



Division of
Clinical Psychology

Faculty for Children and Young People
Paediatric Psychology Network



The
British
Psychological
Society

GOOD PRACTICE GUIDELINES

Evidence-based Guidelines for the Management of Invasive and/or Distressing Procedures with Children



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These guidelines have been edited by Dr Sarah Gaskell,
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Guideline Development Group

Sarah Gaskell, Consultant Clinical Psychologist, Manchester Children's Hospitals on behalf of the Paediatric Psychology Network Committee.

Based on work from Birmingham Children's Hospital NHS Trust (Houghton, 2006).

See Appendix A for Oxford Guidelines in flowchart format (Oxford Radcliffe Hospitals Multidisciplinary Procedural Distress Group, 2005) and Appendix B for a table of age-appropriate distraction techniques for children (reproduced with permission from Duff, A.J.A. & Bliss, A.K. (2005) Reducing distress during venepuncture. In T.J. David (Ed.), *Recent Advances in Paediatrics*, 22 (pp.149–165). London: Royal Society of Medicine Press Ltd.

Aims of the Guideline

- To minimise the distress experienced by children/young people around invasive/distressing procedures and to facilitate the development of their coping skills for the benefit of their health care and well-being.
- To optimise the competency and confidence of 'front line' staff in dealing with potentially distressing procedures.
- To minimise the use of restraint (as distinct from positioning and holding).
- To identify when other services (e.g. hospital play specialists, clinical psychologists) may need to be involved.

Stakeholders and Consultation Process

Stage 1: Paediatric Psychology Network Committee.

Stage 2: Reference group of paediatric psychologists identified from the Paediatric Psychology Network membership: Deborah Christie (Consultant Clinical Psychologist, University College London Hospital), Nicola Doherty (Clinical Psychologist, The Royal Hospitals, Northern Ireland), Alistair Duff (Consultant Clinical Psychologist, The Leeds Teaching Hospitals NHS Trust), Becky Houghton (Clinical Psychologist, East Lancashire Clinical Psychology Service for Children, Young People and Families) and Dorothy Mackinlay (Consultant Clinical Psychologist, City Hospital, Nottingham).

Stage 3: Multidisciplinary consultation including: Royal College of Anaesthetists, Royal College of Nursing and Royal College of Paediatrics and Child Health, National Association of Hospital Play Staff, Royal College of Surgeons – Children’s Surgical Forum, Action for Sick Children.

Reasons for Guideline Development

Anxiety about being hurt is reported to be one of the greatest fears for children/young people when an invasive procedure (e.g. venepuncture, intravenous cannulation, intramuscular and subcutaneous injections) is proposed. Despite pharmacological advances, children and young people continue to find these procedures the most frightening aspects of attending hospital (Schechter, Blankson, Pachter, Sullivan & Costa, 1997). Although tolerable for many, a large group do not cope well, resulting in a variety of negative emotional and behavioural difficulties including conditioned anxiety, emotional withdrawal, attempts to avoid or escape, and in some cases, severe tantrums or aggression (Blount, Landolf-Fritsche, Powers & Sturges, 1991). All too often, the procedure is forsaken or restraint is applied, intensifying the distress for everyone involved.

Avoiding distress is clearly important both for the child/young person's well being during the procedure and reducing the risk of post-procedure behavioural or emotional disturbance. However, use of appropriate psychological approaches should also be cost-effective by minimising the time required for the procedure and reducing the need for sedation or abandoning the procedure. Reducing the child/young person's distress also reduces stress for parents/carers and staff. Parents often become anxious as they helplessly watch their child suffer, and health care professionals find it extremely difficult to be the person who seems to be inflicting pain on the young patient. In addition, national policy now reinforces the child/young person and family's right to support and assistance with potentially distressing procedures (see *Getting the right start: The National Service Framework for children, young people and maternity service – Standard for Hospital Services*, published April 2003). Such policies also place heavy emphasis on the prevention of distress.

It is important to recognise that the range of procedures that are invasive or potentially distressing for a child/young person are not confined to those involving needles, cannulas or other invasive equipment. Children/young people can be distressed by having a nasogastric tube passed, or having a mask prepared to facilitate radiotherapy. Even superficially innocuous procedures, such as using a stethoscope, may be distressing to some children/young people.

It has been argued that anticipatory distress arises out of interactions between individual, parental and situational factors.

Individual factors

- Ratings of needle pain and fear decrease with increasing age (Goodenough et al., 1999).
- Temperament: for example, children rated as more active or intense or negative in mood by their parents display higher levels of distress (Lee & White-Traut, 1996).
- Behaviour: Externalising behaviours positively correlate with behavioural distress before, during and after needle-insertions (Slifer, Tucker & Dahlquist, 2002).

- Experience: There is no known relationship between the number of procedures involving needle-insertion and distress, but the more negative the experience, the greater the subsequent anxiety, distress and non-cooperation (Dahlquist, Gil, Armstrong, DeLawyer, Greene, & Wuori, 1986).

Parental factors

- Familial (if not genetic) links: Parents of ‘inhibited’ children have a greater prevalence of phobias (Hirschfield et al., 1992).
- The relationship between parental anxiety and childhood distress during venepuncture is strong (Jay, Ozolins, Elliott & Caldwell, 1983).
- The benefits of parents being present during the procedure and taking appropriate active roles have been repeatedly shown (Wolfram, Turner & Philput, 1997).

