

RISK MANAGEMENT AT NOLS



BACKGROUND

NOLS was founded in 1965 and from its start as a summer outdoor program located in Lander, Wyoming, NOLS is now a year-round wilderness education school that operates globally. We have operations based in Wyoming, Utah, Alaska, Arizona, Washington, Idaho, New York, Mexico, Chile, Yukon Territory and British Columbia Canada, New Zealand, Tanzania, India, and Sweden. On average, over 5,000 students enroll each year on extended wilderness field courses, totaling 168,000 annual field program days.

The NOLS mission is to be the leading source and teacher of wilderness skills and leadership that serve people and the environment. Since our inception the NOLS educational goals have been to learn and practice judgment, leadership, and wilderness skills.

NOLS RISK MANAGEMENT MISSION STATEMENT

NOLS promotes the health and well-being of students and staff as one of our highest priorities and strives to be the leading source and teacher of risk management practices in wilderness education.

RISK MANAGEMENT GOALS

1. To prevent fatalities, disabling or disfiguring injuries and serious illness.
2. To reduce all injuries and illnesses.
3. To anticipate emergency response and crisis management needs and design suitable protocols and plans.
4. To identify the accepted NOLS field practices for managing life threatening risks and hazards and the expectations for their consistent use.
5. To be a leader and resource of wilderness risk management practices.

Risk is a core element of our curriculum and pedagogy and gives our education relevancy and practicality. Risk management at NOLS is based on the philosophy laid down by our founder, Paul Petzoldt. Risk is inherent in the remote locations through which we travel and our approach to risk is one of respect gained through knowledge, skill, experience, and expertise. We value critical thinking, reflection on experiences, and resiliency in difficult times. We have a strong commitment to our students and we continually seek to enhance our systems of risk management.

Risk Management program at NOLS is organized into the following categories.

1. Risk Management Oversight
2. NOLS Core Curriculum
3. Instructor Training
4. Administrative Processes
5. Field Support Services

RISK MANAGEMENT DEFINITION

- a. Risk Management at NOLS supports educational experiences by integrating all aspects of the organization to promote the health and well-being of students and staff.
- b. NOLS Expedition risk management is the process of understanding and anticipating the risks of leading groups in remote wilderness environments and applying appropriate responses to reduce the likelihood of an injury, illness, fatality, or close call (aka near miss).

RISK MANAGEMENT OVERSIGHT

THE NOLS RISK MANAGEMENT COMMITTEE

The NOLS risk management committee is comprised of representatives from the NOLS board of trustees, special advisors, and the risk management director. The committee monitors the NOLS risk management program and performance and assists in formulating risk management goals and strategies. School directors, field instructors and other support staff often participate in committee meetings. The committee meets regularly three times per year and meetings are generally open to all staff.

PRESIDENT AND EXECUTIVE TEAM

The president of NOLS is an ex-officio member of the risk management committee. The president consults regularly with the risk management director. The president and the executive team establishes risk management as an institutional priority.

RISK MANAGEMENT DIRECTOR

The risk management director provides oversight and guidance of field risk management at the school wide level. The risk management director monitors and investigates injury, illness and near miss incidents, manages the NOLS risk management incident database, establishes risk management policy, maintains the NOLS Accepted Field Practices, collaborates with the education and operations departments, and reviews marketing materials for accurate description and disclosure of risks inherent to NOLS courses. The risk management director consults with loss control experts, physicians, attorneys, other outdoor education professionals, and NOLS field instructors for insight into ways to improve risk management for all NOLS operations.

FIELD STAFFING OFFICE

This department selects and hires individuals to fill field instructor positions. Personnel in the human resource department monitor field instructor performance, compliance with required certifications, and career and skill development. Field instructors are selected for positions based on experience, qualifications, competency, and interest.

NOLS PROGRAM DIRECTORS AND PROGRAM SUPERVISORS

Each NOLS location is led by a program director who is responsible for risk management at the field level. Program supervisors at each location address risk management issues with field instructors during pre-course briefings and post course debriefings. The location management team formulates specific risk management emphasis for particular courses. Program directors and supervisors provide periodic reports to the risk management director, monitor risk management concerns from field instructors, design and implement emergency procedures, and provide input and review to the NOLS Accepted Field Practices. Program supervisors are critical to the evaluation process of instructor performance and make recommendations for promotion.

FIELD INSTRUCTORS

COURSE LEADER POSITION

Course leaders are experienced field instructors that have supervisory responsibility for a course while it is in the field. Staff are promoted to this position in an orderly advancement, having demonstrated requisite levels of skill, judgment, risk management knowledge, program expertise, and NOLS experience.

