

Armed to the teeth

Dentistry in the army has come a long way from the time when soldiers sometimes used gunpowder to blow out an infected tooth. Today the dental team is an essential part of the Armed Forces ready to deploy anywhere in the world. Army dentist **Captain Riaz Usmani** explains the essential work of the Defence Dental Services during operations and peacetime.

A Brief History

The British Army dates back to the time of the Restoration of the Monarchy in 1660. During this time, dental awareness was practically non-existent and dental treatment was restricted to extractions.

Notes from regimental surgeons of the time describe the problems of extensive caries leading to dental abscesses with associated cellulitis of the face. Dental treatments performed by these surgeons included extractions as well as scaling and gum treatments.

It was not until the inception of dentistry as a separate profession in 1860 that calls were made for the provision of dental treatment for soldiers and sailors. It was widely acknowledged that dental disease could be extremely debilitating to the soldier in the field. The following extract from the *British Journal of Dental Science* highlights some of the extreme measures that soldiers took for the relief of dental pain!

“It is well known that to alleviate his misery, the soldier is prone to fire off his tooth by means of a (gun)powder. This picturesque, but perilous form of dentistry sometimes blows out the offending tooth, and not unfrequently the unoffending jaw bone.”

During the Boer War of 1899 to 1902, dental disease was found to be a major cause of soldiers reporting sick. Provision was therefore made to send a dentist, who would become the first to treat British soldiers in the field. He was able to carry out extractions, fill teeth and make dentures.

Dentists were first commissioned as officers with the institution of the Royal Naval Dental Service (1920), the Army Dental Corps (1921), then the Royal Army Dental Corps (1946) and finally the Royal Air Force Dental Service (1930).

These three institutes remained as separate entities until 1996 when they merged to become a tri-service organisation – the Defence Dental Agency (DDA). This was led by a chief executive with three directors who were in charge of their own single-service dental organisations.

This arrangement lasted until April this year when the DDA gave up its agency status and re-branded itself as the Defence Dental Services (DDS). Losing the agency status means that instead of reporting directly to Parliament, the DDS now comes under Director General Healthcare. It remains a tri-service organisation.

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The Defence Dental Services

The principal aim of the DDS is to minimise the risk of dental morbidity for service personnel deployed on military operations. To this end, the DDS works to ensure that service personnel are dentally fit before going on operations. It also has the capability of providing dental treatment in the field.

The DDS employs around 900 personnel. The majority of these work in dental centres which are located in mainland Britain, Northern Ireland, Cyprus and Germany. They look after about 200,000 military

patients. In addition, they also look after the dental needs of families and entitled civilians working for the Armed Forces overseas.

In total, the DDS controls 185 dental centres. These vary in size from small single chair practices to larger multi-chair centres. The DDS has recently undergone a programme of refurbishment for its dental centres, so the majority of the surgeries are modern and well equipped. There is also currently a move to do away with paper patient records and have them stored electronically on a centralised database.

Whilst working in the dental centres, dental staff are involved in routine dental treatment. The patient base is predominantly young adults who typically present with high treatment needs. Each patient is required to attend a periodic dental inspection every six to 18 months depending on their dental risk category.

Dental treatment for service personnel is free, so treatment plans are not influenced by the ability of the patient to pay. This allows the dental officer to base his or her treatment plans purely on the patients needs. The salaried working environment also means that there are fewer time constraints, allowing the dental officer to focus on carrying out work to a high standard.

Dentistry during military operations

Dental teams must be able to deploy wherever the Armed Forces are on military operations or on exercise. Recently, this has included deployments to Iraq, Afghanistan, Bosnia, Kosovo and Sierra Leone.

Dental teams deploying on military operations can be attached to a field hospital, medical regiment or ship. As such, they must be able to adapt to work in a range of diverse environments. On the ground this can mean

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setting up the dental surgery in a tent or a building if possible. At sea, the surgery can be set up within the sick bay on board a ship.

In all cases, the equipment used is the Portable Dental Unit (PDU). In this, the dental unit, dental light, chair, compressor, autoclave, x-ray unit, instruments and materials are all packed into boxes. Each box can be lifted by one person. With this unit it is possible to carry out most treatments with the exception of those requiring lab support.

The majority of treatments done on operations are for dental emergencies. Routine dental treatment can also be carried out, however this is limited by the ability of the patients to travel to the dental surgery.

