

4 THE CHALLENGES OF MANAGING A COVID OUTBREAK DURING A LONG-RANGE DESERT PATROL

Lt Col Natasha Chatham-Zvelebil. *Consultant Emergency Medicine Roto 3B; Emergency Medicine Consultant Joint Hospital Group (South) and University Hospital Southampton*

10.1136/military-2023-maliabstracts.4

The challenges of managing an infectious disease outbreak in a deployed military setting are well documented. During Op NEWCOMBE the outbreak of COVID in camp was predicted with Force Health Protection strategies and a medical response plan in place. Roto 3, December 2021 – June 2022, had a triple vaccinated task group, and models suggested any outbreak would be clinically and operationally insignificant.

These models did not consider the specific challenges of an outbreak during a long range environmentally challenging desert patrol. The consequences of this COVID outbreak were clinically and operationally significant. The clinical effects were disproportionately severe, with features of heat illness a likely contributor. The management of patients was challenged by heat and lack of climate controlled and isolation facilities. The medical group itself suffered with cases of COVID, resulting in the requirement of the Ground Manoeuvre Surgical Group to assume the deployed Role 1 clinical role, provide a partially climate-controlled environment and manage the logistics of maintaining the testing capability and PPE equipment. The outbreak resulted in 3 cancelled patrols, 8 aeromedical evacuations, 9 strategic evacuations and a total of 106 cases, of which 42 were confirmed or suspected whilst on patrol.

The clinical and operational impact of this COVID outbreak should have been predicted. The challenging environment combined with a physically degraded population towards the end of a 6-month deployment, demonstrated that using disease modelling based upon healthy UK-based populations is ineffective. Future deployments must take this into consideration.

5 DIAGNOSTIC RADIOGRAPHY AND REACH BACK CAPABILITY IN THE REMOTELY DEPLOYED ENVIRONMENT; A SUMMARY FROM OP NEWCOMBE ROTATION 3

Sgt Jessica Bailey. *RAF Diagnostic Radiographer Roto 3; Royal Centre for Defence Medicine (Oxford), Rm 3503 Lvl 3, John Radcliffe Hospital, Headley Way, Oxford*

10.1136/military-2023-maliabstracts.5

Diagnostics remains to be an important and vital capability of any deployed field hospital or surgical team, particularly for teams that find themselves deployed in the most remote locations, such as Mali. The DRGo gives the British military a portable radiography solution. Completely digital, it provides an instantaneous X-ray for clinicians to review. A 6-month period between Dec 21 and Jun 22 saw 29 full X-ray examinations completed with a 50% split between those patients being referred for imaging in the firm base and those referred whilst out on patrol. With no deployed radiologists on the ground, the ability to obtain radiologist reports is pivotal to the patients' subsequent treatment pathway. X-rays and CT scans were uploaded back to the Royal Centre for Defence Medicine for reporting through the help of Project Lara. Project Lara brings together several separate innovation capabilities to deliver a better improved telemedicine solution. It gives

Defence Medical Services personnel the ability to request support or transfer medical information whilst deployed in the field via secure communication systems. The project utilises a SATCUBE satellite terminal, essentially a portable WiFi hotspot. When setup, it allows for a high-speed broadband connection of around 10mbps in less than a minute. Used in conjunction with the secure messaging app, Pando, complete radiologist reports were received back from the UK often in less than one hour of uploading the initial X-rays. A natural fit, the deployed Radiographer took on the role of the communications lead and demonstrated how well the two roles could combine in future remote Operations.

6 THE ADVANTAGES OF DEFENCE MEDICAL ENGAGEMENT

Lt Col Robert A Salaman. *Clinical Director Roto 4A. Consultant Vascular Surgeon, East Lancashire hospitals NHS Trust. 207 Field Hospital. Deputy Consultant Advisor (reserves) General and Vascular Surgery*

10.1136/military-2023-maliabstracts.6

The Ground Manoeuvre Surgical Group was established to provide DCR/DCS support to Operation Newcombe, the UK contribution to MINUSMA, a UN stabilisation and support mission in Mali. Opportunities arose during my tour to forge closer relationships with other nations' surgical teams to the benefit of all.

