

An analysis and literature review of the first aid administered in a YouTube video between the timestamps of 3 minutes 30 seconds and 23 minutes 50 seconds from the viewing of the video on the 05/01/2025 of an incident on Crib Goch.

On March 7th 2020 the YouTuber, Brave Dave, was involved in an incident on Crib Goch, within the Snowdonia National Park. The video (Brave Dave, 2020) documents the events and allows for an analysis of the first aid treatment administered before the Mountain Rescue team arrived.

Appendix A contains a chart that analyses the events as presented in the YouTube video published by Brave Dave. The chart uses specific timestamps to offer notes on the most critical points of the injuries of Ed, the casualty, and what first aid was offered before the Mountain Rescue team arrived. The timestamps referred to in this paper may not stay relevant if Brave Dave further edits the video. At the end of the video, it was recorded that the casualty, Ed, sustained the following injuries: a broken femur which required metal pins, a broken wrist requiring a metal plate, a broken nose, two broken bones in his neck and one in his back and Brave Dave also discloses that Ed required multiple blood transfusions.

In analysing the video the key events can be broken down into three main areas of casualty care. Each of these areas is explored in terms of what was done to support the casualty and then compared with what the literature suggests is the best practice to support the well-being of a casualty. The three areas that will be explored are the risk of hypothermia, the treatment of broken bones and the personal feeling of panic which is felt by the first aider as they attempt to manage the situation.

In the form of a conclusion the author has offered a self-reflection on how they think their own management of a similar situation might be changed as a result of the analysis of the video.

The Management of Hypothermia

In the video, Brave Dave stresses the importance of keeping the patient warm as there are high risks of exposure and hypothermia which is reinforced by Freeman et al (2018) who discuss how quickly someone can be in serious trouble if the core body temperature of the casualty is not maintained. Hearn et al (2006) also said that in an outdoor education setting hypothermia is one of the most likely things to kill someone in an adverse situation.

Brave Dave is initially unsure which injury needs to be dealt with first but, once the casualty states that he is cold, Brave Dave quickly recognises that this is important to insulate Ed from the ground.

In their article on the dangers of hypothermia the Mountain Training Society (2024) states that the colder a casualty becomes, the more incoherent and confused they become, with slower reflexes and poorer cognitive ability. At 17 minutes 02 seconds into the video, Ed states that he is freezing, despite Brave Dave's efforts to warm him up. At 20 minutes and 17 seconds into the video, Brave Dave states that Ed's thought processes are starting to slow down. The Mountain Training article goes on to recommend getting off the mountain as soon as possible, to warm the patient up slowly and getting wet clothing removed immediately. Sumann et al (2020) also recommend to provide warm, sweet drinks, high-energy foods and gels and to spend time next to the patient to transfer body heat. Brave Dave's actions in calling mountain rescue show he is attempting to get Ed off the mountain however he does not mention if they have any alternative drinks, and he only provides a small amount of water at 17 minutes and 18 seconds.

Brave Dave does his best to insulate the casualty from the ground and surrounds him with barriers to the heat loss at various points during the video. He does not advise any of the team to lie next to the patient (How to spot, treat and prevent hypothermia, 2024), which is likely because they are all busy with other jobs and they do not appear to have much extra clothing themselves. As Brave Dave and the others continue to insulate the patient at various points throughout the video it becomes apparent that their initial attempts at insulation were not effective.

The Treatment of the Casualty in Relation to Potential Broken Bones

Brave Dave, and the others in the group did not take into account the possibility of neck and back fractures and risked causing permanent damage by not stabilising Ed's neck before moving him to get the insulation in place. Ed sustained multiple fractures, 2 broken bones in his neck, one in his back, a broken nose, a broken wrist as well as a break in his femur. Bone breaks can cause severe blood loss, either internally or more obviously externally (Sumann et al., 2020) and there is little evidence that this was considered by Brave Dave when treating the casualty.

To hold a Mountain Leader qualification, which Brave Dave states he has, "you must have physically attended and completed (i.e. not online) a first aid course which involved at least two full days, or sixteen hours, of instruction and included an element of assessment" (Mountain leader, no date). The sixteen hour Outdoor First Aid Course covers how to deal with head and suspected spinal injuries in its remit (16-hour outdoor first aid course, 2023). In the author's experience there is not a lot of emphasis on this, and a video presentation, or

basic simulated practice, may not be enough to support a first aider in the heat of the moment; this however is dependent on the First Aid trainer and what they choose to emphasise in the training.

