



Remote Medical Support to Polar Operations

The Effect of 'Reach Back' on Clinical Care Delivery

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Introduction

The provision of remote medical support to the Antarctic and Sub-Antarctic space can be challenging – especially when additional support is required, or advice needed.

How can we best support our deployed medical personnel from the headquarters of national programmes? Does the access to senior clinicians or specialist mitigate the need for evacuation or enable care to be delivered at reach for longer? As part of the pre-deployment training for any British Antarctic Survey Medical Unit (BASMU) clinician, additional time will be spent seconded to secondary and tertiary specialty clinics to enhance understanding and increase diagnostic/treatment confidence whilst deployed.

However, if there are concerns whilst deployed, BASMU clinicians can 'reach-back' to UK resources through several means and modalities¹. In this paper, we would explore the various methods utilized over the previous seasons and the impact on patient care delivery as well as support to those patients' requiring evacuation.

Reach-back Modalities

The modality utilised for reach-back advice varies from installation to installation, depending on the technological infrastructure. Methods currently adopted have previously been demonstrated as effective having been used in support of remote and austere expeditions².

The most common method used across the British Antarctic Territory is video-conferencing. The ability for real-time review by specialists, able to observe directed examination, has permitted the safe assessment of several patients and supported accurate decision making with regards to the need for evacuation. As part of routine medical operations, the use of digital imaging and electrocardiogram has enabled rapid case-conferencing. This is further supported by digital note keeping and governance tele-conferencing in order to facilitate information sharing.

Limitations

The use of telecommunications can be limited by digital infrastructure. With a reliance on data transfer and bandwidth, the quality of communication is depending on the ability to maximize bandwidth utilization.

Future Technologies

There is a clear role for the use of augmented reality methodologies for providing remote support to Antarctica. The exchange of information is likely to increase as capabilities develop permitting a seamless sharing of clinical data, providing the optimal care for our deployed populations.

Conclusions

The use of digital technologies to support clinical decision making has a clear role in Antarctica. The sharing of information to facilitate safe assessment and rapid escalation for those patients who need to be evacuated is critical. This is of course limited to the level of bandwidth available and may further be impacted by the variations in Antarctic weather patterns.

References

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