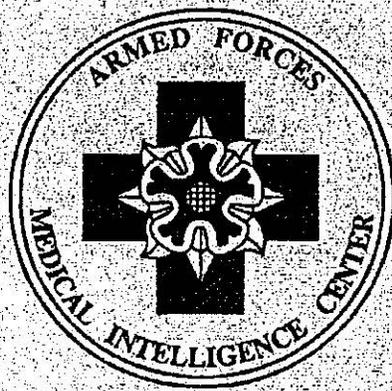


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COALITION FORCES MEDICAL  
AND CHEMICAL DEFENSE  
CAPABILITY IN DESERT STORM  
AREA OF OPERATIONS (U)

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MARCH 1991  
AFMIC-1810R-047-91

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AFMIC

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**Coalition Forces Medical and Chemical Defense Capability  
in Desert Storm Area of Operations (U)**

AFMIC-1810R-047-91

Information Cutoff Date  
31 January 1991

Date of Publication  
8 March 1991

This is a special initiative report prepared by the  
Armed Forces Medical Intelligence Center,  
Fort Detrick, Frederick, Maryland 21702-5004.  
This report has not been reviewed or approved by the  
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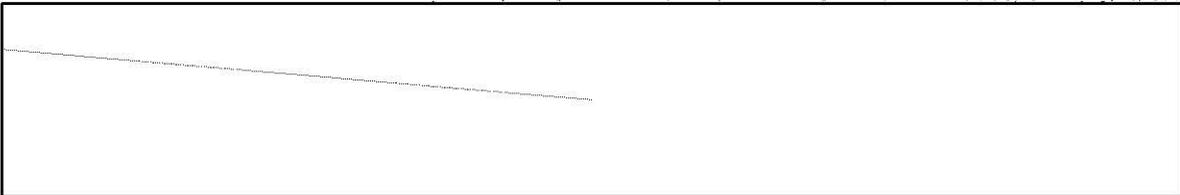
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PREFACE

(U) This intelligence summary provides a condensed review of medical capabilities and activities of foreign allied coalition nations and military forces in the Desert Storm Area of Operations, based on the best available intelligence information as of 31 January 1991. Assessments are based on an integrated review of deployed forces, aspects of field medical capabilities, medical activities, chemical warfare (CW) agent treatment capabilities, medical order of battle, medical personnel, and medical equipment and materiel support.

(U) Echelons of care are discussed throughout the text of this document. Echelonment is a matter of principle, practice, and organizational pattern, varying from battlefield to battlefield. The following generalities of echelonment are accepted. At echelon 1, a buddy or medical aidman provides first aid and directs the casualty to the battalion aid station (or other service equivalent) where he receives minimal care. Echelon 2 care, typically performed by company-size medical units organic to a brigade or division (or other service equivalent), involves triage, beginning resuscitation, and other immediate necessary care for the casualty. At echelon 3 care, the casualty is treated in a medical installation staffed and equipped to provide resuscitation, initial wound surgery, and postoperative treatment. Echelon 4 care is given in the communications zone (the support area to the combat zone), where the casualty is treated in a general hospital staffed and equipped for definitive care. Casualties requiring rehabilitation and reconstructive surgery are evacuated to the Zone of Interior (usually CONUS) for echelon 5 care.

(b)(1), 1.4  
(d)



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*BT*

(U) Each classified paragraph, caption, and title in this report has been properly marked; those unmarked are unclassified.

(b)(3):10  
USC 424

(b)(3):10 USC  
424

(U) Portions of this document have been derived from information which has been determined to be releasable



(U) Request any amplification of subject matter, constructive criticism, comments, or suggested changes be forwarded to the Director, Armed Forces Medical Intelligence Center, Fort Detrick, Frederick, MD 21702-5004, 

