HEADQUARTERS
PERSONNEL AND TRAINING COMMAND

DIRECTORATE OF PRIMARY HEALTH SERVICES
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See Distribution Cancelled by SG's PL 16/01

Your Reference

Our Reference
PTC/451030/3/1/MED

Date
16 Sep 97

SURGEON GENERAL'S POLICY LETTER 6/97

PREVENTION OF MALARIA

All incorporated

Reference:

A. AD Med Pol(H&R)10/6 dated 5 Sep 97.

1. Reference A outlines Tri-Service policy for the prevention of malaria and is enclosed for your action.

2. Staffing is currently in hand to develop a policy for action to be taken in the event of an unscheduled aircraft stopover in a malarious area in accordance with para 16 of Reference A. This policy will be promulgated in due course.

for DPHS

Enclosure:

1. AD Med Pol(H&R)10/6 dated 5 Sep 97 (Surgeon General's Policy Letter 6/97).

Distribution:

Action:

HQ PTC List B14 (SMO)
HQ PTC List B15 (OC)
HQ PTC List B16 (SMO)
HQ PTC List B17 (OC)

MINISTRY OF DEFENCE

SURGEON GENERAL'S DEPARTMENT
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E

See Distribution

Our Reference: AD Med Pol(H&R)10/6

Dated: 5 Sep 97

SURGEON GENERAL'S POLICY LETTER 6/97

PREVENTION OF MALARIA

Reference:

A. SGPL 8/95.

INTRODUCTION

1. Malaria is an ever-present hazard in many of the overseas locations to which Service personnel deploy on operations and for military training. It is a serious health risk causing a large number of imported cases to UK each year of which about half are due to *P falciparum* which can develop rapidly and may be fatal. For example there were 2,500 reported cases of malaria in UK in 1996 resulting in 11 deaths.

2. The prevention of malaria is therefore a priority for the Armed Forces and the policy is based on 3 key principles:

a. Mosquito vector control.

b. Bite avoidance measures.

c. Chemoprophylaxis.

The importance of not relying solely on chemoprophylaxis to prevent malaria has long been part of military doctrine. It is still appropriate and reflects the advice currently given to travellers by the UK Malaria Reference Laboratory.

3. The choice of the most appropriate chemoprophylactic regimen has been complicated by the spread of chloroquine resistant strains of *P falciparum* and by the fact that some of the most effective drugs have been associated with adverse reactions. Risk assessment has therefore become fundamental to the process of choosing a chemoprophylactic regimen and both the efficacy and any possible toxicity must be taken into account.

AIM

4. The aim of this Surgeon General's Policy Letter (SGPL) is to update Tri-Service policy on the prevention of malaria outlining the principles to be applied in the selection of a chemoprophylactic regimen.

MOSQUITO VECTOR CONTROL

5. The reduction of the mosquito population remains an essential part of malaria prevention. The adult vector can be destroyed by using aerosol "knock-down" sprays (which will kill mosquitoes in confined spaces such as nets, tents or rooms but are short acting) or by using residual insecticides which are longer lasting.

6. Mosquitoes breed in stagnant water. All potential breeding sites such as blocked gutters, old tins, tyres and broken bottles should therefore be eradicated. Units serving in malarious areas should ensure that they have an adequate number of personnel trained in Unit Environmental Health Duties (UEHD). Detailed advice on mosquito control can be obtained from Service environmental health staff.

BITE AVOIDANCE MEASURES

7. There is much that can be done by the individual to avoid mosquito bites. The wearing of long-sleeved shirts and long trousers (especially between dusk and dawn) and the use of insect repellent eg. Ultrathon (DET) Repellant containing 31% diethyl tolumide (NSN H1/6840-01-284-3982) on exposed skin will reduce the chance of mosquito bites. This item is not classified as Dangerous Air Cargo and can therefore be carried on aircraft.