It is unknown if any movement of the casualty exacerbated the fractures the casualty suffered that were found at the hospital later. At 8 minutes and 56 seconds into the video, Brave Dave instructs Ed to roll himself onto his back, i.e. with no support given to assist Ed's movements. In a later video, Brave Dave reflects that he thought that this was the correct thing to do (Dave, 2020). The literature, however, on moving someone with a suspected spinal injury recommends that they are supported and immobilised to the best of the first aider's ability so that there is less strain on the spine when the patient is moved (Sumann et al., 2020). Ed is lucky not to have been paralysed from the fractures in his neck and the amount his head moved during the attempts to warm him up. The guidance is that keeping him warm is a priority. The multiple fractures in his leg would have likely been a large part of his later need for so many blood transfusions. 'Apart from pelvic trauma, fracture of the femur is the only fracture provoking acute life-threatening bleeding' (Guerado et al., 2015). It is possible that where a tourniquet applied above the break it may have helped reduce the blood loss, but this is not without risks (Hamad and Rossiter, 2023). They did not fully assess this break and would have had to use an item of clothing as a tourniquet, or a pressure bandage. They could have also considered splinting the injured leg to the other leg (Wilderness Medicine: Your guide to treating illness or injury in the Great Outdoors, 2015).

The Management of the sense of Panic felt by the First Aider whilst Dealing with the Casualty

Brave Dave admits that although he has done all the training required (Mountain Leader, no date.) he did not feel it adequately prepared him for a real-life situation (Dave, 2020). The adrenalin of the moment caused him to make decisions that he might not have made if he had been part of more rescue scenarios in his training. It is also worth considering if the required first aid training for UK Mountain Leader qualification is appropriate for such situations in the mountains. One of the key aspects where Brave Dave and the rest of the team involved, possibly could have shown greater aptitude is the management of their own panic and ability. As they tried to find Ed their panic almost led them to become casualties themselves. However, as shown in the video, Brave Dave still has some ability to be in control of the situation and he advises the others to go slower, as they rush to the casualty, so that other members of the rescue team are not injured. British Canoeing (2019), in their instructions for the management of casualties clearly states that you need to look after

yourself, the team/group and then the victim. Standard first aid training Primary survey and Dr. ABC - first aid advice (St John Ambulance, 2024) also uses the acronym DRS ABCD as a way of helping a panicked first aider in such a scenario to gauge the state of the individual conditions. None of the team are shown in the video to be going through this step by step, although parts of this review were done practically.

For danger (D) and casualty responsiveness (R) it is apparent that this was assessed while they were moving towards the casualty. It is good that they prioritised sending for help quickly.

The casualty was awake and conscious and answering questions appropriately. Therefore his airway (A) and breathing (B) were assessed at this time, and at regular intervals by continually talking to Ed.

The circulation (C) was not seen to be assessed, as there was no mention of checking the casualty's pulse or capillary return. There was little effort made to deal with the open head wound, though, at 7 minutes and 33 seconds, there were mentions of this, but no pressure dressing was applied to this wound. There was no defibrillator (D) available.

The literature surrounding casualty management says to insulate immobilise and stabilise the casualty in the most effective way possible for the scenario (Yarwood, 2010). The lack of communication between the group members as well as the multiple attempts to insulate Ed from the ground and cold air shows the lack of efficiency for these three key points. This behaviour could be attributed to their own panic in the situation, an area where they all seem to struggle to manage the situation.

What I learnt and will use to guide my future professional behaviour in similar situations.

The key takeaway identified for personal future practice is the need to not only have the appropriate kit for the day but also know exactly where the kit is located. Brave Dave says in a subsequent video, (Dave, 2020) that he had another bivvy bag/emergency bag in his backpack he forgot about on the day. He did not come across it during the incident, as it was in a separate pocket and not near his emergency first aid kit.

This is reinforced by the mountain rescue recommending a kit to take on a mountain day, and the importance of checking the weather before you walk ('Stay safe', 2025). The process of acquiring appropriate gear for a day in the mountains has become a priority, not just the bare minimum but enough for one to two people to be able to survive independently overnight. One of the other critical points is knowing what is in one's own first aid kit and

having an understanding of how to use it. Personal first-aid experience and knowledge are somewhat lacking and there is a need for more practice and experience to develop confidence (Hanus, Jossberger and Gruber, 2022).