(b)(3):10 USC  
424

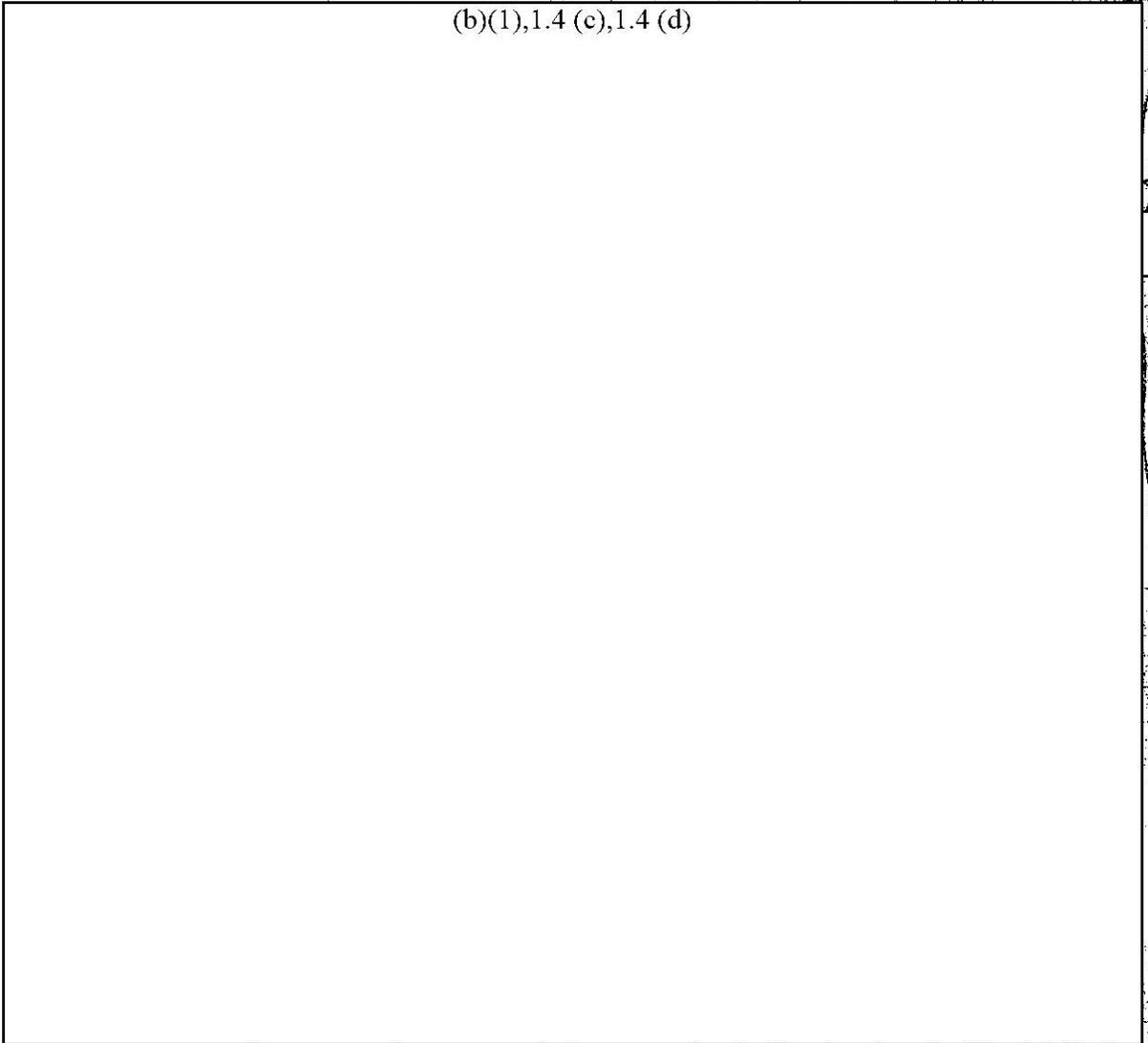
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**KEY JUDGMENTS**

(b)(1),1.4 (c),1.4 (d)



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**ARABIAN GULF STATES  
(BAHRAIN, QATAR, AND THE UNITED ARAB  
EMIRATES)**

**SUMMARY:** (U) Medical assistance provided by the Arabian Gulf States in support of Operation Desert Storm would most likely be in the form of rear area host nation support. There have been no reports of these countries providing forward medical support to either their own forces or those of their Desert Storm allies.

**ASSESSMENT:** (U) Leading hospitals in all three countries offer state-of-the-art medical care. While most medical specialists are well qualified, nursing care suffers because of personnel shortages, lack of personal attention shown to patients, and lower standards of hygiene. Many non-Western trained nurses (primarily Middle Easterners and Asians) will not initiate critical steps such as basic life support and cardiopulmonary resuscitation and are unlikely to alert physicians to oversights such as medication dosage errors.

(U) The Arabian Gulf States' dependence on foreign personnel to staff and manage their medical treatment facilities is a great liability. Some foreign personnel have returned to their home countries as the result of the present crisis. Armed conflict near the Gulf states' borders could result in rapid departures, creating significant shortages of medical personnel in all categories.

(b)(1),(b)(3):50 USC 403-1(i),1.4 (c),1.4 (d)

*Refer to*  
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(b)(3):10 USC 424  
*Refer to*  
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(b)(3):10 USC 424

(b)(1),1.4 (c),1.4 (d)

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(b)(3):10 USC 424

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The following 22 pages are withheld in their entirety per FOIA exemptions (b)(1) and (b)(3) and are not provided.













































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10-91, NO. 1  
Week ending 8 March 1991



# AFMIC WEEKLY MEDICAL INTELLIGENCE WIRE

## Animals as Sentinels for Presence of CBW Agents ( U )

(S) A suspect positive anthrax air sample was identified on 23 February 1991 at a logistics base in the vicinity of Sodowiyat along Tapline Road. Additional sampling in the area was conducted, but subsequent tests were negative. Large numbers of dead sheep were noted in the area. Additionally, individual and groups of dead goats and camels (many clustered around opened feed bags) had been identified during 16 - 21 February 1991 along main supply routes in surrounding regions (Qaryat al Ulya, 27-33-XXN 047-42-XXE and Thaj, 26-53-XXN 048-43-XXE). Veterinary and biomedical teams have collected samples from these areas, but the results currently are not available. The animal deaths in both areas increased suspicion that a biological incident may have occurred. No human illnesses or deaths were observed, and the local villagers paid little attention to the dead animals.

