Managing the Frightened Child

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Visualizing the deeply embedded patterns and routines that constitute clinical work…provides a springboard to improve the safety, effectiveness, and efficiency of care. Uncovering the unseen and unarticulated aspects of expertise helps us better train novices to become experts. Fundamental work…attuned to complexity and revealing previously unremarked behaviors, habits, patterns of work, relations, modes of communication, and contextual influences [will] help us better understand and support the adaptive nature of clinical work in the emergency department's ever-changing, ambiguous, uncertain, and unforgiving environment.[1]

INTRODUCTION

Medical encounters are often frightening for children and stressful for their families. When children are afraid, they resist cooperating and responding to verbal reasoning, inhibiting assessment and treatment.[2-4] For children to cooperate with physical examination and minor procedures, clinicians must first establish a trusting relationship with them.[5,6] Although establishing trust is fundamental to effective interactions with children, there is no systematic approach to teaching this skill. This article describes and demonstrates a practical approach to rapidly establishing trust with children in the emergency department. We deconstruct the elements of clinician-child interactions and elucidate the underlying principles and methods of an approach to establishing trust. Our objective is to place a framework and a set of tools around what emergency physicians are doing intuitively, to enhance effectiveness in their interactions with children. Although what is described below is based on established child development and nonverbal communication research, we have developed much of the practical format and nomenclature presented.

ELEMENTS OF THE APPROACH

This approach is based on perceiving, accurately interpreting, and appropriately responding to a child's verbal and nonverbal cues, which results in the formation of trust and the effective management of the child's emotional state.[7]

The approach has 3 sequential steps: observe, engage, and monitor.

Observe

Use clinical observation to analyze and interpret the child's verbal and nonverbal cues (facial expression, eye behavior, posture, and gestures) and specific behavioral features (responsiveness and interpersonal distance, child-parent positioning, and child engagement) to assess his or her emotional state and ability to cooperate.[8] You will use this information to determine an appropriate method for engaging the child.

Facial expression, eye behavior, posture, and gestures. Facial expression, eye behavior, posture, and gestures are all readily observable and can be used to determine the child's emotional state and level of fear. This is especially straightforward in infants and young children, who have not yet been socially conditioned to mask their emotions.[9-11]

Responsiveness and interpersonal distance. Notice how the child responds when you enter the room. A child's response to the physical proximity of the clinician provides information about his or her degree of fear.[12] A stranger coming too close or approaching too quickly can lead to a visible increase in the child's fear.[13]

Gauge the child's level of fear by how close you can approach before he or she exhibits signs of unease.[14-19] If the boundary is wide (ie, the child displays a high level of fear when you are at a distance), carefully begin interacting from the edge of the perceived boundary (see "Arousing Curiosity" and "Desensitization" sections) and then gradually move closer while observing the child's response. If your interventions are effective, the boundary will shrink as fear decreases, allowing you to get progressively closer to the child (Figure 1 and Video E1 [available online at http://www.annemergmed.com]). If the boundary is initially narrow, suggesting a low level of fear, begin interacting in proximity to the child.

Figure 1. Interacting with a fearful child with a wide boundary (see Video E1, available online at http://www.annemergmed.com).

Child-parent positioning. Observe where the child is situated relative to the parent. The more fearful the child, the closer together the child-parent dyad will be. A child playing independently of the parent suggests a low level of fear (Figure 2 and Video E2 [available online at http://www.annemergmed.com]).

Figure 2. Child-parent positioning (see Video E2, available online at http://www.annemergmed.com).

Child's level of engagement. A child's level of engagement in an activity is another indicator of his or her emotional state and level of fear.

Children generally fall into 1 of 4 categories (Table).

Engage

Once you have assessed the child's emotional state, apply a set of interactive techniques to move him or her from fear to trust. Here, we describe 4 such techniques: arousing curiosity, matching, desensitization, and focusing attention. We present these techniques in discrete and sequential steps, although in practice they often occur simultaneously.

