

A NATIONAL SKI PATROL UPDATE, PART I: MEDICAL EDUCATION TRAINING & THE OEC TEXTBOOK

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SKI PATROLLERS ARE such a familiar presence at ski areas that it's easy for area owners, operators, managers, and even our resort guests to not realize the type and extent of training they undergo each year. In addition to the training done for skiing/snowboarding and pulling a toboggan, their function as safety educators and emergency medical providers requires them to continually refine, and formally refresh, their skills. Because emergency medical response is an ever-evolving science, the training that the National Ski Patrol (NSP) provides its members is evolving also.

Several changes are happening with NSP's medical training and the outdoor recreation industry needs to be aware of them. Although the core level of our medical curriculum is the same, NSP is using modern training methods

The National Ski Patrol emphasizes that the upcoming sixth edition of the *Outdoor Emergency Care* textbook is a work in progress. NSP continues to receive feedback from ski areas and patrollers, and will take that input into consideration during the development of the next edition. NSP will circulate a survey to ski area managers and other stakeholders to gather additional critical information and insights for the process of updating the sixth edition of the textbook.

and current techniques in the treatment provided to patients. This is the first of two articles for the *Journal* that describes some of these important developments, which are designed to prepare NSP members with the best possible quality of safety education and emergency care training for their role at ski areas. This will also allow our education and training processes to evolve and allow for expanded recruitment of new patrollers at ski areas.

Ski patrollers presently train using the curriculum similar to that of Emergency Medical Responder with additional information pertinent to patrolling. This standard has been used since the fifth edition of *Outdoor Emergency Care (OEC)* was published in 2012. The reasons for choosing this level for patroller education are explained here. The NSP is presently developing the next course and text of OEC for patrollers.

Part two in the November issue of the *Journal* will expand upon the future of medical education for our organization. The NSP Medical Committee, our board of directors, and OEC editors are utilizing the feedback and insights received from NSAA and its members, and have taken steps to allow more streamlined access and knowledge transfer for the initial candidate patroller to become a full patroller with an OEC credential. The NSP board and the editors of the OEC program will continue to consult with NSAA and its members as this project moves forward.

THE PARTNERSHIP BETWEEN NSAA & NSP

NSAA and NSP have had a symbiotic relationship since their respective beginnings decades ago. In fact, today NSP and NSAA share the same office building. While different in their individual mission and membership, our organizations share an important commitment to help keep snowsports safe, enjoyable, and accessible for everyone.

We also share many of the challenges affecting virtually all outdoor recreation associations these days: guest safety, business consolidation, climate change, evolving demographics, dwindling volunteerism, and an increasing reliance on technology as a primary mode of communication and learning. For NSP, these realities affect how we provide our patrollers with the specialized medical education programs and training they need.

NSP—through more than 29,000 ski/snowboard patrollers and mountain hosts serving ski areas and their guests throughout the country—is only as sustainable as the quality of its education programs. This is why the organization continually evaluates and refines its medical education programs to ensure their legitimacy and value. Currently, NSP is updating the content and training program for Outdoor Emergency Care, its cornerstone education program, revising the program's corresponding textbook, and working to improve the education process of new patrollers.

A BRIEF LOOK BACK

When Charles Minor "Minnie" Dole founded NSP in 1938, he and the NSP's first medical contributor, Laurence M. Thompson, MD, of the American Red Cross (ARC), sought to provide the best medical education program available for "patrolmen." At that time, the ARC First Aid program—which provided the necessary basic first aid information to patrollers—fit the bill.

Dr. Thompson wrote a special addition supplement, *Ski Safety and First Aid*, that identified considerations of providing care in the winter environment, and this also was added to the NSP curriculum. Through the early years, additional information about winter medical care helped supplement the ARC course.

The first substantial change in medical education for ski patrollers came in 1985. NSP patroller and National Medical Advisor Warren Bowman, MD, created an education program that specifically addressed the medical problems a ski patroller could encounter at a ski area, authoring the Winter Emergency Care (WEC) course curriculum and textbook. Soon after *WEC* was published—in the ongoing effort to serve ski areas as they began to expand into year-round operations—NSP concluded that patrollers needed additional medical education for the other seasons. Accordingly, Dr. Bowman revised the course curriculum and textbook and used a new title: Outdoor Emergency Care.

As the chairman of the Wilderness Medical Society, Dr. Bowman understood *wilderness* medicine, and as a practicing physician in Billings, Montana, he understood *urban* pre-hospital care also. Dr. Bowman wanted patrollers to be able to care for the sick and injured in a pre-hospital care



Courtesy National Ski Patrol

program. In creating OEC, he initiated one of the first pre-hospital medical programs, using insight from both wilderness and urban medicine. Snowsport patients start in an austere environment on the side of a mountain in snow, cold, and wind, and then are transported to a first aid room with additional medical equipment such as a pulse oximeter before being released or transferred to the next level of care.

