

## Refractive Errors in the UK Armed Forces

Sir

In their article on ophthalmic presentations to deployed Emergency Departments [1], Ollerton and Hodgetts state that no published data exist on either the use of contact lenses in the military environment or the incidence of previous refractive surgery, "both of which are anecdotally suggested to contribute to ocular morbidity in the military environment, although no published evidence exists". Large studies of refractive surgery in the US Armed Forces have demonstrated excellent safety, improved operational effectiveness and low levels of ocular morbidity on deployment [2].

Data describing the significant morbidity from contact lens use in the deployed environment has recently been described [3]. The proportion of soldiers in the UK Armed Forces who suffer from refractive error has not been published, though an estimate of 20-40% has been extrapolated from civilian data [4]. We have measured the rate of infectious keratitis in theatre [3], but do not know how many soldiers in theatre wear contact lenses. Calculations of the incidence of infectious keratitis in deployed contact lens users rely on the extrapolation civilian rates of contact lens use in the general population to the Armed Forces.

Corneal refractive surgery including laser in-situ keratomileusis LASIK or laser epithelial keratomileusis LASEK, where the cornea is reshaped using an excimer laser, provide an alternative to spectacle or contact lens refractive correction. The proportion of soldiers with refractive error is therefore important in calculating the number of soldiers who might benefit from this surgery [4].

We performed a prospective audit of all soldiers in a single medical regiment, testing logMAR and Snellen visual acuity with and without normal refractive correction and compared this to the PULHHEEMS record of visual function.

Eighty two soldiers were examined who formed a representative cross-section of the unit in terms of role, age, rank and gender. Thirteen (16%) required refractive correction to achieve a visual acuity better than 6/12 in either eye. One patient was 6/18 RE and 6/12 LE but did not routinely use refractive correction before testing. The PULHEEMS E grade was incorrectly recorded in 24 soldiers, though these errors did not affect the overall P grade.

These data suggest that the rate of refractive errors in soldiers may be lower than the civilian population. If this is the case, the incidence of infectious keratitis in deployed contact lens wearers is likely to be higher than previously thought as the calculation was based on a larger denominator; whereas the number of regular soldiers who might benefit from corneal refractive surgery would be correspondingly lower at approximately 18,000, assuming a total of 114,400 service members.

### References

1. Ollerton JE, Hodgetts TJ. Operational morbidity analysis: ophthalmic presentations during Operation TELIC. *J R Army Med Corps* 2010; 156:37-40
2. Hammond MD, Madigan WP, Bower KS. Refractive Surgery in the United States Army, 2000-2003. *Ophthalmol* 2005; 112:184-190
3. Musa F, Taylor R, Gao A, Hudley E, Rauz S, Scott RAH. Contact Lens-Related Microbial Keratitis in Deployed British Military Personnel. In press *Br J Ophthalmol*
4. Defence Medical Services Core Brief - Section 6 – Specific Medical Conditions

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## The Effective Management Of Out Of Hours Treatment In Primary Care Using Telephone Clinical Assessment Software (Teleassess)

Sir

British Forces Germany Health Service (BFGHS), though a contract with SSAFA GSTT Care LLP, provides Primary and Community care to a widespread population of approximately 48,000 from 15 medical centres in Germany and Belgium. Four of these centres provide a 08.00 to 20.00 hour service seven days a week. The others are typically open 08.00 – 17.00 Monday to Friday. Primary Care Nurses (PCNs) are, in the majority of cases, the service user's first point of contact.

The idea of a telephone based triage model first emerged in 2005 in response to the continual turnover of nursing staff due to posting plots. This meant there was a growing need to fully utilise the skills of the available nursing workforce. In addition, there was also a need to ensure continual professional development of our nursing staff, a number of whom are service personnel dependants with variable backgrounds and skill levels, through the use of supportive systems with strong clinical governance.

Following a successful trial, led by SSAFA FH, *TeleAssess* was

implemented 1 April 2008, enabling improved access to medical services both during In-Hours and Out of Hours (OOH). Designed by *Plain Health (UK)*, *TeleAssess* is a clinical decision support software suitable for use in telephone consultations. In BFG, the system is centrally operated from Bielefeld, and manned from 20.00 to 08.00 hours.

PCNs previously provided telephone advice without the use of a decision support system. *TeleAssess* designed for nurses, provides a consistent platform of internationally agreed best practice clinical guidelines thus enabling nurses to assess and advise callers with a vast range of problems.

Nurses using *TeleAssess* software find it user friendly and unanimously agree that the over-riding benefit of using *TeleAssess* is the evidence-based database underpinning the outcomes. For them, the software has introduced a new way of working, although on average four weeks are required for familiarisation and confidence to develop.

In the main, medical staff in BFG also feel that the use of *TeleAssess* has resulted in a positive change in patient access and behaviour OOH. In the last 18 months, doctors have observed that *TeleAssess* has been a useful and successful way of helping to manage patients over the OOH period and this is borne out in the low number of calls out to doctors. Previously, data from across BFGHS from October – December 2005 indicated that almost half of all OOH calls were routine cases which could have been seen via a routine appointment.

The statistics in Box 1 highlight the monthly demand for OOH support in BFG over the last 18 months:

- An average of 198 *TeleAssess* contacts / month equating to approximately 7 per night
- 67% of *TeleAssess* contacts occurred on a week day, 30% at the weekend and 3% on a public holiday. All contacts occurred between 20.00 – 08.00 hours.
- Highest service users are families with children under 5, followed by the 25 – 34 age group in which females access the service twice as frequently as males. Female usage predominates across most age ranges.
- More than two thirds of calls occur between 20.00 – 24.00 hours.
- 34% of calls resulted in direction to A&E (26% immediately and 8% urgently); 34% could be managed by Clinician advice only. 21% required GP appointments the next day. In only 3% of cases, were GPs required to be called out.

**Box 1 Usage of the *TeleAssess* service over 18 months in BFG**

Despite *TeleAssess* and the triage system being a new way of providing OOH service in BFG, patients' perceptions also appear to be positive. A satisfaction audit – combining questionnaires and telephone interviews - revealed that overall satisfaction with the service was very high with 76% describing the service as good or very good in relation to the time taken to respond to the call, the response to the call and the advice given. Many patients also compared the service favourably with that in the UK and stated they would be happy to use it again.

Readers may perceive that this system of triage could contribute to the management of patients in other army primary health care delivery organisations. It is certainly worth considering based on the BFG HS experience.

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