

## Web-based version of researcher's CARD game helps improve kids' vaccination experience

December 17 2021, by Kate Richards



The CARD game addresses a fear of needles through pain management and coping strategies. Credit: Immunize Canada

With COVID-19 vaccines now available in Canada for kids five to 11



years old, many parents and caregivers are looking for ways to help younger children have a positive vaccination experience—and a system created by a University of Toronto researcher may be able to help.

Anna Taddio, a professor in the Leslie Dan Faculty of Pharmacy and a senior associate scientist at the Hospital for Sick Children in Toronto, and her team have developed a web-based version of the CARD game (short for Comfort, Ask, Relax and Distract) she originally created to help kids receiving vaccines in school-based programs. The system addresses fear of needles through pain management and coping strategies.

The new web-based version of the game is intended for younger kids who are currently being encouraged to get vaccinated.

"We want to help younger kids, especially now that they are eligible for COVID-19 vaccines," Taddio said. "They can play the game on their own or with caregivers to learn how to cope with fear and pain during vaccination."

Earlier this year, Taddio received federal funding to "design and implement pain mitigation strategies for adults" in support of the country's mass vaccination campaign to combat the ongoing COVID-19 pandemic. As vaccines for COVID-19 first began to rollout in 2021, Taddio's system was shared with health-care networks and the public to help people feel more comfortable when receiving their vaccinations. The CARD system has been used across the province including in specialized vaccination clinics run by the Centre for Addiction and Mental Health (CAMH) in Toronto, Wellington-Dufferin-Guelph Public Health and Ottawa Public Health.

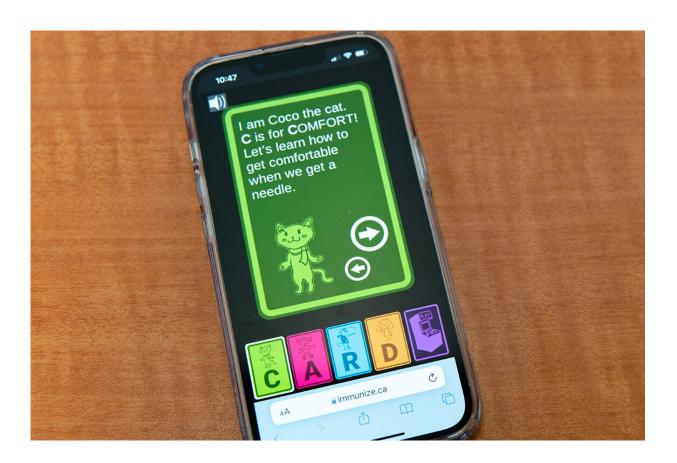
In collaboration with Immunize Canada, the game was developed by Anthony Ilersich, a fourth-year student in the Faculty of Mathematics at



the University of Waterloo.

"We developed the web-based game because if the material is interactive and easy to play online, it should be all the more effective," said Ilersich who was the lead-developer on the CARD game project.

"Vaccination is our strongest defense against preventable diseases. It keeps our children, families, and communities healthy," said Lucie Marisa Bucci, senior manager, Immunize Canada. "Immunize Canada is proud to have partnered on the CARD web game because it applies the best evidence and all that we know to make the vaccination experience more positive for everyone."



The online version of the CARD game, originally developed by U of T's Anna Taddio, educates children, parents and caregivers on how to use evidence-based



pain and anxiety management strategies during vaccination. Credit: Steve Southon

The new game is web-based and accessible on any mobile device. Parents and kids can visit the Immunize Canada website to play the game and learn about coping strategies ahead of time. Children can then use the game as a coping strategy during the actual vaccination procedure.

"The new online CARD game is not only an exceptional all-in-one resource for teaching kids how to reduce pain and anxiety during vaccination; it is also an important tool for every parent and caregiver preparing to vaccinate their child," Bucci said.

Prior to the pandemic, Niagara Region implemented a paper-based CARD program across all schools in the area and, in 2015, Taddio's <a href="https://december.new.org/html/>
HELPinKids&Adults</a> Clinical Practice Guideline (CPG) about mitigating pain during vaccination was adopted across Canada and internationally, including by the World Health Organization.

## Provided by University of Toronto

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