

# RECOMMENDATIONS FOR PAEDIATRIC ANAESTHESIA SERVICES IN EUROPE

## 1. Introduction

The perioperative care of infants and children demands special facilities and presents a challenge for anaesthesiologists. The outcome of surgery and anaesthesia in children is closely related to the experience of the clinical team involved and it is recognised that surgeons and anaesthesiologists should not undertake "occasional" paediatric practice [1]. Furthermore, it has been shown that an experienced surgical and anaesthesia team considerably decreases morbidity and mortality in young children.

There are existing guidelines in the United Kingdom [2], France, Switzerland Germany and The Netherlands [3], but there are currently no agreed standards for the European Community as a whole. Accordingly, in this document the Federation of Associations of Paediatric Anaesthesia (FEAPA) put forward practicable recommendations. The aim of these recommendations is to set down desirable standards for paediatric anaesthetic services throughout Europe.

## 2. Clinical services and facilities

2.1 Anaesthesia for children demands properly trained and skilled staff, medical, nursing and support staff with appropriate facilities. Thus paediatric anaesthesia should not be undertaken where these are not available.

2.2 The ideal child-orientated environment may not be able to be provided in some institutions, nevertheless, children of all ages should not be treated in direct association with adult patients either in the wards or day surgery units. For example, recovery areas should be screened or separated from those for adults.

2.3 Neonatal and paediatric high dependency and intensive care services should be available, commensurate with the type of surgery undertaken.

2.4 There should be an adequate acute pain relief service in place for children of all ages that should be properly staffed and funded.

2.5 Parents (or carers) should be involved in all aspects of the decisions affecting the care of their children including the physical and psychological preparation for, and recovery from, surgery and anaesthesia. Appropriate medication, for example local analgesic ointments and sedatives, should be available.

2.6 Overnight accommodation should be available for the parents of children who require admission to hospital, particularly those who are serious ill. In all but very exceptional circumstances, for example a life threatening emergency, parents should be given full information about the proposed anaesthesia and surgical procedures and their written informed consent obtained.

2.7 Children should be given an explanation of these procedures appropriate to their age and, when appropriate, their consent should also be obtained.

2.8 Age-adjusted anaesthesia equipment and disposable items should be available for general and regional anaesthesia. A full range of monitoring devices should be available in the induction, operating and recovery areas.

2.9 Anaesthesia machines should be able to provide mechanical pulmonary ventilation for all age groups (volume and pressure-controlled ventilation, variable respiratory rates, appropriately designed paediatric breathing systems). Warming devices should be available in the operating room and recovery area.

2.10 In non-specialized hospitals it is desirable to provide a mobile trolley, box or cart for paediatric anaesthesia containing the necessary age related equipment, drugs (including those required for resuscitation) and devices for general and regional anaesthesia for infants and children. These boxes or carts are especially important in general hospitals, where children undergo surgical operations within the same operating areas as those used for adults.

### **3. Training and education**

3.1 Children of all ages, who require anaesthesia must be managed by anaesthesiologists who have received the necessary training in paediatric anaesthesia and resuscitation.

3.2 Trainees in anaesthesia must be appropriately supervised when anaesthetising children. The recommended training and supervision in paediatric anaesthesia is detailed in the FEAPA document "Guidelines for Training in Paediatric Anaesthesia" which should be considered in conjunction with this document.

3.3 All anaesthesiologists whether they are specialist paediatric anaesthesiologists working in specialised units or those with an interest in paediatric anaesthesia working in non specialized District Hospitals must recognise and work within the limits of their professional competence. They should participate in continuing medical education that is relevant to paediatric anaesthesia and resuscitation in order to maintain the skills that they acquired during their initial training.

3.4 There should be regular audit and morbidity meetings relating to paediatric anaesthesia. This should involve all staff participating in the care of children and ideally should include the views of the children, when appropriate, and their parents.

### **4. Organisation in Non-Specialized Hospitals**

4.1 The level of the surgical service for children and the system for ensuring an appropriate and safe paediatric anaesthesia service in non-specialized District Hospitals are issues that have been extensively discussed in many European countries [4,5,7,8].

4.2 Neonates, infants and children up to 3 years of age are at greatest risk of experiencing anaesthesia complications [5,8]. In this age group there is no "minor" surgery or anaesthesia because even in minor procedures the management of these patients can be difficult if the staff is not familiar with this age group.

Therefore, newborns, former pre-term infants (up to 50 weeks post-conceptual age), infants up to 12 months of age and most of the younger children (up to 3 years) should be transferred to specialized centres. The decision to transfer should be based on the number of procedures performed per year in this age group at the local hospital and the experience of all the staff.

4.3 Children with severe or rare co-morbidity require transfer to a specialist unit, In addition, a lack of local facilities such as the possible requirement for postoperative intensive care, the absence of a paediatrician and paediatric nursing staff may necessitate transferring a child, of any age, to a specialised centre [9].

4.4 The organisation for the transportation of emergency cases should be well defined [7].

4.5 The anaesthesiology staff in a non-specialized District hospital should select a member of the group to be responsible for the organization of the care for paediatric patients and for training and assisting other colleagues in the department. These designated specialists should be capable of participating in the routine perioperative service for children but should not be expected to be the sole specialist providing the service. They are expected to update their knowledge and skills in paediatric anaesthesia and resuscitation obtained during their training and thus should have the opportunity to visit paediatric anaesthesia centres from time to time (at least once a year).

## **5. Conclusion**

The FEAPA is firmly of the opinion that these recommendations are both reasonable and attainable and should be the standard for paediatric anaesthesia care in all countries in the European Community.

## **References**

1. Campling E A, Devlin H B, Lunn J N. The Report of the National Confidential Enquiry into Perioperative Deaths 1989. London. Disc to Print Ltd, 1990.
2. Report of a Working Group. Guidance on the provision of paediatric anaesthetic services. The Royal College Anaesthetists 2001; Bulletin 8: 355-359.
3. Recommendations for paediatric anaesthesia services: Ecoffey JC, France, Gerber A, Switzerland, Holzki J, Germany, Turner NM, the Netherlands, Rawicz M, Poland, personal communications.
4. Rollin AM. Paediatric anaesthesia - who should do it? The view from the district general hospital. Anaesthesia 1997; 52 515-516.
5. McNicol R. Paediatric anaesthesia - who should do it? The view of the specialist hospital. Anaesthesia 1997; 52: 513-516.
6. Hatch D, Rollin AM. Quality in paediatric anaesthesia. Curr Anaesth Crit Care 2000; 11: 239-244.

7. Hatch D. Quality in paediatric anaesthesia. European Society of Anaesthesiologists 10th Annual Meeting, Nice 2002, Refresher Course Book: 55-59.
8. Atwell JD, Spargo PM. The provision of safe surgery for children. Archives of Disease in Childhood 1992; 67:345-349.
9. The Report of the Joint Working Group. The Transfer of Infants and Children for Surgery. British Paediatric Association 1993