The art of integrating play into rural paediatrics

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Abstract
Research has shown that children who require acute health services may experience anxiety, distress or psychological trauma. Vicariously, family members and health care professionals may also experience similar responses. One way to alleviate the impact of distress is by integrating play therapy skills and techniques into rural paediatrics. Play has been identified as a children’s nursing competency yet it has been given little attention throughout Australia. Play is represented in the literature as the child’s way of communicating. Thus, it is through this medium that adults must use developmentally appropriate language for the child to understand and comprehend their health care service. It is not appropriate for the child to be expected to communicate at an adult level.

As a paediatric qualified Registered Nurse and Play Therapist, I plan to share my experience and demonstrate to health care professionals working in rural areas some practical skills and techniques that could be integrated. For example, when a child is required to have a peripheral venous cannulation offering ‘the magic glove’ technique may help the child cope with the fear of, and in doing so minimise, pain associated with the procedure. Additionally, when a child is required to undergo a specific procedure, personalising a calico doll may be used as an age appropriate educational opportunity. Sensory play can be used as an expressive play technique to facilitate relaxation when a child may be distressed. These play experiences may include textures such as clay, play doh, slime, squishy squishy toys, paint, sand, and water are all used to experience tactile sensations and could be made available for integration into the health care experience. Projective symbolic play can give health care professionals insights into the child’s thoughts and feelings about their present emotional state.

Play is a state, a mindset that is fun, creative and imaginative. You can integrate the art of play into rural paediatrics by maintaining an attitude of playfulness.

Introduction
Play is a complex and dynamic activity based on context, culture and past experiences (1). Play is recognised as the language of children (2) and with this in mind, a playful approach may be integrated into the care of children requiring medical care and procedures. The aims of integrating play strategies are to decrease pain, anxiety, fear and distress and to increase acceptance, mastery and coping competence. This requires an understanding of the physiological and psychological dimensions of children’s pain and suffering, identifying the child’s focus and interests and preferred style of coping and integrating play based on child and family assessment. Whilst assisting children through painful procedures has been strongly advocated in the literature as a nursing role (3), it is not known how many health care professionals currently offer and integrate paediatric play strategies throughout Australia.

Procedural play strategies may be sequenced according to three phases of the medical encounter; namely pre-procedural educative play, procedural distraction and post procedural play. The three techniques described in this paper are the magic glove, the personalised calico doll and sensory distraction methods. Furthermore, when caring for children, health care professionals are required to consider parental participation to assist children to cope with paediatric procedures. The parental role has certainly evolved over the last 60 years and should be included as an integrated dimension when caring for children.

Parental participation and involvement
The literature indicates that the parental participation and involvement is central to their child’s hospitalisation experience. Early work stemming from the Platt Report of 1959 into the Welfare of Children in Hospital (United Kingdom) indicates that parental presence as vital for children to cope
with hospitalisation (4, 5). Since expanding visiting hours to include parental living-in further demands have been placed on parents to become more involved in the nursing care of their children. This transition has increased from parental access, to participation in the usual parent-child tasks, such as bathing and feeding, to more technical nursing roles, such as assisting with invasive procedures in hospitals (6) to operating complex machinery in the home (7). Therefore, there is strong evidence to support the parental role today is one that health care professionals and parents share in providing preparation and treatment for children. Doverty (8) offers a positive appraisal of this role and states that holistic nursing brings staff and family together as a team. Parents know their children intimately and are the most appropriate human resource to help health care professionals assess and plan for their child’s needs. Hence the emergence of philosophies such as “family-centred care” and “partnership in care”, which are considered fundamental to paediatrics.

When parents are supplied with information about a child’s procedure, Melnyk (6) showed that there was a significant increase in both parent and child coping. However, the majority of children undergoing painful procedures, do not engage in effective coping strategies unless prompted to do so by an adult (9, 10). Children require an understanding of what is happening to them and an ability to be distracted so that pain perception is reduced. Cohen, Bernard et al (11) examined the efficacy of training children to cope with immunisation pain without the assistance of trained coaches and determine whether untrained parents or health care professionals were more effective at decreasing children’s distress. In this study children demonstrated an understanding of the training, but they did not use the coping skills during the procedure. Therefore, children need the guidance of adults to cope with procedural experiences and transfer knowledge from the theoretical to the actual. This indicates that together health care professionals and parents are then in a position to plan developmentally appropriate pre-procedural educational play, as well as an individualised strategies for coping during the procedure. Part of the pre-procedural planning must incorporate the parents’ abilities and desire to assist in providing procedural care. The next section provides a brief overview of play, followed by children and medical procedures which support the rationale for the three techniques identified later in the paper.