Refer TO

(b)(3):10 USC 424

**Comment:** (S) Unexpected deaths or illness among domestic and wild animals potentially can serve as indicators of chemical or biological agent use or presence. However, not every discovery of dead individual or groups of animals needs to be investigated. Apparently, dead or dying domesticated animals (particularly sheep and goats) frequently are taken to collection sites for disposal. A similar incident occurred in late August 1990; large numbers of dead sheep and goats were found in the vicinity of an Nu'ayriah (27-50-XXN 047-50-XXE). Approximately 20 to 30 sites with 40 to 50 carcasses each (90 percent sheep and 10 percent goats) were discovered in remote regions. Apparently, the August 1990 episode also was considered normal by the local villagers, the dead and dying animals had been placed in the disposal sites to separate them from live animals (see AFMIC Special Weekly Wire 39-90). Additionally, villagers and nomadic tribesmen live in close association with their flocks of animals; CBW incidences producing domestic animal casualties also would be expected to produce human casualties. Based on the information provided by the current report, AFMIC's assessment is that the recent animal deaths probably did not result from CBW agents.

Refer TO

(b)(3):10 USC 424,(b)(6)

Refer TO (b)(6)

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This format for AFMIC Weekly Wires will be used for the duration of the message traffic minimize.  
Distribution to subordinate elements is encouraged.

Document ( 1 page) PR (citing (b)(3) 10 USC 424 over the author info) in FOIA case 0376-2011, a REF DIR from USAF based on the same request letter. This doc was also previously rel in MDR-0229-2009 and a nearly verbatim version was rel on GulfLINK citing only (b)(6) over the author info. Both (b)(3) and (b)(6) are applicable.

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## Armed Forces Medical Intelligence Center Assessment

### Iraq: A General Medical Intelligence Assessment (U)

#### Key Judgments

(b)(1), 1.4 (b)

(U) Conditions in major urban areas affected by bombing are favorable for communicable disease outbreaks. Delayed restoration of public health services and approaching warmer temperatures increase the likelihood of significant disease outbreaks. Additionally, Iraqi health organizations currently are incapable of adequately responding to disease outbreaks.

(b)(1), 1.4 (b)

#### INTRODUCTION

(b)(1), 1.4 (b)

(U) Disruption of the country's communication capabilities has significantly impeded the Ministry of Health's (MOH) capability to coordinate and control the restoration of health services. Bomb damage to MOH headquarters, which has forced officials to operate out of disparate locations, will further frustrate their efforts. For the foreseeable future, the MOH will largely depend on international relief organizations to provide the required medical and food assistance, especially to Baghdad and cities that are the focus of anti-government rebellion.

Refer to

**HEALTH CARE ASSESSMENT**

(U) The major causes of the disruption of Iraqi health care services are lack of private or public transport and the nonavailability of vehicle fuel. These factors impact on both the recipients and the providers of health care. As many as 60 percent of health workers in Baghdad may be unable to get to work. Primary care, preventive medicine, and mother-child health services appear to have been impacted most severely. Support services such as medical laboratories also have suffered as a result of staff shortages, forcing many laboratories in Baghdad to close.

(U) The number of military and civilian casualties currently seeking treatment in Iraqi hospitals is estimated to be in the tens of thousands. Hospitals in the north and the south are likely to be busiest.

(U) Hospital destruction and damage as a result of coalition bombing and the civil war have been reported, but as yet remain unconfirmed. The loss of electrical power and water poses the gravest threat to hospital services; however, most major hospitals and a number of other hospitals are believed to have some form of back-up power capable of providing electricity to support essential services (operating room, intensive care units, coronary care units, and sterilization equipment). Significant degradation of medical care is likely to occur when generators are not available or only used a few hours per day due to fuel rationing (military hospitals have priority).

(U) Moreover, loss of running water to hospitals will significantly degrade general staff and facility hygiene as well as general patient care (especially trauma care). Therefore, hospital-acquired infection rates are expected to increase, contributing to an overall worsening of morbidity (illness) and mortality (death) among patients.

