-country downhill skiing techniques impractical. Nordic senior candidates should be able to demonstrate control, stopping within a short distance at any time.

For the following segments of the clinics and evaluations, the pole drag should be performed on the terrain indicated.

- Demonstration, practice, and evaluation: more difficult, steep narrow trails

Performance Objectives for Pole Drag

When performing pole-drag maneuvers, the candidate must do the following.

- Remove straps to prevent injury in case the baskets catch on an obstruction; baskets drag in snow with pressure applied to poles.
- Maintain good body position (low and stable).
- Adequately control the speed of descent.

Overall Skiing—Unpacked Snow or Icy Conditions

During training clinics and evaluation, nordic senior candidates will be expected to ski any trails or slopes under most any type of snow conditions in the following terrain:

- Demonstration, practice, and evaluation: more difficult

Performance Objectives for Unpacked Snow and Icy Conditions

When skiing in unpacked snow and icy conditions, the candidate must demonstrate the following.

- Balance
- Stability
- Control
- Linked, downhill turns
- Moderate, constant, safe speed for his or her ability level
- An appearance of ease and confidence

Evaluation

The nordic senior skiing evaluation will concentrate on the skier's control, style, and ability to handle the terrain, rather than on testing basic skiing maneuvers. The group tour will allow the senior candidate to be evaluated on some of the required skills during the continuous evaluation on the tour. The following is the general definition for evaluating nordic skiing in each of the categories on the score sheet.

Above Senior Level (+)
The nordic senior candidate demonstrates outstanding skill, ability, and technique in nordic skiing (as measured by the program's performance objectives, using the applicable criteria). The senior candidate consistently demonstrates exceptional stability and control in difficult terrain and snow conditions. He or she makes efficient and effective use of equipment and skiing technique to produce a fast, safe, smooth, and consistent run. The senior candidate displays confidence in adapting nordic skiing skills to varying terrain and conditions.

At Senior Level (=)
The nordic senior candidate demonstrates the ability to ski in a safe and efficient manner using an efficient combination of skill, ability, and technique (as measured by the program's performance objectives, using the applicable criteria). The senior candidate demonstrates better-than-average stability and control in all terrain and snow conditions, to produce a safe, smooth, and consistent run.

Below Senior Level (-)
The nordic senior candidate is inconsistent in meeting the minimal skiing requirements (as measured by the program's performance objectives, using the applicable criteria). The candidate makes occasional or frequent errors in speed, control, stability, route selection, communication, or equipment usage. The candidate fails to meet one or more critical standards for nordic skiing or performs skills at a level below that expected of a nordic senior patroller.

Senior Core Component: Extended Nordic Ski Tour

The extended nordic ski tour is the basis for evaluating senior candidates' overall nordic and mountaineering knowledge, skills, and abilities as they demonstrate their physical conditioning and orienteering, route selection, toboggan fabrication, bivouac, and subject-survival skills. Aspects of nordic skiing, toboggan transport, and belay evaluation are frequently evaluated during this tour. The extended ski tour should last four or more hours.

Prerequisites

- Training sessions (local, region, division)
- Daypack containing equipment and materials normally used in the patrol environment

General Terrain Requirements

- 1,000 feet of vertical elevation gain or 25 kilometer of trails
- Variety of trails and slopes, rated from easiest to most difficult

Course Objectives

The learner will address the categories that follow to fulfill the course objectives.

Orienteering

- Follow a compass heading over such a distance and with enough heading changes to demonstrate reasonable orienteering proficiency.
- Plot current location on a map by taking sighting on known landmarks and converting them to a location on a map.

Toboggan Fabrication

- Only use materials from a daypack and natural materials in the field to fabricate a toboggan.
- Load a person into the toboggan and transport the person 50 yards in a traverse, then 50 yards downhill. The instructor of record will evaluate the toboggan for stability, construction, and sturdiness to determine if it is adequate for long-distance evacuation.

