Maternity advice survey: sleeping position in Eastern Europe

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Abstract

***Aim*—To identify hospitals in Eastern Europe promoting front infant sleeping position.**

***Methods*—Questionnaires were distributed to maternity units in 22 countries during July to November 1999.**

***Results*—A total of 489 hospitals in 20 countries responded. Preferred position in normal care units was back (26.6%), front (1.8%), side (65%), or combination/none (6.6%). Corresponding recommendations at discharge were 17.4%, 3.5%, 73%, and 6.1%.**

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Modification of front (prone) sleep position, a causal sudden infant death syndrome (SIDS) risk factor, represents a cost effective public health intervention. A number of child care practices (prone sleep position, soft underbedding, heavy dressing, bed sharing, and lack of breast feeding) have been associated with increased SIDS risk.[1 2] The International Child Care Practices Study (ICCPS) collected information on child care practices associated with SIDS risk from 21 centres in 17 countries.[3] One participating centre (Buenos Aires, Argentina) noted a relatively high rate of prone sleeping in the study population together with a significant incidence of SIDS in the community. With WHO regional office support, a successful "Link" programme between New Zealand and Argentina was launched to raise SIDS awareness and advise "boca arriba" (face up).[4] The programme highlighted the potential for similar cost–effect interventions in other countries where SIDS may be an unrecognised but significant problem. In April 1998 representatives of SIDS International, the SIDS Global Strategy Task Force, and WHO proposed that a Maternity Advice Survey be initiated to determine what infant sleep position advice is given to mothers in maternity units. It was hypothesised that in countries where hospitals promote prone sleep position, there may be high rates of SIDS that are currently unrecognised.

Methods

The collaborative network of WHO in Eastern Europe (CCEE/NIS) identified 22 country coordinators, officially nominated by ministries of health. Details of all maternity units were collected and questionnaires were either posted to directors of obstetrics or paediatrics, administered by telephone, or collected personally during July to November 1999. Although it was recommended that maternity units with more than 1000 births be surveyed, responses were also received from smaller units. Units with

Table 1 Participating countries from WHO in Eastern Europe (CCEE/NIS) region showing demographic information (1999 World Health Report) and usual sleep position in normal care units, and recommended advice given on sleep position on discharge

				Sleep position in normal care unit									
				*Preferred position**				*Never back*	*Always front*	*Sleep position advice on discharge home**			
Country	*Population (millions)*	*Infant mortality rate†*	*Questionnaires received (n)*	*B*	*F*	*S*	*C*			*B*	*F*	*S*	*Nil*
Albania	3.1	30	11	6	0	5	0	1	0	1	4	6	0
Armenia	3.5	26	14	4	1	8	1	2	0	1	0	11	2
Belarus	10.3	23	17	0	0	16	1	9	0	0	0	17	0
Bosnia Her Sarajevo	3.6	15	7	0	0	7	0	2	0	0	1	5	1
Bosnia Her Rep. Srpska			3	0	0	3	0	0	0	0	0	3	0
Estonia	1.4	19	3	0	0	3	0	2	0	0	0	3	0
Georgia	5.1	20	12	4	0	8	0	1	0	2	1	6	3
Hungary	10.1	10	66	40	5	15	6	8	1	40	2	15	9
Kazakhstan	16.3	35	62	19	1	34	8	12	0	10	4	47	1
Latvia	2.4	18	3	0	0	3	0	1	0	0	0	3	0
Lithuania	3.7	21	11	0	0	11	0	3	0	0	0	11	0
Macedonia, FYR	2.0	23	21	2	1	18	0	12	1	1	1	18	1
Moldova	4.4	29	11	4	0	5	2	3	0	1	0	8	2
Romania	22.5	23	69	9	1	58	1	41	0	4	4	56	5
Russian Federation (Barens)	147	18	7	2	0	3	2	1	0	0	0	7	0
Slovak Republic	5.4	11	41	11	0	28	1	2	0	9	0	31	1
Slovenia	2.0	7	14	4	0	7	3	2	0	4	0	9	1
Turkmenistan	4.3	55	57	13	0	40	4	9	0	10	0	46	0
Ukraine	51	19	45	1	0	43	1	27	0	2	0	43	0
Uzbekistan	23.6	44	15	11	0	2	2	0	0	0	0	11	4
Total	—	—	489	26.6%	1.8%	65%	6.6%	32%	<1%	17.4%	3.5%	73%	6.1%

*B, back; F, front; S, side; C, combination.
†Deaths from birth to 365 days per 1000 live births.

Table 2 Relation between preferred sleep position in normal care units with the sleep position recommendations made at discharge from 489 hospitals in 20 countries in Eastern Europe

	Preferred sleep position in normal care units			
	Back	*Front*	*Side*	*Combination*
Recommended sleep position on discharge				
Back	74	1	6	4
Front	5	5	7	0
Side	31	1	296	26
No recommendation	20	2	8	0

Table 3 Sleep position that was "always" and "never" recommended in normal and special care units as an indicator of SIDS awareness in 489 hospitals in 20 countries in Eastern Europe

	Normal care units	*Special care units*
Higher "SIDS risk awareness"		
Always back	35/431 (8%)	56/442 (13%)
Never front	179/421 (43%)	161/426 (38%)
Lower "SIDS risk awareness"		
Never back	138/431 (32%)	99/442 (22%)
Always front	2/421 (<1%)	4/426 (1%)
Always side	163/482 (34%)	114/467 (24%)

more than 200 annual births were included in the final analysis. Completed responses were received from 489 hospitals in 20 countries. The study instrument, in English and Russian, focused on advice given on infant sleep position and included pictures for clarity. Information was also sought on other advice given (breast feeding, smoking, immunisations, alcohol, drugs) and other child care practices (rooming in, bedding, clothing, pacifiers). Questionnaires were collated by WHO and data entry and statistical analysis was undertaken with Epiinfo software (Version 6.04c, Center for Disease Control, Atlanta, Georgia, USA).

