Do Cadet Force Units need a Dedicated Medical Pack?

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SUMMARY: There are over 38,000 army cadets in the United Kingdom of whom about 20,000 attend a two week annual camp each summer. In response to criticisms from the medical staff attached to cadet units about the suitability of the routinely issued medical pack, a national questionnaire survey of all serving Army Cadet Force medical personnel has been performed, along with an analysis of patient attendances at annual camp between 1989 and 1992 in one East Midlands County Force. In particular the appropriateness of the Medical Treatment Pack Training Camp Large as currently issued to cadet units has been examined. The findings suggest that, on its own the pack is unsuitable to treat about 40% of cadets who attend for medical treatment during annual camp; medical staff on average rate its suitability for cadets as very low. Moreover, there is objective evidence that most cadet units need to obtain extra medical supplies, particularly bronchodilators, modern antibiotics and modern dressings; many do so via private purchases from civilian sources. The study highlights a situation in urgent need of review.

Introduction

There are currently 61 county units of the Army Cadet Force (ACF) in the United Kingdom with 38,314 serving cadets (1); about 20,000 of these attend a two week annual camp each year (1). In recent years the routine medical provision for cadet annual camps has been the Medical Treatment Pack Training Camp Large (MTPL) (NATO part no. 6545-99-211-7517). Over some time an appreciable number of adverse individual comments have been made about this pack; collectively these suggest that the medical and nursing personnel attached to cadet units find the current provision unsuitable for meeting the health care needs of army cadets at annual camp. We describe a national survey conducted to quantify objectively any deficiencies in the scale of medical items currently issued to cadet units.

Methods

Analysis of Treatment Patterns

In Lincolnshire Army Cadet Force a medical treatment register has been maintained prospectively at each annual camp since 1989. This counts attendances rather than individuals, showing basic patient details (age, sex, company/detachment) and medical information including

presenting complaint, diagnoses, treatments and disposal. From this register (1200 entries) a random sample of 176 attendances (15%) between 1st January 1989 and 31st December 1992 was taken to determine the proportion of problems satisfactorily treated with items solely from the MTPL and the proportion of problems treated with a Prescription Only Medicine (PoM), or by surgical procedure or dressing; further analyses described the proportion of attendances in each of three main diagnostic groups: trauma and orthopaedics, medical and surgical (including gynaecology), and the proportion of attendances related to a chronic medical problem (defined as an illness or condition which had arisen before annual camp).

Questionnaire Survey

In April 1993, a questionnaire was sent to each medical officer (MO) currently in post with an ACF unit and to each nursing officer (NO) in post without an MO. The questionnaire presented a modified inventory of the MTPL and asked respondents to rate the importance of each item for treating cadets by using a five-point scale from 'not required' through 'low importance', 'medium importance' and 'high importance' to 'essential'. Similar

questions were posed about the quantity of each item supplied using a response scale of 'not enough', 'about right', to 'too much'. Respondents were also asked to give overall assessments of the MTPL in terms of its content, quality, and suitability for cadets, using a scale ranging from 0 ('extremely bad') to 10 ('excellent'). A final section asked if other items had been purchased or obtained to supplement the MTPL. The results were analyzed using SPSS-PC (2).

Results

In the 4 years of the register there were 1202 attendances, giving an average of 300 in each two week camp.

Treatment Patterns and Case-mix

Of all 176 attendances examined, only 5 (2.8%) required off-camp facilities such as a local hospital. For the 170 attendances where sufficient data were available, 99 (58.2%) were treated solely with items from the MTPL whilst the remainder required additional items or services. A Prescription only Medicine (PoM) was given out in 112 of 173 instances (64.7%), (missing data =3); however these items were only available in the MTPL on 64 occasions (57.1%). Similarly 70 of 173 attendances (40.5%) resulted in some form of surgical treatment or dressing but only 33 of these (47.1%) could be provided from the MTPL alone.

Of 172 diagnoses made, 88 (51.2%) were traumatic or orthopaedic, 77 (44.8%) medical, and 7 (4.1%) surgical. The MTPL alone was suitable to treat only 53.5%, 68.9% and 0.0% of these respectively. Fourteen of 176 attendances (8.0%) were related to chronic medical conditions such as asthma and seasonal allergic rhinitis; 12 of these (85.7%) required a PoM.

