OPERATION SHOVELLER

ARMY HEALTH ASPECTS

Lieutenant-Colonel I. C. FRASER, M.B., Ch.B., D.P.H., D.I.H., D.T.M.&H., R.A.M.C.

Deputy Assistant Director of Army Health, Headquarters, South West District

SUMMARY: The deployment and work of the 3rd Division Field Hygiene Section in Jordan are described. In addition to the anticipated environmental sanitary tasks the important work of restoring communications within, and the function of, the local Public Health Service is covered. Comment is made on the establishment of the section, and the need for local support if major epidemics are encountered is stressed.

Introduction

On the 25th September 1970 just four days after 2 Field Hospital had emplaned for Cyprus, the 3rd Division Field Hygiene Section was placed on standby for relief work in Jordan. The Section comprising eight personnel, three Land Rovers and two trailers each heavily loaded with equipment and technical supplies fits neatly into a C 130 Hercules aircraft, and it was in one of these rather noisy aircraft that we arrived in Amman on the 4th October having staged in Cyprus on the previous day.

That day was spent being briefed on what was known of the current situation in Jordan, and in acquiring civilian type working clothing. This latter activity brought a look of delighted amazement to the face of the team's Warrant Officer who claimed he had never before during his service met such generosity.

Prior to our arrival in Amman there was little up to date information on matters of public health; this was due to difficulties with communications, the confused situation in Jordan, and priority very properly being given to the treatment of casualties from the fighting. We knew that there had been three isolated cases of Cholera during June and July and that the normal function of Government Departments including the Ministry of Health had been disrupted.

Bearing in mind the vivid Press and Television reports of disruption of water and food supplies, break down of public utilities, large numbers of homeless and hungry refugees, corpses lying around unburied and the ever present threat of epidemics we were naturally a little apprehensive as to what we would find. We were particularly concerned about our capacity to cope with the prime worry—namely major outbreaks of Cholera. Our anxiety was not alleviated by the initial greeting on arrival at 2 Field Hospital which, suitably edited, was "Glad you have arrived. The doctor in charge of the emergency convalescent hospital two miles down the road thinks he has a case of Cholera. Can you help him?" A quick enquiry revealed a lack of bacteriological laboratory facilities and on clinical grounds only the decision was made, with some misgivings, that the case was not one of Cholera. Fortunately this decision was found correct, but not before some worrying days had passed.

There were other but less acute moments of worry during the period in Jordan and in the event the 'Public Health' situation, as far as we were able to determine, was reasonably quiet. Several factors contributed to this fortunate state of affairs the most pertinent being the warm weather which meant the homeless did not have to huddle together in desperately overcrowded conditions and possibly the effects of a mass Cholera

vaccination campaign which had been carried out in July as a result of the three cases of Cholera already mentioned. Also there were very few flies which was partly due to the dry conditions and partly, in Amman itself, to the policy of spraying the city with insecticide at six monthly intervals.

Restoration of Public Health Services

On the morning of the 5th October after discussions with the Director of the International Committee of the Red Cross (I.C.R.C.) and the Minister of Health, it was agreed that the Hygiene Section should decide its own schedule for work, keeping the I.C.R.C. and the Ministry of Health informed. This freedom of action in what was at that time a somewhat chaotic and politically tense situation was most welcome. I personally am most grateful to Colonel A. M. Ferrie, the Commander of the British Red Cross Force and who was ultimately responsible for our actions, for the way in which only the minimum of restrictions, essential for the safety of the personnel, were placed on our movements or activities.

At this time the civil Public Health Services were not back at work. It was not until the 8th October that liaison with the Director of Public Health at the Ministry was possible and the 10th October before co-ordination was achieved between the Director of Public Health, the Medical Officer of Health for Amman, the Chief Sanitary Engineer and the Civic Authority. Once these links had been established a policy was decided that the team would work through the Ministry of Health on any matters, other than purely domestic hygiene problems relating to the various Red Cross teams. The most significant feature arising from this amicable liaison was that the Ministry of Health once again assumed its normal executive responsibilities and had the necessary authority to deal with the various agencies involved in restoring the Public Health situation.

To make the maximum use of the hygiene section's capabilities it was decided we should

- a. Act as a collecting agency for information on health matters. At this time due largely to the lack of communication, the only "health" information available came through the various Red Cross Units and even that was unreliable and somewhat exaggerated.
- b. Assist with advice where appropriate.
- c. Initiate small scale but immediate measures to deal with health hazards until the normal services could take over.
- d. Assist the Ministry officials with transport so that problems could be investigated on the spot.

General tasks

The actual hygiene work performed by the Section consisted in the first instance of carrying out a busy programme of disinfestation, fly control measures, mosquito larvae control, and rather a crude disinfection of temporary wards and operating theatres by means of spraying with Cresol or "Dettol", for the various Red Cross Hospitals around Amman and at Jerash, none of which apart from the United States (U.S.) Hospital had any facilities. In addition the section established liaison with two laboratories and ran a specimen delivery service for clinical material from both 2 Field Hospital and the U.S. Hospital.

