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*pharmacy partners*

Canada

**PHAC Vaccine Confidence Webcast Series**

# **Implementing the CARD system to support vaccination in community pharmacies**

**November 23, 2022**



# Objectives

At the end of this webcast, you will be able to:

1. Identify opportunities and strategies to implement the CARD system in your practice.
2. Discuss the potential benefits for patients and staff in improving the vaccination experience.
3. Recognize the importance and usefulness of the CARD system to support vaccination in pharmacy settings.

# What is the CARD (Comfort – Ask – Relax – Distract) system?



Watch this webcast to learn about the CARD system, the evidence behind it, and why it is needed.

# Implementing the CARD System to support vaccination in community pharmacies



Speaker: James Morrison BScPhm, RPh  
Director, Pharmacy Excellence



# Acknowledgements

## Funding & support:



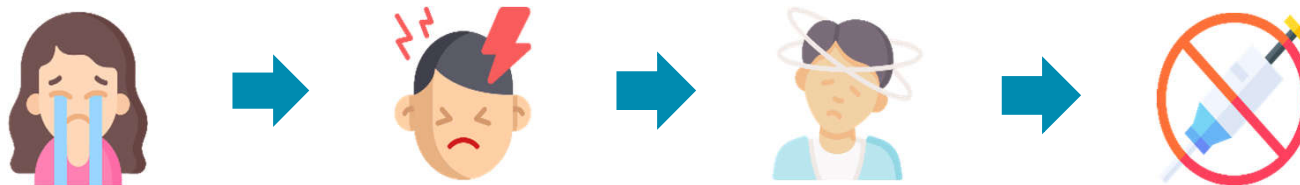
## Partners:



The University of Toronto holds a Section 9 Trademark No. 924835 for CARD.

## Why is addressing needle fear and anxiety important?

- Vaccines are the most common reason why people receive needles.
- Pain is the most common adverse event associated with immunization.
- 2/3 children and 1/4 adults are afraid of needles.
- Fear can fuel pain and lead to immunization stress-related responses (dizziness, headache, nausea, fainting).
- Negative vaccination experiences contribute to negative attitudes about vaccination and to vaccine hesitancy.
- Up to **1 person in every 10** refuse vaccinations because of fear/pain.



## The evidence



In 2015, the *Canadian clinical practice guideline* (CPG) was created. It has been incorporated into the *Canadian Immunization Guide* and **adopted by the World Health Organization**.

The CPG includes evidence-based recommendations for reducing pain, fear and fainting. There are 5 domains of recommendations (5Ps):



Procedural



Physical



Pharmacologic



Psychological



Process

## The CARD framework

- Targets all stakeholders involved in vaccination
- Translates the 5P's of pain management into a user-friendly tool
- Improves the vaccination experience by allowing stakeholders to 'play their CARDS'





# What does CARD look like in a community pharmacy?

## Education

- Educate health care providers, vaccine clients, and caregivers ahead of time and on vaccination day
- Offer posters and handouts outlining CARD approach
- Distribute checklist with CARD options, patient preferences

## Environment

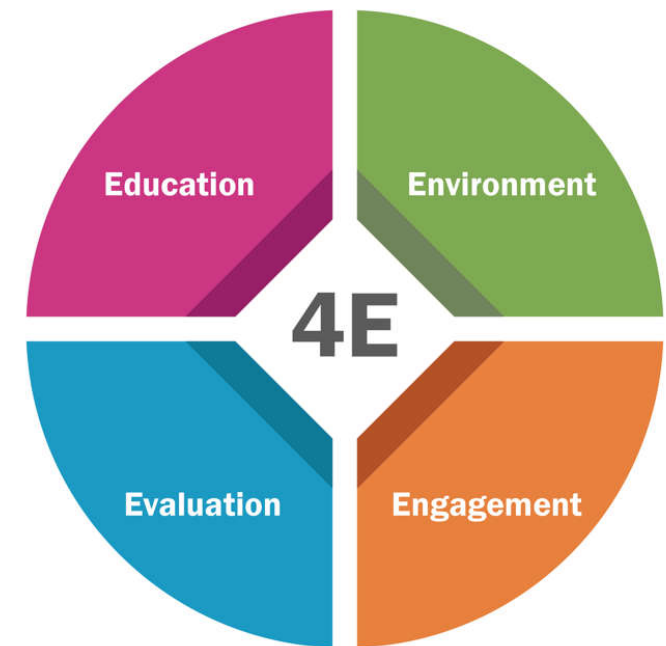
- Allow for privacy
- Offer distractions
- Provide seating for everyone, including support person
- Minimize auditory and visual fear cues (ex: sharps bins hidden)

## Engagement

- Be calm and positive to promote coping
- Assess the client's signs and symptoms (fear, pain, fainting)
- Invite participation, answer questions
- Support CARD (coping) choices
- Minimize injection pain

## Evaluation

- Task specific staff with handing these out
- Provide surveys at the same time as check-in



## The CARD system in community pharmacy

- A CARD implementation project was conducted in collaboration with Whole Health Pharmacy Partners.
- Findings from this project will be reviewed along with key learnings for community pharmacy implementation.