Questionnaire Study

Questionnaires were sent to 61 ACF headquarters; 2 of these were discovered to be units too small to have an establishment for medical staff, and 1 other shared its annual camp with another unit. A 'nil return' was received from 18 headquarters where there was no MO or NO in post, leaving 40 units capable of providing information; of these 32 replies were received (from 21 MOs and 11 NOs) representing a response rate of 80.0%. Of the 21 doctors who responded, 15 were from General Practice backgrounds, 3 were trained as Public Health Physicians and 3 were Hospital Consultants. Of the 11 nurses in the study, 3 were based in hospital practice, 3 in Occupational Health, 2 in General Practice and 3 did not specify.

Table 1 depicts how the majority of ACF medical personnel perceived the value of each item supplied in the MTPL in terms of importance and quantity. It can be seen that 10 of 74 items (13.5%) were judged by a majority of respondents to be of 'low importance' or 'not required'; 8 of these (80.0%), mainly hypnotic drugs and strong

analgesics were also judged to be supplied in excessive quantity. Twenty items (27.0%) were considered by the majority of respondents to be of only 'medium importance'; 2 of these (10.0%) were considered to be over supplied. Of the 46 items (62.2%) regarded by the majority as 'highly important' or 'essential', 14 of these (30.4%) almost exclusively inhaled β_2 -agonists, dressings, bandages, and other non drug items, were judged to be present in insufficient quantity. On average, the MTPL scored 5/10 for its overall content, 7/10 for overall quality, but only 4/10 for its overall suitability for cadet units. Twenty of 28 respondents who gave information (71.4%) indicated that their cadet unit regularly purchased or obtained supplementary medical items for use at annual camp. Table 2 gives details of these supplementary items by category of drug or item and the number of units which obtained them; these data help to clarify the perceived deficiencies of the MTPL in its current application to cadet units. It is noteworthy that 12 of 28 units (42.9%) obtained supplementary respiratory drugs; these almost entirely comprised inhaled β_2 -agonists and corticosteroids for use in patients with asthma. Many more of the supplementary items mentioned were remarkably simple, such as a range of modern dressings, small disposable items, e.g. disposable gloves and stitch cutters, borderline (non-prescription) substances, e.g. insect repellent and lip salve, and treatment room accessories, e.g. 'sharps' bins; 10 of 28 units (35.7%) purchased or obtained tubular support bandage. Five of the 21 doctors surveyed (23.8%) did not have access to an National Health Service prescription pad (FP10S) in the 1992 camping season.

Discussion

Before discussing the detailed findings of this study it is worth mentioning some of its potential limitations. This survey was not designed to address any of the 'supply side' issues involved in arranging adequate medical provision for cadet annual camps, and is intended to stimulate debate and further discussions. Nonetheless this is the first time that the views and opinions of ACF medical personnel have been collectively gathered and objectively assessed, making these data unique. Whilst the numbers of respondents are small (in epidemiological terms) a response rate of 80% is extremely high and ensures that the survey represents the majority view of qualified medical personnel serving with the ACF.

Treatment Patterns and Case-mix.

The analyses of medical attendances by cadets from Lincolnshire ACF during the period 1989-92 clearly indicate potential inadequacies of the MTPL as applied to the treatment of cadets. Only about 60% of problems could be dealt with using the pack alone; in particular, less than 50% of wound dressings and surgical treatments could be provided by this means and over 40% of PoM items had to be obtained from other sources. The analysis

Table 1

Majority opinions about the perceived value of items in the MTPL in terms of importance and quantity as applied to the treatment of cadets.

Relative Importance			
Quantity	low importance or not required	medium importance	high importance or essential
<i>too great</i>	Atropine sulphate eye drops Benethamine Penicillin i.m. injection Ketamine Hydrochloride i.m. injection Lorazepam injection Nitrazepam tablets Pentazocine tablets Temazepam capsules	Senna tablets Tetracycline tablets	<i>No items</i>
<i>about right</i>	Clove oil Zinc Undecanoate cream	Aluminium Hydroxide tablets Amethocaine Hydrochloride eye drops Betamethosone Valerate ointment Benzyl Benzoate application Cimetidine tablets Clotrimazole vaginal tablets Benylin expectorant mixture Fluorescein Sodium eye drops Indomethacin capsules Lignocaine 2% with adrenaline Magnesium trisilicate tablets Malathion lotion Neomycin Sulphate ointment Polybactrin spray Sulphacetamide eye ointment Bandage plaster of paris impregnated Dressing burn sterile Wooden tongue depressors	ALL OTHER ITEMS IN MTPL
<i>not enough</i>	No items	No items	Calamine Lotion Chloramphenicol eye ointment Chlorhexidine Gluconate sachets Paracetamol tablets Salbutamol inhalers Adhesive plaster zinc oxide (2 types) Bandage crepe Bandage elastic (2 types) Dressing assortment waterproof Gauze surgical (sterile) Basin emesis Bottle tablet dispensing

