Masks in the mountains: how a UK search and rescue team prepared for COVID-19

William Robert Kitchen

When a person becomes ill, injured or lost in a remote part of the UK — the climber who falls thirty metres down a mountainside; a hiker with chest pain in the middle of a national park; the walking group lost on the fells in appalling weather in the depths of winter — the job of locating, treating and evacuating that casualty will often fall to a mountain rescue team such as my own, based in the Holme Valley in West Yorkshire. Always on call and consisting of unpaid volunteers trained in search and rescue techniques and emergency medical care, these teams will respond regardless of the weather or the time of day.

‘PPE’ is not a new term for us as a service. Our operating environment has always been dangerous. Until recently though, our PPE was the equipment that kept us safe from extreme temperatures, falling rocks and torrential rain: our climbing harnesses, helmets and cold weather gear. We always wear medical gloves when treating patients, but people with dangerous respiratory tract infections do not tend to go hiking. Droplet and aerosol precautions are therefore historically alien to us.

The spread of COVID-19 in March forced drastic changes to how we work. As my Team’s Infection Prevention and Control Lead, I knew that the challenge facing us was immense. The guidance available from Public Health England and the National Health Service (NHS) was very much intended for indoor environments. The standard fluid resistant surgical mask, apron, visor and gloves would not suffice. Rain would rapidly destroy them.

And, how would we safely remove our PPE? There are no sinks in the hills, making hand washing impossible. Copious quantities of alcohol gel would be needed instead. Due to shortages in March, we had to source this from a generous local distillery. Recognising the risk posed by our lack of experience with enhanced medical PPE, we instituted a buddy-led doffing system. All PPE removal was directly supervised by a ‘clean’ rescuer, reading aloud the doffing steps from a checklist and ensuring that nothing was missed. We hoped that this would minimise any cognitive overload, reducing the probability of mistakes being made.

To further improve our resilience the team was split in half, with only one half responding to each callout. Any COVID-19 exposure would therefore result in a maximum of half of the team being placed into quarantine, allowing our service to remain operational. This was at the expense of manpower though, which had already been reduced by a fifth because of the need to protect clinically vulnerable members of the team by taking them off-call.

Aerosol generating procedures (AGPs) and cardiopulmonary resuscitation (CPR) presented a difficult dilemma. While we are a professional emergency service, our internally trained medical responders, known as ‘casualty carers’, are all volunteers. Access to FFP3 (filtering face piece 3) masks and fit testing was limited at the beginning of the pandemic, so in the interests of safety for our local ambulance services, air ambulances and other prehospital care providers we made sure that fit tested clinicians have always been available to teams with no fit tested personnel. Discussions about our next steps regarding AGPs are ongoing across the organisation.

As for all healthcare providers, it has certainly been a difficult few months for us. Hopefully things will return to normal over the next year or two but, regardless of what comes next, we will continue to be there for those who are lost, injured or taken unwell in the outdoors.

Twitter William Robert Kitchen @WillKitchen96

Contributors WRK is the sole author of the submitted work.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Not required.

Provenance and peer review Not commissioned; externally peer reviewed.

© Author(s) (or their employer(s)) 2021. No commercial re-use. See rights and permissions. Published by BMJ.

Handling editor Caroline Leech


Received 26 August 2020
Revised 7 October 2020
Accepted 30 November 2020
Published Online First 21 December 2020

doi:10.1136/emermed-2020-210580

ORCID iD William Robert Kitchen http://orcid.org/0000-0002-7453-510X

Correspondence to William Robert Kitchen, The Holme Valley Mountain Rescue Team, Marsden HD7 6EY, UK, william.kitchen@holmevalleymrt.org.uk