**Play**

“Fish swim, birds fly, children play” (2)

It is well understood that a child communicates through play and play is an essential aspect for healthy physical, emotional, social, and cognitive growth and development throughout childhood. For health care professionals to ensure that children are cared for in a holistic manner they must incorporate play into the child’s hospitalisation experience. Playing with children allows the health care professional to establish a positive, warm and friendly connection with the child, this in turn generates ease and security and lays the foundation for a close and trusting relationship (12). Haiat, Bal-Mor et al (2003) goes on to state that nurses (and therefore all health care professionals) who care for children are required to:

- acknowledge and understand the importance and practical use of play
- observe what the child is communicating through play
- know how to initiate a variety of game components in diverse situations and finally
- plan and implement interventions that incorporate play.

This is a challenge for health care professionals because it demands further education in relation to play theory and practice, engage and practice communication through play, whilst at the same time perform and integrate play with multiple clinical roles and responsibilities. However, the integration of play can be achieved with some information and a playful, empathic, curious, and accepting attitude (13).
Play Therapy can be broadly divided into two groups, directed or non-directed and can be applied to the various stages of the medical experience. The diagram below shows the continuum of directed and non-directed play. It also shows that within the continuum the type of play may be normative, educative and therapeutic in orientation (14).

![Diagram showing continuum of directed and non-directed play]

Directed therapeutic play may be used to teach and prepare children (15) to aid coping (1), before, during and after medical procedures. The magic glove and the calico doll are examples of directed play, which will be discussed later. Non-directed therapeutic play occurs when the child controls all aspects of play and may be used to assist in identifying and assessing the child’s concerns (Chambers 1993) giving health care professionals an opportunity to assess the child’s level of understanding and feelings. Both of these methods are useful play therapies that health care professionals could incorporate at various stages of the procedural experience. It is therefore, important that health care professionals who care for children understand the various types and functions of play and how play can be integrated with specific medical procedures. To integrate procedural play health care professionals are also required to revise pain theory, pain perception as well as the child’s emotional and behavioural responses to painful episodes.

**Children and medical procedures**

Invasive procedures continue to cause pain and suffering for many children (11). Pain is a subjective multi-factorial experience involving the interaction of physiological, psychological, behavioural, developmental, and situational factors (16, 17). Fordyce (18) identifies and discusses the four features of a pain experience including:

- nociception, the physiological action that alerts the central nervous system due to aversive stimuli
- pain, the sensory perception of the signal
- suffering, the emotional response to the painful episode, such as fear associated with a threat
- pain behaviour, the actions associated with the response to pain.

It is hypothesised that procedural play intercepts pain perception to alter the emotional and behavioural response.

The literature shows that invasive procedures are associated with significantly increased anxiety and at times distress. For example, a number of anxiety-related symptoms such as nausea, vomiting, anorexia, skin rashes, insomnia, nightmares and depression can develop in anticipation of a procedure (19). Children are known to express their distress prior to the procedure through behaviours such as, crying, screaming, hostility, uncooperative behaviour, and aggression and following the procedure by withdrawn, angry, embarrassed or uncooperative behaviour (19). Studies also indicate that children are influenced by previous medical experiences. For example, children who are traumatised on their first experience will find subsequent procedures more distressing (19, 20). Therefore, additional assessment...
is required to plan and implement developmentally appropriate procedural interventions. For example, the nursing assessment should include the child’s age, temperament, attention focus, cognitive level, family learning, past pain (including procedural pain) experiences, culture, emotion, expectations, perception of control, and coping styles as well as parental judgement (20).

Expectation of invasive procedures seems to effect children’s interpretation of pain. Children often fear the worst if they are not told what is going to happen to them (21). The age of the child and the timing of procedural information given are important factors that health care professionals must consider. There is evidence to suggest that younger children report higher levels of pain than older children, however the basis of this effect has not yet been established (22, 23). The timing of procedural education is an important factor in relation to age. Researchers recommend that younger children should be educated immediately before a procedure whereas school aged children can be educated one week before the procedure (22, 24). Often the clinical situation will dictate when procedural education may or may not take place, in cases of emergency, for example. However, when time permits the following three techniques are presented to inform health care professional of ways in which play may be integrated into rural paediatric care.

