

TARGETING TEENS: A one hour avalanche awareness program

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Abstract: The Canadian winter of 1997-98 exacted a toll of 21 backcountry avalanche related deaths. Six teenagers, comprised of three skiers, one snowboarder and two snowmobilers, were killed. This was an alarming number of youth killed in avalanches in Canada.

One-hour talks, using the lesson plan format, were developed to increase knowledge and awareness in youth of the risks associated with skiing, snowboarding or snowmobiling in uncontrolled avalanche terrain. Grade 10 students in physical education classes in city and rural high schools are the target group.

Students are introduced to three key SMARTRISK concepts; "Get trained", "Wear the gear", and "Look first". Ski area signage is shown, and avalanche rescue equipment is demonstrated. The Canadian Ski Patrol System (CSPS) "Avalanche: Be Aware" pamphlet is given to each participant for reference. Students are advised to take a Recreational Avalanche Course (RAC) from a qualified provider.

Since 1997, it is estimated that over 10,000 high school students have attended one-hour avalanche awareness talks. There has been an increase in the number of teenagers attending RACs in Canada. Delivery of the program has expanded within Canada and to the United States. Teenagers who have attended the program report modifying their behaviour in relation to travel in avalanche terrain, but currently this has not been quantified.

A one-hour avalanche awareness talk targeted for teenagers and suitable for delivery in high schools is a first step in increasing avalanche risk awareness in youth.

Key Words: education, youth, avalanche

1. Background

A total of 21 avalanche deaths were recorded in Canada during the winter of 1997-1998. Six of the deaths were teenagers, the highest number of teens killed in one season to date. A party of four teens, three skiers and one snowboarder, were killed outside the Fortress Mountain, Alberta, ski area boundary, before the area was open to the public. Two teen snowmobilers were killed in separate incidents in British Columbia, while attempting to "high-mark" a slope. Strikingly, none of these teens had any formal avalanche education nor had avalanche rescue gear.

It is evident that teens are involved in winter sports, particularly snowboarding, at an increasing rate. The common media image of many winter sports is one of untracked powder in mountainous terrain, while the underlying risks are seldom portrayed.

Despite the availability of public avalanche education programs through the Canadian Ski Patrol System (CSPS) and Canadian Avalanche Association (CAA), none of these programs focused specifically on teenagers. The tragic deaths of the winter of 1997 – 1998 provided a catalyst for the development of one hour, school based, avalanche awareness talks for Calgary schools. A one-hour avalanche awareness program was shared with the CAA, its membership and other avalanche educators. High school based talks have been initiated in a wide number of communities in Western Canada based on this and other programs.

2. Method

A one-hour avalanche awareness talk was developed by CSPS members that could be delivered, in high schools, by volunteers with a basic knowledge of avalanches. Grade 10 (students aged 15 - 16) Physical Education was identified as the primary focus for the delivery of the program. The age group was selected as many Grade 10 students are of driving age, driving themselves and friends to

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the mountains to participate in winter sports. Sports are the main focus of Physical Education, and in Alberta, Grade 10 Physical Education is compulsory for all students, thereby ensuring broad-based attendance. While presenting the program at the Grade 10 level year after year ensures complete attendance of students in a school, the program was also made available to students in Grades 11 and 12 upon request.

The Calgary Board of Education and the Calgary Catholic School Board were contacted and gave permission for the program to be delivered in local high schools. A pilot program was run at one high school to test its suitability. Letters of introduction were sent to all Calgary area high school principals and Physical Education coordinators. Information in the letter outlined the program, the general qualification of the presenters, student group size (maximum 100), equipment required, and booking arrangements. Interested schools were required to book speakers at least two weeks in advance. A volunteer coordinator arranged for speakers who were CSPA avalanche instructors as well as other interested volunteers with an avalanche background.

Local outdoor equipment stores and manufacturers of avalanche rescue equipment loaned the avalanche equipment (beacon, probe, shovel and pack) used in the program.

3. Program

The program is based on the standard time of one hour for a high school course and incorporates visual, oral and tactile learning styles. A formal lesson plan provides Objectives, the Pre-Test/Motivation, Content and a Post Link. Helpful hints on preparation and teaching style are also provided.

Presenters are encouraged to use a risk management approach. Positive messages for youth, developed by SMARTRISK, are designed to reduce injury resulting from active lifestyles. These messages: "Get trained", "Wear the gear", and "Look first", are incorporated into the lesson plan.