The author recognises that in a similar situation, it is difficult to know how one would react with only minimal training and little experience. If the author was placed in the same scenario, the ability to take that breath, to think clearly of effective strategies, to insulate, immobilise and stabilise the casualty would probably not have been thought of or implemented (Hanus, Jossberger and Gruber, 2022). "Mountain rescuers who had performed real resuscitations showed significantly better technical skills than those who had not" (Hanus, Jossberger and Gruber, 2022).

Being able to learn through someone else's actions has been invaluable. The author is grateful to Brave Dave for sharing this video.

Less serious incidents that this author has experienced demonstrate how the level of panic can cause first-aid training to be forgotten. The author intends to maintain up-to-date first aid qualification either once a year or to supplement the knowledge once every three years with other training or sources, Ideally simulated mountain rescue scenarios would be helpful, or Intermediate Life Support (ILS) courses and ways to fund these will be explored.

Even though it would be more expensive, the author feels that getting an ILS for a wilderness environment is more beneficial than the Basic Life Support qualification that is required by mountain training for the mountain leader qualification.

The author now intends to carry the full kit for overnight survival whether the excursion is a social walk or working professionally guiding a group.

Brave Dave, Rory and Tony dealt with Ed's incident very well, especially as none of them was experienced in mountain rescue situations. Their actions stopped Ed from sustaining hypothermia and potentially reduced the effects of his other injuries.

However, the literature supporting how to deal with a casualty suggests that they could have done things differently, In this cauthor's opinion the broken leg and possible spinal injury, could have been handled with more urgency (Perren, 2002).

The lessons that the author has taken from analysing this YouTube video and the participant's actions within it, are the importance of having the right equipment with you ('Think about gear - AdventureSmartUK', 2018), knowing where it is stored in your bag for easy access, up-to-date information on how to use the first aid and strategies to remain calm and clear thinking in order to effectively manage a casualty (Sijbrandij et al., 2020). The learning opportunity provided by this video is an incredible tool for the further development of

skills and knowledge and the development of those who use the outdoors both for pleasure and for business.

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Appendix A

Time Stamp	First Aid and Critical Points
3 minutes and 30 seconds	Ed, one of the walkers they had joined up with, slid off the mountain and disappeared from view.
3 minutes 41 seconds	The group descends very quickly and almost becomes casualties themselves, as Dave commented they needed to slow down to not be injured themselves.
5 minutes and 25 seconds	Tony, who was in front of Dave and Rory, is seen calling for help and asks who to call, Dave responds with 999 asks for the police then asks for MR.
6 minutes and 10 seconds	They heard Ed calling for help
7 minutes and 05 seconds	Dave visually finds Ed and directs the group to the casualty's location.
7 minutes and 19 seconds	Dave arrives at the casualty (Ed)
7 minutes and 23 seconds	Casualty states not being able to see then clarifies that is seeing double
7 minutes and 27 seconds	Dave states that they need to insulate Ed from the ground
7 minutes and 33 seconds	Dave then asks if the casualty Ed feels any brakes and comments on the state of Ed's head, which is bleeding, and the casualty responds stating that their right knee is in a lot of pain.
7 minutes and 46 seconds	After emptying their bags they start isolating the casualty from the ground
8 minutes and 13 seconds	They place one piece of clothing under Ed
8 minutes and 30 seconds	Dave comments on the head trauma again stating that it's "fucking bleeding"
8 minutes and 48 seconds	Dave asks where the casualty has sharp pain, with the response being just the legs
8 minutes and 48 seconds	Dave lifts the casualty legs to place a piece of clothing under them.
8 minutes and 56 seconds	Dave instructs Ed to roll onto his back which Ed does but feels a lot of pain.
9 minutes and 04 seconds	A backpack is placed under the casualty head providing support and isolation from the ground

