



# **THE 1990/1991 GULF CONFLICT: HEALTH AND PERSONNEL RELATED LESSONS IDENTIFIED**

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## **CONTENTS**

	<u>Page</u>
<b>EXECUTIVE SUMMARY</b>	<b>1- 4</b>
Introduction	5
Aim	5
Background	5
Scope	6
Structure	7
<b>SECTION 1 – ISSUES THAT AROSE BEFORE THE CONFLICT</b>	<b>8-12</b>
Organisation and Management of Operational Medical Issues	8
Medical Assessments of Theatre of Operations	8
Service Standard, Occupational and Theatre Specific Immunisations	9
Immunisation against Biological Warfare Agents	10
The Use of Unlicensed Medical Countermeasures	12
<b>SECTION 2 – ISSUES THAT AROSE DURING THE CONFLICT</b>	<b>13-21</b>
Nerve Agent Pre-Treatment Set Tablets	13
Unit Operational Records	13
Operational Location Tracking and Recording for Individuals	16
Operational Medical Record Keeping	18
Depleted Uranium Based Anti-Armour Munitions	19

<b>SECTION 3 – ISSUES THAT AROSE AFTER THE CONFLICT</b>	<b>22-33</b>
MOD Departmental Responsibility For Post-Deployment Issues	22
Post Deployment Health Research	23
Health Assessment and Surveillance	23
Mortality and Cancer	24
Hazardous Exposures	24
Risk Communication	25
Release from Service	27
Reserve Forces	28
Contractors Personnel	30
Gulf Veterans’ Medical Assessment Programme	31
War Pensions	32
Commemoration and Ceremony	33
<b>CONCLUSIONS</b>	<b>34</b>
<b>FURTHER INFORMATION</b>	<b>34</b>
<b>ANNEXES</b>	
F MED 1022 – Op TELIC Medical Audit – Personnel	Annex A
Depleted Uranium Information Card (F Med 1018)	Annex B
Coming Home	Annex C
Dealing with Traumatic Experience	Annex D

# EXECUTIVE SUMMARY

1. The purpose of this paper is to describe the analysis of health-related and personnel issues carried out since the 1990/1991 Gulf Conflict and identify the lessons that can be learned from this work. The Ministry of Defence (MOD) has published a considerable amount of analysis following the 1990/1991 Gulf Conflict. However, much of this work was undertaken relatively soon after the Conflict and before the emergence of suggestions that some veterans were experiencing post-deployment illnesses. The passage of time allows now for a more reflective analysis.

2. Since returning from the Gulf in 1990/1991, some UK personnel who served in the Gulf have become ill. A number of investigations, both scientific and historical, have been undertaken to try to answer a varied range of health-related questions from veterans and their representatives and to establish the facts about issues surrounding Gulf veterans' illnesses (GVI). The MOD has identified some important lessons for the future regarding the preparation, deployment and return of UK forces which were not apparent, or not considered significant, at the time of the initial work to identify lessons for the future.

3. This paper sets out the main health and personnel lessons identified since Operation (Op) GRANBY. It describes the corrective action taken, and provides an insight into how our revised policies and procedures have contributed to the successful deployment and conduct of recent military operations in Iraq (Op TELIC).

4. The paper is in three sections:

Section 1 - deals with issues that arose before the 1990/1991 Gulf Conflict (referred to as "the Conflict").

Section 2 - covers issues that arose during the Conflict.

Section 3 - focuses on lessons identified post-Conflict.

5. In each case the issues are identified; what we have done since; and what happened before, during and after the Conflict.

## **Section 1 – Issues that arose before the Conflict**

6. This section addresses the organisational aspects of medical planning and the need for effective joint medical co-ordination to ensure consistency of approach across the forces deployed. The section also considers arrangements for producing medical assessments relevant to a deployment to the Middle East and for the immunisation of personnel. Multiple immunisations have been suggested as a possible cause of ill health in veterans and the MOD has gone to considerable lengths to address this issue. MOD's policy paper on GVI: 'Gulf Veterans' Illnesses: A New Beginning' published on 14 July 1997, announced a research programme into the possible health effects of vaccines and tablets designed to protect personnel from the threat of biological and chemical warfare. Interim results were published in

April 2003. The main programme of research is now complete and we expect results to be submitted for publication in a scientific journal this year. Further details are available on the MOD's website at: [www.mod.uk/issues/gulfwar](http://www.mod.uk/issues/gulfwar). (Section 1 – Paragraphs 11 to 32).

### **What has MOD done?**

7. The lack of a dedicated Defence Medical Operations Cell as an integral part of the MOD's Joint Operation Centre (JOC) in the early stages of Op GRANBY was identified as a weakness. Since Op GRANBY, the Defence Crisis Management Centre (DCMC) has replaced the JOC. A medical operations cell is established within the DCMC when the Centre is activated. In addition, a medical staff cell tasked with planning and overseeing the medical aspects of joint operations is now an integral part of the Permanent Joint Headquarters (PJHQ) (Section 1 – Paragraphs 11 – 13).

8. Routine medical intelligence assessments and environmental and industrial threat assessments for parts of the world where UK forces may operate are now commissioned by the PJHQ at Northwood. The existing system worked well during Op TELIC but further improvements are planned (Section 1 – Paragraphs 14 to 16).

9. The lack of transparency about the anti-biological warfare immunisation programme during the Conflict has led to serious misconceptions, which persist even now amongst some veterans. The MOD has introduced a number of changes and guidance on immunisation. We have been much more open about the current voluntary anthrax immunisation offered to Service personnel. At the beginning of combat operations last year in Iraq, the take-up of immunisation against anthrax among deployed personnel was around 70% overall and higher in some front-line units. This is a marked improvement, but there is still room to do better (Section 1 – Paragraphs 23 to 28).

### **Section 2 – Issues that arose during the Conflict**

10. The use of Nerve agent pre-treatment set (NAPS) tablets has been suggested as a possible cause of some veterans' ill-health; the issues involved are addressed in Paragraphs 33 to 36. The poor quality or lack of some operational records and the failure to transfer temporary medical records to permanent records are covered in Paragraphs 37 to 65. Depleted uranium (DU) based anti-armour munitions were used by the UK for the first time and have been suggested as a possible cause of ill-health in veterans. The different issues raised about DU munitions are covered in Paragraphs 66 to 72. (Section 2 – Paragraphs 33 to 72).

### **What has MOD done?**

11. Guidance on the use of NAPS tablets has been clarified. Instructions and guidance on operational record keeping have been revised and overall the Services have produced far better operational records during Op TELIC than was the case in

1990/1991. However, operational record keeping at higher headquarters still requires some improvement (Section 2- Paragraphs 33 to 61).

12. We have introduced a mandatory operational medical record form and an audit procedure was undertaken for TELIC1 personnel, to ensure that the information was transferred to an individual's permanent medical record (Section 2- Paragraphs 62 to 65).

13. DU based anti-armour munitions were rapidly brought into UK service for use in 1990/1991. With hindsight, more could have been done to anticipate worries about ill-health and to communicate the minimal risks to our own forces more effectively. Briefing on DU is now a modular part of a number of ammunition, medical, and supply courses. Where appropriate, e.g. in deployments to Kosovo (where the UK did not use DU-based ammunition) and for Op TELIC, pre-deployment training now includes the issuing of appropriate guidance on dealing with the potential hazards from DU. Safety Instructions regarding DU were also included in the mounting orders for Op TELIC and, additionally, were issued within theatre. We have also developed a policy for biological monitoring for DU on current and future operations (Section 2- Paragraphs 66 to 72).

### **Section 3 – Issues that arose after the Conflict**

14. The difficulties MOD experienced in responding to veterans' enquiries and the organisational aspects of the MOD's response to post deployment health issues are covered in Paragraphs 73 to 77. Issues relating to MOD's approach to scientific research into health issues arising from the Conflict are addressed in Paragraphs 78 to 80. Issues relating to Risk Communication; Reservists; Civilian Contractors; War Pensions and Commemoration and Ceremony are covered in Paragraphs 91 to 125. (Section 3 – Paragraphs 73 to 128).

#### **What has MOD done?**

15. Responsibility within the MOD for responding to Gulf veterans' illnesses fell to the MOD's Defence Medical Services Department. However, lessons learned from the UK deployment and its aftermath covered issues wider than just medical ones. The MOD's Gulf Veterans' Illnesses Unit (GVIU) was set up to provide a focus for a more holistic approach. The GVIU has now been incorporated into the Veterans Policy Unit and is leading on post – Op TELIC health research initiatives to try to identify early any adverse health effects that may transpire as a result of Op TELIC. (Section 3- Paragraphs 73 to 80).

16. Post-deployment briefing for Service personnel returning home and help for families in the UK has been enhanced. In May 1999, the Reserves Training and Mobilisation Centre (RTMC) at Chilwell, Nottinghamshire, was established. Mobilisation and demobilisation through RTMC, or at centres with staff provided for and trained by RTMC, has gone a long way to eliminating the issues identified with the call out and employment of Reserves (Section 3 – Paragraphs 100 to 106).

17. Contractors' policy and procedures has been completely revised. A range of personnel measures have assisted Gulf and other veterans (Section 3 – Paragraphs 107 to 125).

## **CONCLUSION**

18. The extent to which the issues identified in this paper actually led to Gulf veterans' ill-health is open to question, but we recognise that had we done better in several areas we would have been more able to reassure veterans about health issues. Experience during Op TELIC indicates that improvements to a wide range of policies and procedures and greater openness with medical countermeasures have all contributed towards the successful deployment and conduct of military operations in Iraq. However, reports of ill health in US and UK veterans took some 18 to 24 months to emerge after the end of the 1990/1991 Conflict and it is not unreasonable to expect the same timescale to apply to Op TELIC veterans, if indeed indications of ill health emerge. It may be another 12 to 24 months before a clearer picture of our performance emerges.

# **THE 1990/1991 GULF CONFLICT: HEALTH AND PERSONNEL RELATED LESSONS IDENTIFIED**

## **INTRODUCTION**

1. In 1990/1991, some 53,400 UK Service personnel deployed to the Middle East for Operation (Op) GRANBY, the UK's contribution to the military coalition that reversed Iraq's occupation of Kuwait. At that time, Op GRANBY was the largest UK overseas military deployment for 45 years.
2. Medical policy and practice before and during Op GRANBY was intended to ensure that personnel were as fit as they could be for what was expected to be a full scale conflict, in a demanding and hostile desert environment, with a risk of endemic and infectious disease. In the event, military operations were little affected by disease and non-battle injuries. Both were well below historic levels for an overseas military deployment of this scale.
3. The Ministry of Defence (MOD) has published a considerable amount of analysis following the 1990/1991 Gulf Conflict. (See for example the Statements on the Defence Estimates for 1991<sup>1</sup> and 1992<sup>2</sup>.) The House of Commons Defence Committee has also held an inquiry into lessons identified following Op GRANBY<sup>3</sup>. However, this work was undertaken relatively soon after the Conflict and before the emergence of suggestions of various post-deployment illnesses among some veterans.

## **AIM**

4. The aim of this paper is to set out the main health and personnel lessons identified since Op GRANBY and the action MOD has taken subsequently.

