

## Personal child health record and advice booklet programme in Tuzla, Bosnia Herzegovina

P McMaster MRCP H J McMaster RGN RM D P Southall FRCP

*J R Soc Med* 1996;89:202-204

**Keywords:** *personal child health record and advice booklets; Bosnia; refugees; parent-held records*

### SUMMARY

Personal child health records, held by the parents, have potential advantages in times of civil disorder. Via health and community workers, 939 booklets (incorporating health records and health advice) were distributed to displaced and other families near Tuzla. Subsequently mothers were invited to bring their children for examination.

Five hundred and seventy-one children with their booklets returned to the clinics. The survey revealed high rates of dental caries (305 cases), anaemia (36), and scabies (20). The war had not affected the duration of breast feeding, and the children's nutrition was generally satisfactory. Immunization status was generally good, though rates were unacceptably low in children from certain areas, reflecting not only deficient provision in their place of origin but also failings in the programme for displaced persons. An informal survey indicated that parents and older children appreciated the health-information content of the booklet.

In a disaster of this sort, the personal child health record and advice booklet serves the combined purpose of yielding essential epidemiological data, providing a permanent health record, and meeting a need for health education material.

### INTRODUCTION

Experience around the world shows that patient-held records have many advantages over those based in health facilities<sup>1</sup>. They are well looked after by the patients or their parents<sup>2</sup> and stay with the patients if they move to a different area. They are immediately available to any health professional in whatever setting and reduce the administration costs for the health facilities<sup>3</sup>.

In war situations they have a particularly useful role, since hospital-based records are commonly destroyed or made inaccessible. Parent or young-person-held health records have been developed as part of our programme of work as an implementing partner of UNICEF in Bosnia since spring 1994<sup>4</sup>. They have been translated into the Bosnian languages by local doctors and linguists<sup>5</sup>. Health education information has been included in the record books, making up over half the contents.

The first 1000 copies were printed in the first week of October 1994. They were immediately brought to Tuzla where there was a request for a paediatrician and nurse to help deal with a sudden huge influx of displaced families from the Bijelina area held by the Bosnian Serb army. Food, shelter and basic amenities for the refugees had already been organized, so our priorities were to assess the health of

children, and to offer the families a permanent record of our findings for them to keep. A further objective was to educate families in the prevention and management of illnesses.

A plan of action was developed with the Bosnian Ministry of Health in Tuzla, with the local authorities in the town of Lukovac, and with the local coordinator of displaced people. Authorization was obtained from each level. The non-governmental (NGO) and UN organizations working in Tuzla were also consulted in the planning stage, and all were informed of our progress at least weekly.

On arrival in Tuzla the displaced families had been channelled to various different areas. The recent influx was mainly accommodated in Lukovac, 6 km away.

### METHOD

The child health record and advice booklets were distributed by staff in collective centres and by local community workers through heads of municipalities in Lukovac town. Mothers were invited to fill in the relevant parts and bring their children on a pre-arranged date to be weighed and measured and seen by a doctor. Displaced families included those from two collective centres (one in a school and one in a kindergarten) and those in private accommodation. There were also local families from four of the municipalities of Lukovac. All the children in the collective centres were seen plus as many from the local community as arrived, all having been invited.

Child Advocacy International, c/o Academic Department of Paediatrics, North Staffordshire Hospital, University of Keele, Stoke-on-Trent ST4 6QJ, England

Correspondence to: Professor D P Southall

The staff working on the project included a local paediatrician working for a Bosnian NGO 'Svijet Malih', willing and able to spend much time on the programme. In the kindergarten, the first 90 children were seen with the help of two nurses based there (one a teacher before the war, now acting as nurse without further training, and the other a midwife) and teachers. Help was also given by a newly qualified local doctor (no working experience) and a local 'nurse' (with no nursing training) from an Italian NGO (ICS), and an international nurse/midwife (HJM).

