

Compassionate Care



**REDUCING STRESS AND DISCOMFORT
DURING NEEDLE PROCEDURES**

Guided Imagery – Being Afraid

Understanding Fear and Phobias



Most children are needle-averse and experience fear surrounding needle experiences.

- Finding ways to mitigate pain and distress is regarded as highly clinically relevant and integral to the delivery of quality, patient-/family-centered health care.
- Negative needle procedures can have a life-long effect.
- It is estimated that up to 25% of adults have a fear of needles with most fears developing in childhood.

Needle phobia is a defined medical condition according to the DSM 5.

- It is estimated to affect at least 10% of American adults.
- It is considered to be both an inherited and a learned condition.
- It is generally acquired between the ages of 4-6.

Have I convinced you yet?



- Childhood experiences with immunizations have the potential to effect future health of patients. It can prevent people from going to the doctor, getting routine blood tests and vaccinations or following prescribed treatments.
- It is a treatable condition. Do you know who to refer to for desensitization?

What We are Trying to Avoid



What is the message?



- How do you set the tone? It's okay to have a script.

Break into groups of 4-5 and brainstorm a message for children:

- 4-6 or
- 7-12 or
- 13-18.

The Ideal



Simple, cost-effective, evidence-based pain-relieving strategies are available.



- Why don't we use them?
- What do you lose?
- What do you gain?
- What is #1 barrier?

Evidenced-Based Recommendations

Taddio,et.al



FOR INFANTS:

-BREASTFEEDING: A combined analgesic intervention with skin-to-skin contact, holding the child, the sweet-tasting milk and the act of sucking.

-SWEET-TASTING SOLUTIONS: Up to 12 months of age for infants who cannot be breastfed.

POSITIONING

-To reduce pain at the time of the injection, DO NOT place children in a supine position during vaccination.

-Infants and children should be held by a parent in a position that is comfortable for both of them

-Infants and older children may sit on the exam table with parent standing to provide support.

-Excessive restraint may increase the child's stress so parent and health care provider are encouraged to hold and support without excessive force.

ORDER OF INJECTIONS

-When administering multiple immunization injections, inject the most painful vaccine last to reduce pain at the time of the injection. More painful immunizations include MMRII, prevnar and HPV.

TOPICAL ANESTHETICS

-To reduce pain at the time of the injection, encourage parents to use topical anesthetics during vaccination.

Previous studies have shown that parents are willing to accommodate the administration of topical anesthetics into their schedules, are willing to pay to reduce the vaccination pain and are able to apply the topical anesthetics to their children's skin before needle procedures if instructed on how to do so.

CLINICIAN-LED DISTRACTION

- Distraction has been shown to reduce children's pain and distress from medical procedures.**
- Distraction has been defined as the use of strategies to take an individual's attention away from the procedure.**
 - Can be employed for children of all ages.**
- A one-time, 15 minute training program is available on internet.**

CHILD-LED DISTRACTION

- To reduce pain at the time of injection among children three years of age and older, use child-led distraction during vaccination.**

BREATHING TECHNIQUES

- To reduce pain at time of injection, have children three years of age and older engage in slow-deep breathing or blowing during vaccination,**
- Can use inexpensive items (e.g. bubbles, party blowers, pinwheels).**

Insufficient Evidence



- sweet tasting solution over 12 months**
- skin-cooling techniques (e.g. vapocoolant spray or cold pack)**
- simultaneous injections**
- intramuscular vs. subcutaneously being less painful**
- administration of oral analgesics before injection**
- parent-led distraction**

No-no



***DO NOT* tell children “it won’t hurt”.**

It has been shown to be ineffective and deceptive

Goals



- Provide the W. 38th Street Health Center with the training and tools to minimize the potentially traumatic aspects of care
- Initiative targets children on the autism spectrum, children with developmental disabilities and children with severe anxiety related to medical care

Identifying Target Groups



- Children with needle phobia: pamphlet for parents and needle protocol
- Autism group: materials from Hands in Autism as well as a sheet with the details of the visit

Needle Protocol for Vaccinations



1. Retrieve Buzzy4shots from designated refrigerator
2. Collect appropriate distraction toys for child use
3. Place child in a comfortable position
4. Allow child to pick out distraction toy.
5. Allow the Buzzy4shots to sit on the area for 30-60 seconds then move it to a location that is between the source of pain and the nerve pathway to the brain.
6. Swab the injection area with an alcohol pad
7. Administer shot and place Band-Aid on location