## **BACKGROUND**

5. Since returning from the Gulf in 1990/1991, some UK Service personnel have become ill. So too have some civilians who also deployed. In some cases, their illnesses are completely unrelated to their service. Some individuals have recognised medical disorders, such as Post Traumatic Stress Disorder, due to their service in the Gulf. Another group, which may include those described above, report medically unexplained multi-system, multi-organ, non-specific symptoms and illnesses which epidemiological evidence<sup>4</sup> shows are not specific to, but are more common in, those who served in the Gulf in 1990/1991.

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<sup>1</sup> Statement on the Defence Estimate: Britain's Defence for the 90s, July 1991, Cm 1559-I, HMSO.

<sup>2</sup> Statement on the Defence Estimates 1992, July 1992, Cm 1981, HMSO.

<sup>3</sup> Implementation of Lessons Learned From Operation GRANBY, Session 1993-94 HC 43.

<sup>4</sup> The number of UK Gulf veterans who are ill and who ascribe their ill health directly to the Gulf Conflict is unknown. Researchers have suggested that approximately 9,000 (17%) of all UK Gulf

6. Specific diseases, disorders, abnormal conditions and medical syndromes all have common features such as a set of physical signs or symptoms that distinguish them from other medical conditions. But veterans of the 1990/1991 Gulf Conflict do not present with a distinct and identifiable pattern of symptoms or signs. The current consensus of the international scientific and medical community is therefore that there is insufficient evidence to enable this ill-health to be characterised as a unique illness or syndrome. The MOD's approach must be guided by expert scientific and medical opinion and for this reason does not recognise "Gulf War Syndrome" as a specific medical condition.

7. Since 1993, the MOD has responded to suggestions that the unexplained ill-health is a result of possible exposures to various potentially toxic substances and psychological injury during the Conflict. The MOD refers to this ill-health as Gulf Veterans' Illnesses (GVI). The way in which we address the complex issue of GVI was set out in 1997<sup>5</sup>. A number of investigations, both scientific and historical, have been undertaken to try to answer a varied range of questions from veterans and their representatives and to establish the facts about issues surrounding GVI. In so doing, the MOD has identified some important lessons for the future regarding the preparation, deployment and return of UK forces which were not apparent, or not considered significant, at the time of the initial work referred to above.

8. Although it would be unwise to assume that health issues emerging after one conflict will follow all subsequent conflicts or military deployments, it is vital that any appropriate lessons identified following the 1990/1991 Gulf Conflict are addressed. However, no assurance can be given that post-deployment health problems will not arise in future. Indeed, all major modern conflicts since the 19<sup>th</sup> century have been subsequently associated with unexplained medical symptoms<sup>6</sup>. New lessons will continue to be identified, and improvements implemented in procedures and preparedness for operations that expose Service personnel to risks to their lives and health, over and above the risks from combat itself.

## **SCOPE**

9. In March 2003, a US-led coalition, with a substantial contribution from UK forces, began military operations against the Saddam Hussain's regime in Iraq. The UK contribution to the coalition is known as Op TELIC<sup>7</sup>. On 7 July 2003, the MOD published: "Operations in Iraq – First Reflections"<sup>8</sup>. Chapter 5 of that document contains information on the employment of civilians and civilian contractors; and on

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veterans believe they have "Gulf war syndrome". Chalder T et al, "Prevalence of Gulf war veterans who believe they have Gulf war syndrome: questionnaire study", British Medical Journal, 1 September 2001, vol 323, 2001, p 473 - 476

<sup>5</sup> See "Gulf Veterans' Illnesses: A New Beginning" dated 14 July 1997 [www.mod.uk/issues/gulfwar](http://www.mod.uk/issues/gulfwar).

<sup>6</sup> Jones E, et al "Post Conflict Syndromes from the Boer War to the Gulf war: a cluster analysis of their nature and attribution, British Medical Journal, 9 February 2002, Volume 324, p 321- 324.

<sup>7</sup> Approximately 70,750 UK Service personnel had deployed on Op TELIC at some stage between 18 January 2003 and 1 January 2004.

<sup>8</sup> [http://www.mod.uk/publications/iraq\\_lessons/index.html](http://www.mod.uk/publications/iraq_lessons/index.html)

post-operation health. In December 2003, the MOD published a follow up document: "Operations in Iraq - Lessons For the Future"<sup>9</sup>. In that document, it was made clear (paragraph 9.44) that a detailed paper on the health lessons identified since the 1990/1991 Gulf Conflict, taking account of experience on recent operations in the Gulf, would be published. This paper is intended to meet that undertaking. Clearly Op TELIC provides an insight into the extent to which the lessons identified following Op GRANBY have been learned and changes implemented and so the current paper also addresses relevant issues associated with Op TELIC.

## **STRUCTURE**

10. The material in this paper is set out in three sections. Section 1 deals with issues that arose before the 1990/1991 Gulf Conflict (referred to as "the Conflict"). Section 2 covers issues that arose during the Conflict and Section 3 focuses on lessons identified post-Conflict. In each case the issues are identified, as is what we have done since the Conflict and what happened before, during and after Op TELIC.

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<sup>9</sup> [http://www.mod.uk/linked\\_files/publications/iraq/opsiniraq.pdf](http://www.mod.uk/linked_files/publications/iraq/opsiniraq.pdf)

## **SECTION 1 – ISSUES THAT AROSE BEFORE THE CONFLICT**

### **ORGANISATION AND MANAGEMENT OF OPERATIONAL MEDICAL ISSUES**

11. The Issue. The lack of a dedicated Defence Medical Operations Cell as an integral part of the MOD's Joint Operation Centre (JOC) in the early stages of Op GRANBY was identified as a weakness. Parallel planning by the MOD and the single Service medical staffs exacerbated the problem. Although MOD does not believe this in itself contributed to GVI, it is clearly important that effective joint operational medical planning is undertaken from the outset with all those involved clear about their remit so as to ensure consistency and avoid confusion.

12. What has MOD done? Since Op GRANBY, the Defence Crisis Management Centre (DCMC) has replaced the JOC. A medical operations cell is established within the DCMC when the Centre is activated. In addition, a medical staff cell tasked with planning and overseeing the medical aspects of joint operations is now an integral part of the Permanent Joint Headquarters (PJHQ).

13. Op TELIC Experience? The MOD's Defence Medical Services Directorate (DMSD) is primarily responsible for ensuring appropriate medical support is delivered to UK Service personnel. Because of the need to maintain strict security during the early stages of what became Op TELIC, DMSD staff were not involved from the outset in detailed planning, before the DCMC was activated. The fact that DMSD staff should be engaged in the operational aspects of medical planning from the earliest phase is a post Op TELIC lesson learned. Subsequent planning (after the activation of the DCMC) to ensure that we were in a position to provide the requisite level of medical support, went well.

### **MEDICAL ASSESSMENTS OF THEATRE OF OPERATIONS**

14. The Issue. In 1990, there was a lack of any routine medical assessments relevant to a deployment to the Middle East. As a result there was some initial uncertainty in deciding precisely what medical countermeasures were required to prepare the force for deployment.

15. What has MOD done? PJHQ now commissions up-to-date medical intelligence assessments for those areas of the world where it is judged UK forces are likely to operate. Medical assessments are prepared by PJHQ and DMSD before specific operations. Force health protection plans are prepared and warning notices issued to commanders by Single Service Commands. These medical assessments are dynamic and updated during the course of an operation. The assessments are made in the UK to meet UK requirements and are informed by UK practice but they include material drawn from a wide range of sources, civilian and military. Procedure for single Service operations is similar (i.e. still run by PJHQ), only the scale and scope is likely to be different.

16. Op TELIC Experience? The existing system used by PJHQ is a major improvement on Op GRANBY capability and worked well. Additional refinements are currently being scoped that should provide further improvements.

### **SERVICE STANDARD, OCCUPATIONAL AND THEATRE SPECIFIC IMMUNISATIONS**

17. The Issue. There is clearly a need to maintain forces fit for world-wide deployment at all times, and vaccination status is an important aspect of military readiness. A portion of the force to be deployed to the Gulf in 1990/1991 was not up to date with Service standard vaccinations. Although most personnel were brought up to date with these vaccinations before deployment, in some cases this meant that individuals received multiple immunisations. It has subsequently been suggested<sup>10</sup> that although multiple vaccinations are not inherently harmful, combined with the stress of deployment they may increase the risk of long term adverse health outcomes. The researchers reported that multiple immunisations before deployment to the Gulf did not seem to be associated with self reported ill-health health, whereas multiple immunisations given during the deployment do, albeit to a limited degree, seem to be associated with ill-health. The researchers suggested that this different outcome might be stress-mediated. The paper reporting these results does not suggest any mechanism which might explain this, and subsequent correspondence<sup>11</sup> in the British Medical Journal called into question the data quality and explanation.

18. What has MOD done? Although there is no conclusive scientific evidence to connect multiple immunisations with ill-health, vaccinations should ideally be administered routinely and not immediately pre-deployment or in theatre. In order to reduce the requirement to immunise troops in theatre, occupational health vaccinations have been made routine for Service personnel. As well as ensuring readiness, (i.e. being able to deploy without having to wait for vaccinations) this minimises the need for personnel to have several vaccinations at once when they deploy.

19. It is the responsibility of commanding officers to ensure that personnel are up to date with appropriate immunisations. Routine immunisations against hepatitis A, typhoid, meningococcal meningitis (for recruits and those under 25), rubella (for females and medical personnel), tetanus, diphtheria, poliomyelitis and yellow fever are offered to members of the Armed Forces where appropriate. Members of the regular forces, and reservists at high readiness for deployment, should have their immunity maintained by routine booster immunisations. Some immunisation in theatre might be necessary e.g if vaccination protection has expired and a booster is necessary or additional immunisations are needed in the light of a further risk assessment, a new threat having been identified, or where individuals having previously refused an immunisation change their minds. Personnel operating in

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<sup>10</sup> British Medical Journal: Role of vaccinations as risk factors for ill health in veterans of the Gulf war: a cross sectional study, 20 May 2000, Vol 320 p 1363 -1367

<sup>11</sup> Bolton, JPG et al letter BMJ (2001): 322:361 (10 February): author's reply Hotopf, M et al: BMJ (2001) 322:362

areas with a specific health hazard, and those in special occupational risk groups (such as medical personnel), may also be given additional vaccinations before deployment. All three Services have routine administrative procedures in place to check the vaccination status of both regular and reserve personnel.

20. For other members of the reserve forces, immunisations should be brought up to date upon mobilisation. Units should also carry out pre-deployment checks of vaccination states.

21. While it is highly desirable that personnel are routinely prepared for deployment during peacetime for exercise and operational deployments, this is not easy to achieve. First, unless individuals perceive a specific threat, voluntary programmes of immunisation are unlikely to lead to 100% uptake rates. Second, specific theatres of operations will require additional preparation. Finally, lead-times are frequently too short to ensure full preparation before deployment - some full vaccination programmes are spread over many months and require regular boosters. It is therefore probable that vaccination in theatre cannot be avoided altogether, although it can be minimised.

22. Op TELIC Experience? DMSD provided general guidance on immunisation and vaccination policy. The Chain of Command was responsible for implementation – ensuring that vaccinations were brought up to date as required. When necessary, Regimental/Unit Medical Officers delivered the appropriate vaccinations. During the force generation period, units conducted additional staff checks on compliance and initiated catch up immunisation programmes as required. Some individuals within the TA/Reserves were not up to date with a number of vaccinations when they were mobilised. Consequently, they required accelerated vaccination programmes (compliant with Department of Health guidance) before they were deployed.