Once a candidate successfully completes the NSP OEC course, that individual becomes an OEC Technician. Patrollers who are trained as OEC Technicians remain the backbone of pre-hospital care at both downhill and Nordic ski areas. NSP decided this year to create and develop training for mountain bike patrollers, which includes OEC training. Throughout the country, OEC has become the premier outdoor pre-hospital emergency care program addressing the many different injuries and medical problems ski patrollers face on the mountain.

WHY NSP USES OEC TECHNICIAN TRAINING

Much has changed in pre-hospital medical care since the 1980s. Recently NSP's Medical Committee and Board of Directors looked closely at where the medical educational component for ski patrollers needs to be to maintain the quality of pre-hospital training they receive. Patrollers need to provide rapid, modern care for guests who become sick or are injured at resorts. The NSP Medical Committee and the NSP Board have determined that the best level of training ▶

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for a patroller is OEC, which includes additional training to accommodate for non-urban environments. NSP is taking into consideration the varying needs of different resorts and their geographies, and the organization will continue to incorporate feedback from ski areas and patrollers into the creation of the next OEC edition.

Emergency medical care has layers of providers. The first level consists of someone trained in basic first aid (usually a weekend course). This first aid tract is available with NSP's recently expanded Mountain Host Program. This Mountain Host Program is not meant to be a training program for patrollers. The NSP first aid curriculum is called Outdoor First Care (OFC), which will be discussed in Part Two of this article (early winter issue). After first aid or OFC, the next progression for a provider is training as an Emergency Medical Responder (EMR). Some call an EMR provider a "First Responder," but this term has fallen out of use, as anyone who is first on scene when someone needs care is a first responder. The NSP OEC credential, which uses training similar to that at the EMR level, and more education in medical emergencies pertinent to ski patrolling, is recognized at most ski areas.

On some mountains, individual patrollers may be trained as Emergency Medical Technicians (EMT), Advanced EMTs (AEMT), Paramedics, nurses, physician assistants, and medical doctors. At the EMT and higher levels, *individuals are credentialed by each individual state*, thus falling under state EMS medical regulations. Those ski areas that choose to use EMTs and above need to be familiar with their state's EMS regulations and laws. NSP's National Legal Committee believes that NSP's OEC training might provide additional legal protection to patrollers and ski areas.

OUTDOOR EMERGENCY CARE

The core standard of the medical education curriculum for ski patrollers has existed for many years. The curriculum for the *OEC* sixth edition textbook and course will include information about the medical conditions and updates based on current best practices for responders.

This standard of training has been used by NSP for years. In 1998, Dr. Bowman included many updates in best practices as additional core medical topics in the *OEC* third edition textbook and course. Although medical conditions remain the same, the core topics taught are continuing to evolve, as treatment using medically-based evidence has changed, so updates on evaluation and treatment will be provided in the sixth edition.

One may question why NSP originally chose to include certain subjects in the curriculum. NSP recognizes that ski patrollers see many different medical conditions and injuries,



Courtesy David Jolie

Ski patrollers in New England helped provide emergency response coverage at a ski event recently held at Fenway Park in Boston.

as more resorts are running year-round operations. Some smaller areas may think less training is needed, but everything from heart attacks to multiple trauma victims can be seen at any time, at any ski resort. Patrollers do not see just broken arms, cuts, and twisted knees. Thus, a well-balanced course is required.

OEC is in compliance with the National Highway Traffic Safety Administration (NHTSA) training standard, which is important for patrollers because it gives them a well-respected, recognizable credential in the medical community and provides expanded training for the skills necessary to care for the sick and injured *during all four seasons* at a resort. This compliance is one of the reasons that OEC has been successful in avoiding regulation in some states. NSAA's *Kortke End of Season Survey* for the 2015-16 season showed 73 percent of ski resorts nationally now offer non-snowsports activities. Resorts are utilizing their capital investments to provide year-round activities such as mountain biking, ziplines, mud runs, obstacle courses, summer festivals, and water activities. In this Kortke Survey, new capital expenditures for summer/fall specific resort activities were projected to be over \$21 million alone nationally in 2016-17.

The OEC credential may enable patrollers to provide services at other events. The city of Boston recently had a "Big Air" skiing event in the Red Sox "Fenway Stadium," its baseball arena, where ski patrollers provided medical assistance. They made a lot of snow! Patrollers could help if a major disaster occurs. Most of all, the OEC credential ensures that patrollers continue to have the knowledge and skills they need to do an excellent job in their role at ski areas throughout the year.

After candidate patrollers have completed an OEC course, they become OEC Technicians. This Outdoor Emergency Care credential is unique: it is *transferable throughout the US* (in addition to some resorts in Canada and those resorts in Europe and Asia that use NSP training). This is not the case with EMTs, where each state issues ▶



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its own credentials for each technician. Nearly all ski resorts recognize the NSP OEC card. Even some ski resorts that do not have NSP patrollers will also recognize the OEC credential. As long as a transferring patroller is in good standing, can ski or snowboard at the level a mountain requires, and meets other resort-specific qualifications, an OEC-trained patroller is qualified to patrol at almost any resort.

