Pre-anaesthesia preparation for children

1. Physically come down to the child's eye level
2. Use age-appropriate language for explanations. Some examples are given below.
    a. Pre-school: "We're going to blow bubbles."
    b. Primary-school going: "We're going to blow into the balloon twenty times. If there's a funny smell, use your mouth to blow it away."
    c. Adolescents: "We'll need you to take slow deep breaths so that you can go off to sleep for your surgery. The gas may smell a little funny."
3. Show them the face mask and if young enough, get parents to put it on their faces sporadically in play while awaiting their turn.
4. Offer them a choice of scents for the mask if available (eg. chocolate, orange). Please ensure you have the available scent in your OT before offering!
5. Consider premedication if highly anxious. **Always discuss this with your consultant before administering.**
    a. PO Midazolam in sugar syrup at 0.5mg/kg body weight to a maximum of 15 mg/kg (takes 20-30minutes for good effect).
        i. **Parents** are to be informed that the child may become more unsteady and should be monitored for fall risk, that the premed needs time to work (ie. delay to the start of operation), and that wake up may be prolonged postoperatively.
        ii. Inform **nursing staff** that the child is being premedicated so they can prepare a trolley bed / cot to monitor the child in once the child is amenable. The child will be monitored in the trolley bay at OT reception and can be offered a choice of cartoons on the wall-mounted TV.
    b. Intranasal midazolam or ketamine or fentanyl are available options for a more rapid onset but are likely to irritate the child. **Discuss this with your consultant.**

Pre-anaesthesia preparation for parents

1. Explain the 2 methods of induction to the parent, ask for any preference and your rationale for your choice. **Please discuss this with your consultant before speaking to parents.**

Intravenous cannulation & induction	Inhalational induction
If there has been an inadequate amount of time for intradermal spread (45mins) and thus analgesia, reconsider inhalational induction OR offer Entonox for additional analgesia in an amenable child. Explain that the Ametop reduces / eliminates pain, but that pressure sensation will still be felt and thus may still distress an anxious child. Explain that the chemical properties of propofol may make it uncomfortable / painful for the child when given intravenously, but that all efforts will be made to reduce that discomfort. Explain that the child may fall asleep very rapidly and that the parent should not be alarmed, but should support the head and neck if the child is in his/her lap.	Expose the parents and child to the face mask (±the chosen scent) and assess the child's reaction. A negative reaction usually indicates a need for either the use of a distraction technique OR premedication OR both. Explain that the smell of the gas will change as we dial it up and some children may not like it. Prepare parents for stage 2 phenomenon with inhalational induction – use neutral language. Avoid using negative words like "struggling". Explore with the parent the possibility of the child becoming inconsolable and refusing the mask entirely at induction – the options are then (1) for the parent to comfort and hold the distressed child while we expedite induction, OR (2) to back off and premedicate the child OR (3) to postpone the operation entirely. Bear in mind the child's age, size, and considerations for assent and Gillick's competence.

Inhalational Induction Techniques for different age groups

1. In children unwilling or unable to cooperate :
    a. Use **distraction** (eg. Bubbles / cartoons / interactive games) if child is unable / unwilling to cooperate. Parental presence is useful.
        i. The O_2/N2O/Sevo ratio should be confirmed with your consultant before starting. The usual practice is to start with O_2/N2O before dialling up the Sevoflurane.
        ii. Positioning on the parent's lap is useful if the child is light enough to be carried in arms (usually less than 20kg). Instructions to parents should include :
            [1] Sit your child on your lap with his/her back to your chest
            [2] Hug your child with both your arms around him/her as a "seat belt"
            [3] Talk or sing to your child and engage them in the distraction technique being used eg. Bubbles / interactive video games
2. In primary school children :
    a. Use challenges or games such as simple math, or a balloon blowing "competition"
    a. Warn them that the smell will change
    b. Tell them to blow the smell away with their mouth if they don't like it
3. In adolescents :
    a. Coach child through single-breath induction technique :
        i. Get them to breath out maximally and breathe in maximally through their mouths, and then to hold their breath as long as they can before repeating the manoeuvre again. Practice with them once or twice while they are lying down on the OT table.
        ii. Inform them that the gas may possibly be smelly
        iii. Prime the breathing circuit with 8% Sevoflurane and 100% O_2
        iv. Encourage maximal expiration before applying the mask to the child's face with a good seal. Do not press down as it is uncomfortable.
        v. Encourage child with positive language.

Intravenous Induction Techniques for different age groups

1. If a cannula in in-situ, test the existing cannula to ensure patency.
    a. If the child complains of or demonstrates pain despite a clearly patent line, anxiety is high and can be addressed with reassurance OR IV midazolam.
    b. If the line is possibly extravasated, reconsider an inhalational technique and insert another IV cannula when under GA.
2. Avoid using PICCs as far as possible. Discuss this with your consultant.
3. If IV cannulation is required,
    a. ensure **topical local anaesthetic** (EMLA /Ametop) has been applied for at least 45 minutes prior
    b. In children unwilling or unable to cooperate:
        i. Assess the dorsum of both hands for the best possible site for venous access where Ametop had been applied
        ii. Position the child on his/her parent's lap with instructions as per **Inhalational Induction Techniques for different age groups** (see previous page)
        iii. Distract the child on the opposite side with bubbles / cartoons / interactive video games
        iv. Have your AU nurse bodily obscure the hand being cannulated by standing with her back to the child and firmly holding onto the chosen arm, providing adequate tourniquet pressure at the same time
        v. Keep a firm hold on the child's hand to prevent the child from pulling his/her hand away during cannulation. Perform the IV cannulation quickly.
        vi. You may need to give an induction dose of propofol quite promptly after insertion. Warn the parent beforehand.
    c. In primary school children : depending on their ability to cooperate, choose either the method above or the method below.
    d. In adolescents :
        i. Use entonox (O_2:N_2O = 1:1) for IV cannulation if child is agreeable. Encourage deep breaths while lying on the operating table.
        ii. Teach coping strategies (eg. deep breathing) for IV cannulation

4. Consider adding lignocaine to the propofol and/or diluting the propofol with normal saline and/or giving small aliquots instead of the complete bolus to reduce the pain on introduction of propofol. Tactile stimulation proximal to the IV site occasionally provides pain relief.