Situational factors

- Children who present acutely unwell and those who are more stable but who have little familiarity with attending hospital are reported to find needle insertion more distressing than those who have chronic conditions and frequent visits (Bauchner, Vinci & May, 1994).
- Prolonged exposure to cues for venepuncture (e.g. seeing medical equipment and blood samples or hearing other children in distress) can also heighten fear unnecessarily. (See Duff & Bliss, 2005, for more extensive review.)

Evidence is growing around how to help young people and their families cope better with aversive medical procedures and a range of different approaches have been shown to be effective.

Pharmacological interventions

Some studies have shown that combinations of psychological approaches and pharmacological agents can be effective (Jay, Elliott, Katz & Siegel, 1987; Kazak et al., 1996). Topical anaesthesia of the skin can be achieved by either direct physical (e.g. ice) or

pharmacological (local anaesthetic) inhibition of nerve transmission. Topical anaesthetics commonly form the basis of treatment and can be used alone or in combination with systemic agents and non-pharmacological interventions (see Duff & Bliss, 2005, for review). In some situations, the use of sedation or a general anaesthetic may be warranted, in accordance with relevant local policies.

Psychological interventions

Cognitive-behavioural interventions are a group of treatment procedures aimed at identifying unhelpful thought processes, attitudes, attributions, and problem behaviours (Barlow, 1999). They can vary widely but in this context mostly include a combination of: progressive muscle relaxation training, guided imagery, distraction, modelling, graded exposure and reinforcement scheduling. Christie and Wilson (2005) carried out a systematic review of practice based evidence which illustrated that cognitive behavioural therapy had been successfully adapted for use with children and young people for the alleviation of procedurally related stress. It is, however, also important that staff enable children/young people to participate actively in the procedure, allow them to exercise choice where possible, have a range of skills to facilitate children/young people's coping and know when to involve other specialist staff (Duff, 2003). Using such techniques in association with needle procedures consistently results in less pain and distress for children and young people (Duff, 2003). These are now classified as 'well-established' treatments for paediatric procedure-related pain (Powers, 1999). Indeed, a recent Cochrane review of psychological interventions for needle-related procedural pain and distress in children and adolescents (Uman, Chambers, McGrath & Kisely, 2006) concluded that there is preliminary evidence that a variety of cognitive-behavioural interventions can be used with children and adolescents to successfully manage or reduce pain and distress associated with needle procedures. The largest effect sizes were found to exist for the efficacy of distraction, combined cognitive-behavioural interventions and hypnosis. In this review, the authors defined imagery as a cognitive technique used to encourage the child/young person to cope with the pain and distress of the procedure by having

them imagine a pleasant object or experience, while hypnosis was described as dissociation from painful experience and distress via hypnotic induction, suggestions and imagined fantasy. The authors acknowledge the overlap between the use of the terms 'guided imagery' and 'hypnosis' and state that when in doubt, they relied on author definitions to distinguish between the two. This lack of clarity in the literature should be borne in mind when reading and interpreting research findings in this area.

Role of parents/carers

Evidence suggests that children/young people prefer their parents/carers to be present and are likely to experience less distress if they are present (Wolfram et al., 1997; Waseem & Ryan, 2003).

It has also been shown that parents can be more effective in supporting their child than a health care professional (Manne et al., 1994). Parents/carers should be encouraged to take an active role in supporting their child through positioning, holding and comforting them, as well as encouraging the use of appropriate coping strategies. There may be rare exceptions to this when parents/carers themselves have severe procedural fears or show very high levels of distress (Lansdown & Sokel, 1993).

Contextual interventions

Frontline staff should have the skills and resources to ensure an appropriate environment for the procedure to take place in and to provide developmentally appropriate information to children, young people and parents/carers (Duff, 2003).

When preparation 'fails'

There are clearly many factors to be considered when judging what to do when problems arise during a procedure. These include the duration of the procedure, the age of the child/young person, parent/child consent and the level of distress. Many procedures are extremely brief and safe holding by staff or the parents of a young child, to enable the procedure to be completed quickly, may be preferable to a more protracted process.

In other situations, circumstances may mean that more extended and forceful restraint would be required in order to complete the procedure satisfactorily. This needs very careful consideration and to be balanced with issues of legality, consent, responsibility and risk management. If successful completion of a procedure is not achieved and all other alternatives (including sedation) have been exhausted, consideration should be given, by the responsible clinician to whether it is clinically important for the procedure to be completed that day. Restraint should only take place in a safe and controlled way, by appropriately trained staff. Restraint should also be distinguished from holding, which is a normal part of supporting a child through a procedure. If restraint is required, local policies or the Royal College of Nursing restraint guidance should be considered.

Parents/carers should not automatically be expected to be involved in restraining their child/young person. Research suggests this may not be helpful (Robinson & Collier, 1997). However, some parents will prefer to be involved directly (and their children may prefer this too) and the wishes of individual parents and children/young people should be respected wherever possible.

If a situation is sufficiently stressful to the child/young person for either sedation or restraint to have been used, or if a child/young person shows very high levels of distress before, during or after a procedure, referral to the Hospital Play Specialist Service or the Paediatric Psychology Service should be considered. As well as providing psychological preparation, coping strategies and interventions, these services can also be helpful in providing advocacy for young people and assessing competency to consent. Further information on consent is available at www.actionforsickchildren.org.

