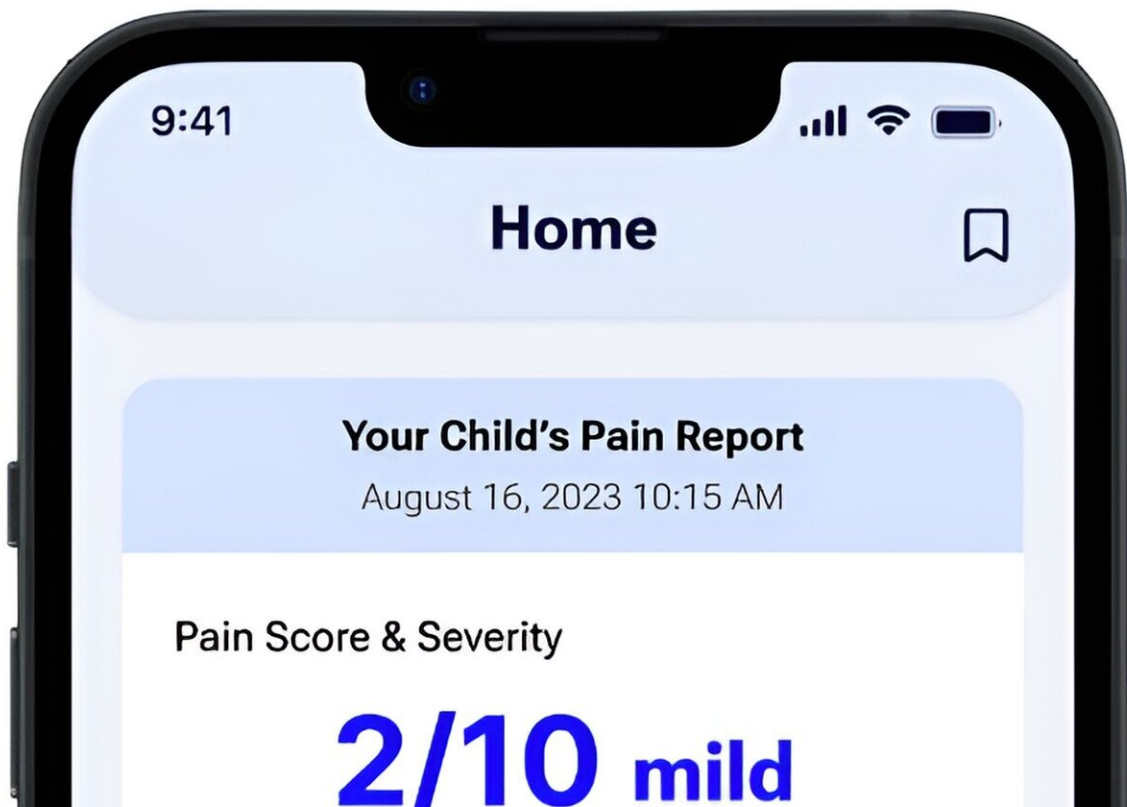


# Study finds positive support from parents and clinicians for pediatric cancer pain management app

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The app includes a library of pharmacological advice and advice for psychological and physical symptoms children may be experiencing. Credit: Researcher

A recent study led by Assistant Professor Lindsay Jibb of the Lawrence Bloomberg Faculty of Nursing and Scientist at The Hospital for Sick Children (SickKids) found that parents of young children with cancer, along with pediatric cancer clinicians, are in favor of an app-based solution that Jibb and her team are creating, to help parents manage their child's cancer pain at home.

The study published in [PLOS Digital Health](#) showed that parents and clinicians not only found the [pain management](#) app to be helpful and safe, but also provided them with a sense of empowerment.

"The burden of caring and pain management for these children falls on parents when they are at home, and kids can experience frequent and sometimes severe cancer pain," says Jibb who holds the Signy Hildur Eaton Chair in Pediatric Nursing Research. "The goal of our mobile app is to ease this burden and help both parents and children receive better quality pain management."

As part of the qualitative study, participants were also invited to provide recommendations for the digital app. Many of these recommendations focused on accessibility and ease of use, but also the need for the app to be available in multiple languages, and with a gamification component to involve children where appropriate in their own care.

Currently in a pilot stage, the app includes a library of pharmacological advice as well as advice for psychological and physical symptoms children may be experiencing. The algorithm-based instructions tell a parent how to help their child respond to certain types of pain, which can include actions such as belly breathing, stretching, or mindfulness sessions. The advice is targeted to the parent based on their child's age and development stage.

In addition, a chat feature is being embedded into the app to address

further the need for real-time support for parents, something that groups such as the Ontario Parents Advocating for Children with Cancer (OPACC) Advisory Group have indicated is of considerable importance. The chat option will connect parents with a nurse in a hospital, allowing them to ask questions and seek nurse-led clinical pain support for their child when needed.

"Digital and [mobile apps](#) are used for a variety of reasons, and it is surprising that they are not more routinely used in health care. As technology continues to advance, particularly with [artificial intelligence](#), the capacity to connect people who are outside the hospital with real-time care and support will hopefully continue to expand," says Jibb.

Participants pointed to some challenges the digital app could pose, such as the ability to measure pain thresholds and know when a doctor or clinician should intervene.

"Pain is very subjective, and perhaps even more so for a child. As a result, some of the feedback we have received as part of this study is to ensure that multidimensional pain assessments, multi-modal pain management support, and pain tracking over time are dedicated features in the app," says Jibb.

This Jibb says, will address the need for a biopsychosocial approach to [cancer](#) pain management and ensure that each patient threshold is individualized to patients and their families.

**More information:** Lindsay A. Jibb et al, Parent and clinician perceptions and recommendations on a pediatric cancer pain management app: A qualitative co-design study, *PLOS Digital Health* (2023). [DOI: 10.1371/journal.pdig.0000169](https://doi.org/10.1371/journal.pdig.0000169)

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