A study of the NSP's OEC curriculum confirmed the NHTSA equivalent training provided by NSP in the past is sufficient to provide the appropriate level of care for injured skiers. An article in the June 2002 issue of *Wilderness and Environmental Medicine*, entitled "Prehospital Medical Care and the National Ski Patrol: How Does Outdoor Emergency Care Compare to Traditional EMS Training?" was written by Ben Constance, MD, Paul Aurbach, MD, and myself. This peer-reviewed article compared the OEC curriculum with that of EMR and EMT programs that follow the NHTSA guidelines, and concluded that OEC meets the requirements for an EMR course and teaches additional material pertinent to ski patrolling. It does not meet the requirements for an EMT course. The article stated: "It is our impression that the OEC-T (OEC Technician) program adequately trains responders to initially manage snow sports pathology." The OEC program is specifically designed to meet the medical training necessary for providing medical assistance at a ski resort for all four seasons.

OEC COURSE AND TEXTBOOK

If you've seen the *Outdoor Emergency Care* textbook, you know it's a large and comprehensive compendium of information. You may also mistakenly assume that patrollers need to know everything in it. A candidate who is taking the OEC course does not need to learn everything in the *OEC* textbook cover to cover. The textbook includes basic information as well as additional information for candidates and experienced patrollers who wish to obtain additional information and training. For a candidate to pass the initial OEC evaluation, the student must learn the stated curriculum in the *OEC course*: the clearly defined objectives, practical skills, and vocabulary. Recent OEC course final evaluations have been audited to ensure these are based on these three components.

This key point that *candidate patrollers are not required to know everything in the OEC textbook* and that *they need to learn only the objectives/skills/vocabulary* has been emphasized to all NSP OEC instructors. Recently NSP created a short NSP website video that all OEC instructors are expected to review to maintain their instructor credential. This video explains clearly to instructors what is to be taught to have someone successfully complete the course.

Some ski areas want only "the basics" course to be taught, while other ski areas include more information in their course. The OEC course is designed to meet *both* needs of NSP's primary customer: the ski areas. If students want more, instructors can provide additional information. I personally know of several areas where students have appreciated the opportunity for additional training and education. The basic course curriculum, plus additional information needed for patrolling in a non-urban environment, is being updated.

Some ski areas have asked to place a time constraint on learning the material in the OEC curriculum, but this would be difficult. Instructors have distinctive styles of teaching, some classes may have students that ask a lot of questions, and sometimes it takes a little longer for a new student to learn a skill. However, NSP emphasizes that instructors should make sure the objectives and skills are taught first, and if time permits and students are eager to learn more, additional material may be given. Generally, a schedule is established at the beginning of the course.

In addition to the traditional classroom OEC course, which may be extended for as many days or months as necessary, NSP offers a hybrid (online/hands-on) OEC course for candidate patrollers from large geographic areas. For example, the two ski areas owned by one entity in northern Michigan hold training classes closer to the Detroit area to make it easier for patrollers who live farther south of their remote ski areas. Areas in the NSP's Southern Division of NSP do this regularly. Much of this version of the OEC course is done online at home, with multiple hands-on sessions to teach the practical skills. This cuts down travel time for both instructors and candidate patrollers. Basic medical knowledge is provided online. When attending an instructor scheduled face-to-face session, patrollers can ask questions about the medical knowledge gained online and practice hands-on skills with the guidance of an OEC instructor. I consider this a good step for rural patrols that have trouble recruiting, improving the driving time commitments both for instructors and students.

Several areas have taught an immersion class, where the student comes daily for a couple of weeks with nightly study before taking the final evaluation. One can see NSP allows different options regarding the way the course is taught, allowing the ski area to tailor OEC education. Again, the key is that the student masters the objectives, skills, and vocabulary. This flexibility should help with recruitment of new patrollers.

After some ski areas expressed a desire to have NSP create a "modular" approach to the OEC course, the NSP Board formed a committee to look at this possibility. Certain topics would be taught first, then more in another module, and so ▶



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The author, NSP's National Medical Advisor, Dr. David Johe.

ski area patrons if only part of the course was completed. Remember, ski patrollers see all types of medical problems on the hill and in the lodge, not just winter trauma. After careful consideration, it was decided not to recommend teaching OEC in modules. Creating partial patrollers is not a promising idea. Meeting the objectives of the current OEC curriculum remains the gold standard for patrollers.

In the next issue of the *Journal* we'll look more at the future of OEC and discuss another essential NSP education program, Outdoor First Care. This specialized training for Mountain Hosts has proven to be another invaluable NSP program supporting many resorts throughout the country.

The National Ski Patrol is committed to working with our principle customers to continue to improve the medical education of ski, snowboard, and mountain bike patrollers serving the industry. Our continued partnerships and collaborations are invaluable in helping keep outdoor recreational use safe, viable, and fun for future generations. ■

In addition to serving as National Medical Advisor for the NSP for over 15 years, David H. Johe, MD, is an orthopedic surgeon and has been an active patroller and OEC/OFC instructor and examiner at Holiday Valley in western New York for more than 25 years.

on, with a credential given at each level. But with this structure, patrollers would not be able to complete the curriculum until completing *all* the modules. Also, patrollers would have various levels of medical education, and some likely would not have the knowledge to take care of some sick or injured

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