PATROL LEADER AND INSTRUCTOR POSITIONS

Field instructors in these positions directly influence the health and welfare of students in the field through their training, leadership, expertise, and experience.

STUDENTS

Students have important responsibilities for risk management in the field.

- Students read the enrollment information on the NOLS website www.nols.edu to determine if they meet the general requirements of a NOLS course and understand the rigors, risks, and remoteness of the particular course.
- Students read the detailed course descriptions and other enrollment information sent after they are enrolled.
- Students and/or parents or guardians read and sign the NOLS Student Agreement that describes the inherent and other risks of participating on a NOLS course.
- Students and their health care providers complete the health history form and honestly describe their physical and psychological health.

Prior to the course departing for the field, instructors conduct an orientation with students that addresses various aspects of the course including travel conditions, living conditions, course environment, student and instructor responsibilities, NOLS policies and the course goals and learning objectives. There is particular emphasis on student's individual responsibilities for risk management for themselves and the group.

This entire process is intended to alert and inform the student that risks do exist and that risk management is a priority on a NOLS course.

Once in the field, the student has responsibility for managing risk within their abilities and is expected, under the direct and indirect supervision of the instructors, to learn and practice leadership, judgment, decision-making, and use the risk management practices taught on the course.

NOLS LEARNING OBJECTIVES

These objectives define the core curriculum taught on every NOLS expedition course. Each course provides fundamental knowledge, skills, and experience essential for successful wilderness travel, and use, and enjoyment of a wilderness environment.

- **Risk Management:** NOLS teaches risk management by applying leadership and wilderness skills and facilitating experiences to develop judgment. Students learn hazard identification, risk assessment, practice decision-making, develop situational awareness, learn injury and illness prevention, first aid/wilderness medicine, and emergency procedures.
- **Leadership:** NOLS teaches leadership as “situationally appropriate action that directs or guides your group to set and achieve goals.” Leadership is learned and practiced by using independent student group travel, “leader of the day” opportunities, and having students serve their team as a self-leader, peer leader, designated leader, and active follower.
- **Wilderness Skills:** NOLS teaches the expedition skills necessary to live and travel in the wilderness. This includes, campsite selection, shelter and stove use, fire-building, sanitation and waste disposal, cooking, nutrition, equipment care, keeping warm and dry, route-finding/navigation, and the skills of the particular course such as backpacking, kayaking, horse packing, sailing, fishing, skiing, snowboarding, caving, or climbing.
- **Environmental Studies:** NOLS connects students to wild places. Students learn Leave No Trace camping, wilderness ethics, about ecosystems, flora and fauna identification, geology, weather, astronomy, land management strategies, cultural issues, and public service.

FIELD INSTRUCTOR TRAINING AND DEVELOPMENT

THE NOLS INSTRUCTOR COURSE

The NOLS Instructor Course, with curricula for mountain, river, sea kayak, and sailing programs, is required for all field instructors. There is a rigorous application and review process to be selected for the instructor course. The curriculum of the instructor course covers the NOLS core curriculum, and students are observed and evaluated on their teaching and leadership abilities, their wilderness living and travel skills, and their hazard identification and risk assessment skills.

NOLS FIELD INSTRUCTOR SKILLS

Documents with the above title describes NOLS' expectations and lists specific skills and qualifications for field instructors to work specific course types and to advance in their positions. Supervisors of field instructors refer to this document when recommending promotion or advancement.

STAFF TRAINING AND DEVELOPMENT

NOLS believes a key component to risk management is the continued development of a professional, experienced, and skilled instructor body. To this end NOLS offers and financially supports a variety of opportunities to further instructor development.

- **Field Instructor Levels of Responsibility:** There are three levels of field instructors; instructor, patrol leader and course leader. The instructor position is considered entry level. After demonstrating competence in skills, judgment, and risk management in their position (under the supervision of a course leader) the instructor can be promoted to the next level. Course leader is the highest level.
- **Technical Skill Development Seminars:** NOLS has extensive in-house training programs in the following skill areas such as; avalanche awareness and forecasting, winter camping and travel, wilderness first responder, rock climbing, mountaineering, caving, glacier travel, natural history, horse packing, canyoneering, sailing, rafting, canoeing, and sea and whitewater kayaking.
- **Leadership and Personal Skill Development Seminars:** NOLS provides in-house training in leadership, communication, group/expedition dynamics, educational techniques, ethical and legal issues, safe learning environments, and diversity and inclusion skills.
- **Instructor Development Fund (IDF):** NOLS offers funding to field instructors for personal expeditions or to attend non-NOLS seminars and conferences. The IDF provides approximately \$18,000 in funds annually. Through this funding it is expected that faculty will gain additional knowledge and experience in wilderness travel settings and technical situations, further develop judgment, gain greater experience and decision-making skills, and challenge personal abilities.

