

Special Report: This is the first in a three part series on health issues in the war with Iraq.

Observations on Health in the 2003 War with Iraq: Part I: Planning

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The opinions and assertions herein should not be construed as official or representing the views of the U.S. Public Health Service, the U.S. Centers for Disease Control and Prevention, U. S. Agency for International Development, the Department of Defense or the U.S. Government.

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Background

The overall health situation in Iraq deteriorated substantially between the period before the Persian Gulf War in 1991 and just before the 2003 war. During this period, some indicators demonstrated a progressive decline, while others reached a nadir in the mid-1990s before the Oil-for-Food and Oil-for-Medicine Programs allowed Iraq to import and distribute food, medication, and health supplies and equipment. During the period 1984-1989, the infant mortality rate (deaths in children less than 12 months per 1000 live births) was 47.1 and the under-5 mortality risk (deaths in children less than 5 years of age per 1000 live births) was 56.0.¹ Ten years later (during the period 1994-1999), the infant mortality rate had risen to 107.9 and the under-5 mortality risk had risen to 130.6. The prevalence of acute malnutrition in children less than 5 years of age increased from 3.6% in 1991² to a maximum of 11.0% in 1996³ and subsequently fell to 4.0% in 2002.⁴ During the 1990s, there was a dramatic increase in the number of reported cases of many communicable diseases, including tuberculosis, cholera, typhoid fever, amoebic dysentery, giardiasis, visceral and cutaneous leishmaniasis, and malaria.⁵

Several organizations which have worked in Iraq for many years provided humanitarian assistance after the 1991 war in Iraq. The United Nations Children's Fund (UNICEF), the World Health Organization (WHO), the International Committee of the Red Cross (ICRC) and the International Federation of Red Cross and Red Crescent Societies (IFRC) continued working in Iraq during the trade sanctions imposed by United Nations Security Council Resolution 660 in 1990. In addition, nongovernmental organizations (NGOs), such as

OXFAM and Care International, and Iraqi Government staff helped to maintain food security, primary and basic health care, and water and sanitation infrastructure.

U.S. Government agencies, primarily the U.S. Agency for International Development (USAID) and the Bureau for Population, Refugees and Migration (PRM), remained the principal donors of humanitarian relief in northern Iraq after the 1991 war. The US Department of Defense (DoD) played an active role in funding security and humanitarian activities jointly administered with USAID's Office of Foreign Disaster Assistance (OFDA). Although these aid programs were thought by some to be more political than humanitarian, OFDA took management control from the DoD in 1995 and shifted them back to a more traditional humanitarian objectives. Nonetheless, unresolved and complex issues of politics, control, reporting channels, budget, and policy direction were naturally provoked in this experiment which combined political-military-humanitarian activities.⁶

U.N. trade sanctions were softened in 1995 by the establishment of the Oil-for-Food Program and the Oil-for-Medicine Program. Under U.N. Security Council control, Iraq was allowed to sell specified amounts of oil in order to purchase food and medications. Under the Oil-for-Medicine Program, the Security Council entrusted the Iraqi Government to purchase medications and medical supplies, provide quality control, and distribute these commodities to the population of Iraq. For the most part, the Iraqi Government did not use these funds to rehabilitate health infrastructure. In contrast, the Oil-for-Medicine Program in the northern governorates under Kurdish control was run directly by the U.N. which used part of these governorates' allotment of oil revenues to construct new health and public health

infrastructure. As a result, the northern governorates entered the 2003 war with markedly improved mortality and nutritional indices.⁷ Patients in Baghdad and the south with chronic diseases, such as insulin dependent diabetes, asthma, hypertension, and cardiac diseases, were recorded in hospital-based chronic disease registers and received their medications every 3-4 weeks.

Coalition military

In the prelude to the 2003 war in Iraq, the U.S. Government devoted substantial resources to planning for whatever humanitarian assistance might be needed by the Iraqi population as a consequence of the conflict. The DoD took the initiative in this planning.⁸ From the beginning, DoD humanitarian planning assumed a rapid removal of the Iraqi regime without significant population migration or loss of essential infrastructure. A broader humanitarian crisis was considered unlikely. Overall funding for humanitarian preparation was inadequate because other donors, primarily European governments, which often share the expense of humanitarian relief did not want to be seen as supporting the war by planning for its consequences. Nonetheless, reports predicting specific humanitarian outcomes of the war began to appear in many places, including the biomedical literature.⁸⁻¹² Many of these predictions were largely based on evidence that the health of the Iraqi civilian population was substantially worse than it was in 1990 prior to the Persian Gulf War, as described above, and that any new conflict, especially if chemical or biologic weapons were used, would have profound and lasting effects.