8. Significant additional protection is achieved by impregnating clothing and mosquito nets with permethrin, or Peripel (NSN H1/6840-99-300-0661), to leave a residue which is lethal to any mosquito resting on these materials. The impregnation procedure is described in detail in Annex B to Chapter 46 of JSP 371, the Joint Services Manual on Pest Control. The initial treatment with permethrin of *both* clothing *and* mosquito nets is to be carried out *before entering any malaria-endemic area.* Re-impregnation with permethrin should then take place every 6 weeks (for clothing) and every 6 weeks – 6 months (for mosquito nets).

9. Whenever possible personnel are to sleep under mosquito nets having first ensured that no mosquitoes are trapped inside. The mosquito nets should be free from tears or holes and to be

impregnated with permethrin. In fixed locations every attempt must be made to provide mosquito-screened accommodation and personnel should try to avoid being outside such accommodation in the evenings.

CHEMOPROPHYLAXIS

10. **Risk Assessment**. The spread of chloroquine resistant strains of malaria parasite in certain parts of the world has necessitated the replacement of chloroquine and proguanil with other drugs whose tolerability is less well established. It is a situation that requires careful risk assessment taking into account the malaria threat and the possibility of side effects from chemoprophylaxis.

11. **Responsibility - Issue of Instructions**. The responsibility for issuing instructions regarding malaria chemoprophylaxis is as follows:

a. **Joint Service Exercises and Operations**. The Permanent Joint Headquarters (PJHQ) is to issue a directive on malaria chemoprophylaxis for all joint or potentially joint deployments. This directive will be based on risk assessment using advice available from the Directorate of Medical Operations and Plans, the Consultant in Communicable Disease Control, the Professor of Military Medicine and the AMD5 Health Unit. Single Service Commands are then responsible for issuing subsequent directives relating to that deployment.

b. **Single Service Exercises and Operations**. For single Service exercises and operations, it is a single Service Command responsibility to issue a directive on malaria chemoprophylaxis after risk assessment has been carried out using appropriate advice.

c. **Travel for Holiday Purposes**. Medical Officers prescribing in respect of travel for holiday purposes should obtain advice from the Malaria Reference Laboratory (Telephone: 0171 927 2437) and not by the process outlined above.

12. **Compliance**. Full compliance with recommended chemoprophylaxis is essential if the malarial policy is to be effective. The achievement of full compliance is dependent on all of the following factors:

a. **Information**. Medical Officers must ensure that personnel are able to make an informed decision regarding chemoprophylaxis. The dangers and seriousness of malaria must be made abundantly clear and the inappropriateness of inaccurate or incomplete media reporting put in the correct

perspective. This necessitates medical staff briefing all personnel involved, either individually or collectively.

b. **Support**. Medical Officers must be confident of the support of the medical hierarchy in maintaining a firm line on the recommended chemoprophylaxis if they come under pressure from their Commanders to deviate from recommended regimens. This support must be available when it is required, which may be out of hours for operational deployments.

c. **Discipline**. The Chain of Command must be prepared to back their acceptance of the recommended regimen with the issue of directives. Failure to comply should be treated in accordance with single Service disciplinary or administrative regulations.

13. **Mefloquine**. The situation regarding the use of mefloquine needs to be clarified. It is a "prescription only medicine" which should only be recommended after careful consideration.

a. **Indications**. Mefloquine remains the chemoprophylaxis of choice for those deploying to certain areas where chloroquine resistance is a problem but it should not be used in other situations. It continues to be recommended by the Malaria Advisory Committee for travellers to those parts of sub-Saharan Africa where there is chloroquine resistant malaria if the visit exceeds 2 weeks. It is widely used amongst NATO Forces and a recently published report following its use by the United Nations in Mozambique (Transactions of the Royal Society of Tropical Medicine and Hygiene 1997 **91**, 343-346) provides strong evidence that it is considerably more effective than chloroquine and proguanil in situations where chloroquine resistance is important.

