

Sir,

Bailey et al [1] report data that are important in raising the profile and importance of military diarrhoea and its possible causes in operational settings.

However, caution needs to be exercised in interpreting their data, as well as using it to draw conclusions too widely in military populations. One fundamental misconception – which is not substantiated by their own data nor that referenced – is that viral causes of diarrhoea in military populations are becoming the dominant pathogens. Military diarrhoea is principally a bacterial disease, something bourn out over many years and many investigational studies [2,3]. Parasites and viruses play a part, and indeed at times viruses may well be overwhelming in their dominance, but this tends to be epidemic in nature and rarely is it a significant endemic problem. Interpreting data in this way, from stool samples collected to no defined protocol but rather depending on whether the clinician on the ground feels it necessary to send samples for viral diagnostics, is misleading. An assumption that infectious diarrhoea in a field setting is viral will reduce the chance that effective therapeutic strategies are considered – important particularly when the incidence is high and the operational impact is substantial. Secondly, as the authors illuminate in their paper, viral diagnostics are not available in theatre, and if therapeutic options are limited, the perceived value to the clinician on the ground of collecting specimens in forward locations, storing and co-ordinating collection and onward movement will be very low, thus impacting investigation of further outbreaks.

It is also not clear from the data they present that in all the outbreaks the authors refer to in their paper, viruses played the dominant role. Table 2 shows 5 outbreaks where at least three viruses were detected, showing the potential for polymicrobial disease, but no advanced diagnostics were used to detect potential bacterial or parasitic causes. Field laboratories, unless set up with dedicated specialist microbiological technicians, and full basic diagnostic facilities, are difficult to rely on. Indeed it is clear from their paper, that the dominant cause of diarrhoea in travellers' worldwide (enterotoxigenic *e. coli*) (2) was excluded from laboratory culture and indeed not assessed at any point in the diagnostic chain. Further, it is not known to what level non-pathogenic exposure to enteric viruses occurs in these groups and consequently whether directed diagnostics, such as those used in these cases, pick up 'bystander' viruses. We urge caution and a reassessment of their conclusion that enteric viruses are the main threat in deployed personnel.

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Author's Reply

Sir,

There is no doubt that both bacteria and viruses are common causes of gastroenteritis in military personnel and both are important problems.

Not surprisingly a systematic review that used "diarrhea" or "traveler's diarrhea" as its primary search term found that papers describing bacterial causes were more common and only 4 (8%) of 49 studies reviewed were performed from 2000 onwards [1]. However, a search using the more appropriate term of "military gastroenteritis" in Google Scholar shows that papers describing viral causes are 2-3 times more common, especially if papers from 2000 onwards are considered. This is why I suggest that enteropathic viruses may now be the most common cause of gastroenteritis on military deployments.

Obviously, neither of these approaches is the best way to answer the question of which cause is more common and further studies to look simultaneously for both bacterial and viral pathogens are required. This was not possible in our initial study, but future military studies will be performed using the Health Protection Agency's 2nd (national) Infectious Intestinal Diseases (IID2) study protocol [2]. This will use molecular techniques to test for a wide range of protozoa, bacteria and viruses [3] and also updated techniques to ensure that enteropathic viruses found on PCR tests are true pathogens [4]. I hope that the UK Military Enteric Diseases Group (MEDG) takes a similarly broad and robust approach in its future studies.

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Recruitment of Medical Officers into Oral and Maxillofacial Surgery

Sir,

The Calman reforms and the recent establishment of shortened dental undergraduate courses have made a career in Oral and Maxillofacial Surgery (OMFS) more attractive to medical graduates [1]. The military OMFS cadre has recently started to recruit amongst its trainees qualified doctors who wish to return to dental school to pursue a career in OMFS. These medical officers were not exposed to OMFS at an undergraduate level but became aware of its remit through its association with other surgical specialties. We recently surveyed more than 900 medical students about their knowledge of OMFS. 20% of fourth year medical students and 16% of final year students surveyed had never heard of the specialty. This lack of knowledge of OMFS has potentially serious implications in the management of head, face and neck trauma. Only 4% of medical students in our survey felt that they had been given adequate preparation for managing Oral and Maxillofacial emergencies. Head and neck trauma currently constitutes approximately one in four battlefield injuries [2]. A large proportion of Army and Royal Marines medical officers will deploy in field roles, some to forward operational bases. Their knowledge at this stage will be based purely on the little OMFS they learned at medical school, supplemented by what they learn as a Foundation Year 2 doctor in the Emergency Department. Methods to improve their knowledge of OMFS could include changes to the foundation year programme of those medical officers likely to deploy so that they may have a structured exposure of the specialty in one of their surgical rotations.

Seventy percent of surveyed medical students believed that it is easier to obtain a Speciality Registrar post in OMFS than in other specialties once dual-qualified. This perception is incorrect. In 2007 the Modernising Medical Careers (MMC) website [3] recorded 219 applications for 25 ST1 posts in OMFS; this is the highest ratio of applicants of any surgical specialty. Nearly one in four students were already graduates but only 19% of them would consider a career in OMFS, entailing studying for a total of three degrees. However even with the increasing numbers of military medical officers having studied for degrees prior to medicine, the attraction of the armed forces sponsoring the second degree will likely maintain a large number of applicants interested in pursuing a career in OMFS.

The recent PMETB review of OMFS soundly endorsed the role of the specialty and the importance of dual-qualification but did recommend trying to reduce the length of training. There may seem to be an obvious financial implication to the armed forces in sponsoring qualified dental or medical officers to study for a second degree but closer examination reveals this to be incorrect. Now that deployments are nearly all consultant based, it is actually the speed in which a medical officer can become a consultant that is actually of importance. Although junior doctor and specialist registrar training benefits the National Health Service in terms of service provision, it actually provides no benefit to the armed forces. Recent evidence suggests that age of appointment to consultant posts in OMFS (37.69 years) is consistent with other associated surgical specialties such as ENT and neurosurgery (37.4 years) [4]. It could in fact be argued that the only time that a surgical trainee is of benefit to the armed forces before becoming a consultant is through military research, teaching and increasing the profile of the medical services as a whole. Motivated OMFS trainees may undertake all of these during their second degree and thereby be on a par with those of other surgical specialties.

Finally it is likely that secondary to factors such as newly proposed foundation programme for dental graduates, and the re-emergence of the specialty of oral surgery [5], that the exposure of dental graduates to OMFS will significantly reduce in the future. This will inevitably reduce dental postgraduate recruiting into the specialty and result in a greater proportion of OMFS trainees being qualified doctors returning to dental school. Therefore increasing the awareness of the specialty amongst both medical students and military foundation year medical officers will become increasingly important in order to attract the best applicants into the Oral and Maxillofacial surgery cadre.

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