

The Royal Army Dental Corps today

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Key points

Dentists in the Royal Army Dental Corps (RADC) are expected to provide safe and effective dental care to British Army soldiers, whether in a UK dental centre or remote and challenging places anywhere around the world.

RADC dental officers lead teams of increasing size throughout their career. To support this, there is professional and military training.

The British Army pushes its officers and soldiers through the use of activities that are outside individuals' comfort zones, often through the use of adventurous training and sport.

Abstract

The Royal Army Dental Corps (RADC) provides dental care to the British Army both in barracks and on deployment. While a significant proportion of most RADC dental officers' careers is spent working in permanent military primary care dental clinics, it is the ability of all RADC dental officers to provide dental care when deployed that provides unique challenges only seen in the military environment. All RADC dental officers are able to deliver high quality care in temporary facilities. During a career the majority of RADC dental officers will have at least one job in a medical regiment providing the dental component of the British Army's rapidly deployable medical capability. This article covers some of the issues faced when delivering dental care outside the UK using portable equipment on a recent exercise.

As RADC officers gain experience they are expected to lead increasingly large teams, both within primary care dentistry and some in the wider Army Medical Services, with the appropriate professional and military training to support their development.

Working under pressure can be developed through the use of adventurous training and sport and the authors have pushed themselves well beyond their comfort zones in the air, on land and under the sea.

Introduction

There are many different careers within dentistry with the Royal Army Dental Corps (RADC), offering some unique opportunities and challenges not available elsewhere. Dental officers in the British Army are expected to provide excellent clinical care and be able to work in some very demanding situations. The majority of the roughly 80 RADC dentists' careers is spent providing primary dental care in integrated primary dental care facilities to military patients and, when overseas, their

families as well. Armstrong and Field have covered the occupational health role earlier in this *BDJ* issue; this article covers the other varied roles undertaken by RADC dentists.¹

As part of the British Army, we have to be able to provide dental care wherever the Army deploys and the first part of article covers the deployable dental role of RADC personnel. Next, the article will cover the leadership roles within dentistry and across the Army Medical Services.

Finally, the article will cover some of the ways the Army develops its soldiers to perform under pressure through adventurous training and sport.

one job working in a medical regiment, an Army unit that has the people, vehicles and equipment to take casualties from the front line and treat them or take them to safety. Our role in the medical regiment is to work within the medical reception station (MRS), a primary care facility, and treat dental emergencies as close to the front line as possible so that the individual can continue doing their job.

Being able to deliver dentistry in temporary facilities, to UK standards, is challenging as it requires the dental team to think about everything that is required to deliver clinical care, from the fuel to run the generators to the ability to manage consumables in inconsistent conditions and then treat patients.

Below is an example of a recent large medical exercise and describes the issues faced by Major Sophie Tyrrell as she set up a dental facility in the Balkans. Due to the changes in the threats faced by the UK today, the Army is undergoing a large re-organisation and so it is different from recent deployments described

Dentistry on operations

The RADC is unique as it has the people and equipment to deliver dental care to the British Army when it deploys around the world. RADC officers can be deployed from almost all roles; most dental officers will have at least

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by Carmichael and Anderson, McKay, and Davies and McCormick.^{2,3,4} Major Tyrrell was a part of a unit that was tasked with providing emergency medical (including trauma) and primary care facilities 1,000 miles from the UK in the Balkans. As part of the MRS, the dental team had to deal with British Army dental emergencies for the six-week exercise.

The first thing Major Tyrrell had to do was to work out how many and what type of dental problems she could expect to see. Any large group of people will suffer from lost restorations, pulpitis, pericoronitis and fractured teeth; a military population is no different, as described by Combes *et al.*⁵ While well-prepared military forces suffer fewer dental problems, they cannot be eliminated completely, with around 150 dental emergency attendances for every 1,000 soldiers deployed for one year during the Second Gulf War in 2003.⁶ Due to the significant space constraints, decisions needed to be made about what to take and what to leave behind. Every item taken had to be worth the benefit in transporting and maintaining it; for example, as this exercise focused on a large, fast-moving operation, it was decided to treat emergencies only and not provide routine care.

