Decreasing Pain and Anxiety with Needlesticks and Procedures: An Evidence Based Practice Change

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A Systematic Approach for Success?

- Identified the action and assembled the team but work did not progress
- Stated the problem and goals
- Assemble and critique relevant literature
  - Synthesis tables
- Translate the evidence
  - Select outcomes
  - Guidelines, policies, processes
- Pilot
- Evaluate and modify
- Institute the change and monitor

You don’t have to see the whole staircase just take the first step.  
*Martin Luther King, Jr.*
The EBP Journey of the “Poke and Procedure Plan”
(2008-2013)

• Listen to our stories—they helped guide our way.

• Select something from the evidence that we share and try it the next time you work with patients or colleagues.

• Talk with one colleague and share your knowledge.

Decreasing pain and anxiety with needlesticks and procedures.
What is the Problem?

- Memory of early immunization pain is evident.
- Venipuncture and IV insertions are the 2 most common sources of pain in hospitalized.
- Children demonstrated high levels of pain and distress with needlesticks.
- Parents reported anxiety and distress when their child undergoes needlestick procedures.
- Health care providers find performing needlestick procedures in fearful and anxious children a challenge.

Needle Phobia is a reality for many!
Patient-Family Centered Care Principles

- Dignity and Respect
- Information Sharing
- Participation
- Collaboration
- Empowerment
The Evidence for the Poke and Procedure Plan

• Get to know the patient
• Individualize
  – Honoring choices
• Preparation
  – Best Words
• Positioning
• Distraction
• Parents as helpers and coaches
• Positive Recognition
• Drugs and Devices

Know and articulate the research and evidence.
The Relationship

Contribution of Success to Behavior Treatment

- Patient/Extratherapeutic: 40%
- Relationship: 30%
- Placebo, Hope, and Expectancy: 15%
- Model/Techniques: 15%

LL Cohen, Acapulco, March 11, 2010 cited from Hubble et al 1999
The Evidence

1. Relationships
   • Relationships are the key to success
   • Get to know the patient
     – Personal coping skills
     – Past experiences

2. Individualization
   • Develop a plan
   • Honor choices
     • Fosters trust
     • Develops cooperation
     • Empowers the child
The Evidence

3. Preparation & Information

• Poke and procedures
• Use “Best Words”
• High distress and anxiety
  • Emphasize coping skills vs. information
• Practice
  – Deep breathing/blowing bubbles
• Positioning

“Best Word” Tips

• Speak while child is comfortable
• Keep explanations simple/brief
• Be truthful and avoid making promises
• Use soft terms:
  “warm rather than burning”
• A quiet voice helps a child to focus
• Avoid telling a child how something will feel

Common medical terms are often commonplace to staff however, not necessarily to families.

Hanley & Piazza Crit Care Nurs Q, 33: 1, 2012
4. Comfort Positions

• Correlates with development
• Positions make it easier
• Teach parents to hold securely
• Teach how to hold
• Articulate the research on comfort positions
• Video on positioning
  http://www.youtube.com/watch?v=VOqIVIFN5Bo
Comfort Positions

Reducing stress & anxiety for children during medical procedures

- Back to Chest Bear Hug works well for:
  - IV
  - Blood Draw
  - Injections
  - NG Tube
  - Exam
  - Port Access

- Chest to Chest Bear Hug works well for:
  - IV
  - Blood Draw
  - Injections

- Frog Hold works well for:
  - Catheterization
  - Pelvic Exam
  - Dressing Change
  - Chest Tube Removal

- Side Support Hold works well for:
  - Lumbar Puncture
The Evidence

5. Distraction

• Take a stimulus and reframe it
• Developmental appropriate
• Stimulus---engaging
• Individualize
• Teach distraction to parents
• Distraction is used
  • Before
  • During
• After: speed the recovery/decrease the memory

Distraction had a greater effect than EMLA on a child’s distress over time. Nurses provided more coaching with distraction than with EMLA.