## **IMMUNISATION AGAINST BIOLOGICAL WARFARE AGENTS**

23. The Issue. On the basis of intelligence information and associated medical assessments, it was decided to offer immunisation to personnel on Op GRANBY against two biological warfare (BW) agents, anthrax and plague, together with pertussis vaccine<sup>12</sup> as an adjuvant<sup>13</sup>. In some cases immunisations were administered in the Gulf. This was partly because personnel began to deploy from their home bases from September 1990, before the decision to immunise against BW agents had been taken. The way this immunisation programme was intended to be implemented is the subject of another MOD paper<sup>14</sup>. A number of lessons have been identified subsequently.

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<sup>12</sup> The immunisation given to protect against whooping cough.

<sup>13</sup> An adjuvant is a substance normally incorporated in a vaccine to accelerate, enhance or prolong a specific immune response. In this case, pertussis was given as a separate immunisation.

<sup>14</sup> "Implementation of the Immunisation Programme against Biological Warfare Agents for UK Forces during the Gulf Conflict 1990/1991" published by Gulf Veterans' Illnesses Unit on 20 January 2000.

24. What has MOD done? Although UK personnel had been in the Gulf since 1991, in March 1998 additional UK forces were once again deployed to the region (Op BOLTON). The assessment was that though the threat of attack from Iraqi biological weapons had been reduced since 1991 by the activities of the United Special Commission for Iraq (UNSCOM) it had not been eliminated. The need again to protect UK forces was vital and it was decided that UK forces due to deploy should be offered a voluntary immunisation against anthrax.

25. When the 1998 voluntary anthrax immunisation programme was implemented, the MOD took care to learn from Op GRANBY experience. MOD publicly announced<sup>15</sup> and explained to all those deploying to the Gulf what was intended and strongly encouraged personnel to receive the anthrax immunisation, but made very clear in writing to all personnel that the programme was voluntary. Detailed guidance was issued to commanders and medical staff that gave them all the information they required to explain to troops why they were being offered immunisation, what vaccine was being used, why the vaccine was considered to be safe and effective, and other relevant information, for example, known side effects. All personnel were also given an explanatory leaflet covering the same issues, and answering common questions and concerns. Additional arrangements were also put in hand to ensure that full details of the immunisations were recorded openly using the generic or manufacturer's name for the preparation, in medical records.

26. The anthrax immunisation programme that began in March 1998 had to be suspended in late 1998 due to vaccine supply difficulties (insufficient stocks were available from the supplier CAMR because of manufacturing difficulties). In May 2001, the voluntary anthrax immunisation programme resumed as vaccine became available, initially for those personnel deployed to the Gulf region. The arrangements for disseminating information about the immunisation were reviewed and updated to reflect further lessons identified from the experience of 1998. In line with current UK regulatory practice, all of the educational material associated with the voluntary anthrax immunisation programme was assessed by the Medicines Control Agency (now called the Medicines and Healthcare products Regulatory Agency MHRA) and found to be compliant with the product licensed data available at that time.

27. We announced<sup>16</sup> in June 2002 that we were expanding the voluntary anthrax immunisation programme further. From January 2005 we plan to offer anthrax immunisation routinely to all forces, including reserves and those essential civilians who are likely to deploy on operations. We plan to begin with those units that are held at the highest readiness. Taken together with our other force protection measures, these arrangements should maximise our forces' readiness and minimise the need for personnel deploying on future operations to have multiple immunisations in a short period of time. We have no plans to make anthrax immunisation mandatory, as in the US.

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<sup>15</sup> House of Commons, Official Report, 3 March 1998, Column 535W.

<sup>16</sup> House of Commons. Official Report, 13 June 2002, Column 1344W ; House of Lords, Official Report, 13 June 2002, Column WA 46

28. Op TELIC Experience? At the beginning of combat operations, the take-up of immunisation against anthrax among deployed personnel was around 70% overall and higher in some front-line units. This represents a marked advance since the 1998 operations in the Gulf (when it was around 30% overall) but there is still room for improvement. The Department must continue efforts to make immunisation against anthrax routine; this should help to allay the concerns of some Service personnel, increase take-up levels similar to those of occupational health immunisations, and improve readiness. The Anthrax educational material is under review. We continue to make further improvements in the area of risk communication.

## **THE USE OF UNLICENSED MEDICAL COUNTERMEASURES**

29. The Issue. Some of the medical countermeasures used during Op GRANBY were unlicensed in the UK, or at least not licensed for the use to which they were put. This has led to concern among some Gulf veterans who erroneously believe that because a product is not licensed it must be unsafe.

30. In each case, the decision to use an unlicensed product reflected the need to protect personnel against a specific threat in the absence of an appropriately licensed alternative and on the basis of medical advice. The fact that a medical product is unlicensed does not mean that it is untested or is inherently unsafe. The licensing of medicines is a rigorous, time-consuming and expensive process. Manufacturers are only likely to apply for a UK license if the potential market for the product warrants the effort and costs involved. Licensing procedures cannot usually be accelerated.

31. What has MOD done? It has always been MOD policy to use medical products which are licensed for use in the UK, except where no other treatment is available and only on the basis of expert medical advice. In certain circumstances, we may consider offering unlicensed vaccines to specialist personnel who risk contact with rare and dangerous diseases by virtue of their occupation, for example laboratory workers and other specialist staff. This would be done only where we have full confidence in the safety and efficacy of the vaccine, where no licensed vaccine or other treatment is available, and on the basis of expert medical advice. Individuals should be fully informed in advance if an unlicensed product is being offered.

32. Op TELIC Experience? All medical countermeasures for Op TELIC were licensed. However, a small number of medical and CBRN specialists who deployed on Op TELIC were vaccinated against smallpox with a proven but unlicensed vaccine. This vaccination programme mirrored the Department of Health's smallpox vaccination programme and was not directly related to Op TELIC. All those offered smallpox vaccination were specifically informed that the preparation was unlicensed.

## **SECTION 2 – ISSUES THAT AROSE DURING THE CONFLICT**

### **NERVE AGENT PRE-TREATMENT SET TABLETS**

33. The Issue. Nerve agent pre-treatment set (NAPS) tablets used during the conflict have been suggested as a possible cause of some Gulf veterans' ill-health. NAPS tablets contain pyridostigmine bromide<sup>17</sup> and are self-administered. Although unit records should show whether NAPS tablets had been issued to troops, it has been impossible for MOD to determine with any certainty the extent to which NAPS tablets were actually taken by individuals between the order to begin taking them on 18 January 1991 and to cease on 1 March 1991.

34. It is possible that some Gulf veterans routinely exceeded the stated dose (on the possible basis that: 'if one tablet is good, then two must be better') or failed to maintain the 8-hourly dosage. It is more certain that large numbers stopped taking NAPS, despite the chemical warfare (CW) threat remaining high, at varying times prior to the order to stop, because they forgot, it was inconvenient, or they were experiencing some minor side effects. Further, the rationale for the use of NAPS tablets needs to be given more prominence in routine training.

35. What has MOD done? Our guidance to Commanders on when troops should start and stop taking NAPS has been clarified. The tri-Service medical form mentioned in paragraph 63 can be used to record when NAPS tablets are issued to individuals.

36. Op TELIC Experience? Operational Commanders were given the authority to decide when troops should start and stop taking NAPS in order that the use of the countermeasure could be adapted to meet the threat situation at the time. All Service personnel receive training on the importance of taking NAPS in theatre and instructions for the use of NAPS are well publicised to command and medical staff.

### **UNIT OPERATIONAL RECORDS**

37. The Issue. When deployed on military operations, Service instructions require HQs, HM Ships, RM Commandos, Army formations and units, RAF formations and units to maintain operational records. These records form a significant body of knowledge about what happened during operations. In the case of Op GRANBY, unit operational records have been used extensively as source documents for previous MOD papers. However, many of these records contained insufficient detail to allow a complete reconstruction of specific incidents, particularly about possible exposure of units and their personnel to potentially toxic substances.

38. Royal Navy/ Royal Marines (RN/RM). For naval personnel serving in HM Ships during the 1990/1991 Gulf Conflict, the records (both operational and medical) are generally adequate. One serious shortfall that has been identified is the

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<sup>17</sup> Each tablet contains 30mg of pyridostigmine bromide to be taken orally every eight hours.

preservation of operational records from Naval Air Squadrons, particularly those deployed ashore.

39. Army. At the time of Op GRANBY, the Army's operational record keeping system (the Commander's Diary) focused on recording combat operations and few diaries make reference to medical events - for example, implementation of the anti-biological warfare immunisation programme. It appears that such activities were considered routine and it is only with hindsight that the need for more detailed information has become apparent.

40. The detail of information contained in Army operational records from the Gulf vary between units, even though all units should have followed the same instructions. In some instances, even the minimum requirements for information recording were not met. Many units stopped keeping operational records when hostilities ceased on 1 March 1991 in accordance with instructions issued in theatre. Unfortunately, a number of incidents and potential exposures took place after this date and little information exists in the operational records relating to them.

41. RAF. RAF units routinely record their activities continuously on a monthly basis through their Operations Record Book (ORB) (Form 540). In addition, operational flying squadrons complete records of sorties flown. During major operations, the ORB is required to be compiled from day to day.

42. The amount of information contained in the ORB for units participating in Op GRANBY varies considerably, although all units were supposed to be following the same procedures. We have since identified that the RAF guidance current at the time required the recording of incidents/injuries to individuals sustained in the course of duty, but did not spell out that specific medical information was required. Therefore, although some such information was included, it is often not detailed enough to answer subsequent questions. As for the Army, some information was not included in RAF records because it was regarded as routine. However, many RAF units also failed to include details specified in the regulations.

43. General. The maintenance and archiving of operational records is a cornerstone of post-conflict analysis of incidents and exposures that may have an impact on the health of those deployed. It is therefore important that units complete their records and capture information in accordance with instructions, and that their records are despatched to the appropriate MOD departments for analysis and retention. The practical constraints imposed by military operations mean that it is unreasonable to expect very detailed, contemporaneous recording. However, it is reasonable to expect that all units will comply with instructions and have an understanding of what they should include in their records and what this information will be used for.

#### What has MOD done?

44. RN/RM When HM ships are on active operations, they normally provide copious records. As a result of experience with Op GRANBY a complete revision of the system of maintaining operational records was undertaken.

45. Army. Instructions relating to Army operational record keeping have been revised to make them clearer and easier to use, bringing together instructions that are already extant. They also require more details to be recorded than was the case during Op GRANBY.

46. RAF. The RAF has taken a number of steps to improve the quality and content of Forms 540. These include, a continuous review of all Forms 540, with feedback to unit and formation commanders, and the publication of revised and updated guidance on how to complete the Form 540/541. This has resulted in a considerable overall improvement in the quality and content of Forms 540 for units and formations and Forms 541 for flying squadrons. The importance of comprehensive record keeping was strongly reinforced to deploying units on Op TELIC. Tri-service units follow the single service operational record keeping procedures that are most appropriate to their role. For example, the Joint NBC Regiment follows the Army's Operational Record system.

#### Op TELIC Experience?

47. RN/RM. The revised and improved system worked well.

48. Army. Units generally produced far better operational records during Op TELIC than they did during Op Granby. However some units still failed to meet the minimum level required. Most units only submitted their operational records once they returned to the UK/ Germany. Consequently, where units in theatre were not meeting the required standard, no remedial action could be taken by the Information-Analysis Branch. Operational record keeping at the higher headquarters still requires some improvement. Standing Operating Procedures (SOPs) need to be developed to ensure that when higher headquarters require advice or expertise relating to operational record keeping they get it from the Information-Analysis Branch of MOD's Corporate Memory.