Bivouac and Patient-Survival Skills

- Select an appropriate bivouac site for a severe winter condition as described by the instructor of record.
- Build a bivouac shelter large enough for one patroller and one "patient."
- Either build a fire or use a stove to prepare a hot drink or meal.

Performance Objectives for the Extended Nordic Ski Tour

When participating in the extended nordic ski tour, the candidate must demonstrate competency in the following.

- Skiing technique and proficiency
- Stamina
- Strength
- Rate of travel

- Proper route selection
- Map and compass proficiency
- Recognition of avalanche or other potential travel hazard
- Toboggan fabrication (sturdy after three 50-yard tests)
- Construction of emergency shelter in terms of site, size, and protection offered
- Ability to heat and provide a hot drink or meal

Evaluation

The following is a general definition for evaluating the extended ski tour in each of the categories on the score sheet.

Above Senior Level (+)
The nordic senior candidate demonstrates outstanding leadership, mountaineering skills, stamina, and adaptability throughout the extended ski tour. The candidate consistently demonstrates exceptional endurance and overall ski skills in difficult terrain and snow conditions. The candidate makes consistent reasoned decisions based on knowledge of mountaineering skills. The candidate makes efficient and effective use of equipment available in his or her patrol pack for all situations encountered. He or she demonstrates skill at securing the incident scene, managing the incident, and preparing an effective bivouac. The nordic senior candidate displays confidence in adapting to the variety of circumstances presented in the tour.

At Senior Level (=)
The nordic senior candidate demonstrates effective leadership, mountaineering skills, ability, and technique. The candidate demonstrates better-than-average endurance and overall skiing ability in most terrain and snow conditions. The candidate demonstrates knowledge of mountaineering skills. He or she makes reasonable use of equipment available from his or her patrol pack for most situations encountered. The candidate provides a serviceable bivouac within a reasonable timeframe. The nordic senior candidate demonstrates reasonable adaptability to the circumstances presented in the extended ski tour.

Below Senior Level (-)
The nordic senior candidate is inconsistent in meeting the objectives of the extended ski tour. The candidate regularly defers leadership and decision making to others or makes occasional or frequent errors in leadership judgment, equipment use, or takes excessive time to grasp and perform skills. The nordic senior candidate fails to meet the critical standards for the extended ski tour or performs skills at a level equivalent to a basic patroller.

Senior Core Component: Nordic Toboggan Transport and Belay

The nordic senior candidate must demonstrate leadership ability when setting up and moving a nordic toboggan. Also, the candidate must demonstrate an ability to use specific equipment effectively and apply his or her knowledge of knots, routes, patient packaging techniques, and patroller safety considerations. In addition, the successful candidate must demonstrate the technical skills required to successfully evacuate a patient under any existing weather and terrain condition. He or she must also have the ability to coordinate a team to conduct a toboggan transport in a smooth, efficient, and safe manner.

The nordic senior candidate should be able to work as a team member and provide leadership when constructing a sturdy toboggan from available materials (which may include an injured person's skis). The candidate should be able to transport the patient a considerable distance under various conditions, using appropriate moving and static belays. Items to be considered when constructing a toboggan include skis, carabiners, webbing, ropes, knots, and any other available building materials. The nordic senior candidate must demonstrate the ability to improvise in an emergency situation.

Moreover, the nordic senior candidate must consider the time and nature of the illness or injury to properly package and care for a patient. The candidate does not have to demonstrate OEC skills for specific injuries during this component. Instructors should identify the nature of the injury so the candidate can use that information to determine appropriate patient management and proper route selection.

While on the extended ski tour the nordic senior candidates may be evaluated on their ability to fabricate a toboggan (from available materials), transport a subject a significant distance, and demonstrate good belaying and patient-handling techniques.