WILDERNESS MEDICINE REQUIREMENTS

Each NOLS field instructor must hold, at a minimum, a wilderness first responder (WFR) certification and current CPR certification.

The NOLS Wilderness Medicine department provides training for field instructors and the general public. The books, *NOLS Wilderness Medicine* and *The NOLS Wilderness Medicine Field Guide* written by NOLS Wilderness Medicine Curriculum Director Tod Schimelpfenig are used as field texts and first aid resources on NOLS courses.

NOLS maintains wilderness medical protocols that are co-authored by the NOLS medical advisor. These protocols provide medical direction for field instructors if they face specific medical emergencies while in the wilderness.

NOLS RISK SERVICES

The NOLS Risk Services offers risk management training courses, program review and consulting services, and produces the Wilderness Risk Management Conference (WRMC).

In 1994 NOLS, in collaboration with other outdoor education organizations, created the Wilderness Risk Management Conference (WRMC), which has since been held annually. NOLS is the lead sponsor of the conference, which attracts up to 560 attendees each year.

NOLS staff frequently speak at other conferences on risk management and wilderness medicine.

Data from the NOLS risk management incident database is periodically analyzed, and published in peer reviewed journals to contribute to the fields of wilderness medicine and wilderness risk management.

ADMINISTRATIVE PROCESSES

ADMISSIONS

The admissions department is often a student's first experience with the NOLS risk management program. Our pre-course information strives to accurately describe the format, curriculum, and risks associated with our courses. The admission staff review the applicant's registration forms including the health form. The purpose of health form and its review is to gather information to determine if the applicant is physically and mentally capable of participating on a course. The NOLS medical review manager may seek additional input from the NOLS medical advisor or the applicant's health care provider.

RISK MANAGEMENT AUDITS

NOLS audits its risk management performance on a regular basis through the use of post course debriefings, written evaluations by students, and instructors and through the risk management incident reporting process. NOLS also periodically enlists outside expertise to perform risk management audits on specific field programs.

ACCREDITATION

NOLS is accredited by the Association for Experiential Education, AdventureMark New Zealand, and the Gap Year Association. The process for accreditation requires NOLS to periodically perform an extensive self-assessment and external review of systems, policies, and procedures that are measured against standards set for adventure programming. These accreditations are renewed on an established schedule.

RISK MANAGEMENT INCIDENT REVIEW PROCESS

The risk management incident database and incident review process are used to analyze and understand field injuries, illnesses, and near miss incidents to learn from these experiences and inform and, if necessary, revise our field risk management practices.

EVALUATIONS

Evaluations examining all aspects of each course and the risk management program in particular are routine at NOLS. We constantly work on improving this process. Performance evaluations of field instructors and students include the areas of risk management and leadership. Students complete a Course Quality Survey and each instructor team evaluates their course and the operational support systems. The risk management director writes an annual risk management report.

COURSE PAPERWORK

The instructors on each course are required to keep a course log that includes daily weather conditions, activities, names of student leaders, and any student challenges along with action taken. A class checklist is used to record the date a particular class was taught and by whom it was taught. Camp location information is recorded. Field injury, illness, and near miss reports and evacuation reports are used to record risk management incidents.

FIELD SUPPORT SERVICES

Robust field support services—equipment, rations, transportation, and emergency management systems—are essential to support our mission, manage risk, and achieve our educational goals.

EQUIPMENT

NOLS maintains a complete inventory of course equipment, and each student goes into the field well equipped. NOLS equipment is selected and/or designed to hold up under rugged conditions, setting a standard for functional expedition equipment. Students may bring their own equipment; however, it must meet NOLS standards.

RATIONS

Eating well is necessary to function at an optimal level in a wilderness setting and in the variety of conditions encountered on a course; adequate nutrition allows one to stay warm, be comfortable, and stay healthy. NOLS provides appropriate amounts and varieties of nutritious, high-energy foods and teaches students in the skill and science of maintaining nutrition on extended expeditions.

TRANSPORTATION

NOLS operates its own fleet of vans, pick-up trucks, busses and utility trailers to transport students and equipment to and from course areas. Vehicles are selected for their durability and are maintained regularly either by trained NOLS staff or reputable service centers. NOLS has a comprehensive transportation policy, which includes licensing requirements, vehicle maintenance procedures, and defensive driving. All staff members who drive vehicles with NOLS students must have completed a defensive driving course.