b. **Side Effects**. Although mefloquine has been in use in USA and parts of Europe for over 10 years (and in UK since 1989) the frequency of side effects has been, because of their subjective nature, difficult to quantify. The incidence of "serious" neuropsychiatric reactions has been assessed at approximately 1 in 10,000 with prophylactic doses. Probably between 0.1% and 1% suffer very unpleasant and temporarily disabling effects. Neuropsychiatric reactions attributed to mefloquine include fits or seizures and subjective effects ranging from headaches, insomnia, vivid and unpleasant dreams, dizziness, loss of balance, and irritability, to aggression, depression, feelings of unreality, panic attacks, hallucinations and psychotic episodes.

c. **Contraindications**. Mefloquine should not be given to patients who have ever had fits or psychiatric disturbance, who give a history of epilepsy in a first-degree relative, or during the first trimester of pregnancy. Pregnancy should also be avoided for three months after stopping the drug.

d. **Alternative Regimen**. Those who cannot take mefloquine, for whatever reason, should be given an alternative regimen. Their medical documents are to be annotated accordingly. The decision on whether or not such Service personnel can deploy to a particular malarious area taking only a "lesser" prophylactic regimen will depend on risk assessment.

e. **Dosage**. One 250 mg tablet should be taken weekly. This is the standard adult dosage which should be commenced 3 weeks before entering a malarious zone and continued for 4 weeks after leaving it. The majority of adverse reactions to mefloquine occur early in the regimen with over 75% of those that are going to occur being apparent by the third dose. Commencing mefloquine 3 weeks before deployment will therefore allow a substantial proportion of those who cannot tolerate mefloquine to be identified and placed on an alternative regimen. However, if notice of deployment is shorter than 3 weeks it is still appropriate to use mefloquine.

f. **Cost**. Mefloquine is a relatively expensive drug and every effort should therefore be made to avoid wastage. Only the required number of tablets should be issued.

g. **Monitoring of Side Effects**. Monitoring the incidence of side effects which could be attributed to mefloquine is to be carried out in accordance with administrative arrangements outlined in Paragraph 17.

h. **Late Clinical Presentation**. There is now evidence that the use of mefloquine as chemoprophylaxis is tending to delay the onset of the disease in those who develop malaria. Any febrile illness developing even many months after returning from a malarious area must therefore be fully investigated without delay.

14. **Service Afloat**. Service afloat has been subject to special malaria prophylaxis arrangements and these will continue under the direction of the staff of MDG(N).

15. **Aircrew**. Aircrew must not take mefloquine as there is a small risk that mefloquine may produce side effects which degrade concentration and coordination. This has flight safety implications.

16. **Aircraft Stop-Overs.** An instruction on the action to be taken in the event of an unscheduled aircraft stop-over in a malarious area is to be issued by DGMS(RAF) to all Medical Officers with responsibility for receiving such aircraft at the destination airport.

ADMINISTRATION

17. **Monitoring of Drug-Related Side Effects.** Medical Officers should report serious adverse reactions to any chemoprophylactic drug to the Committee on Safety of Medicines using the "yellow card" system. In addition the incidence of all side effects which may be attributable to chemoprophylactic drugs needs to monitored as follows:

a. **Joint Services Exercises and Operations.** PJHQ is to issue instructions in relation to the monitoring of side effects for joint deployments. However these instructions will need to be implemented by single Service medical branches, particularly as most side effects will occur prior to deployment. The incidence of side effects is to be reported to SG through HR1.

b. **Single Service Exercises and Operations.** Single Service medical branches are responsible for setting up administrative arrangements to monitor the incidence of side effects during single Service deployments. The incidence of side effects is to be reported to SG through HR1.

18. **Notification of Malaria Cases.** Medical officers are reminded that they must report all cases of malaria, in accordance with current Service instructions, using the F Med 85. They should also be alert for symptoms in those returning from malarious areas.

