

## Editorial

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30 years ago when this author joined the RAMC he was told by colleagues that it would be a short and dull career. Wars were a thing of the past and a life stationed on the Inner German Plain would soon pale. The Falklands war almost confirmed that. It was a conflict fought by foot soldiers, in a hostile environment against an enemy of unknown capability who nevertheless proved capable of inflicting high casualties. Never again we were told. Future wars would employ overwhelming force to minimise casualties. The easy victory in the first Gulf war when a large complement of hospital beds had been deployed, followed by relatively bloodless peace-keeping missions in Africa and the Balkans, all conspired to reassure political and military planners alike that risks could be taken with their medical Services. Following the collapse of the Soviet Union there was review after review, but the net effect, when the logic was stripped away, was a reduction in capability, culminating in the closure of military hospitals and a focussing of attention on deployable capability. Yet now casualties have returned in earnest and the capabilities of the Medical Services are being stretched to the limit coping with them, so it is worth asking in this anniversary edition of the Journal of the RAMC, what has changed and what still needs to be done?

The first point to be made is that the problems are largely unchanged. The patient is the same, the environmental and weapon threats vary from theatre to theatre, but disease and wounding mechanisms are the same, despite the impact of body armour and altered patterns of trauma, and the medical mission is the same. Despite the controversy about military hospitals and care of casualties in the UK, there are encouraging trends in almost all areas of deployed capability and considerable successes in a few: but fundamental problems remain in others. They will be considered in turn; medical advances, resource challenges, and most importantly perhaps, the people problem.

In 1982 we had a good understanding of war surgery. If the patient got to a surgical facility we had surgeons who knew what to do. Their daily practise was generalist, they had memories, if faint, of service in small wars, and more recently in Northern Ireland, and they worked in military hospitals with the colleagues with whom they would deploy. They exercised together at least annually, and they still reigned supreme in a Corps that was focussed in large part on the doctrine of General War, where the best would be done for the most, but where resources would be overwhelmed and mortality was expected to be high. The challenge then, as now, was in getting the casualty to the surgeon. Most would be expected to die either in the immediate period following injury – they were then, and are now, largely unsalvageable, or died from haemorrhage over the next few hours, or died later from complications. With fewer casualties, attention has focussed on providing better resuscitation earlier for everyone, arresting non-compressible haemorrhage, and getting the patient to surgery earlier. The surgical team of general and orthopaedic surgeon, with consultant anaesthetic support, introduced in the 1990's, has delivered outstanding success, and the provision of skilled aeromedical evacuation for even the most critically injured patients has enabled rapid return of casualties to the full spectrum of specialist services that the NHS can offer. There has finally, been a recognition that military casualties require more than just treatment on the NHS, and the confirmation that a formal role 4 capability is required as

the final component of a comprehensive military medical capability that will be able to deliver a seamless patient care pathway.

Our medical assistants are better trained and better equipped. Significant advances in development of haemostatic agents and revision of doctrine on the use, and provision, of new tourniquets has enabled haemorrhage to be better controlled. Better understanding of fluid replacement means that resuscitation can be tailored to give the patient the best chance of resuscitation and surgery at the earliest opportunity. In the Falklands the focus was on dressings, compression, and getting as much fluid as possible into the patient. Tourniquets were almost a dirty word. Many patients remained on the battlefield for hours, and by the time they reached the surgical facility they were significantly hypothermic. Coagulopathies were rare suggesting that the amount of blood lost in survivors might have been small. Oxygen was not carried, and was not even available during surgery. Now, the monitoring of vital signs, including oximetry, is considered essential. Pain relief was administered by morphine syrettes which were inadequate for the task, and there was a problem of overdosing with subcutaneous morphine, released later when a patient was being resuscitated. Other agents were tried, sub-lingual buprenorphine was popular at the time, and ketamine was used for the first time as both an analgesic and short acting anaesthetic, but only now are we really starting to address the problems and epidemiology of many different types of pain. Battle injuries were not the only cause and the management of pain from non-freezing cold injury (trench foot) proved challenging even for the anaesthetist.

