

GROUND RESCUE: ANDORRA THAT'S HOW WE ARE ORGANIZED

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ANDORRA



INTERNATIONAL SOCIETY FOR SNOWSPORTS MEDICINE - SITEMSH
36TH CONGRESS AROSA –SWITZERLAND 12TH-15TH MARCH 2018



INTRODUCTION



Along with the development of ski (and later other snowsports), has appeared the need for adapted & specific healthcare to treat (but also study and prevent) snowsports related injuries.

In every place with ski resorts, all professionals involved in safety & healthcare learned to understand and manage snowsports accidents & injuries.

Some factors influence the way each professional faces a similar challenge.



LOCATION

The geographical location, the distance between the ski resort and populated cities/regions will determine

- the number of potential skiers
- foreigners or nationals
- 1 or 2 day skiers / all week skiers
- can also determine the level of the average skier

SO, AT LEAST, WILL INFLUENCE THE NUMBER / TYPE OF INJURIES



HOSPITAL NOSTRA SENYORA DE MERITXELL

Emergency room / ICU / traumatology & orthopaedic
surgery / CT scan / general surgery ...

192 places



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HOSPITAL NOSTRA SENYORA DE MERITXELL



- 30 to 50 mn from the ski resort medical centers (ground)
- equipped to attend the most common medical and surgical problems (general and orthopaedic surgery, critical care...)
- Cardio circulatory surgery and neurosurgery are not available, in this cases patients must be transferred to Barcelona (200 km) or Toulouse (180 km) by road (>2 hours) or helicopter (45 mn) , depending on weather conditions



HOSPITAL NOSTRA SENYORA DE MERITXELL

- HEMS system
- For transportation to specialized centers
- For first pre-hospital emergencies:
 - only when secure DZ is available



HOSPITAL NOSTRA SENYORA DE MERITXELL



- when no safe DZ available: the helicopter is set on rescue configuration: mountain rescue service (firemen)



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SKI AREAS IN ANDORRA

TWO SKIING AREAS:

GRANDVALIRA:

Ski runs: 210 km

Passenger capacity: 100.700 skiers/hour

VALLNORD:

Ski runs: 93 km

Passenger capacity: 57.000 skiers/hour

60% with man made snow

More than 2.000.000 skier/day / season



SKI AREAS IN ANDORRA



Size of the ski resort, means of transportation, capacity of the local hospital may determine if a medical centre is needed just at the bottom of the resort

- the hospital emergency room sees about **12000 patients** during the winter season of which 10% are snowsports injuries

- 10,000 to 12,000 snowsports injuries/season → capacity of the hospital emergency room should be X 2 to attend all this patients



SKI AREAS IN ANDORRA

But there's also a legal requirement:

- ski resorts must ensure first aid care to customers
- when the capacity is > 5.000 skier/hour there must be a doctor on-site



SKI AREAS IN ANDORRA



GRANDVALIRA:

2 MEDICAL CENTERS:

- Pas de la Casa-Grau Roig (2 sites)
- Soldeu-El Tarter (3 sites)

VALLNORD:

3 MEDICAL CENTERS

- Pal (1 site)
- Arinsal (1 site)
- Ordino-Arcalis (1 site)



Pas de la Casa – Grau Roig Grandvalira



Accounts for 1/3 of all snowsports injuries

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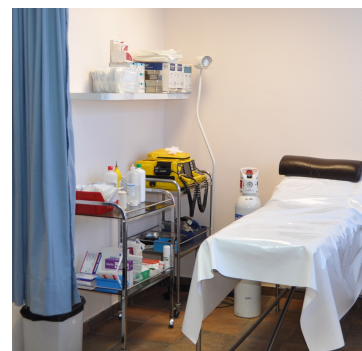


MEDICAL STAFF:

→ Physician + Nurse trained in emergency medicine / traumatology (PHTLS or similar) / *mountain medicine & rescue*

EQUIPMENT:

ALS / X-ray / non surgical traumatology



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FIRST ATTENDANTS: SKI-PATROL SERVICE

- Standard qualification: french “Pisteur secouriste”
- Some with higher qualification: 2nd degree / avalanche control / mountain rescue qualification...
- Double winter season



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SKI-PATROL SERVICE / 1st aid stations

- 5 First Aid Stations at the top of the mountains:
Cubil – Pla de les Pedres – Pic Blanc – Antenes – Font Negre
- 5 crew on each station, at least 2 patrollers permanently on site
- Mean rescue time: 15 min
- Longest rescue time: 25 min (Pla de les Pedres or Montmalús)
- O2, defibrillator, toboggan
- In some other sites: defibrillators, extra toboggan, and other additional material (restaurants, chairlifts)
- Avalanche rescue material



Pas de la Casa – Grau Roig

Grandvalira



FIRST ATTENDANTS: SKI-PATROL SERVICE

- About 2/3 of the patients come to the medical center by their one, the rest need the intervention of the patrollers.
- Ski-patrol assistance can be required:
 - directly at the first aid station
 - by the lifts operators / other resort staff
 - by phone via the resort offices / emergency numbers (118/112/116)
 - by mobile app (Alpify®)



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FIRST ATTENDANTS: SKI-PATROL SERVICE

- If the first alert treats about: unconsciousness / high speed fall / collision / avalanche / lift malfunction...
 - Special warning
- First assessment → ABCD, precises the location and asks for material / staff, mean of transportation
- If there are signs of life threatening injury or circumstances alert on high energy accident radio / phone contact with medical center
 - Medical team on site is considered + pre-alert to pre-hospital emergency service



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FIRST ATTENDANTS: SKI-PATROLS

- The standard procedure is transportation to the resort medical centre, with the required measures (BLS, splinting..)
- by toboggan (60%)
- Snowmobile (30%)
- or other means: chairlift, skiing..

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FIRST ATTENDANTS: SKI-PATROLS

- ALS on piste is rare,
- Life threatening injuries, cardiac arrest, pain control
- The medical team can be transported until the patient by skidoo with the emergency bag (drugs, perfusion fluids, orotracheal intubation set ...), cardiac monitor / Defibrilator
- The transportation to the hospital can be done by HEMS / ground ambulance depending on meteo conditions / situation of the patient



CONCLUSIONS



- NEED OF A GOOD COORDINATION BETWEEN ALL THE INTERVENANTS (1)

PATROLLERS & RESORT MEDICAL CENTER

- We work hand in hand, continuous radio communication,
the medical centre is involved in the education of the patrollers



CONCLUSIONS



NEED OF A GOOD COORDINATION BETWEEN ALL THE INTERVENANTS (2)

RESORT MEDICAL CENTER & HOSPITAL

Phone coordination – exchange of information / medical reports in order to decide about the proper way to transport the injured



CONCLUSIONS



A good knowledge of snowsports injuries defines the needs of the rescue service & ski resort medical centre:

-the staff must be familiar with the most common injuries

-but also the rare severe injuries that occur in a low percentage





THANK YOU

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