The DoD formed the Humanitarian Planning Team (HPT), made up of a small group of military and U.S. Government agency personnel. The HPT carried out most of DoD's planning for potential humanitarian events, including consequences of the use of weapons of mass destruction. Coalition forces medical and civil affairs units would play the key role in mitigating any adverse consequences on the civilian population and public health infrastructure. Wherever possible, the HPT, whose planning was classified, briefed United Nations agencies, WHO, ICRC, and international NGOs to emphasize the DoD's authority, through the HPT, over humanitarian planning, decision-making, and coordination of resources with international organizations and NGOs.

The Coalition forces in the field, with the assistance of the Kuwait Government, organized the Humanitarian Operations Center (HOC) located in Kuwait City to function as a clearing house for 'liaison and coordination' of civilian and military organizations providing humanitarian assistance. HOC activities included providing daily operational and military security briefings, making available office space for organizations providing humanitarian assistance, issuing entry permits and visas to work in Kuwait and to cross the border into Iraq with humanitarian supplies, and serving as the point of liaison for other military organizations and donor countries, such as the British Department for International Development.

Participation in HOC's activities was mixed; many organizations, including international organizations, NGOs, and U.N. agencies, attended meetings and requested the necessary permits, but none shared office space at the HOC during the war. One UN agency, which did not have a country office in Kuwait before the war, temporarily used office space at the HOC. This was a controversial move both within the agency and among other organizations.

Just prior to the anticipated onset of war, the DoD created the Office of Reconstruction and Humanitarian Assistance (ORHA) to provide overall authority and coordination of humanitarian and reconstruction activities. Those designated for leadership positions within ORHA had primarily diplomatic and policy level expertise but lacked field experience in humanitarian programs and knowledge of other humanitarian organizations and agencies. ORHA's creation was meant largely to minimize the U.S. Government's dependence on U.N. agencies and NGOs for recovery and reconstruction. ORHA was suddenly endowed with authority but not a sufficient budget or full complement of personnel. As a result, it remained unsure of itself and its mission. At the onset of hostilities, ORHA's exact role, responsibilities, budget, relationship with other humanitarian organizations, including OFDA's DART, were still being debated and defined within the US government.

U.S. Agency for International Development

The Disaster Assistance Response Team (DART) is, in most natural disasters and humanitarian emergencies, the operational, on-site arm of OFDA. A DART was mobilized in the fall of 2002 to plan for humanitarian requirements in the immediate aftermath of the predicted war. Typically, a DART includes fewer than 10 people who are primarily involved in assessment, coordination of technical assistance, development of project proposals, and procurement of materiel. Because of the unpredictable consequences of the anticipated conflict, the DART in Kuwait included a staff of 80 with experience in complex emergencies, refugee care, human rights abuse and protection, epidemiology, military liaison, information management and communications, public affairs, security, environmental toxicology, and

biological, chemical and nuclear threat analysis. All DART members received unprecedented training ranging from chemical, biological and radiation preparedness to human rights abuse and protection procedures and anti-terrorist driving. In all DART planning, the DART would provide emergency, life-saving health interventions in order to serve as a “bridge” for up to 30 days until U.N. agencies, ICRC, NGOs, and Iraqi national technical staff could fully re-engage.

The DART core team included the DART leaders and sector specialists and was based in Kuwait City. Smaller teams in Kuwait, Jordan and Turkey prepared for deployment to the south, west and north sectors in Iraq, respectively, once security allowed. Planning by the medical and public health specialists on the DART core team attempted to 1) identify and plan support to fill potential gaps in what was an already fragile Iraqi public health infrastructure, 2) provide emergency disease surveillance to detect communicable disease outbreaks early, 3) assess the status of environmental programs, including water treatment, sanitation, and vector control, 4) assess the availability of food, and 5) establish estimates for needed external assistance to be provided through grants to NGOs and U.N. agencies. The health personnel on the DART anticipated that, even with a short war, the tenuous public health infrastructure made Iraq extremely susceptible to outbreaks of diarrheal disease and leishmaniasis as well as increased rates of acute respiratory disease, tuberculosis, acute mental illness, and preventable morbidity and mortality from unattended chronic illness (including mental illness), especially in the elderly. Other potential scenarios, especially those that involved a more prolonged war, highlighted additional health problems, including excess civilian trauma casualties, large-scale population displacement within Iraq, unattended Iraqi

military casualties, prolonged food insecurity with acute and chronic malnutrition, and contamination of victims and environments after the use of chemical or biologic weapons.