9 minutes and 12 seconds	Ed realises his trousers are gone and were ripped off him during his descent. Dave and Rory continue to layer Ed and insulate him from the ground as Tony is still on the phone with the emergency services.
9 minutes and 20 seconds	Ed says "My hand is so smashed"
9 minutes and 32 seconds	A group shelter is placed on top of the casualty
9 minutes and 40 seconds	Dave and Rory try to tuck the edges under Ed to secure it as well as provide more insulation
9 minutes and 46 seconds	Rory comments on the pain Ed must be feeling in his leg and that he can't see an obvious brake
10 minutes and 05 seconds to 10 minutes and 13 seconds	Tony asks about the injuries and Dave only tells him about the head trauma and asks Tony if MR have their location
10 minutes and 18 seconds	Dave then provides a more details list of the injuries stating both the head and the legs. Dave says that the cold is the most harmful thing to Ed at this point.
10 minutes and 29 seconds	Dave checks on Ed and notices his top layers have "ridden up" (10.29) and pulls them back down to provide some protection from exposure.
10 minutes and 36 seconds to 10 minutes and 45 seconds	They continue to insulate Ed from the ground and Ed states that he "cant move his right leg". Dave says it is probably because of the cold and tries to insulate it more.
11 minutes and 09 seconds	Ed asks if his shoes are missing Dave tells him they are
11 minutes and 13 seconds	Dave puts his first aid kit away in backpack
11 minutes and 24 seconds	Dave and Rory start chatting with Ed to keep him awake and conscious
12 minutes and 06 seconds	Dave puts Ed's exposed hand into his jacket to help keep it warm. Wind blows shelter off Ed and Dave and Rory rescues it.
13 minutes and 06 seconds to 13 minutes and 32 seconds	Dave relooks at head trauma and gets the first aid kit back out of the bag
13 minutes and 31 seconds to 13 minutes and 44 seconds	Ed says that there is something wrong with his stomach and he feels something moving around. Dave says "Internal bleeding?" and checks if there is any exposed skin touching the ground, they find some skin still touching the ground and try to insulate it.

13 minutes and 47 seconds	Dave moves Ed's leg and feels a lot of pain
13 minutes and 52 seconds to 13 minutes and 56 seconds	Dave looks at Ed's leg and comments on how swollen it has become.
14 minutes and 07 seconds	They try insulating Ed's stomach from the ground
15 minutes and 10 seconds to 15 minutes and 39 seconds	Tony confirms that MR are coming, Ed tries to remove his hand from the jacket Dave puts it back in the jacket and asks the group if there is any more stuff to put under him.
15 minutes and 44 seconds	Ed tries to remove hand again Dave puts it back.
15 minutes and 45 seconds	Ed expresses more discomfort in and around his stomach
15 minutes and 56 seconds	Dave investigates and says it's probably because of the cold.
16 minutes and 02 seconds	A plastic bag is placed under Ed to help with insulation.
17 minutes and 02 seconds	Ed says "im freezing"
17 minutes and 18 seconds	Dave gives Ed water.
17 minutes and 37 seconds	Ed starts to feel a lot of pain and states "im feeling it all now"
17 minutes and 52 seconds	Dave starts looking in the first aid kit.
18 minutes and 09 seconds	Dave leaves by himself looking for help on the Pyg track. Before leaving he gives instructions to Rory and Tony to keep Ed warm
19 minutes and 23 seconds	Dave finds a group who couldn't get to the casualty without becoming casualties themselves.
19 minutes and 35 seconds	They give Dave some painkillers and Dave takes the painkillers back to the group.
19 minutes and 47 seconds	Dave goes back to searching and finds another group and informs them about what's happened and they follow him back to the casualty site.
19 minutes and 58 seconds	They continue to try and insulate Ed from the elements and the ground. The new group provided a moral boost to the casualty's group.

20 minutes and 05 seconds	Dave and two members of the new group go on the Pyg track and the Miners track to see if they can find MR and the wind gets worse.
20 minutes and 17 seconds	Ed gets worse with Dave saying in the video that his response times were getting longer and it was harder for him to keep his eyes open.
20 minutes and 29 seconds	MR makes contact with the group and starts to locate the incident site.
21 minutes and 00 seconds	The MR member starts to take over the scene.
21 minutes and 13 seconds to 21 minutes and 29 seconds	The group assists with adding another shelter over Ed as they wait for more members of the MR team.
21 minutes and 36 seconds to 22 minutes and 19 seconds	Dave does a hand over passing on the relevant information to the MR team Member.
22 minutes and 44 seconds	They assists MR insulating Ed.
23minutes and 11 seconds	MR take over the scene fully.