

**Student Medical Screening:
Review of Exceptions Made to NOLS Medical Screening Guidelines**
Drew Leemon, NOLS Risk Management Director

Introduction

The NOLS Admissions Department uses written Medical Screening Guidelines to determine if there are any recent or chronic physical or mental health issues that may be inappropriate or affect a person's ability to participate in a NOLS Course. Occasionally exceptions to these guidelines are made. The decision making process for granting a medical exception is far from an exact science and relies on applicant history, course related safety concerns for the individual or their course mates, staff experience and training, course type, and sometimes willingness of branch school staff to give the applicant an opportunity. Often the unique circumstances of each applicant means that decisions are subjective and rely on the experience and professional judgement of the decision makers.

This paper examines medical exceptions granted from November 1999 through September 2001 that were tracked through the NOLS admissions database. This data was then cross-referenced against the NOLS safety database to see how many of these individuals were evacuated from their course. The Overall performance grade for each student was also tracked. The goal of the study is to check the accuracy and effectiveness of the decisions that have been making on medical exceptions.

Overview of the Screening Process

NOLS medically screens prospective students:

- to determine if they are physically and emotionally suited for a course
- to place them on courses suited for their physical and cognitive abilities as appropriate
- to deny or delay enrollment
- to identify medical conditions or medication use that may become a factor during the course

Applicants submit a NOLS medical form that is reviewed by admissions officers. Admissions officers contact the applicants to follow up on "yes" answers to questions on the medical form. Information is gathered from the applicant and if needed and applicable, from parents doctors, therapists, teachers etc. and a concise summary of the applicant's history is written. If the applicant's condition meets the screening guidelines they can be enrolled. If the applicant's condition does not meet the guidelines the application is denied or the admissions officer's supervisor is informed and application is reviewed by a **medical review committee** for a possible exception to the guidelines.

This committee may include the admissions officer, admissions training coordinator, admissions manager, risk management director, operations director, NOLS medical advisor, branch director and others if necessary.

Recent Medical Trends and Implications on Medical Screening

In recent years there have been two advancement in medicine that may have resulted in making more medical exceptions. 1) changes in treatment and diagnosis of mental health and 2) advancements in surgical techniques and rehabilitation of orthopedic injuries.

Mental health has become more accepted as a true health disorder. Diagnoses of mental health conditions such as depression and attention deficit disorder have increased. People are more commonly seeking counseling for stress related to academic and career decisions, family issues, eating disorders, and substance abuse.

The pharmacology of medication used for treating and diagnosing mental health conditions has changed significantly in recent years. Advancements in the types and classes of psychotropic medications have greatly improved the efficacy of drug therapy. A significant advancement is the speed in which some medications are utilized by the body allowing them to be used in diagnosis and resulting in more rapid treatment. As a result whereas older classes of medications required greater lengths of time to be absorbed and utilized by the body, generally in the order of months, the newer classes of medications are often absorbed and utilized in a matter of weeks. Patients and psychiatrists can now fine tune dosages and patients can experience faster results. Also, once the medication is stopped the body rids itself of the medication faster as well.

Advancements in surgical techniques to treat orthopedic injuries are in some cases less invasive and/or more effective. These advancements often result in shorter recovery time and faster rehabilitation. Advancements in physical therapy have also contributed to a trend of shorter and more effective rehabilitation.

Methods

There were 178 records of exceptions in the admission database for the two-year period. These included multiple exceptions made for the same applicant. The medical form is designed to elicit information on health conditions and as such there are multiple questions that may address a single health condition. An exception may be for more than one question for the same condition, or for multiple related conditions such as having an eating disorder, for receiving treatment for depression related to the eating disorder and taking medication for the depression. Each database record was reviewed and the exceptions consolidated by the individual student.

The final list of students with medical exceptions was crosschecked against the NOLS safety database to see if any of these students were evacuated from their course and why.

Each of student's course evaluation was reviewed and their overall performance grade noted.

Findings

NOLS enrolled 6,280 students during the two-year period. After consolidation of the raw data there was a total of 137 records of students on NOLS catalog field courses that were accepted with exceptions to our medical screening guidelines. Two percent of students received a medical exception.

There were nine evacuations from the group of students who received medical exceptions or 6.6% of the total. Four of these evacuations (2.9%) were directly related to the health condition for which we made an exception.

The following chart (Table 1) summarizes the data. The chart is organized as follows: The question number and what it refers to. The number of cases of exceptions made for that question. The number of students evacuated who received an exception. The number of evacuations that were related to having received an exception. The average overall performance grade for the students who received exceptions.

Table 1

Medical Form Question Number	# of Cases	Total # of Evacs	# of Evacs Related to Exception	Average Grade
#10 – Migraines	1			3+
#11 – Cardiac	1			3+
#13 – Other disease	1			4
#17 – history of knee /hip/ ankle injuries	8	1	1	3+
#18 – history of shoulder/ arm/back injuries	4			4
#21-26 – history or current mental health counseling or treatment.	120	8	3	3+
#38 – weight over or under	2			3+
Total	137	9	4	

There were twelve students (7% of exceptions) who were granted exceptions for recent muscular /skeletal injuries or surgery (medical form questions 17 and 18). One of these students was evacuated and the evacuation was for ongoing pain in the afflicted knee on which he had surgery on prior to the course. The conditions we granted exceptions for were; knee surgery (5), shoulder dislocation (3), ankle fracture (2), foot fracture (1), and shoulder surgery (1).