Next, the equipment had to be packed into the Land Rover and trailer. Fragile items of dental equipment were placed in bespoke tough boxes to ensure the equipment survived the journey; see Figure 1 taken during an RADC training exercise. Along with the dental equipment, the dental team had to pack all their clothes and other items they would need for the six-week exercise.

Much of the deployable equipment is the same as used daily in barracks, for example the sterilisers and reciprocating endodontic motors. However, some equipment is just too heavy and bulky to be transported so we have lightweight versions of these items. The portable dental operating unit, with electric handpieces and inbuilt suction, is the size of a suitcase you might use for a long weekend away. A simple dental mechanical chair is used for the patient to lie on and radiographs are taken with the NOMAD handheld x-ray unit.

Once packed, Lance Corporal Stefanie Ferris, the dental nurse, drove the Land Rover and trailer as part of the large, slow convoy, which took two weeks to arrive in the Balkans. Nights were spent in various military bases across Europe. As soon as they arrived in location, the MRS was set up; the MRS is a series of heavy interconnected tents that provide the various rooms required. The dental tent was 12 foot



Fig. 1 An RADC officer loading a tough box with dental equipment onto a Land Rover trailer as part of an exercise



Fig. 2 A dental team has set up a facility in a tent while on exercise in the North of England. In this staged photo, a soldier acts as a dental emergency case

by 12 foot and, as part of the MRS, used the communal facilities such as waiting areas. Dental equipment, particularly the steriliser, uses lots of power and this had to be factored in otherwise the whole MRS would lose all power every time the steriliser was turned on!

With a space to work in, Major Tyrrell and Lance Corporal Ferris set up the dental tent. Their plans were tested with frequent dental scenarios that required problem-solving skills to ensure that patients were treated effectively while complying with infection prevention control, radiographic data management and other aspects of governance. This required an

excellent understanding of the fundamentals of dentistry, such as how to ensure a flow from dirty to clean in a tent and how to create a safe zone for taking radiographs without lead-lined walls. Figure 2 shows a dental team using the portable dental operating unit during an exercise in the UK.

The Balkan exercise involved a large night-time parachute insertion of soldiers, a spectacular sight. Landing in the dark with military kit does cause injuries and the dental team were part of the MRS response to the casualties, using their additional training in treating trauma patients and transporting

them from the landing site to the MRS. Having completed the exercise, everyone had a few days of rest and recuperation, with the dental team spending a few days in the ancient seaside town of Zadar on the stunning Croatian coastline.

Every situation is different it is important to learn from other's experience so Major Tyrrell and Lance Corporal Ferris delivered a presentation to a regular forum for improving the capability of deployable dentistry to military dental teams of the Royal Navy, British Army and Royal Air Force.

Leading dental and medical teams

All RADC officers are expected to be able to lead a team. Junior officers lead small teams, such as a single-chair dental centre, while senior officers can lead multiple large dental centres over a wide geographic area. At all levels, the RADC strives for high levels of dental fitness for the units the centre(s) are responsible for. This requires constant communication with the units to make sure that the right patients are seen; for example, if a unit is about to deploy, they will be prioritised.

As part of the Army Medical Services, those RADC dentists with the right skills can use their talents to be leaders within medical units. The first role would be as the officer commanding a squadron of around 60 soldiers, with the best becoming the commanding officer (CO) of a medical regiment or field hospital with 300 people. For example, the CO of 16 Medical Regiment is an RADC dentist and he leads the medical part of the British Army's high readiness capability, allowing a rapid response to unexpected situations around the world.

Dental teams during the COVID-19 pandemic

As the COVID-19 pandemic struck, RADC dentists and nurses were part of the British military's response by providing emergency dental care and supporting the NHS. Continuous dental emergency care was provided through regional defence primary healthcare (DPHC) hubs and we were treating deploying personnel throughout the pandemic.