Arousing curiosity. Arousing curiosity is a nonthreatening way of initially engaging young children by noticing and calling their attention to an item of clothing or physical feature. Arousing curiosity begins the process of sparking a child's interest and focusing his or her attention.

To arouse curiosity in infants and young children, imitate their facial expressions and gestures, make syncopated or rhythmic sounds, and use tactile stimulation (rhythmically and repetitively tap the stretcher, a toy, or other object)[20] (Video E3, available online at http://www.annemergmed.com).

Figure 3. Arousing curiosity in infants (see Figure 3 and Video E3 [available online at http://www.annemerdmed.com]).

Note: touch can act as a 2-way stimulus, calming children when expected or provoking fear when unexpected.[21,22] Once trust is established, touch is more readily accepted and can be used to deepen the developing clinician-child bond.

For young children, verbal interaction takes on greater importance. When they are afraid or do not trust you, they will avoid responding to open-ended questions; however, they will respond to simple, descriptive, and declarative statements. Use what you have observed as the basis for these descriptive statements. For example, point out the color or describe the design of an item of clothing. You have successfully aroused a child's curiosity when his or her gaze tracks what you are describing or pointing at. Gaze tracking is an especially useful indicator that the child is paying attention, because typical listener responses, such as head nodding, eyebrow raising, and verbal acknowledgement, are absent in preschool-aged children[23] (Figure 4 and Video E4 [available online at http://www.annemergmed.com]).

Table. Four categories of child engagement and fear.

Engagement	Fear	Analysis	Approach
Engaged	Low or no fear	These children are fully engaged in an activity and are unconcerned by your presence.	Approach these children directly and engage them through the activity that they are focused on.
Engaged	Moderate or high fear	These children are using the activity to regulate their fear. They will be aware of your presence and will stop focusing on the activity and become more fearful when you are in proximity to them or when you attempt to draw their attention away from the activity.	Pay careful attention to where the personal space boundary is with these children. Begin by desensitizing them to your presence (see "Desensitization" section) and watch their cues for feedback on the effectiveness of your approach.
Unengaged	Low or no fear	These children may be sitting, relaxed, or on their parents' lap, and they may look at you without concern as you enter the room.	Approach these children directly.
Unengaged	Moderate or high fear	These children are visibly fearful when you enter the room.	Pay careful attention to where the personal space boundary is with these children. Begin by desensitizing them to your presence and watch their cues for feedback on the effectiveness of your approach.

Figure 4. Arousing curiosity in young children (see Video E4, available online at http://www.annemergmed.com).

Note: vocal modulation can be used to create specific speech patterns that are familiar and calming to children. The speech patterns of parents talking to infants and young children have been studied and termed "parentese."[24,25] Parentese is characterized by slow, repetitive, high-pitched, and singsong speech.[26] The speech is simple, clear, attention maintaining, and has pauses.[27] Parentese can be used during arousing curiosity to put infants and young children at ease.

Arouse curiosity in older children and adolescents by inquiring about their interests (see "Focusing Attention" section).

Matching. During interpersonal interaction, people unconsciously mirror one another's facial expressions, postures, and mannerisms.[28-30] Such "matching" creates affinity.[31,32] This can be used intentionally to build trust in school-aged and older children.[32-35]

Observe your body position and posture along with the child's and the parents'. Mirror the child's behavior by matching a single or multiple cue channels (eg, match the child's posture and cross or uncross your arms and legs to mirror the way the child is holding his or her body). Continue to match the child as his or her posture changes during the interaction. Positive changes in posture, such as relaxation or opening, serve as a cue that you are effectively engaging the child.

There are 2 types of matching: symmetric (eg, posture matching posture, gesture matching gesture) and asymmetric (eg, voice matching gesture, facial expression matching gesture). In addition to matching observable behaviors, take a moment to recognize and match the child's rhythm and pace (Figure 5 and Video E5 [available online at http://www.annemergmed.com]).

