



Paediatric Anaesthesia Project 2030

Swiss National guidelines 2020

**Accepted by the members of the SGKA-SSAP at the General Assembly
on 07.11.2019, Interlaken**

Anaesthesiologists caring for children manage patients of different ages (from the premature to late teenagers), presenting with many different medical conditions and undergoing anaesthesia for a variety of diagnostic or surgical procedures.

Perioperative complications are more common in neonates, infants and young children when compared with adults. Equally, it is well established that severe anaesthesia related complications have a 10 times increased mortality rate in children as compared to adults. The higher perioperative morbidity and mortality in neonates and small children undergoing anaesthesia is attributed to the reduced cardio-respiratory reserves in this population. Another major contributing factor is the level of competence and experience in paediatric anaesthesia care that the clinical team is able to provide to this vulnerable and challenging group of patients.

As the pediatric caseload in Switzerland is insufficient to train and maintain pediatric expertise for all anesthetists sufficiently, regionalisation of treatment of younger children in centers with experienced staff and appropriate infrastructure is mandatory. Likewise, older children should be cared for by anesthetists with regular practice in these age groups.

While several countries have initiated processes concerning the harmonisation of conduct, training and education in paediatric anaesthesia, Switzerland still lacks clear consensus-driven guidelines in paediatric anaesthesia (roles, supervision and training).

During the audit of country's 42 anaesthesia departments by the members of the "Paediatric Anaesthesia Project 2030" group (Mirko Dolci, Thomas Erb, Walid Habre, Markus Weiss, see SGAR/SSAR Bulletin, June 2018), there was a request for the establishment of guidelines concerning paediatric anaesthesia practice and training in Switzerland.

Based on the results of the "Paediatric Anaesthesia Project 2030" and further endorsed by the results of the multicentre trial on severe critical events in paediatric anaesthesia (APRICOT), a working group from the SGKA/SSAP and the SGAR/SSAR established a framework of Swiss National guidelines as a first step in the harmonisation of practice in paediatric anaesthesia. The second step shall focus on training and education.

On the 11 of November 2019, the members of the SGKA/SSAP accepted the Swiss National Guidelines 2020 as summarized below:

Level	(I)*	(II)	(III)
Definition	Specialized Paediatric Referral Centre	Dedicated Paediatric Service: Larger Hospital	Community Hospital Paediatric Ambulatory Centres Office Based Anaesthesia
Age	From birth upwards	From post-neonatal upwards	From 3 years upwards
Medical conditions & surgery	All Children with congenital diseases (Heart, lung, neuromuscular and blood disorders, etc) Children with complex medical history (i.e. chronic diseases) Children undergoing major surgery (requiring high dependency units for postoperative management)	Stabilized medical conditions Children without the characteristics highlighted under level I** Surgery not requiring high dependency units for postoperative management	Healthy, stable Children for routine or minor surgery and/or diagnostic procedures
ASA	All	I & II (III in specialized settings***)	I & II

Paediatric Patients:

- 1) Anaesthesia practice in children has to be performed in **dedicated paediatric centres by specialized paediatric anaesthetists (level I centres) for the following group of children:**
 - **Below the age of 3 years**
 - Sick children (**ASA III and higher**)
 - Children with **congenital diseases**
 - Children requiring speciality care (i.e. chronic diseases)
 - Children undergoing **major surgery** (requiring high dependency units for postoperative management)
- 2) Children **below the age of 3 years** can be anaesthetized in **larger institutions with dedicated paediatric services (level II centres)** if they meet the following criteria:
 - **ASA I or II**
 - **Routine or minor surgery**
 - **Diagnostic interventions**
- 3) Children aged **from 3 years upwards** without the characteristics highlighted in group 1, can be managed in **smaller units (district hospitals, office-based units) (level III centres)**.

Staff:

Level I centres: children are to be cared for by groups of dedicated specialized paediatric anaesthetists.

Level II centres: children are to be cared for by anaesthetists with regular exposure to paediatric anaesthesia under the direction of dedicated staff responsible for equipment, medications and guidelines.

Level III centres: Must have dedicated staff responsible for equipment, medications and review of guidelines. Children aged from 3 to 6 years can be cared for by certified general anaesthetists with paediatric training and regular exposure to clinical practice in this age group. Children aged from 6 years upward can be managed by certified general anaesthetists.

****Asterix Level 1:***

May include paediatric anaesthesia services of institutions offering highly specialized interventions (that cannot or is difficult to be relocated). Must be established in close and joint cooperation with a dedicated paediatric referral centre and anaesthesia Level I centre.

*****Asterix Level 2:***

May exclude children with status post correction of mild to moderate defects of congenital anomalies with full recovery of function **and** absence of potentially associated comorbidities or ongoing special requirements.

******Asterix ASA III:***

An anaesthetic service being performed for specialized surgical services on a frequent basis. An established collaboration with a Level 1 institution is an obligatory precondition in order to guarantee required support and patients benefit from the resulting synergies.