49. RAF. Records broadly adhere to RAF guidelines and collectively give a reasonably comprehensive overview of the air component's activities. While the quality and content of individual records varies, key events are in the main documented, as are specific sorties documentation. Overall, the quality is assessed to be better than that for the Conflict.

50. MOD has commissioned a study of medically-related operational data and records by researchers from the MRC Institute of Environment and Health, University of Leicester. Stage 1 is a scoping phase to assess the quality of Op TELIC data and records including operation logs to develop a method of extracting relevant information, identify other relevant exposure information and carry out a pilot study to extract and store information from a sample of operation logs. Stage 2 will address data collection and extraction from relevant records and the development of links to personnel and medical data. Stage 3 will be a study to link the analysis of self-reported health outcomes from the Guys, Kings and St Thomas' study above and the exposure information from Stage 2, and to investigate possible relationships between

these. Stages 2 and 3 will only be contracted for if it is deemed necessary; it is envisaged that they will run concurrently.

## **OPERATIONAL LOCATION TRACKING AND RECORDING FOR INDIVIDUALS**

51. The Issue. Real-time 'who is where' information for personnel on deployments is used by commanders and their staff to determine combat effectiveness. Such records about individuals and units are important both during the deployment (should an incident occur for example) and subsequently (for analysis). If records are not initiated at the outset and subsequently maintained and archived, it is virtually impossible to create them retrospectively. During Op GRANBY, accurate records of who was deployed where and when, of the precautions that were taken to protect their health, of the potential risks they faced and their health status at the time were not maintained.

52. After Op GRANBY, it was necessary to construct a database of all those individuals who had deployed to the Gulf. This was required for individual casework, as well as for health research purposes. The task proved extremely difficult and time consuming. Many useful contemporary records of nominal rolls of deployed units had been destroyed in the period between the end of the Conflict and the beginning of this work because they were considered to be of no further use. The data that were available were inadequate. Different and incompatible MOD databases contained inconsistencies in individual records and had to be interrogated and analysed. A single database was eventually produced to what is believed to be a substantial degree of accuracy, but there are still some gaps. For example, the database is incomplete in that it contains no data on deployed civilians, either MOD employees or contractors' employees operating in support of UK armed forces in the region.

53. What has MOD done? All regular and reserve personnel, MOD civilians, and any contractors' personnel should be tracked while on operations. However, during the deployment to Sierra Leone in 2000, it became apparent that there were still some shortcomings in medical preparedness, and to assist in possible follow-up research, a database of those involved in the deployment was constructed afterwards. Although similar problems of multiple data sources and inconsistencies in data were encountered as for Op GRANBY, data collection proceeded much more smoothly because it was initiated immediately after the deployment and before certain routine records were destroyed.

54. RN/RM. The RN/RM operates a manpower tracking system known as Souls on Board (SOB). The SOB details individuals serving on all HM Ships and Submarines, Royal Fleet Auxiliaries, Ships Taken Up From Trade, detached Naval Air Squadrons, deployed Naval Parties, Royal Marines Commandos and other units so that an accurate account of the whereabouts of every Naval Service person can be maintained. Every unit submits its SOB to the Naval Service Casualty Co-ordination Centre on sailing, deployment or detachment; on receipt the details are typed into the Naval Manpower Management Information System (NMMIS). When a

ship or unit completes a deployment or detachment, a closure signal is sent and a fresh SOB list is signalled on the next sailing, deployment or detachment.

55. Army. The Army has developed a personal computer-based personnel tracking system called AP3. It has been deployed with the Army in the Balkans since 1999. It was also used for deployments to Sierra Leone in 2000, the Former Yugoslav Republic of Macedonia, during Exercise Saif Sareea II<sup>18</sup>, in Afghanistan, during Op FRESCO<sup>19</sup> and during Op TELIC. Information from all operations is archived and is held by the MOD.

56. AP3 can maintain records of individuals arriving in, moving through and leaving a theatre of operation and contains various other data fields including individuals' vaccination status, and the ability to specify location within a given theatre. Although AP3 is an Army system, it can also record details of RN/RM and RAF personnel and civilians deployed.

57. The Army practised operational location tracking during Exercise Saif Sareea II. The Exercise provided an excellent opportunity to demonstrate where lessons remained to be implemented.

58. RAF. The RAF's Operational Manpower Information System 3 (OMIS3) tracks the movement of all assigned forces into, around and out of an operational theatre. It allows access to coherent and high integrity data in support of manpower and casualty tracking, recording and reporting; and it supports the management of information such as nominal rolls, reports and data interrogation. The system can also display some limited medical details useful to the Commander in theatre. Additionally, the system provides 'near real time' data to all users and has the facility to archive all data entries. OMIS3 can also record details of non-RAF personnel in much the same way as the Army's AP3 system.

59. MOD Civilians. Any MOD civilian staff going on a full length operational tour (i.e. for more than three months) will have their computerised personal records updated accordingly. SOB, AP3 and OMIS 3 all have the ability to track MOD civilians.

60. Contractors' Personnel. Contractor's personnel include UK and third Country nationals, including sub-contractors, but excludes locally recruited workers who have been contracted by the MOD to deploy into an operational theatre. SOB, AP3 and OMIS 3 all have the ability to track contractors' personnel. Current instructions require that all contractors' personnel should be required to report to the appropriate military staff in theatre so that a record of their arrival can be created. However, it is the responsibility of the UK MOD sponsor of the specific contract to ensure the

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<sup>18</sup> Exercise Saif Sareea II took place in the Sultanate of Oman during September and October 2001. The deployment involved some 22,500 personnel.

<sup>19</sup> The name given to the assistance given to the Office of the Deputy Prime Minister during the national Fire Brigades Union's industrial action by provision of fire rescue and fire fighting capabilities in order to maintain emergency fire services to save life.

contractor's personnel report to the Theatre Reception Centre (with verification confirmed by the In-Theatre MOD Sponsor).

61. Op TELIC Experience? Personnel tracking was achieved to a high degree in terms of movement in and out of theatre and, to a lesser degree, in theatre. A unified tri-Service manpower system that can accurately track and archive military and civilian personnel movement data on operations was introduced in December 2003 under the name Interim OPLOC. Op TELIC data from before this date and from operational theatres other than Iraq will be loaded onto the Interim OPLOC database by early 2005. Data will be stored for a period of 100 years: designated users from all 3 services and (with permission from the Defence Analytical and Services Agency) external agencies can access any element of the database. From late 2005, the Joint Personnel Administration (JPA) system will be introduced incrementally to the 3 services, starting with the RAF. This will possess its own 'Move and Track' functionality and eventually replace the separate systems currently in place.

### **OPERATIONAL MEDICAL RECORD KEEPING**

62. The Issue. The 1990/1991 Gulf deployment revealed substantial shortcomings in operational medical record keeping. It has also been recognised that there was a lack of transparency about the anti-biological warfare immunisation programme. This led to serious misconceptions, which seem to persist even now that the MOD was concealing the type and number of vaccines being administered. There was also a large-scale failure to transfer the temporary records that were made in the Gulf to individuals' permanent medical records. In addition, there was a substantial under-recording in permanent medical records of the immunisations actually given to troops in the theatre<sup>20</sup>. There were then subsequent failures in the routine peacetime inspection systems to pick up the gaps in record keeping that this had created.

63. What has MOD done? A mandatory operational medical record form is now in use whenever Service personnel deploy on non-maritime operations, during which they are not required to have their permanent Service medical record with them. The permanent record is held on board ship for the RN ship's company and embarked Royal Marines and thus is available to medical staff. The records of deployed Army and RAF personnel are retained at their home base. The operational record has been used in the Army since July 1998 and on a tri-Service basis where appropriate from 20 January 1999. It replaced the records and ad-hoc lists that were prepared for some personnel during the 1990/1991 Gulf Conflict. The operational record comprises a 12-page booklet in a waterproof cover and should be held by the individual to whom it relates at all times while deployed on operations. Since January 1999, medical centres have been required to record the fact that the booklets have been issued to individuals so that forms not returned after the operation can be sought. On return from deployment, the information recorded to be transferred to the individual's permanent record. The operational record should be reviewed for accuracy at each medical examination and updated following

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<sup>20</sup> Implementation Of The Immunisation Programme Against Biological Warfare Agents For UK Forces During the Gulf Conflict 1990/1991 Dated 20 January 2000.

vaccinations and significant health events. An audit procedure was undertaken to assess the extent to which information was transferred to the permanent record.

64. We aim to be as transparent as possible when referring to biological warfare medical countermeasures. Information from the temporary record is also to be transferred to the MOD's Primary Health Care Information Systems (PHCIS). Medical information is also recorded electronically in theatre on the Theatre Operational Medical Data (TOMD) system. Medical data stored on TOMD is downloaded into parent electronic medical information systems held at unit medical centres and at the Central Health Records Library.

65. Op TELIC Experience? The take up and use of the new booklet was high and, despite the increased administrative burden, proved popular with users. We are now reviewing the format to make it even more user-friendly. In addition, we introduced a medical audit form to check that the relevant medical procedures were completed both during Op TELIC and upon return to units. At present it is too early to provide results.

## **DEPLETED URANIUM BASED ANTI-ARMOUR MUNITIONS**

66. The Issue. Depleted uranium (DU)<sup>21</sup> based anti-armour munitions were rapidly brought into UK service for use in the 1990/1991 Gulf Conflict. With hindsight, more could have been done to anticipate that their use might precipitate worries about ill-health and to communicate the minimal health risks more effectively. Some advice was available within the US chain of command, and some was passed through the UK medical chain of command into theatre, but in both cases the information arrived late and was not widely disseminated, nor adequately communicated to the front line commands before the Conflict. This led to the situation where some UK forces potentially could have been exposed to DU dust (which is chemically toxic and weakly radioactive) during clean-up activities or unauthorised "sight-seeing". However, there is no scientific or medical evidence to link DU with ill-health. Many independent reports have been produced and researchers are continuing to study the battlefield effects of using DU munitions, but none of this research<sup>22</sup> has found widespread DU contamination sufficient to impact

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<sup>21</sup> DU is chemically toxic and weakly radioactive. There is a theoretical possibility that excessive exposures from the use of DU in munitions could cause kidney damage or an increase in cancer risk, but most scientists believe that there are very few occasions on which troops or civilians need to take any precautions to reduce potential DU intakes.

<sup>22</sup> The Royal Society, The health hazards of depleted uranium munitions Part I, Policy document 6/01, ISBN 0 85403 5540, London, May 2001. The Royal Society, The health hazards of depleted uranium munitions Part II, ISBN 0 85403 5745, London, 2002. UN Environment Programme, Depleted Uranium in Kosovo, Post-Conflict Environmental Assessment, UNEP Scientific Mission to Kosovo 5 – 19 November 2000, Geneva, 2001. UN Environment Programme, Depleted Uranium in Serbia and Montenegro, Post-Conflict Environmental Assessment in the Federal Republic of Yugoslavia, ISBN 92-807-2146-1, 2002. US Department of Defense, Office of the Special Assistant for Gulf War Illnesses, Environmental Exposure Report: Depleted Uranium in the Gulf (II), 13 December 2000

on the health of the general population or deployed personnel.

