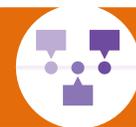


Development of an interactive infographic as a knowledge tool for pediatric procedural pain

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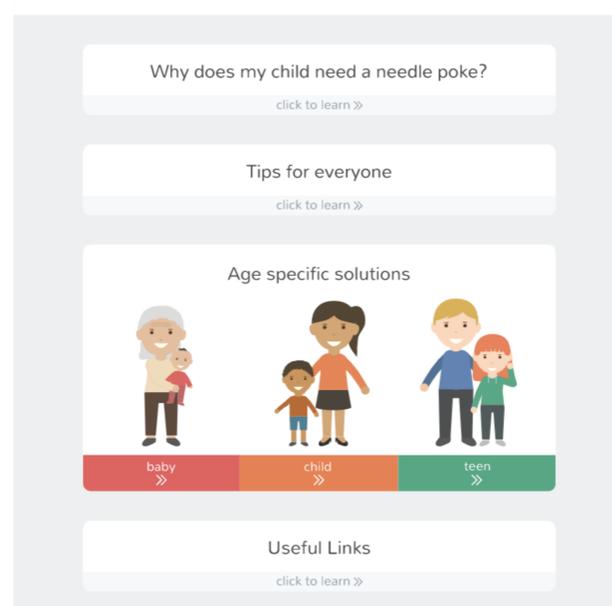


Background

Medical procedures carried out in the emergency department represent one of the most common sources of acutely painful stimuli for children. In many cases, pain and anxiety induced by these procedures could be better managed. Though many evidence-based interventions are widely available to manage procedural pain in children, they remain severely underutilized in pediatric conditions.

Infographics are an innovative, visually engaging strategy to communicate information and hold great potential for making health information more accessible and understandable to the general public. *Interactive* infographics are expected to make information sharing more engaging by introducing a sense of exploration, with the capacity to store more information compared to a traditional print infographic. This study developed an interactive infographic that aims to provide evidence-based knowledge to parents about how to manage pain and anxiety when their child is undergoing a common medical procedure—needle poke.

How to Help When Your Child Gets a Needle



Methods

An infographic was developed based upon a systematic review and a qualitative study on parent experiences and information needs relating to procedural pain in children. Our team's parent advisory group was consulted on the development of the prototype and their key feedback were incorporated in the final version. Currently we are completing usability testing at the Stollery Children's Hospital emergency department to assess parents' perceptions of the tool on 8 evaluation elements on a 5 point Likert scale, including: 1) usability; 2) aesthetics; 3) language; 4) level of engagement; 5) quality of information; 6) length; 7) preference of form over traditional dissemination venues; 8) value-added. In addition we are also collecting user behavior data while parents navigate through the infographic.

Table 1: Usability survey results on procedural pain infographic

Usability measures [N=30]	Min-Max	Median (SD)	Mean (SE)
It is useful	3-5	5 (0.630)	4.50 (0.115)
It provides information that is relevant to me as a parent	2-5	5 (0.682)	4.50 (0.125)
It is simple to use	2-5	5 (0.681)	4.47 (0.124)
I can use it without written instructions or additional help	2-5	4 (0.997)	4.20 (0.182)
Its length is appropriate	2-5	5 (0.776)	4.47 (0.142)
Does it look nice	4-5	5 (0.498)	4.60 (0.091)
I would use it in the future	2-5	4 (1.074)	3.87 (0.196)
It will help me make decisions about my child's health	2-5	4 (1.006)	3.77 (0.184)
I would recommend it to a friend	4-5	5 (0.490)	4.63 (0.089)



Results

Overall, participants gave favorable scores on all 9 questions. For questions 'I would use it in the future' and 'It will help me made decisions about my child's health' participants gave relatively lower scores than they gave on other questions. We are currently exploring the user behavior data and considering potential revisions to the KT tool.



Our results suggest that continuing to pursue interactive infographics as a KT tool for parents is worthwhile. Moving forward, we will continue to do additional usability testing of these infographic prototypes in additional healthcare environments (i.e., rural and remote settings) to ensure a diversity of parental perspectives are being incorporated into tool development.



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Dr. Shannon Scott holds a Canada Research Chair (Tier II) for knowledge translation in child health. Find ECHO Research: www.echo.ualberta.ca or on Twitter @echoKTresearch.

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