The highlights of this work were the establishment, with the assistance of the U.S. Field Engineers, of a chlorinated water supply for the combined U.S. and British Hospitals; the clearing up, disinfesting and disinfecting of the Government Vaccine Laboratory where the animal house had been destroyed and similar work at a large badly damaged civilian hospital. The personnel of the Royal Engineers took part in these operations and made a rather sophisticated field apparatus for hot water for 2 Field Hospital, a number of "bespoke" pairs of crutches and a cradle for a new born infant! Assistance was given to 2 Field Hospital with arrangements for refuse disposal, and the handling and storage of dirty linen, much of which was infected. Laundry was flown in and out daily from Cyprus and the system worked well.

Water supplies

Somewhat to our surprise we were not heavily involved with water supplies either to other Red Cross Units or to the community. Piped supplies had been disrupted in parts of Amman but there was sufficient chlorinated water available although tankers were used to a considerable extent for distribution up to mid October by which time the bulk of the public supply distribution system had been restored. Routine checks were of course carried out.

Communicable disease

Turning to the question of infectious disease, we were involved with the Director of Public Health in following up reports of outbreaks of "gastro enteritis" the implications being that these were possibly Cholera. Three specific investigations were carried out which fortunately did not reveal Cholera. Laboratory confirmation on the scale required was not a feasible proposition and in any case due to the practice of treating cases of diarrhoea with an antibiotic "cocktail" of Neomycin, Streptomycin, Tetracycline and occasionally Sulphaguanidine the results would have been of doubtful value. In retrospect all the reports were exaggerated which in the circumstances is not surprising and perhaps our most effective function was to calm down the situation.

To give an example the following brief description of one investigation may be illuminating. A report was received from the Minister of Health, late on 11th October, that two confirmed cases of Cholera had been notified from Jerash, a small town some 35 miles from Amman. The report had been made by *letter* by the Governor of the town. The following morning the Warrant Officer and myself accompanied by the Director of Public Health visited Jerash to investigate. There was no telephone communication so a visit had to be made. The findings were rather surprising in that the cases had occurred some 18 and 15 days previously. No laboratory diagnosis was attempted or had been possible, the cases had occurred in a refugee camp some six miles away and had been diagnosed by a medical student. One man had died, the other recovered. No contact tracing had been carried out but the local Medical Officer of Health had been consulted after the event, and was satisfied that the cases were not Cholera. The fatal case was thought to have been due to eating cabbage heavily contaminated with insecticide! It is of some interest that six days later the Governor again wrote to the Minister of Health repeating his statement about Cholera although the whole matter had been fully discussed with him.

Disposal of the dead

Among a variety of other problems with which we were involved was the question of disposal of corpses from one of the more badly damaged areas of Amman.

By the exercise of considerable diplomacy, acting under the aegis of the Red Cross, the Army Health Inspector in charge of the section, persuaded the civil authorities to undertake the commitment in a manner acceptable to the religious beliefs of the population. He was able to convince the relatives that this would be done properly and in full consultation with them. This was, a further example of calming a rather emotive situation, a factor of importance in much of the work undertaken by the section.

Discussion

The examples given will it is hoped give some idea of the overall nature of the work carried out and more important a picture of the situation and atmosphere which we encountered. When one looked in retrospect at the daily 'log' of the tasks performed they seem rather disappointing and unexciting from our point of view, but as far as the local population was concerned the comparative lack of Public Health emergencies was a very desirable state of affairs. Despite this the section was fully occupied for some three weeks. A great deal of time was consumed in having to travel to investigate problems. It was not possible to save time by using the telephone, as it either was not working or if it was there was nobody in authority at the other end who spoke English. Once we had established liaison with the various Jordanian health officials things ran very smoothly as without exception they were decisive and keen to take up the reins again. In this we were perhaps more fortunate than other elements of the Red Cross Organisation.

The operation provided very good training particularly for the junior members of the section who had to deal with real problems, improvise, and above all think.

The present establishment of the Section (a W.O.I Army Health Inspector, 4 Hygiene assistants and 2 R.E. personnel (a carpenter and a sheet metal worker) proved correct; and the Army Health Inspector's technical knowledge and equivalent civilian status proved invaluable in his dealings with Jordanian officials.

It must however be appreciated that the section has a very limited capacity to carry out physical tasks and requires the support of the local population, be it military or civilian, to provide a labour force, transport, and technicians for public utilities, if a major public health problem materialises. If there had been a requirement in Jordan for support on this scale it is extremely doubtful if it could have been mastered particularly in the first week or ten days.

It was hoped to participate in some field work with the Jordan Malaria Control Organisation but unfortunately the security situation precluded this.

The Army Health part of the relief operation proved interesting, was worthwhile training and we hope was of benefit to the population we aimed to help.