

The Past, Present And Future of The Defence Medical Services

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As I end my tenure as Surgeon-General, it is timely to review where I believe the Defence Medical Service (DMS) is, and where it is going. Given the progressive increase in combat and the central part that the care of casualties has played during my tenure, it is appropriate that such a review is published in this edition of the RAMC Journal as many of the themes in this forward are featured in individual articles within.

The first point to note is that we were lucky. Defence Cost Study (DCS) 15¹ led to a major outflow of clinical personnel and if it were not for a small cadre of hospital consultants who remained to rebuild, almost unnoticed, the clinical core of the DMS we would not have had the capacity to respond as we have. We were also fortunate that as the intensity of the conflict increased, a new generation of enthusiastic and able Consultants rose to the qualitative challenge. The effect has been the development of a trauma and rehabilitation service that has been described by the UK's external regulator as 'Exemplary'[1]. It has also highlighted that the hospital cadres continue to be the 'battle winners' of the DMS, providing the intellectual stimulus that has led to major changes in pre-hospital care, in-transit care during tactical evacuation, in care in our forward hospitals and in developments in aeromedical evacuation. This is the reverse of the 'peacetime' situation where emphasis has been on the more military aspects of the combat environment – the ability to get medical resources to the right place at the right time, capable of surviving and functioning in a hostile environment. However, both the clinical and military are of course required and it is a rebalancing between the two elements of our profession that is required rather than the replacement of the one by the other.

The second point to note is that many outside the current DMS have contributed to our operational medical success. There are our predecessors who passed on their skills and knowledge upon which we built, as well as a number of international partners who have contributed research and knowledge. Prominent amongst these is the USA who have given us open and free access to their research, particularly the Army Institute of Surgical Research whose functioning is described in this issue, with the first of our embedded officers that we will continue to place there as a co-author. Within the UK, we have had assistance from numerous organizations, and room permits mention of only a few examples. The National Blood Transfusion Services supply blood products and have assisted in developing our aphaeresis capability, which is so important in addressing the coagulopathy of trauma. The Health Protection Agency assists and advises us on infection prevention and control issues whilst a variety of Royal Colleges have provided a range of support, ranging from the Team Training undertaken at the Royal College of Surgeons of England to advice from the Royal College of Anaesthetists on pain management. The Medicines and Healthcare Products Regulatory Agency has assisted us with managing novel products which lack a UK licence when introduced. The Medical Research Council is helping developing our research agenda and the Chair of the National Institute of Clinical Excellence is a member of the external independent committee that provides guidance on such areas as novel or contentious treatments or processes. The heads of all these organizations, as well as the Chief Medical Officer and the NHS

Medical Director at the Department of Health, have all personally made themselves readily available to provide advice and guidance. Finally, our 'team' also includes organizations within MOD, such as the Defence Analytical and Statistics Agency (DASA) who has increasingly taken charge of the cleansing and analysis of routine data or the Defence Scientific and Technology Laboratories (Dstl) who have undertaken rapid research in response to clinical questions or to provide 'due diligence' prior to making decisions on the introduction of new products or procedures. The contribution of non-clinical agencies is also essential to clinical effectiveness or reputation, such as the impact on clinical effectiveness of sub-optimal medical supply before it was gripped by the Medical and General Stores Integrated Project Team and the impact on our reputation as a result of a lack of adequate welfare support at our major receiving hospital before such support was reinforced.

The third point to note is the effect of 'Main Effort'. As Surgeon General I declared pain, limb salvage, infection control and prosthetics as the 'Main Effort' and it has been remarkable the extent to which this empowered our clinicians. All these areas have seen significant advances, and work continues to advance our knowledge. The management of pain has been a particular success, in large part because of the significant immediate benefit for patients, but also because its resolution required a systems approach from point of wounding to rehabilitation, needing the cooperation of many medical nodes from all 3 Services, the Joint Medical Command and the NHS, and the introduction of novel clinical approaches.

