

Short Report

Taking the sting out of school-based immunizations

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Abstract

Pain and fear widely contribute to negative experiences for students during school-based immunizations. In this preliminary research, we used a pre-existing network of 50 schools across Canada that participated in a biannual national immunization poster competition for grade 6 students organized by Immunize Canada to survey principals, teachers and students about their experiences with immunization pain and fear, how they want to learn about managing pain and fear and opportunities to include this information in the process of immunization. Responses revealed that both pain and fear are relevant to the immunization experience and that education and interventions are welcome by students and school staff. This may lead to improved attitudes about immunization, as well as future compliance with recommended immunizations.

Calmer la peur des vaccins en milieu scolaire

La douleur et la peur contribuent largement aux expériences négatives des élèves lors de la vaccination scolaire. Dans le cadre de la présente recherche préliminaire, les auteurs ont recouru à un réseau déjà formé de 50 écoles du Canada qui avaient participé à un concours national bisannuel d'affiches sur la vaccination organisé par Immunisation Canada auprès d'élèves de sixième année. Ils ont sondé les directions d'école, les enseignants et les élèves au sujet de leurs expériences de douleur et de peur liées à la vaccination, de ce qu'ils veulent savoir sur la gestion de la douleur et de la peur ainsi que des possibilités d'intégrer l'information au processus de vaccination. Les réponses ont révélé que la douleur et la peur s'associent à l'expérience de vaccination et que les élèves et le personnel scolaire seraient heureux de recevoir de l'information et des interventions. Ces mesures pourraient améliorer les attitudes vis-à-vis de la vaccination et favoriser l'adhérence aux futurs vaccins.

Keywords: *Child health; Fear; Immunization; Pain.*

Pain and fear contribute to negative experiences for students undergoing school-based immunizations (1). While evidence-based mitigation interventions exist (2), little effort has been given to applying them at school to improve immunization experiences for students and school staff (3). We sought to understand if, what and how students and school staff want to learn about evidence-based interventions to reduce pain and fear during immunizations.

METHODS

Two paper-based surveys were developed; one that targeted school principals or teachers, and one that targeted grade 6 students. The surveys were based on prior studies by the research team, including qualitative interviews with students and teachers about school-based immunizations (4,5). Questions

(closed and open-ended) probed perceptions about pain and fear during immunization, knowledge about pain and fear mitigation interventions, strategies currently being used, opportunities to introduce education about interventions in the school and preferences for how to receive the education. Survey questions were in English or French, depending on the language used by the school. Surveys were distributed together by mail in January 2015 to all of the 50 schools that participated in the 2014 biannual Immunize Canada National Immunization Grade 6 Poster Contest, along with a self-addressed return envelope. These 50 schools were self-selected from 10,700 schools originally invited by Immunize Canada to participate in the contest. Survey reminders were sent in February and May 2015. Ethical approval was obtained by the IWK Health Centre Research Ethics Board. The data were analyzed using descriptive statistics and thematic analysis.

RESULTS

Responses were received from 2 principals, 11 teachers and 277 (50% male) students from 13 schools (i.e., 26% school response rate). All provinces were represented; there were no responses from schools in the Territories. Three themes emerged from responses.

1. Importance of pain and fear—students frequently cited pain (35%) and fear of needles (59%) as the ‘worst thing about getting vaccination needles’.
2. Coping with pain and fear—students reported distraction and rewards as coping strategies for pain and fear. Interestingly, only 20% of schools had distraction kits or celebratory events (e.g., prizes, food) available on vaccination day. Eighty-eight per cent of schools reported accessibility to private rooms, and 57% reported the availability of comfortable chairs for students. Schools were able and willing to accommodate additional interventions to make vaccinations more comfortable (e.g., parent presence, topical anesthetics).
3. Knowledge gap—50% of students did not know ways to make needles less painful and scary and 37% wanted to learn about ways to do this. Seventeen per cent of schools prepared children ahead of time and 29% prepared staff. YouTube videos were offered as the top strategy for education about immunization by both school staff (25%) and students (43%). Other strategies suggested by students included education by health care providers, school lessons, games and the Internet.

CONCLUSION

This study suggests that pain and fear of needles are relevant to school immunization programs across Canada. To date, little has been done to address pain and fear and this study points to the need for education and interventions to improve the immunization experience for students, teachers and principals. The World Health Organization (WHO) (6), and, more recently in Canada, the Chief Medical Officer of Health of Ontario (7), have recognized the need to focus on improving education and introducing interventions for pain-free immunizations in schools, which may lead to more positive attitudes about immunization and improved compliance with future immunization. The low response rate limits the ability to make definite conclusions. We recommend an environmental scan of implementation

practices used by public health to address pain and fear in school-based immunization programs in order to expand on these findings. The next steps are then to learn how to best support students, teachers and principals with pain and fear mitigation interventions and customize educational resources so that they work in tandem with existing efforts and programs to meet the needs of all.

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