The UK team delivered a trauma SIM session in the as-yet untested temporary French facility during the drawdown of OP Barkhane. Several human factors issues were identified, and procedures changed prior to the facility going live. Subsequently I was invited to attend when a UK soldier required emergency care in the French facility. I gained multinational working experience and the UK soldier was reassured by a UK presence in the surgical team.

Informal weekly meetings with the Germans and Swedes enabled a thorough understanding of each teams' experience and skills. The UK team were consequently invited to lead the damage control surgery of an Egyptian UN soldier with multiple limb injuries from an IED strike. This provided valuable experience for the UK orthopaedic and general surgeons and an ODP. The UK team was subsequently able to significantly contribute to the after-action review as well as providing significant expertise and training to the greater UN team for future MMI planning.

Two of the five UK Defence Engagement Strategy's aims are "Capability and capacity building, and Access and influence. By enthusiastically engaging with the medical teams of all nations, the UK GMSG team enhanced its capability and gained significant access and influence to the benefit of injured soldiers.

7 PRINCIPLES OF DELIVERY OF SURGICAL CARE FROM A MILITARY FACILITY TO A LOCAL POPULATION; LESSONS LEARNT FROM DEPLOYED SURGICAL CARE IN GAO

Maj Grosset Antoine. *Orthopaedic, Trauma and Limb Reconstructive Surgery department; Percy Military Teaching Hospital, Clamart, France; French Military Health Service*

10.1136/military-2023-maliabstracts.7

Medical aid to the population stems from a long French tradition of caring for native populations. It has evolved through the various deployments in modern conflicts and is now based on well-defined principles. It is diplomatically important, as it allows the acceptance of the Force by the population. It is governed by military and strategic, legal but also ethical rules.

The experience of the surgical assistance offered at the operational base in Gao has highlighted the limits that each surgeon has had to impose on himself to ensure the sustainability of this care.

It was necessary to consider the local environment, to learn and adapt to socio-cultural norms, and to assess the needs of the population. Very costly in terms of human and material resources, it was necessary to define the care that could be offered.

Confronted by a very large request for care, and the virtual absence of local health structures, not everything can be done, nor should it be done.

Throughout his mandate, the military surgeon must consider the operational mission which takes precedence, and the humanitarian side. The principle of beneficence is at the heart of the medical reflection.

The transmission of knowledge is essential for sustainability. The basic principles are taught to junior surgeons during specific theoretical courses, and practical training alongside an experienced surgeon.

The main idea is that this surgical aid should be beneficial to the greatest number and be sustainable, without compromising the operational mission or giving false hope to the local population.

8

BILATERAL ENGAGEMENT THROUGH SIM TRAINING

Maj (Reserve) Dr. medic Amelie Oberst, MD. *Military Hospital Ulm; Oberer Eselsberg 40; 89081 Ulm; Germany*

10.1136/military-2023-maliabstracts.8

During the current UN operation, the German team of Role 1 and the long-range reconnaissance group of the UK armed forces engaged in binational trauma simulation training.

The simulation was led and designed by a team of British, consisting of two senior anaesthesiologists and one senior surgeon.

The scenario was a 25-year-old unresponsive soldier with multiple gunshot wounds and a blocked airway, in a hemodynamically unstable condition. Following a structured trauma approach, the team established a surgical airway, a chest tube, a central venous line, and surgical bleeding control.

Besides the classical advantages of simulation training, our exercise provided a better understanding of different approaches and the difference in national protocols, enhanced collaboration between single participants, as well as new impulses for daily work.

This simulation training proofed that such a cooperation is supported by a common language, international algorithms, guidelines, as well as a general understanding of crew resource management. Such structures allow international teams to reach a shared goal more quickly and, therefore should be encouraged.