Results

Table 1 presents demographic details for the 20 participating countries. The 489 hospitals surveyed catered for more than a million births annually. Respondents were asked how babies were placed for sleep in both normal care and special care units. For each of the three possible sleep positions—back, front, and side—the acceptable codes were always, usually, sometimes, and never. A range of permutations were thus possible. Table 1 details some of this information. In normal care units the preferred sleep position was back (26.6%), front (1.8%), side (65%), and a combination (6.6%). Corresponding figures for special care units were 31.1%, 2.3%, 55.7%, and 10.9%. Table 2 compares sleep position advice in normal care units to advice at discharge. A response that a particular position was "never" or "always" used may indicate a higher or lower level of SIDS risk awareness (table 3). Written information on sleep position was available to 23% of parents; 11% of hospitals had a written policy. Centres with either written information or policy were more like to place infants on the side (75% versus 68%) or front (4% versus 1%) than on the back (21% versus 31%) in normal care units ($\chi^2 = 8$, $p = 0.018$).

Discussion

Public health campaigns advising parents not to place their infants in the prone sleep position have resulted in dramatic reductions in SIDS mortality rates of 50% or greater. A parent's decision on how to place the infant to sleep will depend on a number of factors including peer norms and advice received from health professionals. Initial advice given to mothers by nursing staff in the maternity hospitals is anticipated to influence actual infant sleep practices.

The results of this survey were partly reassuring in that few hospitals were preferentially placing infants in the prone position (1.8%), and relatively few (3.5%) were recommending prone sleeping at discharge from hospital. However, the majority of hospitals placed infants on the side (65%) and also recommended this position at discharge (73%). Hospitals that "never place infants on the back" may represent a marker for low awareness of SIDS risk. Earlier education campaigns to "reduce the risks of SIDS" advised back or side sleep position. Subsequent studies have shown that the side sleep position is also a risk factor for SIDS. The American Academy of Pediatrics Task Force on Infant Positioning and SIDS published a consensus statement advising against side sleep position, and a subsequent meta-analysis reached a similar conclusion.[5] Despite these recommendations hospital staff are still reluctant to advise that a newborn infant be placed on the back to sleep for fear that the infant may vomit and aspirate. Comments on questionnaires indicated that this was also a concern for hospitals in Eastern Europe. Although the United Kingdom's "back to sleep" campaign has not resulted in increased complications such as aspiration,[6] more information is needed to convince hospital staff that it is completely safe to place infants supine immediately after birth.

Although relatively few hospitals in the survey promoted the prone sleep position, most favoured the side position. This is also a SIDS risk factor albeit with smaller relative risk. No information was obtained on SIDS rates in the participating countries. It should also be noted that recommendation may not imply actual practice. Participating countries should consider collecting information of actual sleep position used by infants after discharge from hospital, together with data on unexpected infant deaths within the communities. The development and evaluation of an appropriate health promotion programme encouraging back sleeping in hospitals, on discharge and at home to reduce infant mortality, should be investigated.

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Cholecystectomy increase

At the children's hospital in Houston, Texas, 36 cholecystectomies were performed in the 20 years up to 1980. Between 1980 and 1996 there were 128 cholecystectomies of which 19 were laparoscopic (Darlene M Miltenburg and colleagues. *Pediatrics* 2000;**195**:1250–3). Much of the increase may have been a consequence of ultrasound diagnosis but there appears to have been an increase particularly in children whose gallstones were not secondary to chronic haemolytic diseases.

Of the 128 patients, only 29 had no underlying medical condition or risk factor. Fifty two had chronic haemolysis (31 had sickle cell disease and 16 hereditary spherocytosis). Other associated disorders or risk factors included gross obesity (8), cystic fibrosis (6), congenital heart disease (6), total parenteral nutrition as a preterm neonate (6), other long term use of total parenteral nutrition (4), family history of gallstones (3), and previous ileal resection (2). Twelve other patients had miscellaneous serious medical disorders. The average age was 10 years and seven were under 1 year. Sixty nine were girls. A quarter (32) of the cholecystectomies were performed as emergencies and complications developed after 16% of emergency and 6% of routine operations. Three children died, all after emergency surgery and all with congenital heart disease. Four of the six children with congenital heart disease underwent emergency surgery. The three who died were an 18 year old who had had an endocardial cushion defect repaired, a 17 year old with an artificial heart valve who had pulmonary vascular disease and had had surgery for truncus arteriosus, and a 10 month old who had had a heart transplant. (Gallstones develop in about 16% of children who have had a heart transplant.)

Elective cholecystectomy is associated with less risk of complications than emergency cholecystectomy. Children with severe heart disease seem to be particularly at risk after emergency surgery.

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