Cohen, LL Pediatrics, 122: 1999
The Evidence

6. Parents as Partners

• Acknowledge their expertise
• Need support with their own anxiety
• Guide them to function as a coach and helper
• Encourage them before, during and after
  • Positive recognition of behaviors that worked
  • Eye contact and affirmative body language

Partner with a parent to achieve better outcomes.
The Evidence

7. Positive Recognition

• Be specific about what went well
• Calling out positive behaviors helps the child remember and reinforce future success
• Prizes do not keep a behavior reinforced
• Involve child in the plan and refine plan for next time

“Make praise effective and credible” Michael Brandwein

http://www.michaelbrandwein.com/ytopics/organizations/workdirectly/buildingbetterchildren.html
The Evidence

8. Drugs and Devices

• Vapocoolant spray
  • Short duration and shallow effect

• Topical Anesthetics
  • LMX4 and LMX5 (20 minutes at least)
  • J-tip (a few seconds)

• Intradermal Injections
  • Buffered Lidocaine
  • Normal Saline

• Breast feeding
• 24% sucrose

• Buzzy® (buzzy4shots.com)
  Vibration and cold
The Poke and Procedure Plan

- Establish the relationship
- Patient-Centered (individualized)
- Preparation
- Distraction
- Positioning
- Parents as partners
- Positive recognition
- Drugs and Devices

A Voice and a Choice for the Child.
One Voice

• One person is assigned to be the “One Voice”
• Speak in a calm and quiet manner
• Move quickly and steadily as situation allows
• Help define for the child expectations
• Direct the helpers and assign roles

Benefit of the Poke & Procedural Plan

• Individualized Care
• Teaching parents to be a coach for their child
• A Voice and a Choice for the Child
  – Teaching the child to advocate for themselves
• Lifetime coping skills
• Decreased pain and anxiety
• Increased satisfaction: child, family, staff
• Communication and Continuity

“Managing needlestick pain and anxiety is the most universal way to decrease children’s pain.”

S Leahy
Education Strategies

• Poster Boards
• Unit meetings
• Committee Meetings
• Handouts

Revise and modify resources to meet the needs of the setting.
Unit (inpatient/ambulatory) Roll Out

• Work Flow
  – Clerical staff
  – Licensed Staff (RN, MD)
  – Child Life Specialist availability
  – Phlebotomist, Tech, MA

• Communication

• Team work and collaboration

• Evaluate and Follow-up

• Keep the elements of the literature

Check the work flow handout for details.
Collaboration

• Team Work is essential
• Everyone has a vital role
• Communicate with care
• Honor and respect one another’s role

Quality patient care is the common goal.
Poke-A-Dot is the messenger

- Ideas made public
  - Builds enthusiasm
  - Makes a commitment
  - Gives permission to ask

Who let the dogs out?
Communication

• Crucial Conversations
  – Peer to Peer
  – Department to Department
  – Advocating for Patients and Program

• Accepting responsibility rather than “finger pointing”
Moving Forward

- Common vision
  - Team work
  - Committed to the goal
- Analyze the current state
  - Force Field Analysis
- Make a Plan
  - Change time line
- Expand knowledge and build skills
- Measurements
- Sustaining the change

Nothing will work unless you do.  

Maya Angelou
Assemble a Team
Identify the Champions

• Multidisciplinary Team
  – Facilitator
  – Stakeholders
  – Patient/Family*
  – Unit Experts
  – Administration

• Champions
  – Leaders
  – Followers

Individually, we are one drop. Together, we are an ocean.
Ryunosuke Satorio
## Forces and Strategies

<table>
<thead>
<tr>
<th>Force</th>
<th>Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor communication among team members</td>
<td>Develop process for improving communication. First work on issues of agreement</td>
</tr>
<tr>
<td>Unrecognized need- does not believe a change is needed or beneficial</td>
<td>Use patient comments to provide real-life anecdotes. Use Patient/Family Centered care principles to support changes</td>
</tr>
<tr>
<td>Lack of easy access to topical anesthetics</td>
<td>Develop policy or standing order that facilitates easy access</td>
</tr>
<tr>
<td>+ 24% Sucrose Policy in place</td>
<td>Increase knowledge and awareness of policy.</td>
</tr>
<tr>
<td>+ Child Life staff available to all units and clinics</td>
<td>Encourage active participation and leadership for change</td>
</tr>
</tbody>
</table>
Diffusion of Innovation