Prerequisites

- Training clinics (local, region, division)
- Warm-up exercises before evaluation clinic
- Daypack containing equipment and materials normally used in the patrol environment

Recommended References

- Nordic Exercises (appendix F)
- *Nordic Training Manual*, National Ski Patrol, 1998
- *Mountain Travel and Rescue*, National Ski Patrol, 1995

Course Objectives

The learner will address the categories that follow to fulfill the course objectives.

Organization and Leadership of a Toboggan Transport/Belay

The candidates will work as a team to rig toboggan belay and haul ropes in such a way that when transported over varied terrain, the toboggan will not have to be re-rigged in the transitions from uphill to downhill, across a hill, or when going from wide to narrow trails, etc.

Performance Objectives for Organization and Leadership of a Toboggan Transport/Belay

When participating in the toboggan transport/belay exercise, the candidate must demonstrate the following.

- Proper selection of knots
- Proper selection of anchor(s)
- Suitable belay position
- Confidence in belay
- Ability to establish belay time through effective communication
- Successful construction of toboggan (if appropriate)
- Leadership in conducting a rescue operation
- Communication with proper authorities
- Team versus an individual approach to the exercise

Up-slope Transport and Belay of a Loaded Toboggan

Training and evaluation content will include route selection, negotiating obstacles, determining the availability of terrain anchors, and a discussion of patient injury. Other important topics to be incorporated into training and evaluation of belay setup and operation include communications, belay commands, teamwork, and effective use of assistance. Demonstration, practice, and evaluation will take place on most difficult terrain consisting of steep slopes between parallel roads or trails with obstacles.

Performance Objectives for Up-slope Transport and Belay of a Loaded Toboggan

When participating in the up-slope transport and belay exercise, the candidate must demonstrate the following.

- Appropriate route selection
- Communication with subject and team members
- Proper belay setup
- Effective operation of belay
- A smooth, safe, and comfortable ride for the patient
- Confident leadership

Down-slope Transport and Belay of a Loaded Toboggan

A portion of the down-slope transport and belay exercise should include a static-belay lowering of a loaded toboggan with the same anchor and hauling system used for the up-slope exercise. The remainder of the exercise should involve moving and moving-static belay techniques.

The terrain for demonstration, practice, and evaluation of the static belay should be on the most difficult, steep slope between parallel roads or trails with obstacles. Terrain for demonstration, practice, and evaluation of moving and moving-static belays should be on more difficult groomed and ungroomed slopes.

Performance Objectives for Downslope Transport and Belay of a Loaded Toboggan

When participating in the down-slope transport and belay exercise, the candidate must demonstrate the following.

- Appropriate route selection
- Communication with subject and team members
- Proper belay setup
- Effective operation of belay
- Speed control using wedge, sideslip, and transitions
- Traverse the slope with minimal slipping
- Coordinated movements with other team members
- Stable position of the rear of toboggan (maintained throughout the exercise)
- Control of rope with hand or belay position
- Skiing with stability and control
- Adaptability to terrain and condition changes
- A smooth, safe, and comfortable ride for the patient
- Confident leadership

On-Trail, Flatland Transport of a Loaded Toboggan

This exercise covers the leader's positioning versus that of the other operator(s), along with the leader's transition and communication with the other operator(s). Another evaluation component is the leader's and operators' attention to the patient and the patient's ride.

For the following segments of the clinics and evaluations, these toboggan-transport maneuvers should be performed on the terrain indicated.

- Demonstration and practice: easier, set track (narrow and wide trails); more difficult, rolling set track (narrow and wide trails)
- Evaluation: more difficult, rolling set track (narrow and wide trails)

Performance Objectives for On-Trail, Flatland Transport of a Loaded Toboggan

When participating in on-trail, flatland toboggan transport, the candidate must demonstrate the following.

- Appropriate positioning of the leader and other team members
- Communication with subject and team members
- A smooth, safe, and comfortable ride for the patient
- Confident leadership

Evaluation

The following are general guidelines for evaluating the nordic senior candidate's ability to construct and handle the toboggan in each of the categories on the scoring sheet.