The DART planned to directly provide necessary resources as well as to fund other organizations to provide essential services. Among the health materiel stockpiled in Kuwait by the DART were 100 WHO New Emergency Health Kits. Each WHO kit is meant to provide basic medical and pharmaceutical supplies for a population of 10,000 for three months. Therefore, the DART stockpile would support a population of 1 million for three months. Grants to UNICEF allowed for the pre-positioning of nutritional, public health, and water and sanitation materiel. A grant from OFDA to InterAction, a consortium of U.S.-based NGOs, for \$900,000 allowed for preplanning and coordination by U.S.-based NGOs.

Additional grants were planned for NGOs, international organizations and several U.N. agencies, especially those that would facilitate Iraqi-managed programs and projects. DART health personnel had confidence that, given the opportunity, access, security and resources, the proven skills of the Iraqi healthcare providers would be the critical factor in mitigating the adverse public health consequences of the war. DART encouraged non-governmental organizations working in the field to immediately employ Iraqi healthcare providers in projects and programs to avoid parallel health care systems from being developed which relied on expatriates.

Understanding that health and water and sanitation are inextricably related but often 'vertically' separated in decision-making and management,¹³ DART health personnel organized a Health and Water and Sanitation Fusion team, made up of U.N. agencies, NGOs,

and military civil affairs units with health, water, or sanitation responsibility to plan for 'horizontal' decision-making and integrated relief and reconstruction management activities.

Given the anticipated DoD scenario of a short war with limited public health infrastructure loss, relief and reconstruction could begin almost simultaneously in some areas of the country. From the outset, USAID's Reconstruction Unit, made up of personnel from the Asia-Near East Bureau and the future USAID Mission to Iraq, served under ORHA and military authorities. In contrast, the DART, which has special status under the U.S. State Department and the Congressional Foreign Assistance Act, must ensure that the U.S. Government prioritizes humanitarian needs over political issues. The DART in Kuwait remained operationally independent from ORHA. This allowed the DART to collaborate with U.N. agencies, NGOs, and international organizations who themselves had to maintain an independent and impartial status under international humanitarian law.

Additional concerns were expressed by expatriate Iraqi consultants to DART and other USAID personnel that pharmacies and medical warehouses could be looted after the acute fighting had ceased. This information was passed on to ORHA and the HOC. USAID/DART purchased a 30 day supply of medications, many of which were temperature dependent, such as insulin, to treat chronic diseases in case the supply of these medications was disrupted by the war.

International and non-governmental organizations

Despite the fact that the U.N. did not sanction the war with Iraq, international organizations, especially those with active programs in Iraq, unofficially began internal planning for pre-conflict evacuation of expatriate staff and post-conflict recovery of services. All expatriate U.N. personnel and their designated Regional Coordinators would be evacuated to Cyprus and not allowed to return until the U.N. security coordinator had deemed the environment safe. During the build up to war these organizations accelerated emergency preparedness training and stockpiled medical and surgical supplies. Because of the hesitancy of many donors, new funding for emergency preparedness did not exist for many organizations. As a result, stockpiling and new assessment costs had to be taken from emergency funds, reserves, or other programs.

ICRC had 35 expatriate and 350 Iraqi national staff in Iraq and planned to keep a small core group of expatriate (including the Head of Delegation) and national staff functioning during the conflict in Baghdad and northern Iraq. This group was ready to expand as needed.

Priority interventions for *ICRC* included 1) services to war-wounded, based on casualty estimates of 7,000 requiring pre-hospital and hospital care; 2) assistance to existing hospital infrastructures, including provision of generators; 3) emergency maintenance for destroyed water and sanitation systems; and 4) assistance to a major psychiatric hospital in Baghdad that had suffered greatly during and immediately after the 1991 Persian Gulf War. Should a massive internally displaced population occur, the *ICRC* was prepared to move with them providing emergency health kits and water bladders. The *ICRC* and other UN agencies

maintained extensive warehousing and port facilities at Aqaba, Jordan and planned to move materials across the Amman Road to Baghdad and elsewhere. Additionally, ICRC completed assessments of all major Baghdad hospitals and stockpiled and pre-positioned medical and surgical supplies and generators both in Baghdad and regionally.