Characteristics that effect the rate of change

• Relative advantage: better than current practice
• Compatibility: values, practice area, work flow
• Complexity: simple format and easy to remember
• Trialability: easy to use, educate, incorporate
• Observability: see or hear the results

What are the characteristics of the Poke Plan which may help or hinder the translation into practice?
Change is a social process

• Sell the advantage
• Trial the innovation
• Observe it working
• Communicate: Ideas made public change practice
• Unit/department leaders
  – Social network- norms and roles
  – Opinion leaders
  – Clinical leaders
  – Power leaders

Be the change you want to see in the world.  
Mohandas Gandhi
Strategies for Success

• Principles of change
  – Leadership and team work
  – Develop and support champions
  – Measure and report back

• Education
  – Varied and targeted
  – Follow-up to build skills and confidence

• Communication
  – Work flow and processes
  – Requiring compliance and participation
  – Recognize excellence in doing the work
  – Telling the story at every opportunity –repeat

It is not a question of how well each process works, the question is how well they all work together.

Lloyd Dobens
Champions of Change

• Each unit has change champions
  – Representatives from more than one shift
  – Includes a child life specialist (assigned or consultant)
  – Need a leader (co-leader)
  – Need to analyze the current state

• Responsibilities of a Champion
  – Collaboration with unit manager
  – Develop work flow
  – Skillful and articulate the research
  – Evaluation

• Consistency and follow through

A leader is one who knows the way, goes the way, and shows the way.

John C. Maxwell
Learning new skills

• Stressful
• Do better with instruction and education
• Seek help from team members
• Positive recognition

A round man cannot be expected to fit in a square right away. He must have time to modify his shape.
Mark Twain

Putting it together with case examples and stories.
Measuring success

• Process Audits
  – How many poke plans completed?

• Family Surveys
  – Did we honor the poke plan for your child?

• Staff Survey
  – How did the poke plan help your practice?

• Press Ganey Results
  – Pain management and procedures receive improved satisfaction comments and scores.
Process Audit

Poke/Procedure unit audit (v. #2)  Date:  Unit:

Patient # ______ (room and bed number)  Subject number:

How old is the patient?  1-6mos  7 -12mos  1 – 3yrs  4- 6yrs  7-12y  13-18y  adult

Did the patient have a poke plan on the door?  Yes  No  Refused by pt
Did the poke plan have past experiences assessed?  Yes  No
Did the poke plan have preferred positions identified  Yes  No

Did the poke plan have at least one distraction technique  Yes  No
Did the poke plan include a topical anesthetic?  Yes  No
   (written in the notes section)
Was sucrose checked marked for infants 6 months or younger?  Yes  No  NA

Comment:
## Data: Unit Audit

<table>
<thead>
<tr>
<th>Item</th>
<th>Percentage Nov ‘10-Feb ‘11</th>
<th>Percentage Aug ‘12-Feb ‘13</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plan completed</td>
<td>62 %</td>
<td>80%</td>
</tr>
<tr>
<td></td>
<td>216 Patients</td>
<td>245 Patients</td>
</tr>
<tr>
<td>Past experiences</td>
<td>86%</td>
<td>71%</td>
</tr>
<tr>
<td>Preferred position</td>
<td>78%</td>
<td>43%</td>
</tr>
<tr>
<td>One distraction items</td>
<td>72%</td>
<td>37%</td>
</tr>
<tr>
<td>Topical anesthetic</td>
<td>1.5%</td>
<td>1%</td>
</tr>
<tr>
<td>Sucrose for infant</td>
<td>45%</td>
<td>26%</td>
</tr>
<tr>
<td></td>
<td>n=68</td>
<td>n=68</td>
</tr>
</tbody>
</table>
# Data: Patients/Parents