Magic glove technique
Initially developed and researched by Dr Leora Kuttner (25) a clinical psychologist and researcher into paediatric pain management (26, 27). The "Magic Glove" technique can be integrated to help children who are in pain or are required to undergo medical procedures such as blood tests, injections, intravenous cannulation, but could also be used as a magic patch, or sock depending on the need etc (26). This procedure is a type of hypnosis because the practitioner facilitates the child to tap into the child’s unique imagination and fantasy. When using the power of suggestion it is important to be mindful of the child’s willingness and openness to try it. Additionally, parental consent and especially the child’s consent are really important. Preparation time is vital. It is recommended for children aged between 3 and 12 however, it could also be successfully used with older clients as well.

The follow steps are from the Child Life Council website see www.childlife.org/files/MagicGlove.pdf

- Begin by explaining to the child that you will be teaching them a ‘special way’ to help them change how much they feel—it’s called ‘the Magic Glove’.
- You can say that ‘you may feel something, but it will not bother you’ or ‘ I can help you change how your arm feels’ It is important to avoid saying ‘you will not feel any pain’
- Explain to the parents or carer that you are teaching the child a strategy to help them use their brain to minimise their level of pain.
- Assess which site will be used for blood test, IV site. If unsure you may prepare both arms.
- Begin by testing each arm prior to the placement of the magic glove. Apply equal pressure with the tip of a pencil to test each arm. Ask the child where you can press on the arm. Tell the child you will press gently on each arm and full sensation should be felt.
- Reinforce the point that there is full sensation now and there will be less after the magic glove is put on. Ask the child to rate the feeling, a little, a lot or not at all. This is not a pain assessment—just a comparative assessment.
- Now ask the client to put the hand / arm into yours and to relax. You might say ‘relax into my hand / arm’
- You may ask the child ‘where would you like the glove to start and end’ focus your touch on that area, making sure that you include the needle insertion site.
Take the magic glove out of your pocket and stroke gently upwards over the designated area (4 to 6 times) including fingers as well.

Enhance sensory focus on the glove by talking about it. ’this will change how much you feel so you wont be bothered by any pain. The stronger the glove, the less you feel, this is going to be a really strong glove’

Create a visual representation of the glove and ask ‘what colour would you like your glove?’, ’are there any diamonds’, ’pictures on it—what?’

At the top of the last stroke, gently squeeze the top of the arm. Indicate that the magic glove is in place and that it will change how the arm feels. You might say ’now that you have your magic glove on you’ll notice that you will feel something, but it wont bother you so much’

Now it’s time to test the magic glove. Apply equal pressure with the tip of a sharp pencil to test each arm. Once again, ask the child to rate the feeling, a little a lot not at all. The non-involved arm will have full sensation and hopefully the other arm will have a diminished sense of sensation. Kids may say it feels tingly, heavy or funny.

Some children may feel the magic glove on the first try. Others may need more strokes of the glove onto the hand to feel the effect.

In a few cases the child may not respond at all. In this case, repeat later or on another day.

Reassure the child that the glove is on when the area is being prepared for procedure.

The magic glove must be removed when the procedure is complete. Remove it by stroking in the reverse direction and ensure that full sensation has returned to the hand. You may also have the child shake both arms to normalise sensation.

You may like to try ’the magic glove’ after you have practiced it a few times on children or adults not requiring invasive medical procedures before you practice on children in the paediatric setting. This technique uses the power of imagination others use more concrete ways to playfully engage with children.

**Pre-procedural educative play: calico dolls**

Young school aged children have not yet developed the use of abstract thought, therefore using demonstration and allowing the child to play with the equipment introduces the child to equipment that will be used. For example, health care professionals may use calico dolls (trauma dolls) to demonstrate an intravenous cannulation prior to the procedure (28). This is appropriate and frequently used paediatric nursing practice that takes into account the child’s developmental level so that the child can see an example of what will happen to them with a concrete demonstration. This practice gives the nurse the opportunity to ask questions about how the doll may be feeling and could reflect any concerns the child has.