67. Briefing on DU is now a modular part of a number of ammunition, medical, and supply courses. Where appropriate, as occurred in deployments to Kosovo and for Op TELIC, instructions were issued for pre-deployment training to deal with the potential hazards from DU. Safety Instructions regarding DU were produced for Kosovo and Op TELIC and their existence publicised within theatre. It should be noted that the UK did not use DU-based ammunition in the Balkans. DU ammunition was used exclusively by US Forces in air-to-ground attacks.

68. Claims of ill-health following suggestions of exposure to DU have featured significantly in veterans' and media analysis of GVI since the Conflict. In January 2001, in recognition of concerns of many Service and former Service personnel generated by the extensive media coverage on DU, it was announced that the MOD would identify an appropriate voluntary screening programme for UK personnel who had served in the Balkans. This programme would be equally applicable to Gulf veterans. An independent Depleted Uranium Oversight Board (DUOB) was established to oversee the setting up of the voluntary DU screening programme. The DUOB consists of technical experts and veterans' representatives with observers from MOD, the Department of Health, the Health and Safety Executive. Solicitors representing the veterans also provided observers until recently.

69. The technical experts on the DUOB considered that a suitably accurate, precise and sensitive test for uranium isotopes in urine was possible for historic exposures. However, while there was anecdotal evidence that such a test existed, there was no independent evidence of the reliability of tests for DU that had been carried out before the DUOB was formed. The DUOB therefore commissioned a series of pilot studies which examined the suitability of a number of testing methods. Following satisfactory results from these studies, the screening programme is now underway. Further information on the DUOB can be obtained from their website at: [www.duob.org.uk](http://www.duob.org.uk).

70. Following the consultation process for the proposed screening programme for DU, we have developed, within our overall health and safety framework, a policy for biological monitoring for DU on current and future operations. The policy was finalised in October 2002 and first implemented in April 2003, following the use of DU munitions in Op TELIC. It provides for biological monitoring for DU for military personnel and civilians on operations where DU has been used.

71. Op TELIC Experience? Advice on the availability of the biological monitoring programme was included in the operational safety instructions regarding DU. Additionally, a DU information card was introduced in March 2003 for issue on departure from theatre to confirm that personnel had been deployed in a theatre where DU munitions were used. The card reminds them of their consequent eligibility for a voluntary biological monitoring test to measure uranium in the urine. A facsimile of the DU information card is at Annex B. As at September 2004, some 350 personnel, both military and civilian, have come forward for the test. The only people in whom DU has so far been detected are a small number who sustained shrapnel injuries in incidents with DU munitions.

72. As part of our post-Op TELIC health research programme, two DU studies are taking place. One, by the King's Centre for Military Health Research, is a study of exposure to DU across the TELIC battlefield. A sample of 700 personnel including front line, clean-up personnel, medics and support staff are being asked to give urine samples, to assess the possible exposure to DU across the various theatre roles. In addition, a DU normative value study for military personnel is underway at the Institute of Occupational Medicine, Edinburgh. The aim is to characterise the overall distribution of values of urinary depleted uranium and uranium concentrations in military personnel in all three services, who did not deploy on Op TELIC.

## **SECTION 3 – ISSUES THAT AROSE AFTER THE CONFLICT**

### **MOD DEPARTMENTAL RESPONSIBILITY FOR POST- DEPLOYMENT ISSUES**

73. The Issue. The difficulties MOD had in responding to veterans' enquiries because the information was not available led to suggestions – and these persist – that the MOD was not being as open as it might have been.

74. Initially, responsibility within the MOD for responding to GVI issues fell to the MOD's Defence Medical Services Directorate. However, lessons learned from the UK deployment and its aftermath covered issues wider than just medical ones. There was, therefore, a need for a broader and more open approach to be taken.

75. What has MOD done? In early 1997, the MOD's GVIU was established to provide a focus for a more holistic approach. Later that year the Government made clear how it was going to deal with GVI and stressed the continuing importance of openness, honesty with Gulf veterans, and a desire to listen to what they have to say and to engage in a dialogue<sup>23</sup>. The GVIU brought together staff from a variety of backgrounds and took on responsibility for the Gulf Veterans' Medical Assessment Programme (GVMAP) which is open to all Servicemen and women, including those who have since left the UK Armed Forces, and Ministry of Defence civilians, who served in the Gulf at any time between August 1990 and July 1991, or who believe that their health has suffered as a direct result of the Gulf conflict. The GVIU became responsible for a liaison officer post in Washington DC. The GVIU has also undertaken international liaison on GVI issues, and pulled together and examined basic data on the Conflict that was available only piecemeal elsewhere. It created a focal point for dialogue with the veterans themselves which has helped to unravel the intricacies of various incidents that form the basis of veterans' concerns. GVIU's functions have now been incorporated into the new Veterans Policy Unit (VPU).

76. The Defence Medical Services (DMS) are responsible for medical support for deployed operations and the provision of timely and appropriate healthcare to military personnel to ensure they are ready to deploy when needed. To reinforce the management of the DMS, not least in terms of support to recent and current operations, the post of Deputy Chief of the Defence Staff(Health) was established in October 2002 to work alongside the 3 star Surgeon General (SG). The SG continues to be responsible for all matters relating to clinical governance; he is the principal medical adviser to Ministers and to the Chief of the Defence Staff. He is also responsible for all professional aspects of operational healthcare and delivery of post-operational health care to those in the Armed Forces.

77. Op TELIC Experience? VPU is leading on post-Op TELIC health research initiatives which are being taken forward in conjunction with DMS and others under the auspices of the MOD's Operational Health Surveillance Strategy Committee and the independent Op TELIC Health Research Board.

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<sup>23</sup> Gulf Veterans' Illnesses: A New Beginning dated 14 July 1997.

## **POST DEPLOYMENT HEALTH RESEARCH**

78. The Issue. A number of specific health-related research activities were instigated after the Conflict to identify the extent of ill-health among UK Gulf veterans. This important research was necessary partly because of a lack of global comprehensive post deployment health information. There is a continuous need to collect and maintain health information and to initiate post-deployment health research in respect of operations if necessary.

79. What has MOD done? In 2002, we asked the independent Medical Research Council (MRC) to undertake an independent scientific review of all the UK research work that has been carried out into GVI in an international context and to advise on whether there are any areas appropriate for future research. The MRC published their report following this review on 22 May 2003. The MRC concluded that the UK's research programme into GVI was highly regarded internationally and has made: "a critical contribution to international understanding". The report contains a number of recommendations for further work. Some are highly complex and we are working with the MRC to take these forward.

80. Op TELIC Experience? On 7 May 2003, Ministers announced<sup>24</sup> that once personnel have returned to duty and resumed their normal lives, researchers will issue questionnaires to a large representative cohort of those who were deployed on Op TELIC1, seeking data on health status and exposures. As well as regular and reservist Service personnel and MOD civilians, other groups who deployed with them such as representatives of voluntary aid societies, contractors' personnel and embedded journalists will be invited to form part of the cohort. The same questionnaire will be distributed to a cohort of those who did not deploy to provide a comparison, or control, group. All of this research activity is now underway. We have set up an independent oversight board to monitor the work. This is chaired by an independent scientist with members drawn from MOD and expert outside bodies. The research will be published in peer reviewed scientific literature.

## **HEALTH ASSESSMENT AND SURVEILLANCE**

81. The Issue. The traditional focus of military medicine (treatment of combat casualties) needs to be complemented by an expanded drive to ensure the health and well being of Service personnel throughout their careers. One of the lessons identified following Op GRANBY is the importance of adequate health monitoring and longer term health surveillance so that any long term problems can be dealt with as early as possible.

82. What has MOD done? The MOD is undertaking a programme of health surveillance research, the aim of which is being to identify, evaluate and recommend measures that should be taken on health surveillance, rather than just morbidity surveillance, in UK Service personnel. The programme involves external academic

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<sup>24</sup> House of Commons, Official Report, 7 May 2003, Column 34WS.

teams<sup>25</sup>. Phase 1 surveyed health surveillance systems in UK industry and identified areas of best practice. It also reviewed current military systems and recommended key features for a common approach to military health surveillance. Phase 2 involved the assessment of systems currently in use in other countries' armed forces and the piloting of a short health and well being questionnaire with UK forces to evaluate the most effective instrument for maintaining such health surveillance. This work underpinned the existing policy on pre and post operational screening and surveillance.

83. Op TELIC Experience? Although not specifically related to OpTELIC, the Government is committed to having an operational real time health monitoring system by the end of 2005. This system will then be developed incrementally in light of the experience of users and in line with the NHS National Programme for IT.

### **MORTALITY AND CANCER**

84. The Issue. As might be expected mortality is a key health indicator in a population and is used by the World Health Organisation. Data on the incidence of major diseases, such as cancer, in a population is also important when dealing with suggestions of adverse health effects.

85. What has MOD done? The NHS Central Register records for all Gulf veterans and for those personnel in an Era comparison group<sup>26</sup> have been 'flagged' to enable research into mortality and cancers rates to be taken forward. Since the mortality results appeared in July 2000, the MOD has undertaken to publish updated information every six months. A breakdown of deaths due to cancer was published for the first time in July 2002.

86. Op TELIC Experience? Work is in hand to identify an Era comparison group for research purposes as well as identifying those who took part in the deployment. In all instances, it is planned to flag their NHS records to enable the future monitoring of cancers and deaths. Once this work is complete and the appropriate ethical approvals have been obtained, we plan to produce Op TELIC mortality and cancer data for the first time next year.

### **HAZARDOUS EXPOSURES**

87. The Issue. Experience in the 1990/1991 Gulf Conflict demonstrated that the modern battlespace poses many risks to health in addition to those from enemy action and naturally occurring hazards, such as those imposed by climate and endemic disease. Today, warfare is often conducted near complex industrial

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<sup>25</sup> King's College, London and the University of Leicester.

<sup>26</sup> The Era group comprises 53,143 personnel, randomly sampled from all UK Armed Forces personnel in service on 1 January 1991 and who did not deploy to the Gulf. This group is matched to the 53,409 Gulf veterans to reflect the socio-demographic and military composition of the Gulf cohort in terms of age, gender, Service (Army, Royal Navy, Royal Air Force), officer/other rank status, regular/reservist status, and a proxy measure for fitness.

infrastructures with the associated risks of possible exposure to highly specialised and toxic chemical substances. The Conflict also pointed up the need for greater awareness of the risks associated with a range of potentially lethal materials – such as pesticides. The supply, management and handling of these substances should be in accordance with laid down procedures, by trained professionals, using the correct equipment. Together all of these non-warfighting hazards represent potential sources of immediate and long-term health risks to military personnel which need to be properly assessed, and, if significant, managed in a manner appropriate to operational imperatives.

88. What has MOD done? Since the Gulf Conflict, the Joint Services manual on pest control has been rewritten and remains under review by the Joint Services Pest Management Committee. Advice on the use of pesticides is now included in deployment warning notices and commanders' directives issued by the Permanent Joint Headquarters for operations and major exercises.

89. Military personnel face an array of health hazards on military operations. In recognising this, the MOD has developed a risk management system, which deals with the full spectrum of hazards to health and these have been classified as Environmental and Industrial Hazards (EIH). The key principle is to avoid hazards wherever possible. Where this is operationally impracticable, the in-theatre Commander will establish procedures to monitor the hazards, conduct site risk assessments, quantify risks and, where appropriate, implement control measures. The effectiveness of this system relies on junior levels of Command being aware of the dangers of their environment and, where risks are identified, being able to record and communicate the risk to personnel, together with appropriate control measures.