A video presentation acts as a motivator and provides the basis for discussion. Initially, the CAA video "Beating the Odds" (23 minutes) was used. In the winter of 2001-2002, the video "Use it or Lose it" (14 minutes), produced by the SNOWSMART program, was adopted. Following the video, presenters introduce the concept of the avalanche triangle, review the meaning of ski area avalanche signs, discuss risk management strategies,

demonstrate the use of avalanche rescue equipment and provide information on Recreational Avalanche Courses (RAC), whose standards have been established by the CAA. The CTV video "Life and Death" (7 minutes), a re-creation of the fatal 1999 avalanche at Abbot Pass, on the Alberta – British Columbia border, concludes the program. The one hour lesson plan is outlined in Table 1.

Table 1
Targeting Teens: a one-hour format

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- Introduction of the presenter.
 - Outline of the objectives of the program.
 - Pre-test of students' understanding of avalanches and human consequences.
 - Video: "Use it or Lose it".
 - Introduction of SMARTRISK messages pertaining to travel in avalanche terrain.
 - Distribution of the CSPA pamphlet "Avalanche: Be Aware".
 - Brief explanation of the avalanche triangle.
 - Display & discussion of ski area signage: avalanche closures and area boundary signs.
 - Demonstration of avalanche rescue gear with student participation.
 - Information sources: websites and RAC courses.
 - Video: "Life and Death"
 - Wrap-up and post link.
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4. Results

4.1 Students reached via coordinated efforts

When the program was presented in 1998 at the annual CAA meeting, it was apparent that similar initiatives were taking place in many communities in Western Canada including, but not limited to, Fernie, Canmore, Nelson, and Whistler. Considerable enthusiasm for the program was generated encouraging members, and others, to start new initiatives in additional communities. The one hour lesson plan has been available for distribution through the Canadian Avalanche Centre in Revelstoke to CAA members and other interested volunteers.

Targeting Teens has drawn together a wide range of volunteers with an avalanche background. These include current and former professional patrollers, firemen, park rangers, retail outdoor outlet employees and avalanche survivors, all united by a common interest in avalanche education for youth. Many avalanche professionals also volunteer their time in

their communities to deliver avalanche awareness programs.

As a result of these coordinated efforts, thousands of Canadian teens have benefited from avalanche awareness talks. In Calgary, approximately 8,000 students have attended these talks over a four-year period. The program was offered for one year in the Greater Vancouver area, reaching over 3,000 students. Thousands of other students in smaller communities across British Columbia, Alberta and the Yukon have similarly benefited. Teenagers who have attended the program report modifying their behaviour in relation to travel in avalanche terrain, but currently this has not been quantified.

The program has been translated into French by members of the CSPA and the Centre d'Avalanche de la Haute Gaspésie for use in the Chic Choc Mountain region of the Gaspé in Quebec. In addition, the program has been distributed to individuals in the US, notably in Washington State.

4.2 Public Awareness

Increased awareness of the program by school board members, students, teachers and parents has generated media interest. In radio and TV interviews, and print articles, avalanche professionals and volunteers discuss injury prevention in youth creating awareness of the availability of avalanche education programs aimed at youth.

4.3 Recreational Avalanche Courses for Youth

An increased demand for more formal avalanche education has resulted from the one hour talks. As a result, a small but increasing number of high schools is sponsoring Recreational Avalanche Courses for students. For each of the last three years, a Calgary high school has sponsored a RAC course for over 40 students. Instructors have commented on the students' enthusiasm and of the rapport developed with patrollers and instructors during subsequent encounters at local ski areas. In addition, several RAC providers have tailored RAC for teens.

4.4 Related Initiatives

The development of two avalanche - based curriculums for Grade 6 and Grade 10 Physical Education was funded by the CSPA. These curricula, suitable for delivery by teachers, were approved by the Alberta Government for use in Alberta schools.

The Targeting Teens program is one of several important catalysts that led to the creation of the SNOWSMART partnership. A volunteer organization (CSPA), a professional organization (CAA), a private foundation (SMARTRISK) and a federal government department (Parks Canada) all partnered to develop SNOWSMART, a national injury prevention initiative focused on youth involved in the winter in mountainous terrain. SNOWSMART was funded by the New Initiatives Fund (NIF) of the National Search and Rescue Secretariat of the Canadian Federal Government.

5. Conclusion

An unfortunate incident propelled volunteers and avalanche professionals to pool their ideas, talents and funds to create a unique program in avalanche awareness for young people. This program is suitable for delivery in high schools and is an important first step in injury prevention in youth who venture into uncontrolled avalanche terrain.

The success of the program is a call to action for all members of the avalanche community to initiate avalanche talks that are focused on youth. The lesson plan is available free of charge from the corresponding author and CSPA avalanche instructors. It may also be obtained from the Canadian Avalanche Centre in Revelstoke, British Columbia.

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