Guideline philosophy and principles

These guidelines are based on the premise that ‘needle phobia’ is uncommon and an inappropriate term for the distress and/or anxiety experienced by children/young people when subject to invasive procedures. Fear is a normal response to a threatening stimulus that involves three response systems (physiological arousal, covert feelings and thoughts and overt behavioural expressions). A phobia, however, is considered to be an unreasonable response to benign stimuli, resulting in at least one response system being persistently and excessively activated. (Butler, 1999). Clearly, needles, cannulas, nasogastric tubes and so forth are not benign stimuli to children/young people. In addition, as noted above, many cases of severe procedural anxiety have been learned as a result of traumatic experiences during previous procedures, which have not always been carried out with care and sensitivity. Such fear and apprehension can then become attached, through association, to otherwise innocuous stimuli (e.g. the waiting room in the outpatient’s department) and fear can, in some children/young people, be of phobic intensity.

These guidelines place a heavy emphasis on prevention, in accordance both with national policy and with the current research literature. They also aim to identify circumstances in which prevention may prove to be insufficient and the involvement of staff with specialist skills, such as hospital play specialists, or referral to paediatric psychology services may be appropriate. Thus the following key principles underpin the guidelines:

- The overall aim is to minimise the distress experienced by children/young people and to facilitate the development of their coping skills, both in the short-term and for the longer-term benefit of their health care and well-being.
- A preventative approach within a systemic framework is described, aiming to incorporate more psychological approaches into the routine clinical practice of front line staff (e.g. doctors, nurses, phlebotomists) in dealing with potentially distressing procedures.

- Holding still and containing are distinguished from restraint. Restraint is not a preferred option and should be a last resort.
- Indicators for involving hospital play specialists and paediatric psychologists are identified.

The guidelines place emphasis on routine approaches that can be used with all children/young people, without taking a significant amount of time and focused on reducing the incidence of failed procedures. They do not attempt to provide detailed descriptions of complex psychological interventions that require the skills of appropriately trained and qualified personnel (e.g. clinical psychologists). Instead, indicators for involving such personnel are identified. Some procedures that are recognised as causing high risk of difficulty for children/young people in coping (e.g. passing nasogastric tubes) may benefit from the preparation of specific guidelines. All such guidelines should be read in conjunction with other relevant Trust policies and guidelines.

Guideline Details

Prior to the procedure (see Appendix A also)	Rationale
<p>Environment</p> <p>The environment for the procedure should be appropriate to children/young people of all ages, facilitate the use of distraction techniques and reduce visible cues associated with threatening stimuli (Collins, 1999).</p> <p>Wherever possible, avoid carrying out procedures in areas that you want children/young people to think of as safe (e.g. bed area if inpatient). The treatment room may be the safest place for the procedure (Stephens Barkey, & Hall, 1999).</p> <p>The number of people in the room should be kept to a minimum (Fanurik, Koh, Schmitz, & Brown, 1997). For example, in the anaesthetic room an absolute maximum of: a parent/carer, the child's nurse, a play specialist and one trainee health professional, along with the anaesthetic team, would be appropriate. However, only one person should be</p>	<p>Facilitates distraction and reduces the child/young person's sense of threat.</p> <p>This will reduce the development of anticipatory anxiety and enable respite for children/young people undergoing repeated procedures.</p> <p>To reduce stress for the child/young person and increase the likelihood that all present will act in a consistent and supportive manner.</p>

<p>actively engaging the child/young person at any time and fewer staff may be more appropriate, particularly if the child/young person is very anxious.</p> <p>Ensure it is warm, comfortable and child/young person friendly, with adequate lighting and developmentally appropriate activities available (Pruitt, Johnson, Elliott & Polley, 2008).</p> <p>Have equipment ready in advance and out of sight.</p>	<p>This will avoid the build up of anticipatory distress (Humphrey et al., 1992), which will be exacerbated by longer waits and exposure to procedure related cues.</p>
<p>Assessing the child/young person and family</p> <p>Establish a basic rapport with the child/young person and family (Colville, 2001).</p> <p>Assess the child/young person's developmental level.</p>	<p>This is essential in order to be able to assess the child/young person's needs accurately and to create a supportive relationship.</p> <p>To help in choosing the best approach to coping (Uman, Chambers, McGrath, & Kisely, 2008). It is important not to make assumptions based on age and experience – an older young person with plenty of exposure to medical procedures may still experience high levels</p>

Ask about the child/young person's previous experience with similar procedures (Bijttebier & Vertommen, 1998); were these traumatic? Did they need to be sedated or physically restrained? What was done to reduce distress and how successful was it? (e.g. for needling, did the use of a topical local anesthetic cream help?) What do the parents and child/young person feel would help most? Assess the need for topical anaesthesia/sedation (Cummings, Reid, Finley, McGrath & Ritchie, 1996).

of anxiety. These guidelines advocate an individualised, developmental approach that takes account of a child/young person's individual preferences, characteristics, cultural needs and developmental stage. Each child's particular needs should be taken into account and the approach adapted accordingly.

With appropriate assessment by staff skilled in working with children/young people, responses to these questions will help in understanding the child/young person and in deciding the best way of supporting them through the procedure. Finding out what has worked previously is particularly important as it builds on resiliency and coping skills previously used, and ensures that an approach is tailored to each individual child/family (Pruitt et al., 2008). Topical local anaesthetic creams are known to be effective in reducing pain, but careful consideration needs to be given to whether or not this outweighs the potential for exacerbating anticipatory anxiety. If the child/young person has previously tolerated similar procedures well, it is important

Check the child/young person's notes for information relating to previous procedural experiences and any recommendations (Duff & Bliss, 2005). Assess the child/young person's current level of distress in relation to this procedure.

How are the parents/carers coping, what is their comfort level, are they happy to be involved in actively supporting their child (Bauchner et al., 1994)?