Above Senior Level (+)
The nordic senior candidate demonstrates outstanding leadership, skill, ability, and technique in operating a nordic toboggan (as measured by the program's performance objectives, using the applicable criteria). The candidate consistently demonstrates exceptional stability and control in difficult terrain and snow conditions. The candidate makes efficient and effective use of equipment, belay techniques, and skiing movements to produce a safe, smooth, expedient, and consistent run. The nordic senior candidate displays confidence in adapting nordic toboggan transport, belay, and skiing skills to varying terrain and conditions.

At Senior Level (=)
The nordic senior candidate demonstrates the ability to operate a nordic toboggan in a safe and efficient manner using an efficient combination of leadership, skill, abilities, and technique (as measured by the program's performance objectives, using the applicable criteria). The candidate demonstrates better-than-average stability and control in all terrain and snow conditions, producing a safe, smooth, and consistent run.

Below Senior Level (-)
The nordic senior candidate is inconsistent in meeting the minimal nordic toboggan handling requirements (as measured by the program's performance objectives, using the applicable criteria). The candidate makes occasional or frequent errors in leadership judgment, control, stability, route selection, communication, equipment use, or takes excessive time to grasp and perform skills. The candidate fails to meet one or more critical objectives for nordic toboggan handling or performs skills at a level equivalent to a basic patroller.

Senior Core Component: Senior OEC

The senior OEC component is a national education opportunity that allows members to participate in ski patrol-relevant exercises. These exer-

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cises are designed to develop and enhance the skills of decision making, problem management, and leadership as applied to the management of emergency care situations in a typical ski patrol environment. Their purpose is to build on but not duplicate the Outdoor Emergency Care Program.

Senior OEC training provides an opportunity for senior candidates to gain new and different perspectives on their own style of leadership in emergency medical situations. Division senior staffs provide scenarios for written and on-snow practice exercises. These scenarios emphasize leadership, triage, and managing multiple-injury problems.

Local training for the senior OEC program may be accomplished at the patrol, section, or region level, depending on geography, instructor availability, and other considerations. Training of senior OEC candidates should be done under conditions and on terrain similar to that which will be used for the clinic evaluations. It is recommended that training be done on snow for the benefit of the candidate.

During the clinic evaluations, the senior OEC candidates will be assigned an advocate whose primary responsibility is to observe the candidates throughout the clinic, be a mentor for the candidates, and be another set of eyes for the examiners in support of the candidates' actions.

Prerequisites

- Review basic skills (OEC and Basic Life Support CPR).
- Submit written answers to two open-ended practice scenario problems (select from appendix G).
- Create one new senior-level training scenario.
- Participate as a leader in a minimum of four practice scenarios.
- Participate in training clinics.

Recommended References

- *Outdoor Emergency Care,* National Ski Patrol, current edition
- *OEC Study Book,* National Ski Patrol, current edition

Terrain Requirements

On-hill scenarios (typical patrol emergency care situations) must be scheduled during the ski season, on the

snow, and comply with requirements described in the scenario. There must be sufficient snow to accomplish all evaluation criteria. Other scenario types, i.e., non-ski run emergencies, such as those that occur in the patrol room, cafeteria, or base-area facility, must also be in their realistic settings. The evaluation clinic must be held at a ski area although the ski area does not need to be open at the time of the evaluation.

Under exceptional circumstances, an alternative location (not a ski area) may be used, but only if the division OEC supervisor has approved the location in advance. The location must meet all the requirements for a senior OEC clinic/evaluation, including terrain, skiing capabilities, scenarios, emergency care equipment, patrol toboggans, etc. If there is no snow at the time of the evaluation, the clinic/evaluation must be canceled or rescheduled.