Figure 5. Symmetric and asymmetric matching (see Video E5, available online at http://www.annemergmed.com).

Desensitization. Children can be apprehensive about unfamiliar objects in the examination room. Allowing them to touch select objects that will be part of the physical examination or procedure is often used to rapidly desensitize them to the environment and enhance their trust and cooperation. Once they have handled the equipment and understand that it is nonthreatening, they will no longer pay attention to it. Demonstrating parts of the physical examination on yourself, the child's parents, siblings, or a toy before approaching the child is another common desensitization technique (Figure 6 and Video E6 [available online at http://www.annemergmed.com]).

Figure 6. Desensitization techniques (see Video E6, available online at http://www.annemergmed.com).

When children are especially fearful, avoid sudden entrances, which can further distress the child. In these situations, graded exposure (ie, gradual desensitization to your presence by coming in and then immediately leaving the room, talking only to the parents and not making eye contact with the child, or remaining at a distance from the child as you begin speaking to the parents) can be an effective desensitization tool.[36,37]

Focusing attention. To form a relationship, the clinician and child must be engaged with and paying attention to each other. Engagement and focus are prerequisites for building trust. Focusing attention is a trust-building technique that captures a child's attention and anchors it to a learning-based activity or task.

Arousing curiosity and desensitization are used initially to minimize fear and engage the child. Once the child engages, begin to focus his or her attention by directing it to a specific activity or task. For preschool-aged children, use a developmental task that the child is actively attempting to master. A developmental task is a learning activity that mobilizes a child's innate curiosity and desire to learn. Learning-based activities are inherently engaging and intrinsically rewarding, and can therefore sustain a child's attention even when potentially frightening or painful stimuli are introduced (Figure 7 and Video E7 [available online at http://www.annemergmed.com]).

Figure 7. Focusing attention with developmental tasks (see Video E7, available online at http://www.annemergmed.com).

For school-aged and older children, identify an area of interest and use it to focus their attention through a deliberate type of conversation, which we refer to as the "deep dive." The deep dive creates an image in the child's mind of the identified area of interest and focuses his or her attention in the same way that a developmental task does in preschool children.

Once you pinpoint an area of interest, begin by asking the child simple, concrete questions. By asking the child to retrieve and describe stored sensory information, you are helping him or her create detailed mental images. The goal is for the child to become immersed in the image being created. Assume you know nothing about the child's area of interest; remain curious and attentive. The less you assume you know, the deeper the dive.

Throughout the process, be attuned to the emotional connection between parent and child. They are continuously reading and affecting each other's states. Watch the parents for cues on the child's emotional state and how effective your approach is.[38] This can be especially important when children begin focusing their attention because they often appear to have a flat affect, making it difficult to read their cues.

Parents will experience the shift in their child's emotional state as you move him or her from fear toward trust. Watch for a change in the parents' demeanor.[39] They may smile or become engaged in and focused on the activity along with the child[40] (Figure 8 and Video E8 [available online at http://www.annemergmed.com]).

Figure 8. Parent-child emotional connection (see Video E8, available online at http://www.annemergmed.com).

Bluetooth pairing. The point at which trust is established between clinician and child follows from an observable set of child behavioral responses: softening of the facial expression, opening and relaxation of the posture, focusing of attention on the task and on the clinician, and the beginning of interactive play.[9,10,41-43] We refer to this process figuratively as Bluetooth pairing, given its parallel with the coupling of electronic devices.

In children who readily engage without fear, Bluetooth pairing is almost immediate. With children who are initially fearful or reticent to engage, segue to the physical examination or procedure once Bluetooth pairing is evident (see Figure 9 and Video E9 [available online at http://www.annemergmed.com], for an example of the process of Bluetooth pairing with a young child).

Figure 9. Example of the process of Bluetooth pairing with a young child (see Video E9, available online at http://www.annemergmed.com).