Do you need the help of a play specialist to support you in preparing the child/young person?

Some specialties may routinely involve play specialists in preparation for certain procedures.

not to sensitise them to the procedure by unnecessarily exposing them to aspects they previously had little problem in dealing with.

The child/young person may demonstrate high levels of distress on this occasion even if they have previously coped well with such procedures.

Most children prefer their parents to be present and are likely to experience less distress when they are. If risk factors are present it may be valuable to involve a play specialist prior to the procedure, if available. Whilst some play skills will be familiar and available to parents and other health care staff, others need to be gained through specific training (Collins, 1999). The aim is to prevent distress. It is, therefore, not helpful to involve a play specialist after a child/young person has become very distressed.

A well-established preparation protocol can help the child/young person to cope with the procedure.

Preparation – providing information

Briefly explain the procedure to the child/young person and family in clear, developmentally appropriate terms, using relevant play materials (Harrison, 1991).

It is important to be honest, using the ‘softest’ and least threatening words possible.

Individualise the way you express this information for the child/young person’s age, temperament, emotional and physical state (McCarthy et al., 1996).

Explain honestly what needs to be done, why it needs to be done, how it will feel (include description of any sensory experiences they can anticipate; e.g. what the procedure might feel like, any smells or sounds they might experience) and what the child/young person needs to do (e.g. sit very still, hold their arm still, or whatever is appropriate for the procedure) (Anderson & Masur, 1983). Also let them know how they might feel after the procedure.

The aim is to create a climate of honesty and trust, as well as respect and sympathy.

Do not give false reassurances – e.g. ‘this won’t hurt’ (Uman et al., 2006).

It can be helpful, especially if the child/young person has had the procedure before, to ask what they think is going to happen, to check for misconceptions and then build your own explanation from that in a developmentally appropriate way (Fanurik et al., 1997).

Handle any fears calmly and sympathetically.

Give the child/young person and family some idea of how long it will take; e.g. ‘until we finish our song’; ‘five minutes’; ‘until the big hand gets to 10’, etc. (but don’t underestimate).

Play materials and story books about children undergoing similar procedures can be helpful when explaining procedures to younger children (Cummings et al., 1996). Giving children/young people the opportunity to familiarise themselves with equipment and/or ‘rehearse’ the procedure in advance can also be beneficial.

This can be particularly important in helping the child/young person to manage his/her anxiety and use appropriate coping strategies.

<p>Using pharmacological interventions</p> <p>Topical anaesthetics form the basis for treatment and can be used alone or in combination with systemic agents and non-pharmacological interventions (Duff & Bliss, 2005).</p> <p>Keep the child/young person involved and busy doing things whilst waiting for topical anaesthetics to work.</p> <p>Specific guidelines on the use of pharmacological interventions are beyond the scope of these guidelines.</p>	<p>Topical anaesthesia should always be the basic component in addressing pain associated with painful procedures. There is consistent evidence that combining empirically effective cognitive-behavioural approaches and topical anaesthesia further reduces children's distress (Kazak et al., 1996). Consideration may need to be given to whether or not their use outweighs the potential for exacerbating anticipatory anxiety (Fanurik et al., 1997). For example, if using topical anaesthesia is going to result in an extended wait in an anxiety-provoking setting, it may be ill-advised.</p>
<p>Actively involving parents/carers</p> <p>Parents/carers should be encouraged to take an active role in supporting their child/young person.</p> <p>There may be exceptions to this, when the parents themselves have severe procedural fears or show very high levels of distress</p>	<p>Evidence suggests that children prefer their parents to be present and are likely to experience less distress if they are present. This can also have benefits for parents (Piira et al., 2005), for example, helping to decrease their own anxiety levels.</p> <p>However, if parental levels of distress are very high this will impact on the child/young person's anxiety and it may, exceptionally, be necessary to</p>

<p>(Hirschfield et al., 1992). If it is necessary for a parent not to be present for these reasons, this needs to be handled extremely carefully in order to avoid blame or causing feelings of guilt. Parents should be given the opportunity to indicate that they would prefer not to be present.</p> <p>Explain how the parent/carer can help. (Information sheets may be given beforehand.)</p> <p>Parents/carers can help by holding (but not restraining) and comforting their child, coaching them in coping techniques and using distraction procedures (Kleiber, 2001). Parents can also be very effective in using praise with their child/young person to reinforce co-operation and coping skills.</p>	<p>undertake the procedure without them present.</p> <p>Parents/carers too may benefit from some preparation or coaching so that they are better able to understand their role in the procedure and can be guided by staff (Bauchner et al., 1994). Written guidance given to families in advance of the procedure can help prepare all parties for taking an active and constructive role in the process (e.g. leaflets produced by Action for Sick Children: Helping children cope with needles; Helping children cope with pain available from www.actionforsickchildren.org).</p>
<p>Give the child/young person appropriate control</p> <p>In many procedures, children can participate positively from an early age and can exercise choice, within appropriate limits (Pearch, 2005).</p> <p>They may be able to unwrap certain medical equipment,</p>	<p>Having a sense of some control can reduce feelings of helplessness and uncertainty.</p>