EMERGENCY SUPPORT AND MANAGEMENT

Should a student become injured or sick during a course NOLS has developed an efficient and well-organized emergency response system to provide first aid and, if necessary, evacuate the student to medical care. However, the remoteness of our course areas can complicate emergency response. It is not uncommon to be 24 hours or more from advanced medical care. Weather and other variables can also hinder evacuation response resulting in delays in reaching medical care. Each course carries a communication device for emergency notification. Almost all courses carry a satellite phone and personal locator beacons (PLBs) and some courses also carry two-way radios, and cellular phones. These devices work well, but are subject to limitations due to the topography and atmospheric conditions so they are not always 100% reliable. Rapid evacuation from remote locations cannot be guaranteed.

- Field instructors prepare a written field evacuation report to detail their evacuation plan including contingencies and back-up plans.
- There are NOLS staff on duty 24 hours a day and are ready to receive emergency calls at all NOLS locations. NOLS has access to extensive evacuation resources both internally and through other agencies and can arrange evacuations.
- NOLS can respond to the student's needs once they are out of the field including phone calls to parents/guardians/family members and supporting access to medical care.

RISK MANAGEMENT STATISTICS

The NOLS risk management incident database was started in September 1984 and contains records of injuries, illnesses and other related incidents that occur on courses. This database provides a valuable tool for analyzing the effectiveness of our risk management systems and procedures. The following table and graph is a summary of our recent risk management data.

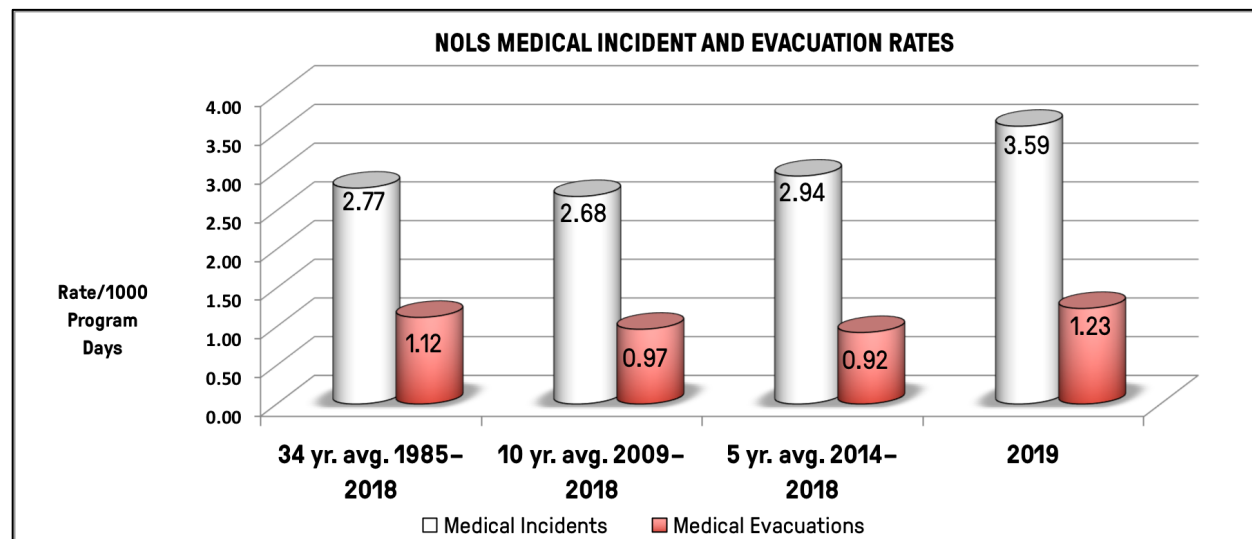
NOLS INJURY AND ILLNESS STATISTICS

For period of fiscal years 2014–2019

INJURIES:	ILLNESSES:
• 5% of students are injured	• 5% of students become ill
• 36% of injured students are evacuated	• 27% of ill students are evacuated
• 46% of field medical incidents are injuries	• 54% of field medical incidents are illnesses
• 40% of injuries are sprains, strains, and tendon injuries	• 46% of illnesses are communicable, i.e. flu
• 42% of injuries are soft tissue injuries	
• 5% of injuries are fractures and dislocations	

We average 230 reportable injuries and 267 reportable illnesses per year. Most injuries are minor and include sprains and strains of knees and ankles and minor wounds and contusions. Most illnesses are gastrointestinal illnesses. It is rare for an injury or illness to be serious enough to require a night in the hospital.