Needle Protocol for Blood Draw



1. Retrieve ethyl chloride spray and blood draw kit from designated refrigerator
2. Collect appropriate distraction toys for child use
3. Place child in a comfortable position
4. Allow child to pick out distraction toy.
5. Fasten tourniquet at this time
6. Swab the injection area with an alcohol pad
7. Spray the area of blood draw with ethyl chloride for 4-10 seconds or until the skin is white, effective immediately
8. Draw blood and place Band-Aid on location

New Equipment



- **Buzzy4shots:** Reduces or even helps eliminate the pain that is felt by the shot. How?
 - Uses a cold pack and vibration to numb the pain
 - Must be placed between location of pain and the nerve pathway to the brain
- **Ethyl chloride spray:** topical vapo-coolant
- **Distraction toys:** Assortment of visual, tactile, and auditory toys
 - All toys along with necessary pamphlets and other information will be placed on a rolling cart. Where can this cart be located?
 - These need to be disinfected after use. Place in the tub marked “toys to be cleaned,” wipe down with hydrogen peroxide wipes, when clean move to “clean” drawer.



Rolling Cart



Buzzy4shots

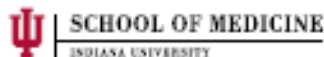


Collection of data



- Children will be asked for an emotional reading at the beginning and end of medical care
- Parents will be asked to complete a short-survey with both Likert-scale questions about their experience and their child's experience, and three open-ended questions
- Data analysis is important in order to judge the effectiveness of the new approach

Early Intervention for Needle Phobia: Strategies to Reduce Toxic Stress in the Medical Home



Stephanie Rosa, BA, Lynne Sturm PhD, HSSP, Kathryn Holland LCSW, and Sarah Stelzner, MD
Indiana University School of Medicine and Indiana University Health, Indianapolis, Indiana



BACKGROUND

Medical events of varying types can lead to traumatic stress in children and impact their perception of the medical home and of receiving treatment. The National Child Traumatic Stress Network emphasizes a need for preventative interventions for children who experience traumatic stress in their daily lives since such reactions can impair a child's ability to function and receive proper care.

Pediatricians are often faced with patients who have a strong aversion to needles and are noncompliant during situations involving the use of needles. Frequently, swarms of nurses or MAs are required to restrain the child when using needles resulting in an additional stressor.

This poster highlights strategies that have been developed by members of the Eskenazi Health Clinic West 38th Street Pediatric Team to manage behavioral or emotional distress when children are in the presence of needles. This medical home serves a diverse, low income community. These interventions address the issue before, during and after the stressful event with needles.

MATERIALS & METHODS

Over a six month period, a team made up of behavioral health specialists, a summer intern and a pediatrician implemented the following strategies: Using literature on needle phobia, they developed a new protocol. Nurses and MAs were briefed on the draft protocol that involved a noninvasive approach to decreasing the pain and stress of drawing blood or giving vaccines. The team incorporated their suggestions and feedback into the protocol.

Patients participating in this new method of care were asked to identify how they were feeling before and after the use of the needle through a face chart. At the end of the testing period, the Nurses and MAs who participated were also given surveys to indicate their level of success with the program as well as their level of satisfaction. As a means of raising awareness in families with children experiencing traumatic stress from needles, the team developed a pamphlet to include significant information that parents should consider. The pamphlet was approved and edited for distribution at the West 38th Street Health Fair and given to families identified as having children with needle phobia. These pamphlets are available for distribution with the Vaccine Information Sheets handed to each family before injections are given.

The protocol contains three techniques geared toward relieving pain or stress the child may feel when getting a shot or blood draw. These include the use of Buzzy4Shots, distraction toys, and a local anesthetic. The Nurses and MAs received a short seminar regarding the appropriate use and sanitation for Buzzy4Shots. A Center for Disease Control and Prevention website provided tips for disinfecting toys as well as which toys were suitable for a clinic. Lastly, the team developed a standing order for an ethyl chloride mist spray in order to reduce the pain associated with the needle.

ACKNOWLEDGMENTS

This initiative would not have been possible without funding from the Primary Care Innovation Fund, Eskenazi Medical Group.

RESULTS

Intervention	Very helpful	Helpful	Little difference	Unhelpful	Very Unhelpful
Buzzy4Shots	88	88	88	88	88
Distraction Toys	810	410	110	810	810
Ethyl Chloride Spray	810	810	110	810	810
Chlorbutol	88	88	18	88	88

Figure 1. Data shows the feedback from Nurses and MAs on specific intervention tools.