<p>clean the site where a needle is to be inserted, or choose whether to sit up (on a chair or on a parent’s lap) or lie down (Stephens et al., 1999). They may also be able to give the signal when to start, or to indicate when they need a break in longer procedures.</p> <p>Be creative! Find a way to involve the child/young person and give them some control over what is happening to them.</p>	
<p>Permission to make a noise</p> <p>Let children/young people know that it is fine for them to make a noise – to cry or shout out – when the needle is inserted. You may even want to encourage some children to make a noise, for example, to roar like a lion. It can help if the parent and health care worker make the noise too.</p>	<p>Evidence suggests that giving children permission to make a noise can result in them experiencing less distress than if they are told not to cry and to be brave (Fernald & Corry, 1981). It may be relevant to work with a child/young person to help them reduce the noise they make over time, if this is excessive and possibly distressing for others within earshot.</p>
<p>Timing of procedure</p> <p>When it is known in advance (by the child/young person) that they are going to undergo a potentially distressing procedure, it should take place as soon as possible.</p>	<p>This will avoid the build up of anticipatory distress (Humphrey et al., 1992), which will be exacerbated by longer waits and exposure to procedure related cues.</p>

<p>Think carefully about when to tell a child/young person that a procedure is needed – with younger children especially it is best not to give too much advance notice (Lee & White-Traut, 1996).</p>	<p>Too much advance warning can give time for the build up of anxiety.</p>
<p>Holding/positioning Some children can find it helpful to be held in a comfortable position so consider which option would be most helpful. This can be practised with the child and their parent/carer beforehand.</p> <p>Holding is not the same as restraint and is usually best done by the parent/carer. Holding is a way of comforting the child and helping them to maintain a good position for the procedure. It should be carried out in a firm, calm way, avoiding the use of force (Cavender, Goff, Hollon & Guzzetta, 2004).</p>	<p>Holding can help the child to feel more secure and can help them to keep a good position for the procedure. A study by Sparks, Setlik & Luhman (2007) found that children held in an upright position by parents, as opposed to lying flat, whilst undergoing an invasive procedure produced significantly lower distress scores.</p>
<p>Who should carry out the procedure? If the child/young person is very frightened, or is known to have had adverse experiences before, or (in the case of venepuncture) has difficult vein access, consider asking a more experienced clinician to carry</p>	<p>Reduces risk of failure or repeat of an adverse experience (with further risk of developing ongoing procedural anxiety).</p>

<p>out the procedure (Duff & Bliss, 2005).</p>	
<p>Select coping strategies Choose the best coping strategies for this child/young person with the child and family, drawing on your knowledge of the wide range of options available and the needs of this child/young person today (Chen, 2000).</p>	<p>Selecting the right coping strategies will significantly increase the likelihood of a successful outcome to the procedure.</p>
<p>Other considerations in the treatment room Minimise disturbances (e.g. by turning bleeps and pagers off when possible) and interruptions (e.g. by putting ‘engaged’ signs on doors) (Stephens et al., 1999).</p> <p>Give consideration to whether the child/young person wants to look or not look at what is happening to them and try to facilitate this (Fanurik et al., 1997).</p> <p>Use a range of distraction approaches while the child/young person is waiting for you to be ready to undertake the procedure (Fanurik, Koh & Schmitz, 2000).</p>	<p>The aim is to try to create a calm environment for the child/young person and family and to focus fully on their needs for these few minutes.</p> <p>Some children/young people prefer to see what is going on, whilst others get less distressed if they cannot see.</p> <p>The aim is to avoid the build up of anticipatory distress/anxiety.</p>

During the procedure	Rationale
<p data-bbox="124 145 546 213">Helping the child/young person to cope – use of distraction</p> <p data-bbox="124 220 546 735">Use distraction, with developmentally appropriate materials, to help the child/young person to cope with the procedure. The aim is to help the child/young person to shift attention away from distressing aspects of the procedure, towards more interesting and pleasant experiences. (See Appendix B for table of age-appropriate effective distraction techniques for children).</p> <p data-bbox="124 759 546 1018">The ‘rule of thumb’ in utilising distraction is that the more interactive and varied the technique and the more active processing required, the greater the chance of distress being reduced (Dahlquist et al., 2002).</p> <p data-bbox="124 1038 546 1294">Distraction does require the active participation of an additional adult (parent/carer, play specialist, nurse). Encourage one person to take the lead for distraction (Fanurik et al., 1997).</p>	<p data-bbox="572 220 975 363">Distraction is a well-established intervention that mediates reductions in fear and pain (Uman et al., 2008).</p> <p data-bbox="572 1034 990 1214">Having several people trying at once with different distraction techniques can be confusing for the child/young person and may increase anxiety.</p>

Helping the child/young person to cope – use of touch

Infants and toddlers usually like to be touched for comfort. Older children/young people may also enjoy this. Patting, stroking and rubbing can provide a physical distraction from pain or discomfort and an alternative rhythm and focus, as well as comfort.

Older children/young people may enjoy having lotion massaged into their skin.

Many children, especially infants, toddlers and younger children, find touch comforting and a distraction from discomfort or pain (Bauchner et al., 1994).

Helping the child/young person to cope – use of music and singing

A tape recorder, CD player or videos can be used to provide music appropriate to the developmental level and individual interests of a child/young person (Fanurik et al., 2000).

Infants tend to like lullabies – or perhaps wind up toys that play music. Younger children respond well to familiar sing-along nursery songs. Teenagers and older children may like to choose (or bring) their own music to listen to on a headset (Fanurik et al., 1997).

Music and singing can be used to promote relaxation and a sense of control. They can also be used as a distraction, to shift the focus from the discomfort or pain, to a more pleasant alternative. Music can also add familiarity to an unfamiliar setting.

