

AVALANCHE AIRBAG SURVEY: A U.S. PERSPECTIVE

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ABSTRACT

Several avalanche accidents in the winter of 2012 propelled avalanche airbag awareness into the mainstream of the United States. In our industry we've been aware of airbag effectiveness for over 20 years, relying mainly on data from European airbag use provided by the SLF and ABS. This season, the CAA plans to release Canadian statistics. In the United States, there's currently no tracking mechanism in place to quantify or qualify airbag use and their effectiveness in avalanche accidents, so we'll begin that process now and continue it into the future.

Our preliminary research shows that in U.S. avalanches where an airbag was deployed, over seventy percent of the victims may have been prevented from being completely buried. But numbers don't tell the complete story: we'll also explore several important topics like what type of terrain they were in, how using an airbag may/may not affect decision making in avalanche terrain, and most importantly, the level of experience and avalanche education among those who were caught and deployed their airbags.

1. SURVEY RESULTS

Survey was administered in the early spring of 2012.

357 completed surveys, shifts to 214 when specific airbag questions are asked.

2. 32% snowmobilers, 29% backcountry skiers/boarders, 27% "sidecountry" skiers/boarders, 3% "hybrid" skiers/boarders, and 9% between guides, ski patrol, mechanized skiers/boarders (helicopter/snowcat), climbers, snowshoers and Search and Rescue.

3. 60% of respondents owned an avalanche airbag

4. 100% of respondents owned a beacon and shovel, 99% owned a probe and 21% owned various generations of the Avalung.

5. 55% of respondents had some level of formal avalanche education. Eight U.S. citizens chose to take Canadian courses.

6. 52% had purchased their avalanche airbag in the last year, 24% in the last two years, 13% in

the last three years and 11% had owned an airbag for more than three years.

7. When asked "What led you to purchase an avalanche airbag?" the answers varied:

- A. "Statistics" was the most prominent answer.
- B. "My parents paid for it."
- C. "Don't have faith in my partners ability to use beacons or dig me out."
- D. "Wife bought it for me because she loves me."
- E. "My desire to ride more difficult terrain and challenge myself."

8. Have you practiced deploying your airbag? 80% yes, 20% no.

9. When asked "Has wearing an airbag affected your decision making in the backcountry? As an example, while wearing an airbag have you chosen to enter terrain that you would not enter without an airbag?" 195 people said no but 19 people said yes. Here are some examples:

- A. If I'm being honest, yes, it emboldens me somewhat.

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- B. I think I am more confident entering terrain with open run outs, (i.e.: no trees, no cliffs) as burial is the only likely outcome).
- C. Yes - I find that I'm more willing to ski dubious terrain.
- D. I don't think so but it does make me feel safer and I do sometimes check my trigger as I approach a slope.
- E. Yes. I always have to go first.

10. 13 people had deployed their avalanche airbags in avalanches.

- A. Three in Colorado, three in Alaska, three in Washington, three in Utah and one in Nevada.

11. Exactly 50% of these incidents were not reported to local avalanche centers.

12. Terrain: airbags used in open bowls with clean run-out zones (5). Open bowls with obstacles like trees, rocks and cliffs (2). Complex terrain (2). Others: couloir, thick forest, spine, remote trigger that hit flat area (13).

13. Seven respondents were carried under the snow at some point and six were always on the surface of the slide.

14. One respondent was completely buried and required beacon/probe/shovel to be rescued. Two were partially buried with head above the surface and ten stopped on the surface.

15. Eleven respondents said their airbag was visible above the surface when the avalanche stopped.

16. Avalanche danger was moderate to considerable in twelve of the cases and high in one when the avalanches occurred.

17. Ages:

- A. 20 to 25: 1
- B. 25 to 30: 4
- C. 30 to 35: 5
- D. 35 to 40: 2
- E. 40+: 1

18. Gender

3 female, 10 male

CONCLUSIONS:

1. ENTIRE SURVEY

- A. Airbag use is becoming more common in the U.S. 52% of survey respondents had purchased an airbag in the last year.
- B. Skiers/boarders have now surpassed snowmobilers in airbag use: 32% snowmobilers, 68% various forms of ski/boardings.
- C. People are buying airbags because of previous and current marketing statistics.
- D. Owning an airbag can affect decision making in avalanche terrain.
- E. 55% had formal avalanche training. High or low?

2. SURVEY OF ACTUAL AIRBAG DEPLOYMENTS IN AVALANCHES

- A. Recreationists need to improve avalanche reporting to local avalanche centers. Only 50% of these incidents were reported.
- B. Airbags may be most effective in open bowls with clean run out zones.
- C. One airbag user was completely buried requiring beacon, probe, shovel rescue. Airbags should not replace standard rescue equipment!
- D. 38% of those caught in avalanches with airbags were between 30 and 35 years old.
- E. In 12 of the 13 avalanches, the danger rating was moderate to considerable.
- F. All 13 caught in avalanches and who deployed their airbags survived*.

*We know of one incident in Colorado last season where the user had an airbag and did not survive.

http://avalanche.state.co.us/acc/acc_report.php?accfm=inv&acc_id=442

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