

## Essay

## Medical evacuation from Mostar

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*My Name is Today*<sup>1</sup> is the title of a book that expresses the urgency of treating the problems of children immediately if lifelong developmental and psychological sequelae are to be averted. As the war in Bosnia and Herzegovina has shown, access to adequate medical or surgical treatment can be denied for several years in areas of conflict. Our experience from the city of Mostar in southern Bosnia addresses the controversial principles of medical evacuation.

Most medical evacuations from former Yugoslavia have been conducted under a Special Medical Programme run by the Geneva-based International Organisation for Migration (IOM). This operation began in Croatia in September, 1992, and was expanded to include Bosnia and Herzegovina in July, 1993. In the first 15 months, over 1000 patients were evacuated to other countries throughout the world. In August, 1993, a joint medical programme with IOM and the United Nations High Commission for Refugees (UNHCR) was established for Bosnia and Herzegovina.

Our programme of medical evacuation of children was established as part of an initiative to support health care, including a screening project involving 7352 children, in Mostar between May and December, 1994.<sup>2</sup> 14 of about 12 000 children from Mostar were brought to the UK for treatment. The adequate management of complex medical or surgical conditions that were not of themselves life threatening in a war-torn country with a severely disrupted health delivery system could not have been completed in any other way. Since these children did not have immediately life-threatening conditions, they did not fit all the IOM criteria.<sup>3</sup> However, they did have serious medical or surgical conditions that were ruining their present lives, and which had profound implications for their long-term development.

The children, selected irrespective of their ethnic origin, were evacuated with the agreement of their parents and the Bosnian government by paediatricians employed on the programme after places had been supported by the UK Foreign Office and Department of Health. Evacuation was undertaken in conformation with UNHCR/UNICEF guidelines<sup>4</sup> and the UN Convention on the Rights of the Child<sup>5</sup> to a standard that, in our view, is a minimum for this difficult exercise. 12 children were evacuated with their mothers, one with his older sister and one, an orphan, was accompanied by a guardian from the children's home. Their fathers could not accompany them because men of military service age

were not allowed out of Bosnia. Siblings, who would suffer if separated from their mothers, were also evacuated.

Children were accompanied by a paediatrician at all times with, when necessary, appropriate resuscitation and monitoring equipment. The paediatrician had a UN identity pass and the UN protection force were aware of all movements. UN vehicles were used in the war zone. Accommodation in the UK was, where possible, with a Bosnian language speaking family. To date, 11 have returned to Mostar, and one is in the Netherlands. The remaining two are continuing treatment in the UK.

A 4-year-old girl lived in a small village 40 km from Mostar. Until the mobile screening clinic of our programme visited the village there had been no access to medical care for 14 months. When she presented for screening it was obvious that she had a substantial neurological deficit, the signs of which were nystagmus, a positive Romberg's test, strabismus, and abnormal finger-nose coordination. Because of the security situation, it was not possible to move her to Sarajevo for a computed tomography scan and it was agreed that medical evacuation was needed. She was taken to Southampton in the UK where she was found to have a cystic posterior fossa tumour that was removed surgically. With intensive physiotherapy and occupational therapy she improved dramatically during the next 2 months. Her mother was clinically depressed on arrival in England and also improved. By her return to Mostar, the girl was able to walk on her own and communicated verbally, skills that she had not previously learned.

Problems in the remaining 13 children were non-union of the right tibia secondary to a gunshot wound, short stature and delayed puberty, virilisation from untreated congenital adrenal hyperplasia, undiagnosed Turner's syndrome, severe aortic regurgitation, aortic valve stenosis and incompetence, bilateral cataracts and retrolental fibroplasia, atrioventricular septal defect and short stature due to Ellis Van Creveld syndrome, peroneal and tibial nerve injury resulting in foot drop from shrapnel injury, intestinal stricture and severe hearing impairment, Fallot's tetralogy with hypercyanotic spells accompanied by twin with cerebral palsy, and liver failure due to Alagille syndrome.

There is little doubt about the benefits that these children and their families derived from their evacuation and treatment. However, it is important to assess whether the funds used could not have been of more value if spent in Mostar. The approximate cost, excluding the hospital treatment, was £3000 per family. This included passports and visas, travel, accommodation, subsistence, translation costs, and salaries for the logisticians and paediatricians. Hospital treatment was estimated to average about £7000 per child, although this cost was generously borne by the hospital trusts that provided treatment. From our experience of working in Mostar for the past 12 months,

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we believe that these funds were well spent with a tangible outcome.

Every effort was made to ensure that it was not appropriate for treatment or diagnosis to be undertaken locally. Some patients identified as having medical problems requiring diagnosis were investigated by sending blood, tissue, and urine samples to the UK for analysis, allowing them to receive treatment locally, without the need for evacuation.

About one in 1000 children from Mostar entered this programme (14 cases for a population of around 12 000 children under 18 years of age). One of the main criticisms of medical evacuation is the perceived enormity of the problem. With respect to Bosnia, our data suggest that the proportion identified makes this programme acceptable as far as children throughout the country are concerned. There are around 750 000 children in Bosnia.

It is difficult to compare the costeffectiveness of primary health care with specialist services in any country. When a state is receiving international aid because of war or extreme poverty then the current approach is to provide only primary care since the need for this may be overwhelming. To provide specialist treatment for children this can either be established within the country or through medical evacuation. For most countries disadvantaged by poverty, conflict, or both, local provision of specialist services is unrealistic in the short term particularly in respect of skilled staff. Children's physical, emotional, and psychological development cannot, however, be put on hold without potentially disastrous long-term consequences. Advantaged countries with effective specialist services could find the treatment of a small number of incoming patients more costeffective than providing aid and training in specialist care to countries where there is armed conflict, political instability, or where adequate primary health care has not yet been achieved. However, for medical evacuation to be of lasting benefit the situation in the country of origin must be, following the treatment, adequate to sustain the

health and wellbeing of the child. Hopefully Bosnia will be a good example of such a country.

The arguments in favour of specialist care for children in disadvantaged countries, and therefore medical evacuation as one form of this service, might be described as based on compassionate rather than economic grounds. However, a child with a chronic illness usually drains resources from their family and community. Moreover, the increased contribution to society of a child treated successfully may be comparable with the benefit provided by a donation of similar size to primary health care. Every child has the right to both primary and specialist health care.<sup>3</sup> In our advantaged countries we would not dream of investing all resources, even if inadequate, in primary care alone without also developing facilities to treat effectively the more seriously ill or injured. International aid should mirror the expectations of care within advantaged countries. In war, this form of aid has measureable benefit compared with so much other aid which does not reach intended beneficiaries. Moreover, medical evacuation can generate goodwill in communities, thereby enhancing the effectiveness of other forms of humanitarian aid.

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