Doll therapy as a form of play therapy is useful, tangible and educational for preschool and school aged children (29). In order to engage in educational procedural play the practitioner requests the child to draw on their calico doll to personalise it. For example, the child could customise the doll to resemble the child’s hair colour, eye colour, sex, race and age. Ask the child to name the doll and place an armband on the doll with identifying information, including the doll’s age, weight, allergies, and Doctor. The doll’s information, given by the child provides a parallel process to what may have already been experienced by the parent and child. The child may mimic, or role play, their parent’s responses and behaviours.
The dolls may be used in a variety of settings including emergency, routine admissions to hospital and / or surgery, or as an accompanying support for transporting between health care facilities. If calico dolls are unavailable the child may bring a favourite fabric doll or teddy from home and used in communicating through play with a child.

The doll is then used to prepare the child for procedures, for example an IV cannulation.

- Demonstrate on the doll the where the EMLA or AnGel cream is applied
- Identify where the tourniquet is place and explain to the child that it may feel tight
- Show where vein is palpated
- Demonstrate insertion of the cannula and removing needle to show only the plastic tubing is left behind
- Then tape the cannula into position to show how the doll needs to keep the arm really still (that’s the most important job the doll has—too keep still).
- At this point ask the child what would help the doll to keep really still, enquire what the child thinks the doll may feel. Using the doll provides a safe place to express any fears the child may have and the opportunity to respond to the fear.
- The doll can also be used to show parents, siblings, significant others about the child’s intended procedure.
- Provide time for the child to role play what they have witnessed.
- Observe what happens to the doll and talk about their role in keeping the doll still.

It is important to be aware that children cope with medical procedures differently. Thompson assessed children’s coping and anxiety levels prior to surgical procedures and demonstrated that anxiety is not necessarily reduced with information giving during the anticipatory stages of waiting for a procedure (30). Some children cope as “attenders” preferring to have information about the procedure prior to and during a procedure, whereas others, “distractors”, prefer not to be informed at all (31). Other authors discuss coping in terms of behavioural versus cognitive coping, active versus passive coping, and sensitisation versus repression. For a critique of coping constructs see (17). When children are identified as “distractors” sensory distraction play may be helpful to support the child experiencing medical treatment.

**Sensory distraction and medical play**

Medical play is a form of play therapy that can be used to familiarise children with medical equipment. The purpose of medical play is for children to safely examine the equipment that they will encounter throughout their hospital stay (3) either as preparatory education or as post procedure. These activities allow children to approach a threatening situation with a greater sense of mastery (16) because the child has the opportunity to engage with medical equipment though touch, smell and play. The same
principle can be used post procedure in order to process the medical experience. The use of games or puzzles depicting medical themes, or the creation of art work using health care materials (such as, bandage strips, tongue depressor, syringes) is recommended (32).

Sensory distraction is used for when children are anxious about their medical treatment. Distraction kits are available from the charity ‘TLC for kids’. Distraction toys, such as stretchy rope and figures, bionic putty, slime and goop provide the tactile sensory experience that allows the child to focus on the sensation and distract them from the anxiety associated with the medical intervention. Children’s waiting areas and play rooms could have a number of expressive and therapeutic toys that will help facilitate emotional processing, but should not be used in the treatment room—rather have a distinct set of distraction toys used only for that purpose. Most importantly, it is the staff that can make the most powerful influence by adopting some of the skills found in Child Centred Play Therapy.

Play therapists are taught to communicate using a permissive, accepting, playful attitude towards the child. Landreth (2) lists four messages that the therapist could consciously convey, namely:

- I am here
- I see you
- I understand
- I care

Health care professionals may wish to also convey these messages by being emotionally present to the child, empathically reflecting and acknowledging what is seen, such as pain or fear, and attuning to the child. To find out more about Play Therapy refer to the Australasia Pacific Play Therapy Association see: www.appta.org.au

**Conclusion**

This overview of integrating play demonstrates that health care professionals can integrate these strategies into the care of children prior to them undergoing medical procedures. Acknowledging that parents are co-workers in caring for their child has demonstrated a major paradigm shift in the nursing of hospitalised children. Parents can choose to be involved in preparing and assisting with procedures with the aim to reduce children’s distress, fear, pain and anxiety. Furthermore, parents are an important human resource that health care professionals ought to use for assessing and preparing children for invasive procedures.

This paper has stated that play is the language of children and as such can be used as a communication tool. Children have the right to medical information and therefore health care professionals need to understand how play can be integrated as a healing modality. Finally merging paediatric and play therapy knowledge is useful to prevent or reduce trauma associated with medical procedures.

**References**