National senior-rated scenarios will be used in all warm-up and evaluation rounds. No props, other than moulage, may be used to simulate conditions specified in a scenario. For example, a bamboo pole may not be substituted for a tree. Alpine and nordic candidates may be evaluated as a leader in no more than one non-ski run problem (e.g., incident in a patrol room, cafeteria, or base-area facility). If the scenario specifies a snow environment, the candidate being evaluated as the leader must be able to ski up to the "incident." Reasonable accommodations must be made for non-skiing senior auxiliary candidates to access all scenarios, e.g., snowmobile transport. Any equipment or helpers that are part of the scenario should be waiting out of sight of the scenario and the helpers should be able to ski up when responding to the leader's request for assistance.

Senior auxiliary candidates must be evaluated as a leader in one non-ski run problem.

Performance Objectives for Senior OEC

At each scenario, candidates are evaluated on their ability to meet the standardized performance objectives for decision making, problem management, and leadership. Each objective carries equal weight. What follows is an explanation of how the terms "decision making, problem management, and leadership" relate to expected performance.

Decision Making

- Problem assessment: The candidate approaches the incident appropriately, evaluates the situation, and determines all essential issues and safety needs.
- Patient assessment: The candidate conducts a primary survey and secondary survey, and during a "patient" interview considers the trauma and likely medical outcome.
- Appropriate prioritizing: The candidate addresses a single patient and determines whether the patient is a priority case. The candidate also assigns priority status to multiple patients and conducts triage.
- Overall safety: The candidate takes all appropriate actions to identify, protect, mark, and move patients.

Problem Management

- People resources: The candidate requests, uses, and directs available resources appropriately; keeping people involved without allowing independent actions.
- Equipment resources: The candidate requests and uses equipment appropriately and ensures that other patrollers also use equipment appropriately.
- Plan of action: The candidate manages the problem, avoids repeating actions, directs logical follow-through given the patient's condition, and allots the appropriate amount of time for action points.
- Anticipation: The candidate plans for what may happen next, avoids common problems and duplication of services, and unnecessary movement of the patient.
- OEC skills: The candidate directs or applies appropriate OEC skills according to patient need and in accordance with OEC skill performance guidelines.
- Transportation: The candidate uses planned, supportive, and appropriate means to arrange transportation for priority cases and for others, securing an adequate number of helpers.

Leadership

- Communication with the patient, helpers, bystanders: The candidate informs the patient of what is happening, gives appropriate instructions to helpers, and directs bystanders without introducing confusion.
- Attitude: The candidate is positive, reassuring, and outgoing.
- Ability to direct: The candidate is assertive, makes independent decisions, and demonstrates an ability to use resources and provide clear direction to helpers.
- Confidence: The candidate demonstrates that he or she knows what to do and how to do it.
- Delegating: The candidate builds and uses a controlled team approach and doesn't try to do everything alone.

Course Objectives—Final Evaluation

The senior OEC candidate will demonstrate the following knowledge and abilities as they pertain to various elements of Outdoor Emergency Care.

At the end of every scenario, each evaluator will independently complete an evaluation sheet. The advocate for the senior and the two

station evaluators must reach a consensus evaluation regarding the senior candidate's performance on that scenario. The point of striving for consensus is to have a well-reasoned decision to share with the candidate. Station evaluators should defer non-critical performance issues to the advocate. Since advocates have observed candidate performance throughout the entire day of warm-ups and evaluations, they must be allowed to overrule decisions concerning the candidate's *minor* errors if they believe the error was misunderstood by the examiners.

If the basic skill review and practice scenarios have been administered correctly during senior OEC training, the candidate should be able to meet all of the program objectives. If the senior candidate feels comfortable with his or her ability to deliver high-quality emergency care, the candidate's decision-making efforts will reflect that confidence.

There are several options, approved by the NSP Board, for running a final senior OEC evaluation. Each region may decide, in collaboration with the division OEC supervisor, which option will be used (see current options in the following sections or check most current edition of *NSP Policies and Procedures*).

Option A—Warm-Up Round

Senior OEC candidates will participate in group exercises at three stations of about 20 minutes each. These exercises are designed to help the senior candidates—who have been randomly assigned to the various stations—team advocates, and station instructors begin the process of building a team.

