

Restoring The Equilibrium – Medical Force Protection And Training For Role 1 Staff

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Cooper's paper [1] is not only essential reading for General Duty Medical Officers' (GDMOs) about to undertake their first operational tour in Afghanistan but should be used by all involved in the training of Defence Medical Services (DMS) personnel working at Role 1. Recognising that GDMOs may deploy within days of completing their Entry Officer Course (EOC) thereby missing some elements of unit pre-deployment training means that steps must be taken to ensure that their EOC covers the vital elements identified by Cooper such as medical resupply, environmental health, casualty evacuation and the treatment of non-entitled civilians. In particular Medical Force Protection (Med FP) and the treatment of women and children are subjects that merit more attention on the EOC and Role 1 pre-deployment training.

Force health protection (FHP) is a unified approach that describes integrated preventive and clinical programmes, which are designed to protect personnel [2]. FHP involves enhanced methods of preventing casualties before, during and after a military operation, through a full spectrum of health activities, which are categorised under three interrelated pillars: Force Generation and Force Preparation; Medical Force Protection; and Medical and Rehabilitative Care.

NATO defines Med FP as *"the conservation of the fighting potential of a force so that it is healthy, fully combat capable, and can be applied at the decisive time and place. It consists of actions taken to counter the debilitating effects of environment, disease and selected special weapon systems through preventive measures for personnel, systems and operational formations"* [3]. The four principles of Med FP are:

- Measured assessment of the threat based on accurate and timely all-source intelligence.
- Risk assessment in order to manage risk rather than eliminate it completely.
- Health risk management, which provides military commanders with the freedom of action to execute a mission through an informed health assessment.
- Audit and surveillance, which allows the effectiveness of Med FP to be measured.

In recent years much has successfully been done to ensure that young Medical Officers (MOs) have the skills to deal with battle trauma but little emphasis has been placed on Med FP and the importance of Disease Non Battle Injury (DNBI). In years gone by, because of the areas the British Army fought in, the Army Medical Services (AMS) accumulated a vast expertise in infectious diseases and through a well resourced Army Preventive Medicine cadre were able to not only put in place health education

programmes for all Service personnel but had the necessary surveillance, diagnostic and treatment skills in this specialised area. These skills may have been lost in recent years. However more recently the General Medicine cadre has recognised the importance of having infectious disease specialists but more needs to be done to ensure that the DMS has the right number of health protection specialists and more importantly that those at the "coal face" (Role 1) have general public health skills in this area.

The Surgeon General and Chief of Joint Operations have also noted the impact of DNBI in the last 18 months and as a result two Preventive Medicine Consultants undertook a Med FP audit in 2009 [4]. There is a large degree of overlap between the recommendations in Cooper's paper and this study. The Med FP Audit Team's aim was to undertake a broad based audit across the whole area of operations to which Med FP policies apply within theatre from Main Operating Bases (MOBs) to Forward Operating Bases (FOBs) and Patrol Bases (PBs). Included in a number of specified tasks was a review of the implementation of Med FP protective measures by units and individuals and the processes within theatre for response to disease outbreaks and occurrences to environmental injury.

In historical campaigns infectious disease has caused significantly more morbidity and mortality than battle trauma. As Operation HERRICK in Afghanistan moves to a campaign footing in an area that has multiple health threats, including several highly endemic diseases such as malaria, leishmaniasis and rabies it is important to ensure that robust Med FP policies and practices are in place. In addition it is important to minimise the effect of highly transmissible diseases such as gastrointestinal and respiratory infection, which will have a greater impact in "campaign" living conditions. DNBI rates are a particular source of concern because of the immediate impact that sickness and injury can have on operations. The overall impact of the level of morbidity is usually measured in terms of working days lost (WDL), restrictions on work (light duties), hospital attendance and admission, and aeromedical evacuation to the home base. On HERRICK 8 there were 16,104 Role 1 attendances recorded, which resulted in 4,719 days on light duties, a rate of 22 days per 1000 personnel per week (22/1000/week) and 2,799 days off all duties (13/1000/week). During the same time there were 861 (4/1000/week) attendances at Role 2E for DNBI, 418 (2/1000/week) admissions and 140 aero-medical evacuations (0.7/1000/week) [5]. Of those who are aero-medically evacuated it is unclear how many personnel returned to full duties in theatre.

The Med FP audit received excellent support and engagement, and commanders at all levels were keen to put forward their views. Overall the audit showed acceptable compliance with existing policies. In particular, there was widespread good practice as the vast majority of UK personnel worked hard to apply training, experience and common sense to reduce obvious threats to health. Where compliance was incomplete this was almost invariably due to evident operational constraints.

However the direction on medical information collection (health surveillance), and its extent, quality and flow could all be improved.

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The flow and exploitation of information and staffing of force protection issues could also be improved both in and out of theatre, for example by greater stakeholder engagement and wider dissemination of existing analysis. Improved information should also inform the level of risk associated with current practices for managing relief in place.

Numerous observations were made on health protection, and considerable detailed input was obtained. In particular, reviews of current threat assessments for malaria and hepatitis B were recommended. Consequently it is now UK policy for all personnel to be offered hepatitis B immunisation prior to deployment. Detailed guidance and further work on the management of diarrhoea and vomiting and outbreak control are also required. In the autumn of 2009 an AMS Consultant gastroenterologist deployed to take this forward. In particular in collaboration with the US Medical Services, it is hoped that the common pathogens responsible for gastrointestinal outbreaks amongst UK personnel can be identified (See Letters to the Editor). This in turn may result in better preventive strategies such as the use of chemo-prophylaxis early on in such outbreaks. In 2009 two significant outbreaks (influenza and salmonella) have necessitated the requirement for urgent public health support and despite the recognition for several years of the requirement for a UK Rapid Deployable Outbreak Investigation Team (RDOIT) capability this is still to be formalised.

Commanders consistently reported the issues of mental stress, the burden of weight carriage and ergonomic factors, and support services including catering and ablutions to the Med FP Audit team. Moreover the combined effect of these, together in the summer with the powerful effect of heat, causes a significant loss of performance i.e. degradation. Further work from the Institute of Naval Medicine is looking in detail at the nutritional effects of degradation and an Operational Mental Health Needs Evaluation is planned for early 2010 to look more specifically at the 'in theatre' mental health needs. Post-operational mental health surveillance data is provided by the ongoing King's Centre for Military Health Research (KCMHR) Cohort Study. To date, analysis of available data relating to deployed personnel shows no evidence of statistically significant differences in the rates of overall mental

disorder between those deployed to recent operations in Iraq or Afghanistan. The results have been extensively published; the key finding has been the rate of Post Traumatic Stress Disorder of approximately 4 - 6% [6].

While considerable medical force protection is being achieved through hard work and adherence where possible to existing policy, much detailed work can be done to improve it, and, most importantly, to remedy the lack of information which limits assurance of its effect. The training of Role 1 staffs in Med FP is therefore not just important to ensure that they are prepared for this challenge when they arrive in theatre but should result in improvements in DNBI.

In summary we must better prepare GDMOs and other Role 1 medical staffs for their role in Medical Force Protection. Their role in active surveillance will be key as long as it is supported by a robust analysis and feedback capability. For Afghanistan training in tropical medicine and the other important DNBI causes (respiratory and gastrointestinal illness, musculoskeletal injuries and dermatology) will also be vital. In addition to the obvious benefit to the Force in reducing DNBI there will be a benefit to the esteem of the GDMO who will feel that they have been adequately prepared to meet the challenges that they face in this area rather than "learning on the job."

References

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