In many of the locations where the Armed

Forces deploy, there is often little or nothing in the way of local dental services. Therefore, although the principal aim of dental teams on operations is to provide dental support for the Armed Forces, there is the opportunity on occasion to provide basic dental care for the local population. This can be extremely rewarding as a simple extraction can instantly cure years of chronic toothache.

Where the situation permits, dental personnel can also carry out oral health promotion in local communities.

Military dentists

Dentists may join the Armed Forces either directly, or from university where they can receive a cadetship (ie sponsorship) for

their final three years. Upon joining, they then embark on their Entry Officers Course. This four month course includes training in leadership and basic military skills to allow the dentist to become an officer. The training takes place at Dartmouth for the Navy, Sandhurst for the Army and Cranwell for the RAF.

Newly qualified dentists will then embark on their Vocational Training (VT) for one year. During this period, the VTs meet up about once per month for their training weeks. The majority of these are held at the DDS headquarters with some also being held in Germany. One highlight during this time is the visit to the American Armed Forces Dental Conference in the Bavarian Alps.

Riaz and dental nurse Barry Aitken treat a patient



There is a strong emphasis on post-graduate training in the DDS. Dental officers have the option to attend some of the many in-house courses run by DDS specialists, or can apply to receive funding for external courses/examinations.

Dental Nurses

Dental nurses can join the DDS either directly from civilian life, or as a transfer from a different branch within the Armed Forces. Those who have not previously served in the military must undergo basic training appropriate to the service that they have joined.

Following this, they undertake the dental nurse training course. The majority of this

14-week course takes place at the training establishment in Aldershot. The course is modular and includes lessons on theory with modular assessments, practical modules, an individual development portfolio and a clinical attachment to another dental centre. A basic dental nurse qualification is received upon successful completion of this course.

Opportunities for further training include courses on specialist radiography and practice management. The majority of dental nurses also work towards gaining their national certificate.

Dental Hygienists

Postings for hygienists are generally to larger dental centres. In many cases they will also visit smaller dental centres on a regular basis.

Training for dental hygienists is undertaken at the Hygiene School in the training establishment in Aldershot. Potential applicants may be DDS dental nurses or individuals transferring from another branch from within the Armed Forces.

Competition for places is strong and applicants must have the minimum academic requirements (either a National Certificate and five GCSEs or two A-levels).

Up to 16 applicants are accepted each intake and the course runs for two years. During this time, the trainee hygienist receives full pay and is committed to giving three years return of service following qualification.

The course covers a broad range of subjects from microbiology to placement of rubber dam and is taught in a series of classroom and practical sessions. Clinical sessions take place in the large open clinic in the Hygiene School. The patients who attend here are primarily civilians who have been referred from local General Dental Practitioners. During this time, the trainee hygienist will also make Community and Domiciliary visits in the Aldershot and Guildford area as well as visiting the Oral Surgery Department in the Royal Surrey County Hospital.

Hygienists qualifying from this course receive a Diploma in Dental Hygiene (RCS Edin) and a BTech level certificate in Oral Health.

Dental Technicians

The DDS recruits up to three dental technicians per year. Entry requirements are a BTech National Certificate or Scottish HNC in Dental Technology.

Initial training for technicians – as for all new recruits – involves carrying out their basic military training. Following this, the dental technician embarks on a 14-week dental nurse course to give a wider perspective of the role of the DDS. The technician then undergoes a 20-week orientation period in the DDS laboratory in Aldershot where he or she will gain further experience in prosthetic and crown and bridge work.

“..the Armed Forces offer excellent professional training”

Postings for technicians are to any of the DDS laboratories in the UK, Germany or Cyprus. These range in size from the larger laboratories (for example Aldershot and Halton in the UK) to smaller, two-man laboratories (eg. Hohne in Germany). For senior staff with the appropriate qualifications, there is the opportunity to work in an NHS hospital setting in a maxillofacial laboratory.

There are several further technical and professional development courses that are available to the dental technician. These include an HND in either maxillofacial or orthodontics and a BSc in dental technology.

Civilians

In addition to employing military personnel, the DDS also employs civilians who work in a variety of administrative and clinical roles.

The rewards

The need to reduce the risk of dental morbidity amongst service personnel is now a well-established role within the Armed Forces. The DDS is committed to fulfilling this role during peacetime and military operations.

For members of the dental team, the Armed Forces offer excellent professional training along with a good disposable income and an enviable lifestyle. Together with the opportunity to deploy on military operations, this can make for an exciting and rewarding career.