Evacuation in the Falklands was problematic. Vehicles were almost non-existent and helicopters were barely up to the task and in short supply. But distances and therefore journey times, were short. Escorts were not present on battlefield helicopters. Now we agree that every casualty requires a comprehensive response, often including a medical team to provide resuscitation and a helicopter to ensure rapid evacuation. However, with finite resources we must not lose sight of the need to reduce risk to the responders and the aircraft, particularly as the more dispersed battlefield places increasing demands to evacuate over greater distances. Better decision making at the scene may reduce urgency and increase flexibility, but we must now focus on training more paramedics to perform this task and carry out research that will enable us to understand the prognostic indicators in order to focus resources on those who need them. The survival rates of those reaching surgery in 1982 were high, but the question has never been satisfactorily answered, were they the ones destined to survive? Current research is aiming to answer some of these questions, so that medical commanders can make more informed decisions and deploy the right resources, in the right time scale, to give optimal care to the casualty, and optimal support to the operational commander that will increase his freedom to manoeuvre.

In the deployed surgical facility, a battery of tests is now possible; then there was only a simple cross match, but the essence of surgery is the same, and the challenge now is to train a surgeon to be competent in trauma surgery when in peacetime practice the emphasis is on ever greater specialisation. The competencies expected of the war surgeon cannot be delivered in routine practise in the NHS and we shall have to look either at taking a lead in the

training of trauma surgeons within the NHS, or continue to rely on additional training, much of which can only be obtained in other countries. The loss of training places in South Africa has been a significant loss to our ability to train trauma surgeons and although simulation has been heralded for many years as the answer to filling the skills gap, it is not yet sufficiently developed to deliver this. In 1982 the first surgical teams deployed had only one consultant ashore, a truly general and experienced surgeon, and he had to oversee a number of senior registrars. That generation of general surgeons is rapidly approaching retirement. Recently we have been reluctant to deploy surgeons below consultant grade, largely because of the impact on training programmes, but the training opportunities available on current deployments under consultant supervision may make us reconsider that stance.

We have been fortunate over the past few years, in that the rate and complexity of casualties have increased slowly, giving us time to learn from American experience, and develop our techniques. Surgical facilities are well established, and our teams have an opportunity to rehearse before deployment; in future they may have to start again from scratch. As with our surgeons, the dash to specialisation in the nursing cadre is in danger of distracting from the training of generalist military nurses, but we have inadequate data to prove whether the quality of care has suffered or benefited from that trend. In the meantime we follow accepted wisdom but risk over-qualifying some of our personnel at the expense of delivering the right competencies to all of them.

Data collection in 1982 was largely based on the field medical card and a retrospective interview survey of casualties was conducted by medical officers in an attempt to inform work being led by the Professor of Military Surgery. It was hardly systematic but since then many advances have come about through application of simple audit and the adoption of the principles of clinical governance. For many years however we have struggled to define and collect the comprehensive data sets that inform that audit. The promise of information systems that would facilitate and automate data collection and retrieval has distracted from practise but the imminent roll out of DMICP will produce a step change in capability, initially in the peacetime environment. The momentum must be maintained into the deployed environment and progress from being an electronic patient record to a functional operational medical decision support tool. That will have to be supported by a new organisation that will integrate data collection, storage, retrieval and analysis, and that will inform epidemiological analysis and decision making across Defence.

In considering equipment, logistic support, and sustainability, we have probably turned the corner. In 1982 the scales were adequate, but old; re-supply was geared towards General War, and was woefully inadequate for light mobile forces. A RAP requiring 20 litres of Hartman's would receive 2 or 3 large tri-wall boxes, which collapsed in the rain and spewed their contents over the mountainside. Now we have finally started to sort out scales in modules, re-supply by single line item, rapid response to UORs [urgent operational requirements], an understanding of the acquisition process, and a supply chain that is responsive and improving all the time. Further improvements will only be made, however, if we start to place medical support officers into logistic staff appointments at every level.

The debate about evacuation continues, but structures are still geared to evacuation of the majority of land casualties by vehicle, with the attendant escorts, and yet experience has shown that the majority of serious casualties over the past 20 years have been evacuated by helicopter. Coupled with strategic aeromedical evacuation this has enabled progressive reductions in the deployed medical footprint but without assurances on how helicopters will be employed in future conflicts we risk moving out of step with other acquisition strategies. We must fight, not for dedicated helicopters which would restrict flexibility, but for better

equipment in assigned aircraft, and better training for all medical personnel who are likely to deploy. The debate about who should be on the helicopter has been clouded again by inter-Service rivalry, but articulation of clear doctrine and the delivery of the competencies required to deliver the capability must be delivered urgently.

