Avalanche accidents in Italy
Season 2015-2016
winter 2015-2016 italian Alps summary:

• first snowfall in October then

• warm and no snow in November and December
  zero level many days: November › 4000 m; December › 3500 m

• snowfalls only in January

• a lot of snowfalls in February

• so March and April with average snow cover

85% accidents: from February to May 33% accidents: April
few accidents thanks to particular conditions of stability: short periods of instability

(few days or few hours)

Pila, 5 January 2016

cracks triggered by single skier uphill, slope 20°-25°

examples:

Gran Paradiso

spontaneous slabs from moraines May 2016
Example:
slab remote triggered by a skier
Gran Paradiso
Few accidents thanks to particular **conditions of stability for long periods**

examples:

Gran San Bernardo
18 January 2016
Slopes 45°-50°
after snowfall and especially strong wind and intense cold: no spontaneous avalanches
between end of March and beginning of April, two snowfalls with Saharan sand a preferred base layer for avalanches
avalanche danger:

- winter not so critical for spontaneous avalanches
- average critical for skiers/mountaineers

avalanche problems (in order of importance):
1 – wind slab, often close to the ridges
2 – wet slab
3 – deep slab (old snow with a weak layer)
Avalanche victims in Italy 1986-2016

In Italy on average (linear media) 19 persons die every year in avalanche fatalities.
In Italy on average there are 14 avalanche fatalities each season.
Victims in Italy by Regions season 2015/2016

[Map showing the number of victims in various regions including Austria, Slovenia, Croatia, France, and Switzerland.]
Avalanche accidents rate by category in Italy 2015-2016

- Backcountry skiing: 50%
- Freeride: 32%
- Mountaineering: 15%
- On road: 3%
Accidents: When?

66% accidents: 1st day of good weather after a snowfall

87% accidents: within 3 days after a snowfall

Every days of the week (a little more on Saturday, a little less on Friday): confirms increase in frequentation of the backcountry.
Avalanche victims by category 2015-2016

15 victims:

13 backcountry skiing
1 off piste skiing
1 mountaineering

not easy to distinguish clearly between mountaineering and ski touring because many times at the moment of the burial, the ski mountaineers involved were climbing with ice axe and crampons
Problems highlighted in this season:

2 accidents in which several people were caught at the same time:

- 12 March 2016 Monte Nevoso: 9 people caught (6 dead)

- 10 April 2016 Cima Salimmo – Faustinelli Couloir: 9 mountaineers caught (7 uninjured, 2 injured)

- and other accidents where just by chance, there were not many people caught

Problems: self rescue inefficient or impossible; hard work for rescue team
Problem highlighted also in this season:

the number of backcountry skiers has increased substantially in recent years

The consequences can be dramatic because multiple burials are more likely, that complicate self-rescue, even more so if there are more groups that do not know each others.

Gran San Bernardo – Col Serena

January 2016: at least 105 people in the picture…and many other more back
Skimo race – Tour du Rutor 2016
Mont Gelé – Valpelline – April 2016

photo credit www.gulliver.it
Noeud de la Rayette – Valpelline – April 2016

photo credit www.gulliver.it
Gran San Bernardo
Cresta di Corléans – February 2016

Photo credit www.gulliver.it
Features of the accidents:

50% of accidents → slopes > 3000 m of altitude

62% of accidents → cold aspects (from NW to N until E)
38% of accidents → warm aspects (from SE to S until W)

because of: lighter and better equipment + better fitness and technique

= increases the search for steep slopes

70% of accidents → slopes > 40°

small avalanches that unbalance skiers
Mont Blanc – Petit Mont Blanc – Couloir Bonatti
3 french skiers (without helmet):
small loose wet avalanche at 11.00
1 caught, airbag deployed, severe trauma
(500 m of fall)

2nd avalanche during rescue operation

At 15.00 2 skiers still in the bottom of couloir,
searching lost equipment.
Monviso – Coolidge couloir – classic steep couloir, skied few days before and posted in the social media

warm day - small natural loose avalanche

10 people in the couloir - 3 people caught: 2 injured, 1 died

photo credit www.camptocamp.org
Monte Nevoso - Riva di Tures – Valle Aurina – 12 March 2016

9 different groups (local groups + 2 austrian), a total of 26 persons
9 people caught (skiing up, skiing down and on foot):
2 injured
1 injured
1 injured
6 dead
1 person dead with airbag not deployed

1 person injured with airbag deployed, critical buried but visible

no more data because there is still an investigation by the Prosecutor

old snow with a weak layer
for further informations: aineva@aineva.it