<table>
<thead>
<tr>
<th>Item</th>
<th>Nov 2010-Feb 2011 n=30</th>
<th>Aug 2012-Feb 2013 n=53</th>
</tr>
</thead>
<tbody>
<tr>
<td>Needlesticks hurt medium</td>
<td>31%</td>
<td>38%</td>
</tr>
<tr>
<td>Needlesticks hurt a lot</td>
<td>24%</td>
<td>26%</td>
</tr>
<tr>
<td>Staff made a poke plan</td>
<td>24%</td>
<td>62%</td>
</tr>
<tr>
<td>Staff use words or toys to distract</td>
<td>50%</td>
<td>43%</td>
</tr>
<tr>
<td>Given a choice of position</td>
<td>46%</td>
<td>43%</td>
</tr>
<tr>
<td>Did the Poke Plan help</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A lot</td>
<td>26 %</td>
<td>26%</td>
</tr>
<tr>
<td>Medium</td>
<td>19%</td>
<td>25%</td>
</tr>
<tr>
<td>A Little</td>
<td>44%</td>
<td>13%</td>
</tr>
<tr>
<td>None</td>
<td>11%</td>
<td>17%</td>
</tr>
</tbody>
</table>
Measuring success

• **Staff Survey** *(What are the positive effects of the Poke Plan?)*
  – Child’s history and suggested interventions
  – Empowering children and parent
  – Team work and communication

• **Press Ganey: Pain controlled**
  - Dec 2011 = 86
  - Dec 2012 = 89.4

• **Press Ganey: Personal issues index**
  - Dec 2011 = 85
  - Dec 2012 = 89.5
Personal Issues include: Pain control, emotional care, respect, response to concerns and participation in treatment decision.
Roll Outs

- Written Plan for Change
  - Measurement
  - Champions
  - Work flow
  - Time Line
- Knowledge and skills
- Team work
- Communication
- Collaboration
- Celebrations

Each unit has a unique culture

Inpatient units
Emergency Service
Ambulatory units
Specialty clinics

Most people spend more time and energy going around the problems than in trying to solve them.

Henry Ford
## Bridges and Barriers

<table>
<thead>
<tr>
<th>Bridges</th>
<th>Barriers</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Common goal=patient/family</td>
<td>• Silos and finger pointing</td>
</tr>
<tr>
<td>• Team work</td>
<td>• Communication challenges</td>
</tr>
<tr>
<td>• Similarities between practice</td>
<td>– confronting peers</td>
</tr>
<tr>
<td>• Reframing pokes and procedure as a process</td>
<td>– confronting colleagues</td>
</tr>
<tr>
<td>• Partnerships</td>
<td>• Resources</td>
</tr>
<tr>
<td>• Policy for comfort as opposed to topical</td>
<td>• Unclear expectations</td>
</tr>
<tr>
<td>drugs</td>
<td>• Reluctance to change</td>
</tr>
<tr>
<td>• Celebrations!</td>
<td></td>
</tr>
</tbody>
</table>
Sustaining Change

• Develop Competencies
  – Orient new staff
  – Skill development

• Find Resources
  – Equipment
  – Materials

• Provide education
  – CE programs
  – Website

• Mentor and Coach

• Quality Improvement
  – Auditing
  – Reporting results

Coming together is a beginning. Keeping together is progress. Working together is success. Henry Ford
Helping others...Sharing success

• Celebrating success – Spotted Dog Winery
• Acknowledge each other
• Sharing with others
  – National Conferences
  – Internal QI programs
  – Michigan Immunization RNs
  – International Conferences
  – EBP Conferences
• Hope Award
• Highlighted in UMHS state of the system address
Partnerships in Action
The change begins with you.... leading and following

Individually, we are one drop. Together, we are an ocean.

Ryunosuke Satoro
The change begins with you..

- **Trial** one thing you learned today
- **Share a story** with a colleague

**Questions for**

Julie Piazza, Cathy Desmet and Sandy Merkel
Practice Change Built on Vision, Values, Evidence, & Policy

- **Vision:** To decrease pain and anxiety with needlesticks and procedures
- Patient-Family Centered Care
- Evidence-Based Practice
- Change in the culture
- Monitor and sustain
- A policy to focus on comfort
- A website for education

Additional References