Organisational change has been driven by many factors, but not always by design. In 1982 control of the medical services was dominated by secondary care clinicians, but they have now been almost totally removed from the decision making process. The gap has been filled by a small cadre of medically trained staff officers, predominantly from the occupational and public health cadres, and by a rapid increase in the number of direct entry medical support officers. Despite improvements in staff training there is still a long way to go, and there is an increasing need for clinicians to return to the staff and policy forum. Promotion rules, changed to introduce common terms of service for professional officers and enable professional pay spines, now discriminate against the able in favour of the eligible, and are an increasing source of irritation. We serve and compete in an increasingly joint environment, alongside and against officers of the other Services, who, while intellectually and clinically gifted, are often operationally inexperienced and untested in command.

As Yellowleas noted 30 years ago, the single greatest impediment to progress and rationalisation is the influence of the single Service medical directorates, and that remains true today. We must of course retain the best of single Service identity but must accept that cooperation and joint effort is essential if we are to overcome the challenges of the future. Each Service is too small to sustain their current posture, and this insularity has meant that too much time has been wasted fighting internal battles. In each Service there is still reluctance to allow able officers to compete against their Service colleagues for staff appointments outside of the medical services. Under intense media pressure there is also a danger that attention will be focussed on today's tactical issues and insufficient attention given to the operational challenges of tomorrow.

A strategic vision is required for the next 20 years and that must recognise the move from a tri-Service DMS to a truly joint DMS, recruited through the single Services but delivered jointly. Where a common standard can be applied to a capability, it should be delivered jointly. We must train more officers and NCOs at every level who will be able to sustain current levels of operational capability, train the next generation, and provide the leadership to deliver that vision. That training should be delivered through joint structures where sensible, and when specific to the medical services it should be designed and delivered to a joint audience, supplemented by environmental differences only when essential.

We are moving in the right direction. Operations are increasingly joint; clinicians from all 3 Services work together, predominantly in a land environment; and there are moves to manage them more strategically, optimising their training and employment. Paradoxically the only reason we are so strong today is because of the operational challenges of the past 5 years. Should conflict cease, because of our geographical dispersion, we risk being fragmented, with too many clinicians focussing on their immediate clinical practice in MDHUs, medically qualified staff officers concentrating on clinical governance and policy in headquarters, and medical support officers concentrating on the field medical services. Much work is required to bring them together in new peacetime organisations.

Ultimately it is our people who deliver medical capability, and it is hard to predict how we will fare over the next few years. In 1982 the NHS looked stable. You chose either a military career or a civilian one; you could transfer one way but rarely the other; and the routine practice of military medicine was satisfying, if not always too demanding. Now we are fully embedded in the rapidly changing training pathways of our NHS colleagues, and practice in

an increasingly specialised world. The requirement to receive knee surgery from someone who only operates on knees may hold good in peacetime specialist centres, but is not the environment in which to train a generalist trauma surgeon. We must continue to work together to agree on the competencies required by our staff, and secure placements where they can be achieved.

Our people at every level tell us that they want to be trained to do the military clinical task, but it is still hard to achieve that training as we try to balance career needs, single Service demands, and the wider service need. DMETA currently responds only to customer demand, but in future should be placed to inform the customer of the requirement, design it, and deliver. More needs to be done to focus training on the military requirement, while acknowledging the need to place and employ people in the NHS. This can only be done if the 3 Services agree. Training overall must improve, not just clinical, but importantly in command, leadership and management, and focus on delivering a multi-disciplinary command and staff cadre, open to clinical and non-clinical officers, properly trained in medical planning.

The Royal Navy and the Royal Air Force should allow their people to work more closely with their Army colleagues, and develop early the right career profiles to allow better application of common terms of service. The Army must offer up some command appointments to the other Services, especially as opportunities expand with implementation of Improved Medical Support to the Brigade (IMSB). Single Service differences should be retained either out of necessity, for example at role 1, or to meet specific environmental needs, but as a source of strength, not protectionism. This will only be achieved in an organisation that has a clear purpose, is adequately resourced, and properly organised and managed, with a focus on the fundamental output – the delivery of a full range of military medical support to servicemen and women of all 3 Services. That is the essence and purpose of a Joint element in our medical Services. With greater acceptance than for many years of the need for a comprehensive and capable Defence Medical Service, now is the time to make the change.