90. Op TELIC Experience? The UK's capability for environmental monitoring in operational theatres is limited, but Environmental Health Officers and Technicians were deployed on Op TELIC. A senior Technician was attached to the Joint Nuclear, Biological and Chemical (NBC) Regiment for the duration of the Operation to provide advice on health risk assessment and on guidance to personnel. In addition, the Army's Environmental Monitoring Team was placed on a high state of readiness to deploy to theatre to provide a definitive sampling and monitoring capability. In the event, the Team's input during the warfighting phase was only required to be advisory, although they did deploy during Op TELIC 2 in their primary role. As part of the post Op TELIC research package the Institute for Environment and Health, Leicester University have been contracted to conduct a study of exposures (see paragraph 82).

## **RISK COMMUNICATION**

91. The Issues. Communication is of fundamental importance in the regulation of risks. It allows people to participate in, or be effectively represented in, decisions about managing risks. And it plays a vital part in putting decisions into practice – whether helping people to understand regulations, informing them and advising them about risks they can control themselves. It is about openness, honesty, reducing the scope for rumour and the unknown, and ensuring that personnel know not only what

might happen to them but what has happened to them. The language used needs to be readily understood by a lay audience and the special concerns of the audience need to be addressed as well as the facts. Risk communication should be ongoing and routine. It must recognise the different needs and concerns of groups within a force – for example, the relative psychological vulnerability of younger, inexperienced personnel and any specific health concerns of the increasing proportion of female personnel who will deploy in future.

92. There were failings in risk communication throughout the Gulf Conflict, some of which lie at the heart of the problems of veterans and MOD's subsequent difficulties in explaining events of the time. Specifically, the fact that the MOD was not open about the UK's anti-biological warfare immunisation programme, did not provide sufficient information to forces about the vaccinations they were receiving, did not explain the reasons for offering them, or provide information on the assessments of safety of the vaccines, side effects and so forth, has led to uncertainty, suspicion and doubt. Information about the potential hazards (or absence of hazards) presented by DU was not always fully disseminated nor was information on the simple precautions which could have been taken to minimise these risks. There were also gaps in debriefing troops comprehensively and authoritatively after each CW alarm with the consequence that many veterans are irretrievably convinced that these alarms were genuine and the subsequent explanations bogus.

93. What has MOD done? Improving risk communication is a process that begins in routine peacetime training. A number of steps have been taken since the Gulf Conflict to improve this process within the UK armed forces. Chemical and biological warfare agent issues present particular risk communication problems. It is the practice during routine training to emphasise that all alarms are to be taken as real. This precautionary approach ensures that troops always react to an alarm and take the appropriate defensive measures. In terms of risk communication it can potentially distort the fact that alarms may go off in the presence of some harmless substances. Troops must therefore still always 'suit up' when the alarm goes off but they must not assume that because it has gone off inevitably a real chemical agent is present. An appropriate assessment of risk and a balanced response is therefore essential. For example, it may be administratively easier to say that in the event of potential hazard, full protective clothing should be worn. But the wearing of the protective clothing in itself presents risks - for example, limited vision, and the possibility of heat exhaustion.

94. Another important lesson arising from the Gulf Conflict is the need to debrief service personnel thoroughly, consistently and in as much detail as possible following every single alarm. Commanders must never allow a pattern of false alarms to become an excuse for the down-playing of each new alarm. If the procedures for the removal and analysis of samples are initiated, (as they were following the incident on 19 January 1991 at Al Jubayl, Saudi Arabia<sup>27</sup>), then the

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<sup>27</sup> A Review of the Suggested Exposure of UK Forces to Chemical Warfare Agents in Al Jubayl on 19 January 1991 dated 20 January 2000.

results of the analysis need to be passed back quickly and authoritatively down the chain of command to reassure individuals involved in the original alert. Awareness of these issues is being raised throughout the armed forces. New chemical agent detectors are now being introduced that will give fewer false alarms. Robust procedures for sampling and testing of suspected chemical and biological agents are in place (and were utilised for Op TELIC). As has been mentioned above, new guidance is in place which explains the risks from handling DU-based ammunition.

95. Op TELIC Experience? The types of issues and problems that veterans have raised over the years do not appear to have been a factor during the recent deployment of Service personnel to Iraq and in the immediate aftermath. Between the first Conflict and Op TELIC other large scale deployments (Bosnia and Kosovo) have taken place and so deployment and aftercare procedures have been fine-tuned. These have in turn minimised the problems previously reported by Service personnel. The lack of problems identified is encouraging, but we need to take account of attitudes and experiences of Service personnel once they have had time to reflect and when they retire from the Armed Forces. The post deployment research that we have in hand will help in this respect.

## **RELEASE FROM SERVICE**

96. The Issue. Even before Op GRANBY, many of those who eventually deployed may have been concerned that they would be made redundant as part of the Options for Change<sup>2829</sup> manpower reductions. Following Op GRANBY, many Service personnel left the armed forces soon afterwards – some voluntarily, some not. This meant that some people had not only to cope with their experience of the Conflict but the additional challenges of a rapid return to a non-Service environment. This may have been a contributory factor to their likelihood of developing subsequent ill-health.

97. What has MOD done? In July 1998, a partnership was formed between the MOD and Coutts Consulting Group PLC to give resettlement a more civilian edge. All Service personnel with three or more years' service are eligible to register.

98. All personnel who leave the armed Services have access to a resettlement programme. The current tri-Service Resettlement full programme is available to all personnel who have served a minimum of 5 years and to all personnel (including Reserves) who are medically discharged whatever their length of service. For those who have served 3 years a Job-Finding-Only service is available. Personnel who are administratively discharged or who fail their training (the potentially vulnerable to social exclusion) are now provided with resettlement 'signposting' to reduce the risk that they will fail to make a successful transition to civilian life.

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<sup>28</sup> House of Commons, Official Report, 20 July 1990, Column 470.

<sup>29</sup> At 1 April 1998, the number of armed forces personnel had fallen by 31% compared to 1 April 1990. MOD, Defence Statistics 1998.

99. Op TELIC Experience? We have introduced a 2-3 day period of 'normalisation' for Service personnel, both Regular and Reserve, returning from Op TELIC. They are given time to deal with the issues raised by combat in the company of those who understand and have shared the experiences. During this period, they should be offered a post-deployment briefing package. This package includes two leaflets – see Annexes C and D - and a presentation, covering post traumatic stress reactions, and the problems that may be encountered on returning home to families. Personnel receive guidance as to whom they might consult if they experience post traumatic problems, including their commanders, padres, social workers or medical officers. The families of returning personnel are also offered a presentation and issued with leaflets to alert them to the possible after-effects of the operational deployment. A review of normalisation procedures for regular and reservist personnel has taken place in relation to Op TELIC.

### **RESERVE FORCES**

100. The Issue. Members of both the Regular Reserve and the Volunteer Reserve Forces deployed on Op GRANBY. Almost all were in medical roles and most served in one of two units - 205 General Hospital (Volunteers) and 32 Field Hospital. Although researchers from King's College, London did not show that reserve service was a risk factor in subsequent health outcomes, interestingly, reserves comprised 11% of the patients seen during the first two years of the Gulf Veterans' Medical Assessment Programme (GVMAP) – a proportion higher than would be expected given the number of reservists who deployed. This may have been because, since they were no longer serving, they sought a referral to the GVMAP while those still in the armed forces saw their Service doctor. It may also be a reflection of average age or a reluctance on the part of some serving personnel to go to the GVMAP because they feared, wrongly, that this would have an adverse effect on their careers. In addition, the larger proportion of Reserves attending the GVMAP may have been because NHS doctors did not have access to information which may have been available to Service doctors through the Chain of Command, hence they may have been more likely to refer their patients to the GVMAP.

101. The procedures for employing Reserves were probably immature and untested at the time of the Gulf Conflict and there were shortcomings in MOD's preparation of these part-time or ex-Service personnel (predominantly Army personnel) for the Gulf Conflict with its many stresses and challenges. There have been suggestions (with the benefit of long hindsight) that the discharge of Reserve forces after the Conflict was conducted too rapidly. This approach was motivated by the good intention of returning Reservists to their civilian occupation, often within the NHS and family as soon as possible. In post-operational reports, it was seen as a very smooth and successful process.

102. The policy and procedures for reserves of all three services, but particularly the Territorial Army, did not adequately address the long term implications of the process of transition back to civilian life after service, or how any issues arising from permanent service should be handled when the veteran has a different status within the civilian community. Procedures extant in the early 1990s were not well

understood and it is not known whether all veterans received appropriate advice on these issues during 1990 and 1991. It is to be expected that Reserve Forces will be called out in support of future operational commitments; indeed, the Reserve Forces have consistently provided, on a voluntary basis, some 10% of the total UK force deployed on NATO operations in the Balkans since December 1995.

103. Operations in support of Op TELIC have seen the largest compulsory call out of the Reserves in modern times. To date (September 2004), 12,312 Reservists reported for mobilisation; 10,722 were accepted for service. The need for effective induction and preparation (mobilisation), and administration during full time service and demobilisation of reservists has been recognised as essential.

104. What has MOD done? In May 1999, the Army established the Reserves Training and Mobilisation Centre (RTMC) at Chilwell, Nottinghamshire. Mobilisation and demobilisation through RTMC, or at centres with staff provided from and trained by RTMC, has gone a long way to eliminating the issues identified with respect to the call out and employment of the Army's Reserves. RTMC provides a focal point for individuals during mobilisation and demobilisation which was hitherto lacking. All Naval Reserves now mobilise through the Royal Navy Mounting Centre (RNMC) in HMS NELSON, Portsmouth. Prior to 1 April 2004 RMR and RFR (RM) were mobilised/demobilised through RTMC Chilwell and received the same package as their Army counterparts. RAF Regular Reserves are mobilised/demobilised through any one of six nominated Reserve Mobilisation and Training Centres (RMTC) located at major RAF Stations. RAF Volunteer Reserves are mobilised/demobilised through the parent RAF Station of their Volunteer Reserve unit. The mobilisation period consists of a short (in the Army case - not normally more than two day) administration package including a medical and dental examination. This is followed by an individual training package consisting of refresher periods in topics such as weapon handling, first aid and security, the content and length of which depend upon the role that the mobilised individual is expected to fill, as well as a fitness assessment. When a reserve unit is being mobilised, this is followed by a period of collective training which may be of several weeks' duration. Training teams provide theatre specific training packages covering the nature of operations and the risks to be anticipated in particular theatres of operation. The medical and dental examination includes a questionnaire, to be completed by the reservist, which inquires about any history of perceived psychological illness and an estimate of current alcohol intake. Standard service immunisations are given as required.

105. During the demobilisation process a briefing is given in the form of general advice about traumatic stress reaction and on common sense measures to aid the identification of its symptoms. Demobilisation also includes a request for a declaration of any change of state of health during service as well as information about specific exposure to potentially adverse health effects. An opportunity is also offered to see a doctor. All families of Reserves are provided with information on traumatic stress reaction in advance of the reservist's return home. Material on securing continuing advice is provided on demobilisation, including contact details for medical and other welfare services. Guidance on seeking reinstatement in civilian employment is also provided.