There were 120 exceptions (88% of exceptions) made that involved mental health counseling (medical form questions 21 – 26). Ninety of these cases had specific information available in the admissions database on the particular mental health condition the student was being treated for. The remaining 30 cases either had a history of a condition other than the ones we specified on the medical form (questions 23a – 23g) or the information wasn't in the database.

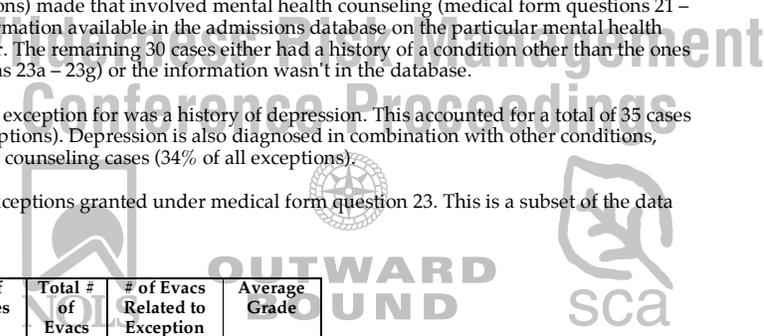
The largest single condition we granted an exception for was a history of depression. This accounted for a total of 35 cases or 29% of counseling cases (26% of all exceptions). Depression is also diagnosed in combination with other conditions, which brought the total up to 47 or, 39% of counseling cases (34% of all exceptions).

Table 2 provides a more detailed look at exceptions granted under medical form question 23. This is a subset of the data in Table 1.

Table 2

Medical Form Question Number	# of Cases	Total # of Evacs	# of Evacs Related to Exception	Average Grade
#23a – suicide	2			3+
#23b – academic/ career	4			3+
#23c – substance abuse	5			3+
#23d – family issues	5			4
#23e – eating disorders	6			4
#23f – depression	35	2	2	3+
#23g – learning disabilities	17	1	1	3+
#23c&f	1			4
#23b&d	1			4
#23e&f	2			3+
#23f&g	8			3+
#23a,d&f	1			3
hospitalization for mental health	3			3+

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Total	90	3	3	
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The three students who had been hospitalized were suffering from depression.

Ninety-five of the 120 counseling cases also involved medications that were either begun, ceased or had dosages changed within a time frame contrary to our screening guidelines. The common medications used by students who received an exception are, Prozac (18), Zoloft (14), Paxil (14), Wellbutrin (14), Ritalin (9), Celexa (10), Adderal (9), Effexor (7) and Concerta (6). Not all records in the database indicated the specific medication and some students were on multiple medications or recently switched medications.

By comparing the overall performance grades these students received we can see that they performed well on their courses. The vast majority of students met or exceeded expectations. The lowest grade received was a 2 for two students who received exceptions for depression. The next lowest grade was 2+ for two students with learning disabilities. Three students received a grade of 5; one had depression, one had an eating disorder and one was granted an exception for substance abuse.

Table 3. NOLS Number Grades and Definitions

Grade	Definition
1	Student performance is unsatisfactory; does not meet course expectations.
2	Student performance does not consistently meet course expectations.
3	Student performance meets course expectations. Student is reliable and consistent.
4	Student performance is very good; exceeds course expectations.
5	Student performance is excellent. Student is a leader.

Conclusions

Granting exceptions to the NOLS medical screening guidelines is not a common occurrence, 2% of all students enrolled. When an exception is granted it is carefully evaluated. The admissions officers are diligent and effective in investigating an applicant's health history in order to get pertinent information. The medical screening review committee is effective and successful in deciding to grant exceptions. The students who received exceptions performed well on their course.

The admissions database is a useful tool for admissions officers to use to keep track of this type of information. Through this study suggested refinements for how the database is used include. 1) Consistently using the database to record concise and specific statements for why an exception was granted. 2) Using a different term other than exception to indicate a health issue that is not an exception to the medical screening guidelines. 3) Refining the system for entering overall performance grades. Currently minus grades cannot be recorded in the database. 4) Refining the system to capture students who were not enrolled.

Discussion

We can only review an applicant's health history when they are honest with us and disclose their history. This is a factor in our system and throughout the practice of medicine.

This paper only studied medical screening exceptions. It did not address disclosed pre-existing conditions which met our guidelines, but resulted in evacuation. The impact of a pre-existing medical condition on performance is difficult to study. An accurate picture must include both disclosed and non-disclosed conditions, those people with pre-existing conditions who do fine on courses as well as those whose condition affects their performance, and a determination of when a pre-existing condition is significant (eg: Is a five year old rehabilitated ankle injury a pre-existing condition?

The data is not available to quantify how many applicants who do not meet NOLS medical screening guidelines do not receive an exception and are not enrolled on courses.

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