Selected RADC officers supported the military aid to the civil authorities as planners for the Nightingale hospitals, by acting as liaison staff with the NHS and developing the wider Army medical strategy for coping with the pandemic. Some RADC dental nurses completed training to allow them to assist on military COVID-19 bedding down facilities, increasing the capacity of the Army to cope with local outbreaks.



Fig. 3 The pass out parade is the culmination of the intense officer training course at Royal Military Academy Sandhurst and is a moment of pride at completing the course and reflecting on the career to come

Leadership

As the Army needs to operate in uncertain, complex and ambiguous situations, it is critical to have leaders at all levels. To ensure this, the Army has a selection policy designed to select officers with the potential to be great leaders and undergo continuous military and professional training.

Military training as a Army officer starts at the internationally renowned Royal Military Academy Sandhurst. Here, the officer cadets learn the fundamentals of soldering and discovering how to work under pressure, culminating in a pass out parade in front of family and loved ones (see Figure 3). After 'passing out' of Sandhurst, all dentists complete training with colleagues from across the Army Medical Services to understand how medicine fits into the Army. Junior officers undertake a variety of online and residential military training, particularly looking at developing critical analysis skills. Many RADC dentists attend Army Staff College, further developing their leadership ability. Military training continues for senior officers, who can attend the Advanced Command and Staff Course, with senior leaders from across the Royal Navy, Royal Air Force and Civil Service.

Clinical training has always been important and the military have run vocational training and foundation training schemes internally for many years; now Army dentists are part of civilian foundation training schemes, with military trainers. Postgraduate clinical education is actively encouraged and supported. Many RADC dentists complete Masters-level courses, either full-time or distance learning, predominately in restorative

specialties. Individuals with appropriate training and experience can become tier II practitioners as part of a managed clinical network within DPHC. It is possible to become a consultant in restorative dentistry, though this is very competitive, with the best candidate selected from all three services. A few Army dentists undertake maxillofacial training and transfer to the Royal Army Medical Corps.

As well as accessing external training, many RADC officers organise and deliver internal training within DPHC and across the medical regiments. This has included training dental nurses to deliver oral health education and apply topical fluoride. During the COVID-19 pandemic training increasingly moved online.

Adventurous training and sport

Being under pressure helps develop your resilience, teamwork and ability to cope in extreme situations that you could be faced with as an Army dentist. One way of developing these skills is through sport and adventurous training. For example, the authors have jumped out of aeroplanes as part of an accelerated freefall (skydiving) course, paraglided off mountains in Bavaria, Germany, competed in downhill skiing races on Olympic slopes in Italy, dived on deep wrecks in the freezing water of Scapa Flow in the North Sea and led teams walking through remote hills. Meanwhile, colleagues have trekked through Mongolia on horseback, rowed across the Atlantic and run the week-long Marathon de Sables across the baking-hot Sahara Desert.

Sport is particularly good at developing teamwork and RADC personnel have



Fig. 4 At the end of a two-week training camp, an RADC officer competes in a giant slalom race at the Army Medical Services Ski Championships. Many competitors have no racing experience before the start of the camp

represented the Army at rugby, netball, fencing and bobsleigh, to name a few. It is challenging balancing busy clinics with the training requirements of high-level sport, but with dedication, it is possible. Sport also provides a

great way to meet with colleagues from across the Army; for example, the Army Medical Services Ski Championships brings together regular and reserve Army medical personnel for training and racing (see Figure 4).

Conclusion

As RADC officers, we have had the privilege to serve our country through challenging and varied careers that would be hard to replicate outside of the military environment. The ability to deliver good dentistry both in barracks and in demanding environments has certainly be a highlight of both of our careers, along with some amazing sporting opportunities and adventurous training around the world. This has only been possible with the development of broader leadership and management skills that have improved our ability to provide better dentistry for our patients.

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