In the school clinic a large room was divided by screens into an area for the nurse and another for two assistants from the community office who helped mothers to fill in the books. The health centre was used for displaced families in private accommodation and local resident families. Each local community was given a day on which to ask the children in that area to come to the clinic. A more complex appointment system was rejected by all the community leaders; however, the result was that large numbers came early in the morning and many had a long wait. The books would be filled in if the mother had not already done so. The children would be weighed and, for those over 2 years old, height was measured. For those under 2 years, head circumference was measured. These data would be plotted on the centile charts in the books (WHO data) and also recorded on a slip of paper (six per sheet of A4) pre-printed with labelled boxes for entry onto a computer database (FileMaker Pro). This was done by the local nurse and HJM.

The Bosnian paediatrician and another local general practitioner, together with the international paediatrician (PM), would then see the children, working through the health record part of the books and then undertaking a basic clinical examination. Further examination was undertaken as indicated by history and screening examination. Any medical troubles were noted and advice was given. Because local facilities for treatment or further investigation were limited, medical evacuation was considered for major problems—for example, a child displaced from Srebrenica who had raised intracranial pressure was accepted by the Royal Hospital for Sick Children, Glasgow.

The database was changed after the first day when we realized that an enormous amount of time was spent trying to specify which immunizations had been received and when. For the rest of the survey, a simplified version was used (see Figure 1) recording whether the child had received the minimum of vaccinations according to the following criteria: BCG by 2 months; diphtheria, pertussis and tetanus (DPT) and polio × 1 by 6 months; DPT and polio × 3 by 1 year; measles, mumps and rubella by 18 months; diphtheria, tetanus and polio booster by 5 years.

## RESULTS

The number of parent held records distributed for each age group was: 243 of 0–6 years, 334 of 6–12 years, and 362

Datum rođenja	2.6.92	Adresa	Lukavac	4/1/11			
Dojenje do	28						
Viscina	91 cm	Percent	70	Tezina	14.3 kg	Percent	90
Obin glave	cm	Percent					
Imunizacije OK	1	0=No Info. 1=OK 2=Not OK	Caries		Anaemia		
Pregled	Hydrocoele						

Figure 1 Final data collection slip used in Tuzla

of 12–18 years (total 939). The total number of children who returned and were examined by a doctor was 571. The age groups of those examined was 0–6 years, 202 (35%); 7–12 years, 194 (34%); and 12–18 years, 175 (31%) [0–1 year old, 18]. The M/F ratio was 49.4/50.5. Sixty-four children were Lukovac residents, the other 507 having been displaced from Bijelina/Janja (23), Bratunac (105), Cerska (10), Huskici (1), Jaruske (70), Kamanici (2), Kovjevic Polje (6), Orahovica (70), Srebrenica (96), Teocak (1), Vijenae (2), Vlasenica (96) and Zvornik (25).

Data were collected on the duration of breast feeding in the expectation that it might have been reduced by the war. In fact, the mean durations before and after the war were almost the same (52 and 60 weeks respectively).

For weight, 2.8% of children were at or below the third centile; for height 6.0%; and for head circumference 5.8%.

Table 1 presents the results on immunization, showing the variation in different areas and, of importance, the percentage with no information about immunization. Several children whose mothers said their child had received BCG, even some with a record of the immunization, had no scar. Often mothers reported that their child had not been immunized because, on the due date, he or she had some minor condition such as scabies (which at that time was regarded in Lukovac as a contraindication).

Illnesses detected by screening in the 571 children included: dental caries (305), clinical signs of anaemia (36), enuresis (15), scabies (20), asthma (4), bronchitis (5), post-whooping-cough bronchitis, innocent heart murmur, ventricular septal defect (1), rheumatic fever (1), otitis media (3), rhinitis (5), blocked tear duct (1), watering eye from birth (1), nasal infection (2), sinusitis (1), impetigo (2), skin abscess (4), eczema (2), vitiligo (2), burn (1), BCG abscess (1), hearing loss (3, in one due to explosion), hydrocephalus (1), epilepsy (3), squint (3), cerebral palsy (1), phobia of dark (2), inguinal hernia (2), undescended testis (5). Many children had evidence of post-traumatic stress disorder but this could not be formally evaluated within the time available.