<p>Helping the child/young person to cope – breathing techniques</p> <p>Help the child/young person to use breathing techniques to manage their discomfort or pain. Ideas include:</p> <p>Blowing away the pain – have the child/young person imagine a birthday cake with candles. Suggest the child ‘blows out the discomfort/pain’ with a slow, steady breath (French, Painter & Coury, 1994). Demonstrate and practice with the child before the procedure. Young children will need assistance in engaging and sustaining this technique.</p> <p>Blowing bubbles or party blowers – these tools can sustain a child/young person’s regular breathing to relieve discomfort, pain and anxiety, while adding an element of fun (Manne, Redd, Jacobsen, Gorfinkle, Schorr, & Rapkin, 1990). Bubbles should not be used if the lead clinician is uncomfortable with their use in the particular setting.</p>	<p>Breathing can have a powerful effect on physical and psychological functioning (Uman et al., 2006).</p>
<p>Helping the child/young person to cope – relaxation</p> <p>Simple approaches to helping the child/person to relax can be used, for example,</p>	<p>Relaxation helps the child/young person to gain control over the symptoms of</p>

<p>pretending to be a rag doll (have one to hand to show how they can go really floppy) or a soldier puppet whose strings have been cut (Chen, 2000).</p>	<p>autonomic physiological arousal by breathing slowly and releasing muscle tension. This helps the procedure to be less uncomfortable for the child/young person, reducing anxiety and giving them a degree of control. The paediatric psychology service can help children/young people learn more sophisticated breathing and relaxation techniques, including guided imagery.</p>
<p>Communicating during the procedure Only one person should speak at a time to the child/young person during the procedure.</p> <p>Continue to converse in normal tones (Duff & Bliss, 2005).</p>	<p>Before, during and after the procedure it is important to pay attention to the way you communicate with the child/young person (Pruitt et al., 2008). When more than one person speaks at a time, the child/young person can become confused and distracted from focussing on coping strategies. Adults involved may, therefore, need to discuss and co-ordinate their input in advance of the procedure.</p> <p>The aim is to normalise the situation and to convey support and facilitate trust.</p>

Pay attention to verbal and non-verbal cues from the child/young person. Be particularly aware of the non-verbal signals you may be sending. Use positive directions whenever possible. The use of 'don't' tends to convey a negative, punitive message. Instead, tell the children/young people what they can do.

Set them up for success (Stephens et al., 1999), for example, 'This is the time to hold still' is much more supportive than 'Don't move'.

If appropriate, remind the child/young person that the discomfort/pain will soon get better (but remember to be honest).

<p>If problems arise in completing the procedure (see Appendix A also)</p>	<p>Rationale</p>
<p>Responding to a distressed child/young person When a child/young person reacts with such distress that the procedure is not possible, stay calm and avoid conflict and coercion.</p>	<p>It is important to facilitate trust and a feeling of being listened to and respected (Duff, 2003).</p>
<p>Clinical response: First – Taking a break (Duff, 2003) Is there time to take a break and re-introduce the procedure? If so, allow the child/young person’s parent/carer to take them away for a break and after their return reintroduce the procedure slowly and try again.</p>	<p>The child/young person may manage the procedure with a little respite and time for further support from the parents.</p>
<p>Second – if this fails, consider – does the procedure really need to be done today? If the procedure does not absolutely have to be done today, further preparation and training could prove effective (McCarthy et al., 1996). It may be appropriate to involve a hospital play specialist at this point or refer to the clinical psychology service. A psychologist, usually working in conjunction with a hospital play</p>	<p>Providing opportunity for the child/young person to learn to deal with their anxiety will give the opportunity for them to have a more positive experience and increase the likelihood that they will cope with future procedures.</p>

<p>specialist and other health care staff will develop an appropriate programme, which may include modelling, graded exposure, reinforcement scheduling and further work on the development of coping strategies.</p>	
<p>If it is clinically essential for the procedure to be done today:</p> <p>1. Sedation If necessary, options for sedation should be considered before resorting to restraint.</p> <p>If sedation is used, ensure that appropriate psychological approaches are used in conjunction (Fanurik et al., 1997). If it is necessary to use sedation in order to achieve a successful outcome to the procedure, refer to the play specialist service for post procedural work and they will involve the clinical psychologists if appropriate.</p> <p>2. Restraint On occasion, for clinical reasons, it may be necessary for a procedure to be carried out under restraint. Negotiate in advance if parents/carers are to participate in restraint should it be required. It is also important to take the child/young</p>	<p>The aim is to minimise the child/young person’s distress.</p> <p>If sedation has been necessary it is likely that the child/young person will have experienced a high level of distress.</p> <p>Parents/carers should not automatically be expected to be involved in restraining their child/young person. However, some parents will prefer to be involved directly (and their children may prefer this too) and the wishes of individual</p>