One third of students with injuries or illnesses are evacuated from the field. We track these evacuations and other events to gauge our risk management performance and to gain insight as to where we may need to focus our attention. The following chart displays our average evacuation rates.



FATALITIES AT NOLS

Since NOLS was founded in 1965, twelve people have died on courses. No fatality is acceptable, but NOLS courses involve the pursuit of adventurous activities in rugged terrain in which there are real dangers. Wilderness adventure involves risk, which, can become dangerous and potentially life-threatening due to the unpredictable forces of nature or an error in judgment.

NOLS FATALITY STATISTICS:

- 119,746 students, 4,877,750 program days, and 5 fatalities since September 1984—the point when we began to keep detailed risk management records.¹
- Fatality rate over 35 years per 1000 program days = 0.001
- Thirty-four year odds of a student dying on a NOLS course: 1:23,949
- 5 fatalities per 119,746 students

For context the following statistics are from other sources.

Turner (2011)² American Public Health Association

- 254 deaths among 1,361,304 college students age 18–24 at 4-year institutions
- Odds of a student dying at college: 1:5,359
- 18.66 deaths per 100,000 students

National Ski Area Association³

- Fatality rate winter 2017/2018 per 1000 skier/snowboarder days = 0.001
- There were 37 skier/snowboarder fatalities in the U.S. during the 2017/2018 season

LIST OF FATAL INCIDENTS AT NOLS:

1. July 1966: A student died in a mountaineering fall in the Wind River Mountains, Wyoming.
2. June 1971: A student died in an unroped crevasse fall on Denali, Alaska.
3. June 1972: A student drowned in a canoe incident on the Green River, Wyoming.
- 4-6. January 1974: One instructor and two students were killed in an avalanche in the Teton Range, Wyoming.
7. July 1979: A student was killed in an unroped fall in the North Cascade Mountains, Washington.
8. July 1989: A student was killed by rock fall in the Wind River Mountains, Wyoming.
9. December 1992: A student was killed by an avalanche in the Absaroka Mountains, Wyoming.
10. June 1996: A student was killed from a head injury during a river crossing in the Absaroka Mountains, Wyoming.
11. July 1999: A student presumably fell into a moulin and died on the Matanuska Glacier, Alaska.
12. September 2011: A student slipped and fell down a steep slope while backpacking in India.

Periodically NOLS risk management data is analyzed and published. The following published papers are available on request

Trends in Skin and Soft Tissue-related Injuries in NOLS Wilderness Expeditions from 1984-2012, Stanford, K., Phillips, L., Chang, Y., Leemon, D., Schimelpfenig, T., Harris, S., (2017) *Wilderness and Environmental Medicine*, 28, 307-312.

Medical Incident and Evacuations on Wilderness Expeditions, McIntosh, S., Leemon, D., Visitacion, J., Schimelpfenig, T., Fsnocht, D., (2007) *Wilderness and Environmental Medicine*, 18, 298-304.

Injuries Related to Hiking with a Pack During National Outdoor Leadership School Courses: A Risk Factor Analysis, Hamonko, M., McIntosh, S., Schimelpfenig, T., Leemon, D., (2011), *Wilderness and Environmental Medicine*, 22, 2-6

Ultraviolet Keratitis Among Mountaineers and Outdoor Recreationalists, McIntosh, S., Guercio, B., Tabin, G., Leemon, D., Schimelpfenig, T., (2011) *Wilderness and Environmental Medicine*, 22, 144-147

¹ Program day is 1 person on a course for 1 day, e.g. 10 students and 2 instructors on a 30-day course is 360 program days

² Turner, J. (2011) Leading Causes of Mortality Among American College Students at 4-Year Institutions. American Public Health Association, Annual Meeting, November 2011, Washington, D.C.

³ National Ski Areas Association Fact Sheet: Facts About Skiing/Snowboarding Safety, (2018), http://www.nsaa.org/media/348423/Fatality_Fact_Sheet_2018.pdf viewed January 4, 2019

CONCLUSION

There is a risk management consciousness that pervades NOLS and indeed, guides every step of the school's operations. Risk management has always been, and will continue to be, a priority at NOLS. Nevertheless, no matter how many systems an organization employs, and no matter how stringently those systems are followed, incidents will happen. We cannot—nor can anyone—reduce that possibility to zero. We accept risk as an integral part of the learning process and of the environments through which we travel, but we do not seek risk for the sake of risk. Our wilderness classrooms have no handrails, emergency situations can be complex and take time to resolve, and students on our courses must accept the fact that risk of injury or death exists during wilderness travel and recreation in remote areas.