

During the period of work, depending on the specific medico-tactical situation, the FMHs tasks, the principals of its operation, and the variants of deployment have been amended accordingly.

By summarizing the experience gained, three basic variants of the FMHs operation in an armed conflict were identified:

- 1) Deployment of a surgical hospital on the basis of a local medical facility;
- 2) Deployment of a self-supported surgical hospital; and
- 3) Deployment of a self-supported multiprofile hospital.

Our experience indicates that the FMH of ARCDM "Zaschita" is well adapted for operation under such conditions, as its organizational and staff structure and medical equipment promote administering any type of medical care, including secondary care. The chief of FMH is capable of urgent responses to the changing situation, and can modify the task set to that medical unit in a timely fashion.

**Keywords:** armed conflicts; casualties; deployment; evacuation; field multiprofile hospital; hospital; military operations; organization; war

#### G-21

##### Effect of a Refugee Crisis on District Health Care: A Case Study from Karagwe District, Tanzania

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**Background:** In April 1994, approximately 160,000 Rwandan refugees suddenly arrived in the Karagwe District in NorthWestern. The refugees settled in large refugee camps in the district where they stayed until their sudden repatriation in December 1996. Medical assistance to the refugees was provided by several international organizations in co-operations with the United Nations High Commissioner for Refugees (UNHCR). The crisis had profound positive and negative socio-economic effects on the host society. Less is known about the impacts on the health care of the host society. The present study focuses on the effects of the crisis on Nyakahanga Hospital, the district hospital of Karagwe.

**Methods:** During a field visit to Nyakahanga in February–March 1998, statistical data from hospital records were collected and analysed. Structured and unstructured interviews were conducted with key informants and staff who had worked at Nyakahanga throughout the crisis. The following indicators of quality of obstetric care were analysed: 1) in-hospital maternal deaths; 2) stillbirth rates; 3) the percentage of deliveries done by Caesarian sections; and 4) the number of uterine ruptures.

**Results:** The most striking effects of the refugee crisis on the hospital was a severe loss of experienced medical personnel, especially qualified midwives. Most of these health workers left for better-paying employment in the refugee camps. Thus, an increased workload, including obstetric emergencies and major surgery, had to be dealt with by a reduced number of experienced staff. The findings suggest that this situation led to a deterioration

of quality of care at the hospital reflected by a statistically significant ( $p < 0.001$ ) increase in both hospital maternal mortality rates and stillbirth rates. The material support received by the hospital from various aid organizations was insufficient, poorly coordinated, and was received too late to be of value. The negative effects of the crisis on hospital care persisted for more than one year following the repatriation of the refugees.

**Conclusions:** As a result of the refugee crisis, the quality of medical services at the district hospital level deteriorated despite some support from relief agencies. Low-income countries with fragile health-care systems and a permanent shortage of qualified medical personnel host most of the world's refugees. In planning for future interventions in refugee catastrophes, it is essential that relief organisations give appropriate assistance not only to the refugees, but also to the existing health-care system of the host country.

**Keywords:** aid; health care; host countries; obstetrics; quality; refugee camps; refugees; relief; repatriation; socio-economic effects; Tanzania; UNHCR

#### G-22

##### Contribution to the Study of International Law Concerning Natural and Technologic Disasters: Problems Posed by Unidentified Patients Crossing National Boundaries after Large-Scale Disasters

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This study deals with legal problems posed by organising aid as a result of natural or technologic disasters. Such disasters not only require exceptional medical organisation, but also specific international co-ordination, so that emergency teams may arrive early on the scene.

Moreover, these teams need to be managed properly on site, so that efficient co-operation allows the victims to be treated, and the injured who need it, to be transported to the medical institutions of neighbouring countries. While the sending of international medical aid is now well-understood, the crossing of frontiers by unidentified victims in peace time remains a major problem of international law. Any decision to allow such a victim to cross a boundary must respect all of the established identification techniques, of which the Interpol formula is the reference. Bilateral and multilateral agreements should be designed to allow such crossings in circumstances of force majeure.

This study presents model agreements such as those existing between France and Switzerland and those defined in the Convention of American States. Planning ahead for an appropriate response to the inevitable disasters of the future implies the definition of new specific agreements, so that efficient international aid may become a reality for all victims of large-scale natural and