of diagnostic categories shows approximately 50% relate to trauma and orthopaedics and 45% to general medical problems; it is particularly noteworthy that almost 10% of all attendances occurred because of chronic underlying illness, especially asthma and seasonal allergic rhinitis. These data clearly indicate a case-mix not dissimilar to a civilian Accident and Emergency department; medical provision needs to cater for this balance of work.

Suitability of the MTPL

Respondents' views regarding the MTPL (Table 1) should be interpreted in conjunction with the list of supplementary items purchased or obtained by over 70% of units (Table 2). Accepting that there will always be variation and some idiosyncrasy in the prescribing habits of individual clinicians, a clear theme nonetheless

emerges with respect to the undersupply of inhaled β_2 -agonists and corticosteroids and a wider range of antimicrobial drugs. It must be stressed that in 1992 almost one quarter of ACF doctors had no means of prescribing items additional to those contained within the issued medical pack, except by private prescription. Besides the lack of sufficient quantities of some drugs, a clear lack of modern bandages and dressings, antiseptics, and borderline substances has also been highlighted; with respect to the latter, it should be borne in mind that during cadet camps the Medical Incident Room functions as the focal point for all medical problems including a number of minor ailments, which would ordinarily have been dealt with from the contents of a family medicine chest or bathroom cabinet. In its defence, the MTPL is designed to sustain about 500 military personnel for 'disease and non-

Table 2
Supplementary items currently purchased or procured by ACF units

Category	Number of cadet units obtaining items*
gastrointestinal drugs	2
cardiovascular drugs	0
respiratory drugs (including antihistamines)	12**
central nervous system drugs	3***
antimicrobial drugs	3
endocrine drugs	0
genitourinary drugs (including contraceptives)	1
musculoskeletal drugs	4
ophthalmic drugs	1
ENT drugs	0
dermatological drugs	7
immunological drugs & vaccines	0
dressings	8
bandages	3
support bandages (tubigrip etc.)	10
suture materials	2
minor disposable items	4
borderline substances (throat lozenges etc.)	9
antiseptics	6
emergency drugs	2
medical room accessories (scissors sharps bins etc.)	4

* one respondent said he purchased "too many items to remember"

** mainly inhaled β_2 agonists and corticosteroids

*** mainly simple analgesics

battle injuries' during the period of a two week training camp; inevitably this intended usage limits its applicability to traumatic and musculoskeletal injuries such as those commonly seen in cadets.

ACF units attending annual camp account for approximately 260,000 person-days per annum. They represent an entirely different population from that which is usually encountered in a typical military training camp. It is therefore not surprising that their health needs are different and that these are poorly met by existing medical packs designed for other purposes. The findings of this

report provide objective evidence that the MTPL is inadequate on its own to treat at least 40% of the medical problems reported at cadet camps, and that dissatisfaction among ACF medical personnel is generally high. Specific criticisms of the MTPL relate more to its failure to provide many items which are commonly needed, than to the supply of unwanted items. Many cadet units clearly feel obligated to purchase additional items which they regard as necessary.

The detailed findings of this survey have been submitted through the appropriate chain of command to UKLF and MOD Operations and Logistics with a view to the future provision of a more appropriate cadet medical pack; so far little progress has been made towards achieving this goal. Stocks of the MTPL are nearing exhaustion or expiry, and this presents a considerable practical opportunity to improve the existing arrangements. Medical provision likely to prove adequate for cadet units through the 1990's and beyond must address the treatment of both medical problems (particularly respiratory disease) and accidents. This might be partially achieved by combining Primary Care and Treatment Bay Modules at all future cadet camps, although neither one of these on its own is likely to prove sufficient. Further flexibility, such as local prescribing through civilian channels, may still be needed to incorporate additional demands for 'inhalers' and other 'family practitioner favourites'.

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Editor's note:-

This excellent article refers to the old Medical Treatment Pack Training Camp Large. The Primary Care Module has been radically reorganised and ought to suit the authors' needs.