ICRC felt that they would not be able to operate in an environment contaminated by chemical or biologic weapons agents. However, the ICRC trained their staff and consulted with Iranian and other medical experts who had previous real-world experience in protection of personnel and decontamination of victims. Separately, in case of a chemical or biologic weapons event, coalition forces and DART personnel developed contingency plans to ensure rapid identification and evacuation of any international staff, to assist in the decontamination and care of casualties and to provide care for unexpected numbers of Iraqi military casualties.

At the beginning of hostilities, the ICRC had used \$16 million from its reserve funds to cover part of the \$80 million needed for the initial 4 months of emergency programs for a population of 400,000. No funding could be requested internationally by the ICRC until the actual onset of hostilities. Then, funds could only be raised through an international consolidated appeal process to both recover expended reserve funds and cover the costs of a prolonged war.

IFRC in Geneva planned to coordinate the resources available in the national societies in six neighboring countries. Among the resources available to *IFRC* were Emergency Response Units (ERUs). ERUs are pre-packaged 150-bed mobile hospitals or clinics each of which can

be operational in 3-5 days and ready to serve a population of 250,000. Moreover, ERUs include personnel and water supply making them especially useful in austere or contaminated environments. Just as the war plans escalated, a new partnership between UNHCR and the IFRC provided for the potential utilization of up to nine ERUs regionally placed to care for persons involved in major refugee movements.

The Iraqi Red Crescent Society, established in 1932 and supported by the IFRC since 1991, had shifted its focus from massive food aid and medical programs to community-based health activities and capacity building. The Iraqi Red Crescent Society maintained a volunteer force of more than 3,000 many of whom were emergency first responders trained with a focus on community-based first aid. Its ability to function as an impartial and neutral society was in question because it reportedly had a close and troublesome relationship with the Iraqi regime and was accused, by the Kurdish population, of being a front for the Iraqi intelligence service. IFRC planned to place the Iraqi Red Crescent Society under the leadership of ICRC once the war began. Recognizing the critical role that Red Crescent Societies have historically played in the Middle East, USAID considered a well functioning Iraqi Red Crescent Society to be essential to Iraq's recovery. For this reason, USAID funds were placed in escrow to facilitate this process.

WHO assisted the Iraqi Ministry of Health during the 1990s with extensive education and training of over 400 national staff in surveillance and outbreak control. WHO also provided health observers for the UN Oil-for-Food program and supervised the treatment of children

who were referred from the UNICEF school-based nutrition screening program to primary health clinics and hospitals.

The activities of WHO, the lead UN health agency in Iraq, were directed by the Eastern Mediterranean Regional Office (EMRO) in Cairo. In preparation for the war, WHO/EMRO designated a Regional Coordinator located in Cyprus and prepared to field a country team made up of technical experts in public health, disease outbreak control, management, planning and logistics, and media information. WHO also forwarded 15 New Emergency Health Kits to Baghdad and 15 to Jordan.¹⁴ Like other organizations, WHO had expended all reserve and emergency funds and was unable to guarantee to USAID planners the completion of assessments or additional emergency preparedness programs.

The Iraqi Government had prepared for war by procuring and distributing additional medicines under the Oil-for-Medicine Program. Unconfirmed assessments in the pre-conflict months of January and February 2003 reported that warehouses in Baghdad had medications for an additional 4-6 months. However, additional reports from the south indicated a short supply of amoxicillin, oral rehydration salts, diluent for BCG vaccine, and measles, measles/mumps/rubella, and diphtheria/pertussis/tetanus vaccines.

UNICEF implemented and supervised major health, education, and water and sanitation programs in Iraq in the years before the 2003 war. In the south and central areas of Iraq, UNICEF and WHO attempted to reorient the health system toward a public health focus. Just before the war, a mass polio vaccination campaign vaccinated an estimated 98% of children

less than 5 years of age.¹⁵ Although 92% of eligible children had received measles vaccination, a large campaign just before the war attempted to vaccinate the estimated 500,000 children who were still susceptible. Because the prevalence of breast feeding rate was only 30%, UNICEF planned to continue to include powdered milk temporarily in the distributed food basket. Post-war plans included the encouraging of breast feeding once any post-conflict food crisis was resolved. UNICEF also stockpiled more WHO New Emergency Health Kits and safe birthing kits in Kuwait, Iran, Baghdad and Jordan.

