Reducing pain with needle procedures

What we know:
No one likes to have needle procedures, especially kids. Unfortunately we often need to perform needle procedures on children, to help diagnose and treat diseases, acute illness or injuries. But there are things we can do to make needles less painful. Evidence supports that if we consistently follow these recommendations children will have less or no pain with needle procedures.

Always Before Every Procedure;
1. Numb the skin
Research supports the use of 4% lidocaine cream, Emla® (lidocaine/prilocaine) cream, or J-tips® to numb the skin before needle pokes. Each requires specific application time before the needle poke for best effect. Know what is available on your unit and plan accordingly. Some vasoconstriction can occur, but is reversible with heat and tapping after several minutes.

2. 24% Sucrose or breast feeding
Sucrose or breastfeeding should be used for babies 12 months and younger for lab draws, and as needed during and after acts like a pain medication. Sucrose is not swallowed so it does not affect NPO status, or any labs or procedures to be performed.

Always During the Procedure
3. Upright/Comfort Positioning
Research shows that children perceive less pain during needle procedures if they are allowed to be in an upright position, preferably with a parent or caregiver, holding them or close by. This should be possible for most children older than 6-9 months, with adequate trunk control. Laying a child down increases their anxiety and pain, and should be avoided.

For infants 0-6 months swaddling, holding, and warmth along with rhythmic sounds provide comfort during needle pokes.

Involve parents whenever possible by instructing them on how best to position or hold their child.

4. Distraction
Evidence also supports the use of distraction for all children during painful procedures like lab draws, IV starts and injections. The type of distraction will vary by age and child preference, so have more than one option available.

- neonates: pacifier, low lights, soft voice, warmth
- infants: pacifier, colorful toys, music, books
- toddlers/pre schoolers: favorite toy, books, music, bubbles, pinwheels, videos
- school age: books, bubbles, music, videos, phone apps, games, stories, imagery, breathing
- teens: music, apps, games, videos, imagery, deep breathing, their choice

After the Procedure
Praise the child for what went well. Find out what was helpful and remind the parent and child to use those strategies the next time.

Problem solve around anything that did not go well. Be sure to involve child life or consider the use of minimal sedation with nitrous for children who really struggle with needle procedures.

Provide information to parents on future options so they can plan ahead with their care team.

References
Shah PS, Cochrane Database of Sy.
Uman LS, Chambers CT, McGrath P, J Kissel SR. Psychological interventions for needle related procedural pain and distress in children and adolescents. Cochrane Database of Systematic Reviews 2006, Issue 3 (2)