106. Op TELIC Experience? Reserve personnel were visited in theatre in 2003 and earlier this year and questioned about their Op TELIC experience. Pay and administration issues tended to be raised rather than health issues. The Services have also conducted Demobilisation Surveys which should provide valuable feedback. In respect of welfare, a range of follow up measures has been put in place to check on Reserve personnel following demobilisation so that any problems can be identified at an early stage. A number of Reserve personnel have been referred to the GVMAP and have been seen. Normalisation and welfare issues for Reservists have been refined and the number of problems raised with the MOD is currently at a low level.

## **CONTRACTORS' PERSONNEL**

107. The Issue. Approximately 2,000 civilian contractors' employees worked in the Gulf in direct support of UK forces. We do not know precisely how many were involved, what they all did and where they were. Issues such as security, welfare, medical care, and insurance were not adequately addressed.

108. What has MOD done? MOD is increasingly reliant upon contractors' personnel to provide in-theatre support of the armed forces during military operations. The issues surrounding their activities in operational situations – welfare, security, access to health care etc – need to be clearly understood by all those concerned. A joint MOD/Industry Contractors on Deployed Operations (CONDO)<sup>30</sup> Project Team was set up in December 1999 to look at and develop policy for the use of CONDO. Contractors whose personnel deploy on military operations to undertake tasks contracted for by MOD will be required to report to the MOD where their personnel are, the dates they are in theatre, and what they are doing. A process has been developed to record and archive contractors' personnel records which will help to co-ordinate the recording of personnel in theatre. All new contracts will adopt this policy, while extant contracts will only be amended at an appropriate time. It is the responsibility of contractors to ensure that location records are maintained and provided to the MOD in respect of not only their personnel but also those of any sub-contractor.

109. It is also the responsibility of the contractor to ensure that his personnel, including any sub-contractor is medically and dentally fit to perform the task they have been contracted to undertake. MOD retains the right to veto the deployment of an individual or remove him/her from theatre if they become a medical or dental burden on limited operational resources. While deployed, MOD will provide emergency health treatments and, in non-emergency cases, health care equivalent to that provided to Service personnel, free of charge. However, the contractor will be required to make provision for immediate first aid care in accordance with current responsibilities and for repatriating employees unfit for further work. Long term health care of civilians does not fall within MOD's responsibilities.

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<sup>30</sup> CONDO includes locally recruited workers employed by contractors.

110. Consistent with existing practice, the presumption will be that contractors will be responsible for ensuring that their employees have adequate personal insurance in place prior to deployment on military operations. However, in cases where insurance cover is either not available or has been withdrawn by the insurer (e.g. if the situation in theatre has unexpectedly changed from benign to non-benign) the MOD will consider the alternatives with the contractor.

111. Op TELIC Experience? About 150 civilian contractors were deployed into theatre at any one time during Op TELIC and this was the first time contractors were used under the MOD's CONDO policy. In general, it appeared to work well. However, a number of shortfalls were exposed, among them the ability to actually track personnel and issue of NBC equipment. Further work is underway.

### **GULF VETERANS' MEDICAL ASSESSMENT PROGRAMME**

112. The Issue. The number of unexplained post-deployment ill-health issues affecting a potentially large number of individuals, deemed it appropriate to establish a medical assessment facility to which concerned individuals could be referred by their doctors. The aim of the facility would be to develop expertise in respect of specific deployments.

113. What has MOD done? The MOD's Gulf Veterans' Medical Assessment Programme (GVMAP) was set up in 1993. The GVMAP is open to all Servicemen and women, including those who have since left the UK armed forces and Ministry of Defence civilians, who served in the Gulf at any time between August 1990 and July 1991, or who believe that their health has suffered as a direct result of the Gulf conflict. Individuals who worked for contractors providing direct support to UK operations during the Gulf conflict may also be seen. The GVMAP has two main purposes: first, to investigate patients' medical complaints and, so far as possible, to diagnose what they are suffering from and recommend appropriate management or referral, or provide reassurance if no illness is found; the GVMAP collates statistical information, which is available in an anonymised form as a resource for researchers who have obtained the appropriate ethical clearance. This may be useful in helping to determine whether there are particular patterns of ill health associated with service in the Gulf.

114. The GVMAP has played an important part in addressing the health concerns of veterans who have been seen there, and indeed veterans who have not, by collecting and publishing anonymised data on patients. In response to a recommendation made following an independent audit in 1998, GVMAP introduced a patient satisfaction questionnaire to gather feedback on performance. As of 30 June 2004, 97 % of patients who completed the questionnaire expressed satisfaction with the service provided. Feedback from satisfaction questionnaires has enabled the GVMAP to improve the service delivered. For example, we have made it clearer to veterans that the GVMAP automatically writes to their doctors at the time of the visit, and again approximately six weeks later, and that veterans have right of access to their GVMAP assessment report.

115. We have recognised that some patients find it difficult to travel to London for an assessment and since May 2001, have been running clinics at Northallerton, North Yorkshire. The clinical findings of the first 3,000 Service and ex-Service patients seen have been reported in the medical literature<sup>31</sup>.

116. Policy guidance on how Service doctors should deal with medically unexplained symptoms following deployment has been issued by the MOD's Surgeon General.

117. Op TELIC Experience? Defence Medical Services issued SGPL 16/03 (The Management of Medically Unexplained Symptoms Following Deployment) to alert medical staff to the possibility of personnel developing post-deployment symptoms and to instruct on the procedures to be followed. On 7 May 2003, we announced<sup>32</sup> that the role of the GVMAP would be extended to include veterans from Operation TELIC and others on referral from their doctors. We have no plans at present to further extend the remit of the GVMAP or to establish a separate new facility. However, the situation will be reviewed periodically.

## **WAR PENSIONS**

118. The Issue. Gulf veterans have been critical of the operation of the war pensions scheme.

119. What has MOD done? The terms of the war pensions scheme are determined by legislation. Its current limitations are fully recognised, including the inadequacy of its provision for the more seriously disabled, hence the MOD's proposals<sup>33</sup> for new compensation arrangements. However, these are not planned to be retrospective. The proposed new scheme would be for injuries and illnesses caused on or after the date of its introduction. The war pensions scheme will continue for those personnel whose service predates this.

120. The Veterans Agency (VA, formerly the War Pensions Agency) administers the War Pensions Scheme. The VA was transferred from the Department for Work and Pensions to the MOD in June 2001. This has led to improvements, notably closer working between the various parts of the MOD and, consequently, a better response to veterans' needs. In keeping with the nature of GVI, many claims from Gulf veterans are complex, involving multiple ill-defined symptoms which, consequently, are difficult to determine. In line with wider expert medical understanding, the VA has not generally accepted that there is a single definable illness that could be called "Gulf War Syndrome". However, the fact that this label is not recognised does not mean that a war pension will not be paid for the underlying

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<sup>31</sup> Lee H et al "Health Status and Clinical Diagnoses of 3000 UK Gulf War Veterans" Journal of the Royal Society of Medicine, vol 95, 1 October 2002, p 491 – 497.

<sup>32</sup> House of Commons, Official Report, 7 May 2003, Column 34WS.

<sup>33</sup> Ministry of Defence: Joint Compensation Review: A Consultation Document dated March 2001.

disablement. A war pension will be paid for substantial disablement, regardless of the label that is given to it, where it is assessed under scheme rules to be due to service.

121. The VA set up a specialist Gulf cell in 1996 in order to provide expertise and continuity in dealing with Gulf veterans' claims. Most claims have been made within 7 years of Service release and so there is no onus on the claimant to prove that disablement/death is due to Service. The onus lies instead with the MOD to prove that disablement/death was not due to Service. Claims must be accepted unless a Service causal link can be disproved beyond reasonable doubt by reliable evidence. Utilisation of medical reports from the GVMAP and enhanced medical adviser expertise in dealing with claims for GVI have significantly reduced the need to obtain further medical evidence. Claims clearance times have subsequently been reduced.

122. Op TELIC Experience? Claims for a war pension can be made for any disablement, by anyone who has regular or reservist service. Claims cannot be made while a person is still serving: they can only be accepted at or beyond service termination. To date (August 2004) 172 claims have been received from Op TELIC participants, with 62 awards being made. The majority of claims are for defined illnesses and injuries commonly found in relation to other service theatres. The VA is implementing agreed measures to allow a separate analysis of Op TELIC cases.

## **COMMEMORATION AND CEREMONY**

123. The Issue. There is a need to allow individuals to feel psychological closure following return from deployed operations. Commemoration and ceremony would be useful mechanisms to reinforce this.

124. What has MOD done? Our Strategy for Veterans<sup>34</sup> includes – among a range of measures - commitment to support events and projects that commemorate the contribution of our Armed Forces. Work is overseen by the Minister for Veterans.

125. Op TELIC Experience? A Service of Remembrance for Iraq 2003 was held at St Paul's Cathedral on 10 October 2003. Her Majesty the Queen and His Royal Highness The Duke of Edinburgh were in attendance, accompanied by the Prince of Wales and other members of the Royal Family. Relatives of those who died in action in Iraq, together with Government representatives and diplomats, Service chiefs and Service personnel also attended. The Defence Council were present along with representatives from Parliament, Single Service Boards, Unit representatives/Colonel and Colonel Commandants and representatives of all the Formations, Ships, Regiments, Corps and Squadrons who were deployed as part of the UK Component Force.

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<sup>34</sup> The cross-government Veterans Initiative, which works in close partnership with ex-service organisations, was launched in March 2001.

## **CONCLUSIONS**

126. This paper reviews a number of issues relating to the health of personnel who served in the Gulf Conflict of 1990/91. It recognises that we could have done better in a number of areas, especially regarding the collection and dissemination of information. Experience during Op TELIC indicates that improvements to a wide range of policies and procedures and greater openness with medical countermeasures have all contributed towards the successful deployment and conduct of military operations in Iraq. Overall, the provision of in-theatre medical care throughout Op TELIC was very successful. But it is still too early to draw definitive conclusions about post deployment health issues. Reports of ill health in US and UK veterans took some 18 to 24 months to emerge after the end of the Conflict. In the event of Op TELIC veterans being concerned about their health, we now have well established procedures to better assist them than after the first Gulf Conflict. The support network available to veterans who experienced a range of problems (not just health related) following the Conflict was possibly not as accessible to those who really needed assistance. The appointment of a Minister for Veterans in February 2001 and the wide of range of activities undertaken under the Veterans Initiative are helping to transform the way assistance to veterans of all kinds is delivered across Government with benefits for Gulf Veterans.

127. However, we must be realistic about what can be achieved in respect of operational health issues. It is important to keep in mind that military operations are often unpredictable, distressing, physically and mentally extremely demanding, conducted at a high tempo and in environments which may not allow ideal solutions to be implemented. This 'fog of war' can lead to procedures on the ground falling short of the ideal. Obviously during operations, administrative regulations and instructions – requiring the collection of data for example - must not impede war-fighting or put personnel at risk. This should not however be allowed to become an excuse for inaction. And even when everything sensible has been done to implement the lessons identified from the Conflict, post-deployment ill-health may still arise. The evidence of history<sup>35</sup> suggests that future deployments will lead to post-deployment health questions. We cannot therefore guarantee that deployed forces will not suffer ill-health, but we will endeavour to do everything we can to minimise the risks.