(U) The departure of Western health care workers from Iraq will be felt most at premier medical treatment facilities. The replacement of primarily Irish and Western European health workers at Baghdad's Ibn al Bitar Hospital (also referred to as the PARC or Irish Hospital) by Iraqi, North African, and reportedly Cuban personnel raises critical doubts as to the future medical capabilities of what had been considered the foremost hospital in Iraq.

(b)(1), 1.4 (b)

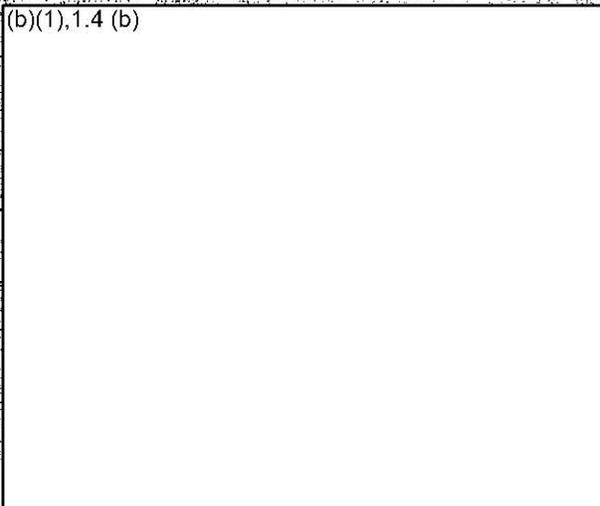


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(b)(3):10 USC 424

**DISEASE OCCURRENCE**

(b)(1), 1.4 (b)



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(b)(1), 1.4 (b)

layed restoration of public health services and approaching warmer temperatures will increase the likelihood of significant disease outbreaks; civil disturbances could further delay infrastructure repairs.

(U) The prevalence of some diseases has increased in Baghdad, but major disease outbreaks have not been confirmed. Open source news releases, citing international and Iraqi health officials, indicate that communicable diseases in Baghdad are more widespread than usually observed during this time of the year and are linked to poor sanitary conditions (contaminated water supplies and improper sewage disposal) resulting from the war. According to a joint World Health Organization (WHO) and United Nations Children's Fund (UNICEF) report, the quantity of potable water in Baghdad was reduced to less than 5 percent of the original supply as a result of the war; the incidence of diarrhea was four times above normal levels. Respiratory infections similarly increased. Children particularly have been affected by these diseases. Increased incidence of typhoid and cholera has been reported by Iraqi Red Crescent officials, but the spread of these diseases has not been confirmed by other international nongovernmental agencies with representatives in Iraq.

(U) Food- and waterborne diseases have the greatest potential for outbreaks in the population; these diseases include acute diarrhea, typhoid, cholera, hepatitis A, and brucellosis. Other likely communicable diseases include childhood diseases (diphtheria, pertussis, tetanus, measles, and polio), meningitis, acute respiratory infections, and tuberculosis. The Expanded Program of Immunization (EPI) has been interrupted. Generally, increases of vectorborne diseases (leishmaniasis, schistosomiasis, and malaria) will be more of a long-term problem; however, increased incidence can be expected with approaching warmer temperatures.

RELIEF ASSISTANCE

(U) Although urban areas have been affected by indirect consequences of bombing, there are conflicting indications about the population's ability to cope with the degraded conditions. While the Cable News Network (CNN) has provided coverage of Baghdad residents scooping water out of the Tigris River, waterborne diseases can be minimized by boiling, filtering, and disinfecting (treating) the water prior to use. Civil defense preparations prior to the onset of the war instructed inhabitants on how to protect food and water from contamination and to purify contaminated supplies. Radio broadcasts continue to provide precautionary measures for preventing diseases, but WHO/UNICEF reports that these measures commonly are unheeded; reportedly, residents are using scarce fuel for purposes other than boiling water. Moreover, government health agencies lack the capability to test water for potability.

(U) Medical relief has been dominated by the International Committee of the Red Cross (ICRC), which has delivered more than 1,000 tons of aid in the form of power generators, water, water purification systems, food, medical supplies, equipment, and medical personnel into Iraq since late February. Much of this aid has been targeted for 25 of Baghdad's hospitals. Relief shipments have arrived either by direct flights to Baghdad or more commonly by truck transports originating in Jordan or Iran. The ICRC also has negotiated with Iraqi MOH officials to extend medical and sanitation activities to other Iraqi cities; nearly all Iraqi cities are believed to need similar services as a result of coalition bombings and the current civil disturbances.

(U) Other international and private relief agencies active in Iraq include UNICEF, WHO, regional Red Crescent Societies (Jordan, Iran, Libya, Morocco, Tunisia, and Algeria), and the Paris-based Medicins sans Frontiere (Physicians without Borders)

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(b)(3):50  
USC 403-1(i)

The large number of refugees exiting southern Iraq was not expected,

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