<p>person's ability to consent into account as it may not be appropriate to restrain an older child who is clearly indicating that they do not agree to the procedure (Collins, 1999). Refer to local policies on using restraint (see Royal College of Nursing guidance: Restraining, holding still and containing children and young people).</p> <p>If it is necessary to use restraint in order to achieve a successful outcome to the procedure, refer to the play specialist service for post procedural work and they will involve the clinical psychologists if appropriate.</p>	<p>parents and children should be respected wherever possible (Robinson & Collier, 1997).</p> <p>Whenever extended and forceful restraint has been used in order to achieve a successful outcome, the child/young person will have experienced high levels of distress (Pearch, 2005) and may have problems with future procedures if this is not addressed.</p>
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After the procedure	Rationale
<p>Once the procedure is completed, continue distraction activities until they reach a natural conclusion (Uman et al., 2008).</p> <p>Praise the child/young person for what they have managed to do (McCarthy et al., 1996) and encourage them to choose a sticker, badge or other developmentally appropriate reward to commend their bravery. Consider using post-procedural play activities to reflect on and reinforce how the child/young person coped with the procedure.</p> <p>Even if the procedure fails, try to praise the child/young person for trying and reassure them and their family that you will arrange some help for them to assist them next time they need to deal with the procedure.</p> <p>Document what has been tried and what has worked well – both in the child’s notes and in a form that the child/family carries with them.</p>	<p>Enables the child/young person to feel that their efforts are appreciated and to have positive feedback so that they can leave the treatment room feeling more positive about the experience.</p> <p>Debriefing the child/young person and giving feedback on what progress they have made, even if this did not result in a successful outcome is very important. Children/young people are often too aware that they have ‘failed’ even though they may have managed to co-operate much more than they had done previously.</p> <p>Having a record of what works well for an individual child/young person helps to ensure that progress and success can be built upon in subsequent procedures.</p>

Consider the child/young person's level of distress – even if the procedure was successfully achieved, might the child need more help before further procedures?

If the procedure has been difficult, consider whether the health care professionals involved would benefit from a debrief and/or further training, outside of the acute, stressful situation (Corville, 2001).

Some children/young people may need help in order to deal with future procedures. Play services may be able to offer further individual psychological preparation for the procedure, including developing coping strategies. Paediatric psychology services can provide cognitive-behavioural interventions aimed at assisting the child/young person develop and apply coping skills in order to manage pain and distress, and when developmentally appropriate, to help the child/young person to comprehend how thoughts and behaviours can alter their experience. Interventions may include distraction, relaxation training, guided imagery, breathing exercises, desensitisation, preparation, modelling, rehearsal, reinforcement, making positive coping statements and coaching a child/young person to engage in such strategies (Uman et al., 2006). However, these kinds of interventions take time, so this needs to be taken into consideration when scheduling further procedures.

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Literature search criteria

To draft these guidelines information was requested from the National Paediatric Psychology Network Committee and on the Paediatric Listserve. Literature was used from a previous literature search done for a journal article (2004) and in December 2007 an updated literature search was implemented. This utilised NHS Library, specifically the PubMed database. The search terms used were i. procedural distress OR anxiety, ii. procedural distress OR anxiety AND assessment, iii. procedural distress OR anxiety AND management. Search criteria specified all articles produced in the English language and those published post 1994.

Dissemination

To be agreed with the Faculty of Children and Young People.

Implementation, monitoring, audit

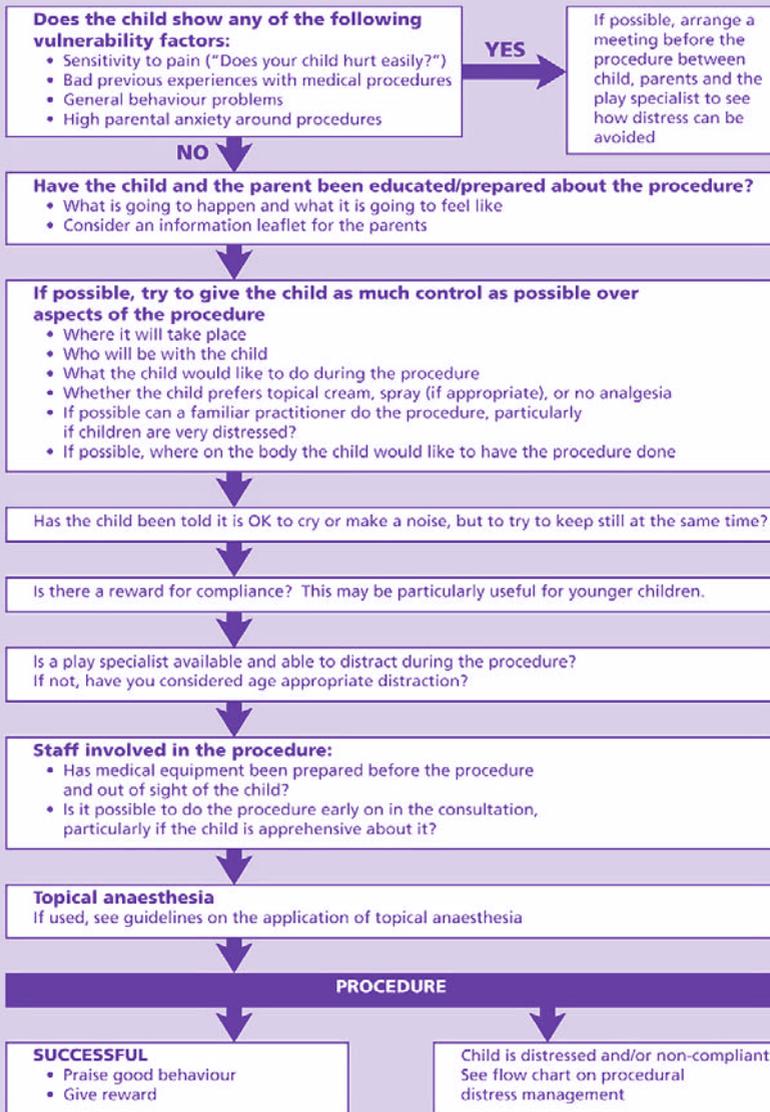
Individual organisations wishing to adopt these guidelines will need to make local arrangements for how they will be implemented, monitored and audited. It is recommended that this is done within a multi-disciplinary framework with appropriate training provided for all staff involved.