The instructor of record should allot time for positive learning opportunities, critique, feedback, and rotation to the next station. Constructive feedback should include discussion of expectations, suggestions for improvement, procedural issues, and alternative strategies for the incident. The warm-up/socialization rotations are designed to help senior candidates decrease jitters and to give each person at least one opportunity to be the primary caregiver at an incident before the evaluation rotations begin. Under no circumstances are these warm-ups to be used for evaluation purposes. Warm-ups must be done the day of the evaluation.

Option A—Evaluation Rounds

Candidates are evaluated on their ability to perform as the leader in a senior-level OEC scenario. One evaluation consists of being the leader in a multiple-injury scenario. The second evaluation as the leader in a multiple-patient (triage) scenario.

Option B—Evaluation Rounds

If this option is chosen, the evaluation is accomplished as part of the training sessions. During a series of clinics, candidates will have to successfully complete six scenarios as leader. These six scenarios must include two multiple-injury problems, two multiple-patient problems, and two bystander problems. Candidates may be evaluated by a senior OEC trainer/evaluator from their home area on only two scenarios (one each from two out of the three different categories). The other four scenarios must be evaluated by senior trainer/evaluators from other areas.

Option C—Warm-up Round

The warm-up round is identical to Option A.

Option C—Evaluation Round

Candidates are evaluated once as the leader in a multiple-patient (triage) scenario. The candidate may pass, fail, or be reevaluated, based on the decision of the senior trainer/evaluators. Reevaluations will only be given under extreme circumstances when the candidate's performance was jeopardized by a scenario-based situation, e.g., patient giving wrong vitals.

Evaluation

The following is a general definition for evaluating OEC scenarios in each of the categories on the score sheet.

Above Senior Level (+)
The senior candidate demonstrates outstanding decision-making, problem management, and leadership abilities (as measured by the program's performance objectives, using the applicable criteria). The senior candidate consistently demonstrates exceptional problem assessment, resource management, communication, and team interaction in every scenario. The patroller does an exceptional job of identifying and coordinating all actions necessary to manage the helper(s), bystander(s), and the scene to satisfy OEC skill performance objectives while ensuring the safety of the patient(s).

At Senior Level (=)
The senior candidate demonstrates above-average decision-making, problem management, and leadership abilities (as measured by the program's performance objectives, using the applicable criteria). The senior candidate demonstrates above-average problem assessment, resource management, communication, and team interaction in every scenario. The patroller identifies and coordinates all actions necessary to manage the helper(s), bystander(s), and the scene to satisfy OEC skill performance objectives while ensuring the safety of the patient(s).

Below Senior Level (-)

The senior candidate is inconsistent in meeting the minimal decision-making, problem management, and leadership abilities (as measured by the program's performance objectives, using the applicable criteria). The candidate makes critical or frequent errors in problem assessment, resource management, OEC skill performance, communication, and team interaction. The senior candidate identifies and coordinates actions necessary to manage the helper(s), bystander(s), the scene, and the patient(s) at a level below that expected of a senior patroller.

Continuing Education

To maintain senior OEC skills, patrollers must complete established annual OEC refreshers and local OEC continuing education programs. The Senior OEC Program does not require any additional training or evaluation beyond attending annual refreshers and continuing education sessions.

Senior Auxiliary Core Component: Patroller Enrichment Seminar

The Patroller Enrichment Seminar (PES) is an approved senior core component for senior auxiliary and a senior elective for alpine and nordic patrollers. It is a national education course that allows patrollers to participate in practical, relevant exercises that help enhance their patrolling experience.

PES encourages patrollers to increase their knowledge of education and leadership opportunities within the patrolling environment, to provide more effective services for area management, and to seek personal achievements as members of a national education association. This national education course—which consists of four two-hour modules—offers a goal-oriented, objective-based, interactive clinic that may be modified to address local patrolling responsibilities.

For details on the specific modules, see chapter 14 and appendix H.