So to the future. We have achieved much, but much more needs to be done. In the operational area non-compressible haemorrhage and junctional trauma continue to challenge us, as clearly outlined by Tai and Dickson. The epidemiology and patho-physiology of infection needs further work. We need to consider what responsibility we have for the longer term care and clinical outcomes of our more seriously injured personnel, a subject of internal debate within MOD and with other government departments and where the surgical Royal Colleges have also offered to assist. The drive and enthusiasm of our best clinicians needs harnessing within a high quality academic environment, and this needs further development of the Royal Centre for Defence Medicine in cooperation with our partners in the University of Birmingham and University Hospital of Birmingham, as well as internal partners such as Dstl. We need to reconsider our deployed organizations where the introduction of the massive transfusion protocol had led to a significant increase in biomedical scientists, where the severity of injury has led to the deployment of plastic surgeons, deployed radiologists have come back into their own and the requirement for specialist nurses has been highlighted. Organizationally, we need to consider whether and how we should contribute to multinational specialist facilities, such as neurosurgery or maxillofacial surgery where casualty numbers do not support a dedicated facility. We need to gain international consensus on the timelines to surgery and ask if our UK consensus is appropriate, and in particular we need to quantify the contribution of our helicopter-borne consultant-led primary retrieval teams; we need to maximise survival of our injured but not so restrict the freedom of action of our Commanders, by tying them to a specific time from medical facilities, that we compromise their ability to win the battle and thereby paradoxically increase casualty rates. Non-clinical medical unit commanders will need to gain a better understanding of clinical issues, perhaps taking note of a number of failings within some hospitals within the civilian

¹Front Line First - the fifteenth Defence cost study of 1994, followed by 2 reviews by the House of Commons Defence Committee 1994-5 Session, Defence Costs Study Follow-up: Defence Medical Services (HC 102). ²Awaiting publication. Overall mortality, as measured by the Case Fatality Rate, is currently in the order of 16% compared to the historic norms of 23 – 27%.

medical services caused by Chief Executives' lack of attention to clinical matters.

Any future must be put into the context of civilian medicine upon which we rely for basic clinical training and employment between deployments. More focused training exacerbated by shorter training makes it ever more difficult to develop the military clinicians of the future, another subject addressed in this edition. We can relatively easily supplement this training for Regulars, but it will be more difficult for Reservists unless we change our traditional approach which has hitherto relied mainly on providing civilian clinicians with military training with only a modicum of military clinical training. Proposals for Trauma Centres and Networks might improve UK Trauma care, but make it even more difficult to attract the required number of Reservists and challenge our current MDHU deployment. We need to consider how we can retain our female clinicians; retaining females is an issue for the whole of the Armed Forces but is one that has a disproportionate effect upon the DMS with its still mainly female nursing services. We also need to address how we can manage the inevitable manpower planning difficulties in relatively small cadres with long training times which can result in significant over-manning suddenly changing into a critical shortage; most forget that we emerged from the Cold War very well manned and indeed had to make some redundant, which became a critical shortage only 4 years later after DCS 15.

This forward has largely addressed the area of trauma care. For completeness, and to reassure those that otherwise will feel neglected, there are other areas that need attention. The mental health of those involved in conflict continues to attract media and political attention. We believe that our policies are right, but need to better explain them, and indeed a mental health plan is in preparation bringing together in one document our approach. We have sustained our previous levels of Disease and Non-Battle Injury

rates, but is this sufficient? Are we making sufficient effort, for example, to ensure that eye protection is worn, given the positive impact of such a mandatory policy? What is the role of our Combat Medical Technicians (CMTs), what training should they have, is there a suitable civilian qualification or should we consider using nurses with appropriate additional training instead, noting that the predecessors of CMTs were Nursing Orderlies? Does the traditional Role 2 Dressing Station have any role in managing trauma in conventional combat when the current model of advanced first aid at point of injury and rapid helicopter evacuation to a capable Role 3 facility is achieving the best survival ever achieved in combat? Why are we failing to retain General Practitioners when most other cadres show significant improvements in retention – is it because our model of primary care is wrong or is it related to the poor infrastructure highlighted in the Healthcare Commission report [1], or due to the deterioration in a General Practitioner's peacetime practice during deployment, which was an issue identified during the early Northern Ireland campaign?

The bottom line is that after three years of increasing combat and casualty numbers, it is the DMS that is setting the standard for trauma care for the NHS and not the other way round, though we need to exploit this further, as proposed in the editorial by Lt Col Tai. Our reputation is high, but reputation is fragile and the future will only be ours if we work for it. I leave the DMS in excellent health, in excellent hands and with an excellent reputation and bright future.

Reference

1. Defence Medical Services: A review of the clinical governance of the Defence Medical Services in the UK and overseas March 2009, Commission for Healthcare Audit and Inspection accessed at http://www.nhs.uk/Defencemedicine/Documents/Defence_Medical_Services_review%5B1%5D.pdf