Procedure for updating

It is recommended that these guidelines are reviewed every three years, unless radical new research findings emerge in the meantime. The National Paediatric Psychology Network are responsible for identifying a small working party or reference group to review the guidelines in light of current research and policy.

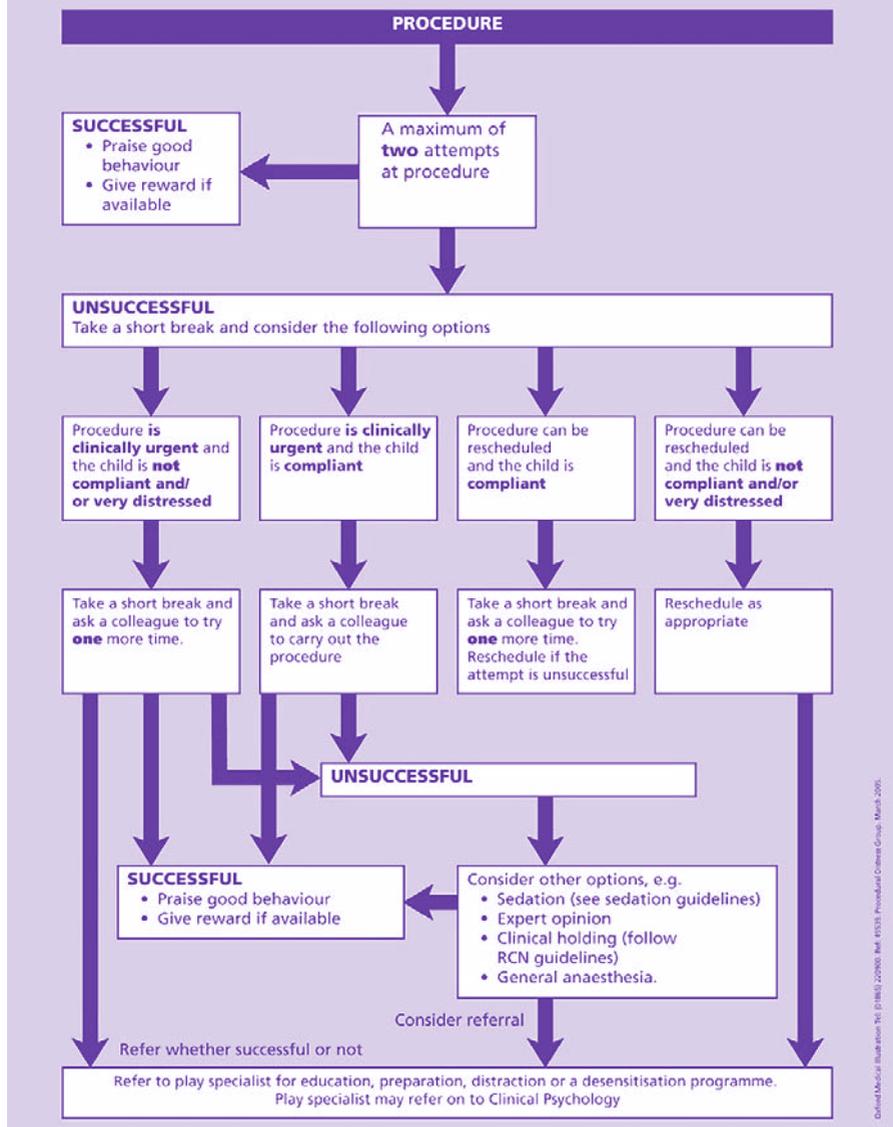
Appendix A

1. The prevention of procedural distress in children



Oxford Radcliffe Hospitals Multidisciplinary Procedural Distress Group, 2005

2. The Management of procedural distress in children



For further information please contact Dr Konrad Jacobs, Dept of Paediatric Psychology, John Radcliffe Hospital. konrad.jacobs@nhs.net

Appendix B: Age-appropriate effective distraction techniques for children^A

Group	Age	Sensory	TECHNIQUE		Cognitive
			Physical		
Infants	0 – 12 months	Gentle Heat (e.g. warm blanket) ^B Snoezelon	Swaddling Appropriate Massage ^C Oral Pacifiers with/without oral glucose/sucrose Rocking Snoezelon	Positive Touch	Visual Stimulation (e.g. blowing bubbles) Auditory Stimulation (e.g. music, singing) Snoezelon
Toddlers	13.-24 months	As above Cold (e.g. ice-cubes applied to site of intended venepuncture) ^B Counter-irritation ^B	Appropriate positioning Sitting on parent's lap Hugging/holding Appropriate Massage ^C		As above Action rhymes Pop-up book 'Mummy's jewellery' Blowing bubbles Kaleidoscopes Party blowers
Pre-School	2 – 4 years	As above	As above Deep breathing Electronic/'Smart' toys ^D Brief relaxation	Drawing ^D	As above Counting, being read stories Non Medical conversation Video-taped cartoons Movies ^E
Young Children	5 – 7 years	As above	Hand held computers ^D		Guided imagery Engagement in fantasy scenes Thought stopping
Older Children	8 – 11 years	As above	Video Games ^D		As above

^A Save materials most likely to distract for the procedure itself; ^B Under the directions of physician; ^C To be used with caution; ^D Where procedures allows; ^E Some evidence that nurse-coaching and film-distraction significantly increases child coping and reduces distress. **Note:** Techniques often used in conjunction with parental prompts/rewards for using the distraction activity. [?] For children > 4 years, parental coaching may increase child's use of distraction.

Notes

Notes

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