As part of the UN Oil-for-Food program, UNICEF carried out nutrition screening in more than 560 primary healthcare centers and 3000 Comprehensive Child Care Units located within primary schools throughout Iraq. Although the nutritional status of young children had improved substantially since the implementation of the Oil-for-Food program, as described above, UNICEF continued to support supplementary and therapeutic feeding programs to which malnourished children less than 5 years of age and lactating mothers were referred. In preparation for the war, UNICEF pre-positioned, at the Iraqi border, a one month supply of F100 therapeutic milk formula¹⁶ and high protein biscuits in order to continue supplementary and therapeutic feeding should it be necessary.

Three-fourths of indigenous water and sanitation technicians had left Iraq since the end of the 1991 war. UNICEF and partners, such as OXFAM and CARE International, attempted to ensure the availability of potable water, especially in health facilities. As part of this effort, these organizations stockpiled spare parts for water and sanitation machinery and chlorine.

A plan to assist vulnerable subgroups of the population after the conflict included the delivery of health services through the existing Iraqi National Health Services by Ministry of Health and WHO personnel. The plan focused on routine immunization, micronutrient supplementation, nutritional rehabilitation, and maternal and child health services at the PHC level. Supplies, including essential medicines, vaccines, oral rehydration salts and micronutrient supplements, were procured by UNICEF and would be distributed at previous Oil-for-Food food distribution points. Screening for vulnerability would remain at the Comprehensive Child Care Units which would continue to refer vulnerable persons and malnourished children to primary health centers for the necessary care.

UNHCR predicted that any war with Iraq would generate few refugees. If populations migrated, it would be within Iraq. Under international law, care of such internally displaced people, including their protection and the provision of essential services, would be the responsibility of the occupying forces.¹⁷ At the onset of hostilities, *UNHCR* would coordinate relief for refugees just outside the borders of Iraq while the coalition forces and *ICRC* would care for displaced persons who remained Iraq. Despite the predictions, *UNHCR* assisted neighboring countries in preparations for a refugee influx of up to 900,000 people. The Iranian Government with *ICRC* and *IFRC* support prepared electricity and water and sanitation services in five areas on the Iran-Iraq border. The entry points to camps had not been yet been totally cleared of mines, barbed wire or trenches, all remnants of the 1991 war. Moreover, *UNHCR* cautioned that, because potential camp sites in the north were at an altitude of 1,800 - 2,500 meters high, there was a risk of hypothermia and cold exposure for people displaced to these camps.

International Organization for Migration (IOM) serves as an intergovernmental organization to resettle displaced persons. During the 1991 war they accepted responsibility for 113,000 third country nationals (TCNs) and transported them to designated camps, primarily in Jordan, and provided medical care and screening before transport to their home country. IOM anticipated that up to 150,000 TCNs, mostly Egyptians living and working in Iraq, would move mainly toward Jordan once the conflict began in 2003. IOM staff was primarily concerned about measles outbreaks and measles vaccination, as well as bioagent and chemical screening and management if a WMD event occurred. UN estimated that costs for care of this group for 6 months would be about US\$80 per capita. At the beginning of the conflict an international appeal process was in place to raise these funds.

NGOs also carried out planning before the war. The few NGOs which worked in Iraq before the war prepared plans to begin emergency operations. InterAction, the consortium of U.S. based NGOs, formed an Iraq Working Group to facilitate pre-war coordination. USAID, through the Joint NGO Emergency Preparedness Initiative (JNEPI), encouraged NGOs to prepare assessment, logistics, stockpiling, and staffing activities. The NGOs participating in this initiative began regular coordination meetings in Amman, Jordan in early March 2003 to coordinate activities and to prepare for various contingencies, including a flow of refugees and third country nationals from Iraq into Jordan. JNEPI also conducted training for NGO personnel in protection from chemical and biologic agents and rapid assessment. At the onset of war 10 health-related NGOs were registered with the HOC in Kuwait. These organizations attended briefings and training offered by the HOC. They had also formed their own

coordination mechanisms to keep each other informed and to register any concerns as a unified group to HOC, military, or Kuwaiti authorities. Additional NGOs who preferred not to have an association with the military were primarily located in Jordan.