19. **Malaria Warning Cards.** All at risk personnel should be issued with a Malaria Warning Card (F Med 568) before leaving a malarious area. This card warns the individual that the diagnosis of malaria must be considered if any illness develops and that it should be shown to medical staff when seeking treatment for fever even months after exposure.

CONCLUSION

20. Malaria continues to represent a serious threat to the health of Service personnel deployed to malarious areas. Adherence to all the recommended preventive measures, including compliance with chemoprophylaxis, is essential. Service personnel must continue to be taught the importance of preventing malaria in endemic areas and both they and their health care professionals must be aware that infection can develop soon after returning from a malarious area or many months later.

21. The choice of chemoprophylactic regimen should be made after risk assessment has been carried out and expert advice taken. It is necessary to maintain close surveillance of the incidence of malaria amongst Service personnel and of the frequency and severity of any side effects associated with chemoprophylaxis.

22. This SGPL supersedes all previous policy letters on the prevention of malaria including Reference A.

for Surgeon General

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Your Reference

Our Reference D/SG(Med Pol)/370/2

See Distribution

Date 19 Jul 00

AMENDMENT TO SURGEON GENERAL'S POLICY LETTER 6/97

PREVENTION OF MALARIA

Reference:

A. SGPL 6/97 – *Prevention of malaria*.

1. There is compelling evidence from trials that the single most effective measure to prevent malaria is the use of insecticide treated nets.[1]

2. Reference A Paragraph 8 is to be amended to reflect this evidence hierarchy. The amended Paragraph 8 should now read:

3. This amendment to Reference A is to be implemented immediately. The medical instruction for any deployment to, or exercise in, a malaria-endemic area is to incorporate this change.

4. Please disseminate this instruction to all medical facilities.

[signed on CHOTS]

for Surgeon General

[1] Croft A. Malaria: prevention in travellers. *BMJ* 2000 (15 July) 321: 154-160.

Distribution:

External:

Action:

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See Distribution

Your reference

Our reference PTC/451030/3/1/Med

Date 21 Jul 00

AMENDMENT TO SURGEON GENERAL'S POLICY LETTER 6/97

PREVENTION OF MALARIA

References:

A. D/SG(Med Pol)/370/2 dated 19 Jul 00.
B. SG PL 6/97 dated5 Sep 97.

1. Reference A provides amendment to paragraph 8 of Reference B, which is self-explanatory emphasising the importance of additional protection over and above drug prophylaxis. SMOs are to amend Reference B and implement the policy with immediate effect.

2. All SMOs or their nominated deputy are to sign the enclosed certificate to indicate that they have received, understood and incorporated the newly amended policy. The certificate is to be returned to WO Med Pub(RAF) at this Headquarters within 1 month of receipt.

DD Med P&P(RAF)
for DGMS(RAF)

Enclosures:

1. D/SG(Med Pol)/370/2 dated 19 Jul 00.
2. Certificate of Receipt and Understanding.

DGMS (RAF)

INVESTOR IN PEOPLE

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HQ PTC List B14 (SMO)
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HQ PTC List B16 (SMO)
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HQ PTC List B67 (SMO)

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CERTIFICATE - RECEIPT OF AMENDED POLICY

This form is to be completed and signed by all action addressees. The signature is to be that of the Senior Medical Officer, Medical Officer Commanding or a nominated **MEDICAL OFFICER** deputy.

NB. **In extreme cases** where no Service Medical Officer or Civilian Medical Practitioner is available this certificate may be signed by a SNCO.

I certify that I have received, incorporated and implemented the SG's amendment (dated 19 Jul 00) to paragraph 8 of SG's PL6/97.

Signature: .....

Name: .....

Rank: .....

Unit: .....

Date: .....

Return the completed Certificate to:

WO Med Pub(RAF)
Room G88, Building 255
HQ PTC
RAF Innsworth
Gloucestershire
GL3 1EZ