Once Bluetooth pairing occurs, indicating that trust is established, children will cooperate (as illustrated in Figure 10 and Video E10 [available online at http://www.annemergmed.com]).

Figure 10. Laceration repair in children (see video E10, available online at http://www.annemergmed.com).

Monitor

As you engage and interact with the child, continuously monitor for feedback on the effectiveness of your approach. If the cues indicate that your approach was ineffective (the child did not respond, responded negatively, or responded with increased fear), step back, analyze the child's present cues, and try another tack. Developing trust with children is an iterative process, and it often requires trial and error to determine how to best arouse their curiosity and focus their attention.

CHALLENGES

To establish trust, the child must be able to engage. Certain populations (eg, severely autistic patients) have great difficulty engaging. This approach will not be effective with them. This is different from children who will not engage because they are experiencing pain or physical discomfort (eg, nausea, fever). Pharmacologic adjuncts (antiemetics, antipyretics, or analgesics) can help alleviate these symptoms and allow the child to focus and fully engage with the clinician.

CONCLUSION

We present a systematic approach to rapidly establishing trust with children and their families during medical encounters, which results in cooperation and the effective management of the child's emotional state.

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REFERENCES

1. Wears RL, Schubert CC. Visualizing expertise in context. *Ann Emerg Med*. 2016;67:752-754.
2. Hearst D. The runaway child: managing anticipatory fear, resistance and distress in children undergoing surgery. *Pediatr Anesth*. 2009;19:1014-1016.
3. Duff AJA. Incorporating psychological approaches into routine paediatric venepuncture. *Arch Dis Child*. 2003;88:931-937.
4. Cohen LL. Behavioral approaches to anxiety and pain management for pediatric venous access. *Pediatrics*. 2008;122:S134-S139.
5. Krauss BS, Callgaris S, Green SM, et al. Current concepts in the management of pain in children in the emergency department. *Lancet*. 2016;387:83-92.
6. Leroy PL, Costa LR, Emmanouil D, et al. Beyond the drugs: nonpharmacologic strategies to optimize procedural care in children. *Curr Opin Anaesthesiol*. 2016;29(suppl 1):S1-S13.
7. Krauss BS, Krauss BA, Green SM. Managing procedural anxiety in children. *N Engl J Med*. 2016;374:e19.
8. Darwin CR. A biographical sketch of an infant. *Mind*. 1877;2:285-294.
9. Darwin CR. *The Expression of the Emotions in Man and Animals*. London, England: John Murray; 1872.
10. Knapp ML, Hall JA. *Nonverbal Communication in Human Interaction*. 7th ed. Boston, MA: Cengage; 2010.
11. Konner M. *The Evolution of Childhood: Relationships, Emotion, Mind*. Cambridge, MA: Belknap Press of Harvard University Press; 2010.
12. Little KB. Personal space. *J Exp Soc Psychol*. 1965;1:237-247.
13. McBride G, King MG, James JW. Social proximity effects on galvanic skin responses in adult humans. *J Psychol*. 1965;61:153-157.
14. Aiello JR, Aiello TC. The development of personal space: proxemic behavior of children 6 through 16. *Hum Ecol*. 1974;2:177-189.
15. Gifford R, Price J. Personal space in nursery school children. *Can J Behav Sci*. 1979;11:318-326.
16. Guardo CJ. Personal space in children. *Child Dev*. 1969;40:143-151.
17. King MG. Interpersonal relations in preschool children and average approach distance. *J Gen Psychol*. 1966;109:109-116.