FEEDBACK FROM PROVIDERS/ PATIENTS/STAFF

6/8 providers believed the intervention was helpful/very helpful in reducing the stress of shots and blood draws.

51.6% of patients surveyed felt better after receiving a shot or blood draw using the intervention, 16.1% felt worse, and 32.2% had no change.

The majority of Nurses/ MAs felt: patients seemed less stressed with the use of Buzzy4Shots, ethyl chloride mist spray, and distraction tools, parents appreciated the efforts taken to reduce pain and stress; they themselves felt the procedure less stressful.

CONCLUSIONS

Identifying the strengths and weaknesses of this new approach to providing care can improve the way children experience their medical home. Continued measurement of the effectiveness of the program and quality improvement will allow for effective dissemination of the program to other Eskenazi sites and medical facilities. Strengths of the program include the low budget associated with its implementation and continual use, improved staff satisfaction, improved patient and family experience.

The initial outlay amounted to a total \$375, which includes one training of staff with Buzzy, two Buzzy4Shots, distraction toys, give-away gifts, and ethyl chloride mist spray and a cart to transport the materials. The ongoing costs will amount to approximately \$150 a month for give-away gifts, five ethyl chloride mist spray bottles, and distraction toy replacements.

Collaborative teamwork among the nurses and MAs adopting this new strategy is vital for the success and advancement of the program. Establishing a Champion Nurse to be an example and motivate the other staff members has been crucial since implementing a new system can result in resistance to changing the norm. Some staff members believe that patients should accept the discomfort associated with the medical procedure, which is contrary to the mission of providing patients with a safe and comforting medical experience. In order to move toward a culture of change, staff members are involved in ongoing training seminars and new staff members are familiarized with the protocol.

This program holds the promise to prevent needle phobia in adolescent and adults, to improve patient adherence and perhaps to impact vaccine refusal.

Future directions for this program include having a wider distribution of flyers to parents about needle phobia for early identification as well as referring these target patients to behavioral health for desensitization.

REFERENCES

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COMMENTS FROM PATIENTS

• "Comforting to have a 'numbie' with the shot." - 10 year old female

• When asked: "Was this helpful?"

Response: "Yes because I am really nervous when it comes to sharp objects." - 17 yo male patient

• "It didn't hurt at all." - 8 yo male patient

• "Can I please have the vibrator thing (referring to the Buzzy4Shots tool) again?" - 10 yo male patient

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Medical events of varying types can lead to traumatic stress in children and impact their perception of the medical home and of receiving treatment. The National Child Traumatic Stress Network emphasizes a need for preventative interventions for children who experience traumatic stress in their daily lives since such reactions can impair a child's ability to function and receive proper care.

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RESULTS

Intervention Tools	Very Helpful	Somewhat Helpful	Made no difference	Somewhat Unhelpful	Very Unhelpful
Buzzy4Shots	3/8	3/8	2/8	0/8	0/8
Distraction Toys	5/10	4/10	1/10	0/10	0/10
Ethyl Chloride Spray	7/10	2/10	1/10	0/10	0/10
Giveaway Gifts	4/9	4/9	1/9	0/9	0/9

Figure 1. Data shows the feedback from Nurses and MAs on specific intervention tools.

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COMMENTS FROM PATIENTS

- “Comforting to have a ‘numb’er with the shot.” - 19 year old female
- When asked : “Was this helpful ?”

Response: “Yes because I am really nervous when it comes to sharp objects.” - 17 yo male patient

- “It didn’t hurt at all.” - 8 yo male patient
- “Can I please have the vibrator thing (referring to the Buzzy4Shots tool) again?” - 10 yo male patient



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What Did We Learn?



- Focus on preventing the development of needle phobia
- Reduce anticipation time
- Offer choices: which arm, how fast or slow, want to look or not look, where do you want to be, where do you want your parent to be. Help child develop a plan.
- Parent and patient education using brochures is helpful.
- Don't need i-pads with easy access to smart phones.

Overall Importance and Benefits



- Minimizing the trauma associated with medical care
- Children should not associate going to the clinic with negative experiences or thoughts
- Healthcare institutions are looking to both provide exceptional care and focus on patient satisfaction
- Preventative health is key

Where do you go from here?



- What can you take away from this session that you can use in your practice tomorrow?

- What would you like to know more about?