## **FURTHER INFORMATION**

128. Further information about the MOD's response to the health concerns of Gulf veterans, and all reports published by the MOD on this subject; can be obtained from the Veterans Policy Unit's website at: [www.mod.uk/issues/gulfwar](http://www.mod.uk/issues/gulfwar). Information is also available from the Veterans Policy Unit (VPU). VPU can be contacted via Freephone 0800 169 4495, by fax on 0207 218 1482, by e-mail to: [SPPoIVPU-GVIDD@mod.uk](mailto:SPPoIVPU-GVIDD@mod.uk). The postal address is:

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<sup>35</sup> Jones E, et al "Post Conflict Syndromes from the Boer War to the Gulf war: a cluster analysis of their nature and attribution, British Medical Journal, 9 February 2002, Volume 324, p 321- 324.

SP Pol Veterans Policy Unit - Gulf Veterans' Illnesses  
Ministry of Defence  
7<sup>th</sup> Floor, Zone H  
Main Building  
Whitehall  
LONDON SW 1A 2HB

4 November 2004

Annex A

**F MED 1022 - OP TELIC MEDICAL AUDIT – PERSONNEL CHECK LIST**

To be completed by unit medical staff.

1.	Service Number:	
2.	RN / RM / Army / RAF / RNR / TA / RFA/RAFA/ FTRS / Individual Reservist / Civilian / Other	
3.	Name (surname):	
4.	Name (forenames):	
5.	Date of Birth:	
6.	Parent Unit (Ship/Unit/Base):	

7.	<b>Unit(s) served with and their location(s) on Op TELIC:</b>		
	Unit	Location	Dates (from - to)
a.			
b.			
c.			

8.	<b>Post Deployment Stress Package</b>	
a.	Has the person above seen the presentation F Med 1021 'Coming Home'?	Yes / No
b.	Have they received the Handout 'Coming Home' (F Med 1019)?	Yes / No
c.	Have they received the handout 'Dealing with Traumatic Experiences' (F Med 1020)?	Yes / No
d.	Have they been informed as to how to access local military support groups?	Yes / No
9.	<b>Information Cards</b>	
a.	Has the person above received a Malaria Warning Card (F Med 568)?	Yes / No
b.	Have they received a Leishmaniasis Warning Card (Med Alert Card 3/03)?	Yes / No
c.	Have they received a DU Information Card (F Med 1018)?	Yes / No
10.	<b>List of Medical Countermeasures Issued (e.g. Combopens, Ciprofloxacin, Doxycycline):</b>	
	Medical Countermeasure	Date
a.		
b.		
c.		
d.	Has the person above handed in all unused Combopens, NAPS, Ciprofloxacin and Doxycycline?	Yes / No

11.	<b>Medical check on completion of and transfer of information from F Med 965</b>			
a.	Has the information from the F Med 965 been transferred to the F Med 4?	Yes / No		
b.	Has the information from the F Med 965 been transferred to PHCIS?	Yes / No		
c.	Was the information on the F Med 965 complete?	Yes / No		
	If no, what is missing?			
12.	<b>List of Immunisations given in theatre:</b>			
	Immunisation	Date	Confirmed by medical record	
a.			Yes / No	
b.			Yes / No	
c.			Yes / No	
13.	<b>List of Environmental and Industrial Hazard Exposures documented in the F Med 965 (eg DU):</b>			
	Exposure	Location	Dates	Other Details
a.				
b.				
c.				

**This information has been recorded to ensure that relevant medical procedures have been completed. I confirm that the information in this form is accurate to the best of my knowledge and belief. I understand that this information may be used for statistical analysis and I agree to my personal data being used for that purpose. I understand my confidentiality will be respected at all times and my personal data will be used and protected in accordance with the Data Protection Act 1998.**

Name (Interviewee)		Rank/Rate		Signature		Date
Name of interviewer		Rank/Rate		Signature		

**Remedial Action:**

**Unit/Date Stamp:**

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## Annex B

### **DU Information Card (F Med 1018)**

#### Front of Card:

You have been deployed to a theatre where Depleted Uranium (DU) munitions have been used.

DU is a weakly radioactive heavy metal, which has the potential to cause ill health.

You may have been exposed to dust containing DU during your deployment.

#### Back of Card:

#### **Further Information**

You are eligible for a urine test to measure uranium. If you wish to know more about having this test, you should consult your unit medical officer on return to your home base.

Your medical officer can provide information about the health effects of DU. Information is also available on the MOD web site:  
[www.mod.uk/issues/depleted\\_uranium/index.htm](http://www.mod.uk/issues/depleted_uranium/index.htm)

## **COMING HOME**

### **Operational Deployment**

#### **INTRODUCTION**

Prior to deploying to this operational tour, you may have had an image of what it would be like. The reality of the tour may have been very different. Remember that family and friends may also have had an image of the tour. They may have difficulty understanding your experiences and, because of this, they may ask many questions to clarify what it was really like.

Service personnel and their families generally cope well with operational deployment; however, when you return home, you may find that some of the following areas might be affected:

#### **RELATIONSHIPS**

- Most people look forward to the end of their tour. You may have expectations of what it will be like when you come home. In most cases coming home is trouble free but in others there may be some disappointment if reality does not live up to these expectations.
- Partners assume many roles during an operational deployment. These include: financial manager, mechanic, home maintainer and child-carer. For some this will have been very positive and there is a chance of some friction occurring if you want to take back some of these roles straight away.
- When you return home, it may take time to readjust to the family and for them to readjust to you. Be patient.
- Sometimes coming home may not be as smooth as you would like it to be. Remember that relationships have to be worked at and there will always be a period of readjustment and settling down.
- For many, an operational deployment can be quite positive and the period of separation can help to refresh relationships. Coming home can, for many, signal the start of a new phase in relationships with partners, family and friends.

#### **CHILDREN**

- Children will have grown and changed while you have been away. They may feel a little uncomfortable with you initially, as they have got used to

you being away. Be patient and allow them to get used to you in their own time.

- Children become used to being treated in a certain way by partners or child-carers. This may cause friction when they have to readjust to your style of parenting. Be patient, they will adjust if you do not treat them harshly or spoil them. Try to re-establish your normal parenting style and do not try too hard.
- Some children may be resentful at being left when you deploy. It is reasonable for them to feel this and they will soon forget the period of separation if you treat them well.

### **DIFFICULT TOURS**

- For some the tour may have been difficult and you may have had some unpleasant experiences. Try to talk them through. Family and friends are only too pleased to listen and support you while you think problems through and move on.

### **SOME DO'S AND DON'TS**

- Don't bottle things up. Try to discuss concerns as they come up.
- Don't try to avoid thinking and talking about experiences from your tour. Your family and friends will almost certainly want to listen.
- Don't isolate yourself. Try to be with people when possible, but also reserve some private time for yourself.
- Don't use alcohol to cover up any problems that you may have when coming home. Small amounts are OK, but frequent heavy drinking is destructive in the end.

### **DO'S**

- Do take time to be with your family and friends. Plan some events together even if you do not feel like it.
- Do try to fit in with the routine that your family and friends have established while you have been away. Try not to take over.
- Do look after yourself by eating and sleeping well and try and maintain a reasonable level of fitness.

## **WHERE TO FIND HELP**

There is an awareness of the problems faced by families after an operational tour. The Services have access to a number of agencies that can help with family problems faced by soldiers returning home.

If you are concerned about family problems you should seek the advice of your Unit Medical Officer or GP in the first instance.

## **DEALING WITH TRAUMATIC EXPERIENCES**

At some point, everyone experiences difficult or stressful events in their lives. Sometimes these can be difficult to come to terms with or highly distressing.

People often associate “trauma” with high profile or dramatic incidents like shootings or bombings or where there is great loss of life, such as in catastrophic accidents and natural disasters.

Trauma can also happen in the course of ordinary life. Such things as illness, being the victim of a crime and road traffic accidents affect many people every day.

The reaction of the person to the event, whatever it may be, is dependent upon many things such as the nature of the event, the person’s state of mind and the support that they receive from family, friends and their unit.

Everybody has their own way of responding to difficult or traumatic events and people may react to the same event in many different ways. There is no right or wrong way to feel. However, it may help you to know how others have reacted in similar situations.

## **COMMON REACTIONS TO STRESSFUL AND TRAUMATIC EVENTS**

### **FEAR**

- Of hurting oneself and others.
- Of being abandoned for reacting badly.
- Of “breaking down” or “losing control”.

### **HELPLESSNESS**

- The feeling of being “out of control”.

### **SADNESS**

- For deaths, injuries, and losses of many kinds.

### **GUILT**

- For being better off than others. Being alive when others died, or being uninjured when others were.

- Regret for actions that might have been taken or not taken.

### **SHAME**

- For having being exposed as helpless, “emotional”, or needing others.
- For not having reacted as one would have wished.

### **ANGER**

- For what has happened.
- At whoever caused the event or allowed it to happen.
- At the injustice and senselessness of it all.
- At the lack of proper understanding by others.
- Over inefficiency or lack of resources.
- Why me?
- Feeling let down.

### **MEMORIES**

- Of the current, or a past trauma(s) in your life.
- Feeling positive about a difficult or dangerous event can cause confusion. Why feel good about an event where people may have been injured or killed? For some, these events can be associated with great heroism or positive action.

### **PHYSICAL SENSATIONS**

You may feel bodily sensations too. Sometimes they may be linked directly to the event and may even develop some time afterwards.

Some common responses are:

- Feeling uptight.
- Difficulty sleeping, sometimes with bad dreams.
- Having distressing thoughts about the event.
- Feeling the need to avoid certain things, including people.

- Experiencing distress that will not go away and that was not present before the event.

### **NUMBNESS**

You may find that coming to terms with what has happened is a slow process. It may seem like a dream. People may, mistakenly, think that you are being “strong” or that you do not care. Numbness or deliberate blocking of your feelings may not be helpful if it goes on for too long. In order to make things better, it is advisable to confront your feelings, however painful this may be.

### **ACTIVITY**

To be active and busy may be a relief to start with. However it may be detrimental if you use it to avoid dealing with your experience. Helping others may help you too, but not if this diverts attention from you getting the help *you* need.

### **REALITY**

Confronting the reality, eg repeatedly going over exactly what happened, talking about the event or returning to the scene, if this is possible, may help you come to terms with it.

### **REPETITION**

In addition to deliberately thinking about the event, the natural tendency to dream about it may help in coming to terms with it.

### **SUPPORT**

It can be a relief to receive other people’s physical and emotional support. **DO NOT REJECT IT!**

### **SOME DO’S AND DON’TS**

*Don’t* bottle up your feelings. *Do* express them and let your family and friends know how you feel.

*Don’t* avoid talking about what happened.

*Do* take every opportunity to review the experience when alone and with others.

*Don’t* isolate yourself. Try to remain part of a group.

*Don’t* expect the memories to go away immediately - they might stay with you for some time.

*Do* take time out when possible to sleep, rest, eat well and think things through. Contact with your friends and family may help, eg blueys, phone calls and R&R.

*Do* express your needs clearly and honestly to family, friends and colleagues that you trust.

### **WHEN TO SEEK HELP**

If you feel that your emotions are excessive or have been present for too long, ie if you continue to feel tense, confused, empty, exhausted and numb or you have to keep active in order to shut out the experience.

If you continue to experience bad dreams and poor sleep.

If you have no one with whom to share your feelings and wish to do so.

If relationships seem to be suffering.

If you are abusing alcohol or drugs.

If your work performance suffers.

### **WHERE TO FIND HELP**

There now exists a greater awareness of the problems faced by individuals after any traumatic event. The Services have gained particular expertise in assisting those who have experienced difficulties during *and* after operational service.

If you wish to receive help this may be obtained through your Unit Medical Officer or GP.