18. Evans GW, Howard RB. Personal space. *Psychol Bull*. 1973;80:334-344.
19. Harper LV, Sanders KM. Preschool children's use of space: sex differences in outdoor play. *Dev Psychol*. 1975;11:119.
20. Meltzoff AN, Moore MK. Imitation of facial and manual gestures by human neonates. *Science*. 1977;198:75-78.
21. Drescher VM, Gantt WH, Whitehead WE. Heart rate response to touch. *Psychosom Med*. 1980;42:559-565.
22. Nilsen WJ, Vrana SR. Some touching situations: the relationship between gender and contextual variables in cardiovascular responses to human touch. *Ann Behav Med*. 1998;20:270-276.
23. Dittmann AT. The body movement-speech rhythm relationship as a cue to speech encoding. In: Siegman AW, Pope B, eds. *Studies in Dyadic Communication*. New York, NY: Pergamon Press; 1972:135-151.
24. Ferguson CA. Baby talk in six languages. *Am Anthropol*. 1964;66:103-114.
25. Fernald A, Taeschner T, Dunn J, et al. A cross-language study of prosodic modifications in mothers' and fathers' speech to preverbal infants. *J Child Lang*. 1989;16:477-501.
26. Grieser DL, Kuhl PK. Maternal speech to infants in a tonal language: support for universal prosodic features in motherese. *Dev Psychol*. 1988;24:14-20.
27. DePaulo BM, Coleman LM. Talking to children, foreigners, and retarded adults. *J Pers Soc Psychol*. 1986;51:945-959.
28. Cappella JN. Mutual influence in expressive behavior: adult-adult and infant-adult dyadic interaction. *Psychol Bull*. 1981;89:101-132.
29. Bernieri FJ, Rosenthal R. Interpersonal coordination: behavior matching and interactional synchrony. In: Feldman RS, Rimé B, eds. *Fundamentals of Nonverbal Behavior*. New York, NY: Cambridge University Press; 1991:401-431.
30. LaFrance M. Postural mirroring and intergroup relations. *Pers Soc Psychol Bull*. 1985;11:207-217.
31. Chartrand TL, Bargh JA. The chameleon effect: the perception-behavior link and social interaction. *J Pers Soc Psychol*. 1999;76:893-910.
32. Lakin JL, Chartrand TL. Using nonconscious behavioral mimicry to create affiliation and rapport. *Psychol Sci*. 2003;14:334-339.
33. Lakin JL, Chartrand TL. Exclusion and nonconscious behavioral mimicry. In: Williams KD, Forgas JP, von Hippel W, eds. *The Social Outcast: Ostracism, Social Exclusion, Rejection, and Bullying*. New York, NY: Psychology Press; 2005:279-295.
34. LaFrance M. Nonverbal synchrony and rapport: analysis by the cross-lag panel technique. *Soc Psychol Q*. 1979;42:66-70.
35. LaFrance M. Posture mirroring and rapport. In: Davis M, ed. *Interaction Rhythms: Periodicity in Communicative Behavior*. New York, NY: Human Sciences Press; 1982:279-297.
36. Elliott CH, Olson RA. The management of children's distress in response to painful medical treatment for burn injuries. *Behav Ther Res*. 1983;21:675-683.
37. Jay SM, Elliott CH, Ozolins M, et al. Behavioral management of children's distress during painful medical procedures. *Behav Ther Res*. 1985;23:513-520.
38. Dimberg U, Thunberg M, Elmehed K. Unconscious facial reactions to emotional facial expressions. *Psychol Sci*. 2000;11:86-89.
39. Dimberg U. Facial reactions to facial expressions. *Psychophysiology*. 1982;19:643-647.
40. Hatfield E, Cacioppo JT, Rapson RL. *Emotional Contagion*. Cambridge, United Kingdom: Cambridge University Press; 1994.
41. Mehrabian A. Inference of attitudes from the posture, orientation, and distance of a communicator. *J Consult Clin Psychol*. 1968;32:296-308.
42. Mehrabian A. Relationship of attitude to seated posture, orientation, and distance. *J Pers Soc Psychol*. 1968;10:26-30.
43. Mehrabian A. *Child Communication in Nonverbal Communication*. Chicago, IL: Aldine; 1972.