Iraqi Ministry of Health

Under the Saddam regime the Ministry of Health (MoH) often did not serve the best interests of all of Iraq's population, and was thought by Coalition planners to be one of the most corrupt Ministries. MoH decisions were centralized in Baghdad, leading to major inequities. Moreover, the MoH's multilayered political bureaucracy was preoccupied with procurement and management of hospital facilities; its organizational structure did not reflect public health priorities. Nursing and allied health positions were poorly staffed since the regime never compensated for the loss of expatriate nurses who evacuated Iraq before the 1991 war. Most physicians and the few remaining nurses (mostly in administrative positions) received limited continuing education, poor salaries and were forced to work at more than one job, often outside the healthcare field.

Despite deteriorating working conditions, pre-war data strongly suggested that the technical level workers at the MoH, governorate and sub-governorate levels were dedicated professionals who functioned well. Basic curative services were provided by relatively well-trained health workers and were widely available. However, during the past decade, the healthcare infrastructure, especially in the central and southern portions of Iraq, was poorly maintained. Suffering the consequences of sanctions against the Iraqi regime, health facilities

outside Baghdad, especially in Shiite dominated south, slipped into a state of chronic decay and neglect. In addition, the health system was very clinically oriented; major determinants of population health status, such as sanitation and water supply, were grossly neglected in large parts of the country.

ORHA, which had responsibility for restoring Iraqi government ministries, designated an “interim Minister of Health” who was to guide the formation of a new MoH structure. The initial plan anticipated the removal of Baathist leadership that extended to all MoH departments. To keep the technical functions of MoH operational, an advisory board made up of respected and representative Iraqi leaders, both national and expatriate, was to be formed as soon as possible. Expatriate advisors with experience and expertise in health system development and public health would provide mentorship to this advisory board. The board would provide management oversight to the technical staff of the MoH until the new ministry leadership was elected. Two separate MoHs had been created among tribal groups in the Kurdish-controlled north during the past decade. In order to avoid similar splits in central and southern Iraq, the new MoH in Baghdad would have to prove they serve the entire Iraqi population equally.

Conclusions

During the prelude to war, U.N. agencies, Red Cross organizations, and NGOs attempted to plan for the likely humanitarian consequences of the war, but they faced major obstacles.

First, most organizations could not know if there would be war or not. This made it difficult

to invest substantial time and resources in planning for an event which may or may not occur. Available funds for planning and prepositioning supplies were limited because many major donor governments refused to commit resources to planning because of objections to the war. Moreover, appeals for funds could not be activated until organizations were sure the war would begin. Second, much of the humanitarian planning done by the major potential donor, the U.S. Government, was done by military authorities in relative secrecy. The usual source of U.S. Government humanitarian funds, the USAID Office of Foreign Disaster Assistance OFDA and the US Department of State's Bureau for Population, Refugees and Migration, were not fully aware of these military plans. This lack of knowledge of the principal donor government's intentions made coordinated planning difficult.¹⁸ Third, because ORHA was a part of the military force which would initiate the war, many organizations, including U.N. agencies and many NGOs, feared losing independence and impartiality if they coordinated with ORHA or accepted U.S. Government funds.¹⁹

The events leading up to the recent war in Iraq offer some important lessons in preparation for future predictable humanitarian emergencies. Humanitarian action planning by all parties must be transparent in order to achieve coordination, which is essential to avoid duplicating efforts and leaving gaps in essential services. All organizations which will be involved in the forthcoming emergency must be open to communication because each organization offers a unique perspective and experience. Prior to the war, the Coalition military forces and ORHA failed to benefit from the substantial experience of U.N. agencies, Red Cross organizations, and NGOs, which had worked in Iraq for many years and were very familiar with the existing health and public health infrastructure. However, regardless of the lack of coordination with

military authorities, individual organizations and the Iraqi Government made certain specific preparations for the onset of war, such as carrying out vaccination campaigns and distribution of food and medications, which anticipated disruptions in public health programs. There was little duplication in effort because each organization's preparations were often carried out in the sectors in which that organization has a clear historical mandate and in which that organization had been working in Iraq for years.

Planning for humanitarian emergencies requires some knowledge of and experience in this complex field. Nonetheless, all the expert planning in the world may be for naught if the assumptions under which such planning is done do not prove valid. Emergencies by their very nature are unpredictable and require participating organizations to maintain maximum flexibility to meet the needs of the affected population. Organizations and personnel with experience can better maintain the flexibility necessary to provide an appropriate and efficient response to the particular conditions present in a specific emergency.

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