## Feedback

Parents and older children were questioned about the parent-held record and advice booklets. Had they read any

Table 1 Percentage immunization status by area of origin (number in parentheses)

	Satisfactory	Not satisfactory	No information
All (571)	79.9 (456)	15.5 (89)	4.6 (26)
Bijelina/Janja (23)	65.2 (15)	34.8 (8)	0
Bratunac (105)	70.5 (74)	25.7 (27)	3.9 (4)
Jaruske (70)	97.1 (68)	2.9 (2)	0
Lukovac (64)	85.6 (55)	7.9 (5)	6.3 (4)
Orahovica (71)	94.2 (66)	5.8 (4)	1.4 (1)
Srebrenica (96)	68.8 (66)	21.1 (20)	10.4 (10)
Vlasenica (98)	79.2 (79)	13.5 (13)	6.3 (6)
Other areas (44)			

of it? Interestingly, nearly all had read the whole book. This reflected the lack of other reading material. Parents and young persons were asked what they had found to be most interesting, and what they had learnt from the books. They were also asked which sections of advice they regarded as unnecessary. The replies included the following: 'First time in one place so much good information', 'only papers refugees have', 'Grateful someone has come to see them as refugees'. An aunt, looking after her nephew and niece in their mother's 'absence' (this often meant death), commented on how helpful it was for her, not having any previous experience of her own children. Sections that were particularly appreciated included those on: infant feeding; managing behaviour problems; diseases, especially scabies; what to do when a child has temperature and convulsions; care of baby 8 months old; drugs; development; pregnancy and puberty—mentioned several times by both girls and boys aged 12–16 years: one boy (aged 16) said more should be said about boys. Parents mentioned: hygiene; play and talking to children.

## DISCUSSION

As used in Lukovac, personal child health record and advice booklets not only provided essential data on immunization, nutrition, and prevalent medical disorders but also appeared to benefit the young population by supplying a permanent health record and health education material.

The screening showed that scabies and clinical signs of anaemia were common. There was widespread dental caries, and, as elsewhere in Bosnia<sup>6</sup>, a high prevalence of the psychological effects of war.

The length of breast feeding was remarkably good, and our gross measure of nutritional status yielded no evidence

of an increase in underweight children. Analyses of weight for height from elsewhere in Bosnia agree with this finding<sup>5</sup>.

The immunization status of children from certain areas was reasonable. One notable exception was Bijelina/Janja. Even for the displaced people from Srebrenica, who had been in Lukovac for 2 years, there were still shortcomings. The lack of records on immunization in this group reflects not only the initial loss of records but also deficiencies in documentation of the current immunization programme for the displaced children.

We were disappointed by the non-attendance of approximately half the mothers to whom books had been distributed. A larger number could have been screened if the books had been given out as the child was examined. However, this would have greatly lengthened the time taken to see all the children. Many of the parents did not carry the child's immunization record with them. Distribution of the books in advance gave them the opportunity to fill in the records before coming, and to learn why they should bring their child. Illiteracy would be an obstacle. We did not enquire about this, but in our sample three mothers and one grandmother mentioned they could not read, two from Cerska and two from Srebrenica. For such people, the advice section of these booklets could still be important, since it could be read out by a literate friend or relative.

Follow up of the long term effectiveness of this approach to health education was needed. Unfortunately, this was not possible.

*Acknowledgments* We thank Dr Senija Ibrisimovic, who examined half the children in this study; all the nurses, teachers and municipality workers who helped mothers complete the records; ICS for logistic support, and especially Amra and Lidija with Jasna for translating; and Unicef Tuzla Field Officer Suhreta Ramic and Manuel Fontaine for their invaluable support.

## REFERENCES

- 1 MacFarlane A. Personal child health records held by parents. *Arch Dis Child* 1992;67:571–2
- 2 Jeffs D, Nossar V, Bailey F, Smith W, Chey T. Retention and use of personal health records: a population based study. *J Paediatr Child Health* 1994;30:248–52
- 3 Lakhani A, Avery A, Gordon A, Tait N. Evaluation of a home based health record booklet. *Arch Dis Child* 1984;59:1076–81
- 4 Southall DP, Ellis J, McMaster P, McMaster H, Willock A, Plunkett M. Medical Evacuation from Mostar. *Lancet* 1996;347:244–5
- 5 Southall D, McMaster P, McIntosh I, Hewertson J, Chappel H. A Screening Programme for Children in Mostar. BiH, International Child Health, 1995:4

(Accepted 21 December 1995)