# Methods



## Design

- Before and after study

## Setting and Participants

- 5 independent community pharmacies in southern Ontario offering COVID-19 vaccinations to children aged 5-11 years old

## Procedures

- Before phase (control) – no changes to practices
- After phase (CARD) – integration of CARD

## Methods (based on the 4E)

### CARD interventions

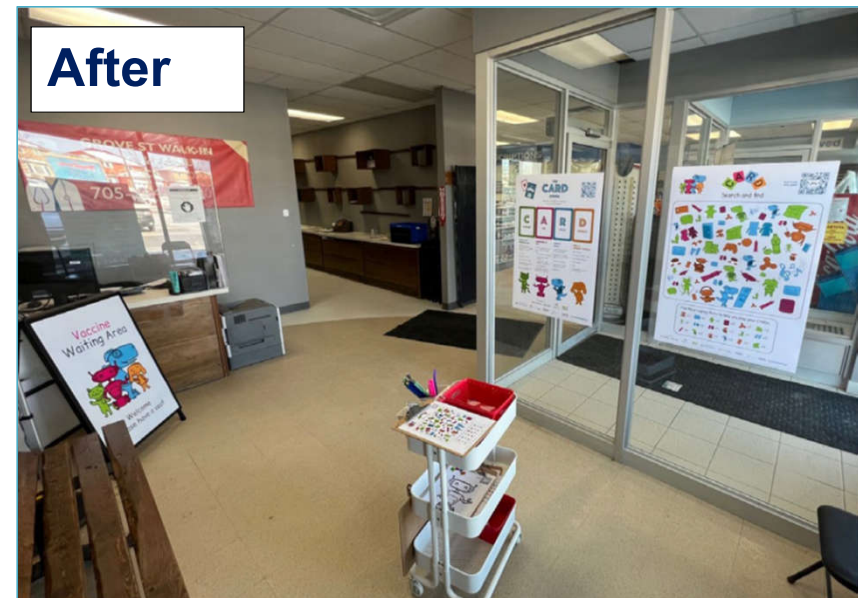
- **Environment:** posters, distraction kits, privacy
- **Education:** immunizer training, CARD client coping checklist
- **Engagement:** reducing fear cues, supporting coping choices

### Evaluation

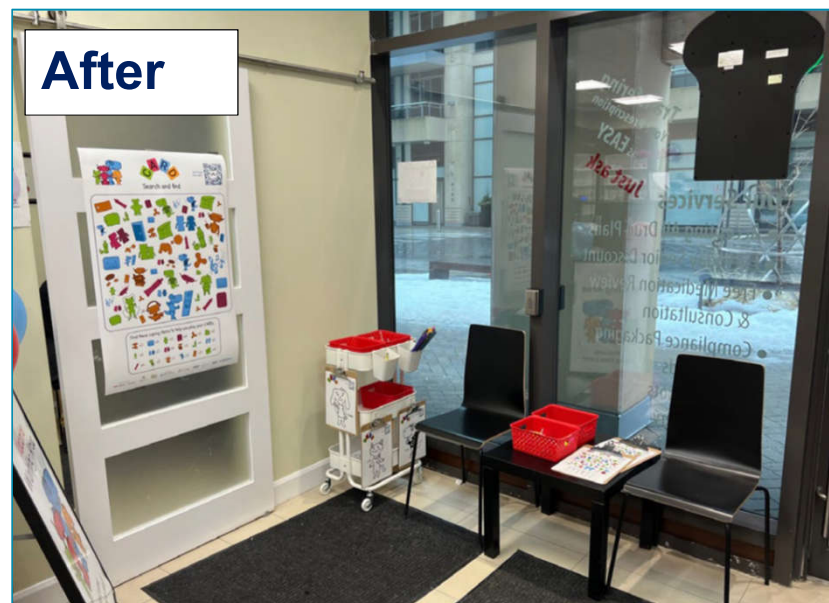
- Children and parents completed surveys about pain/fear, experiences relative to the last needle, and how much CARD helped.
- Vaccinators provided quantitative and qualitative feedback.



# Environmental changes to the waiting area



## Environmental changes to waiting area (cont'd)

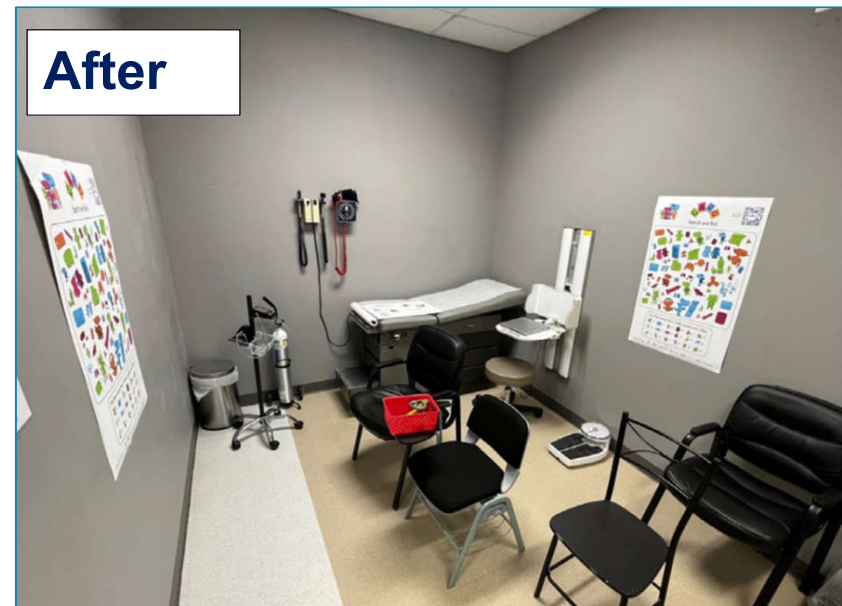




## Environmental changes to waiting area (cont'd)

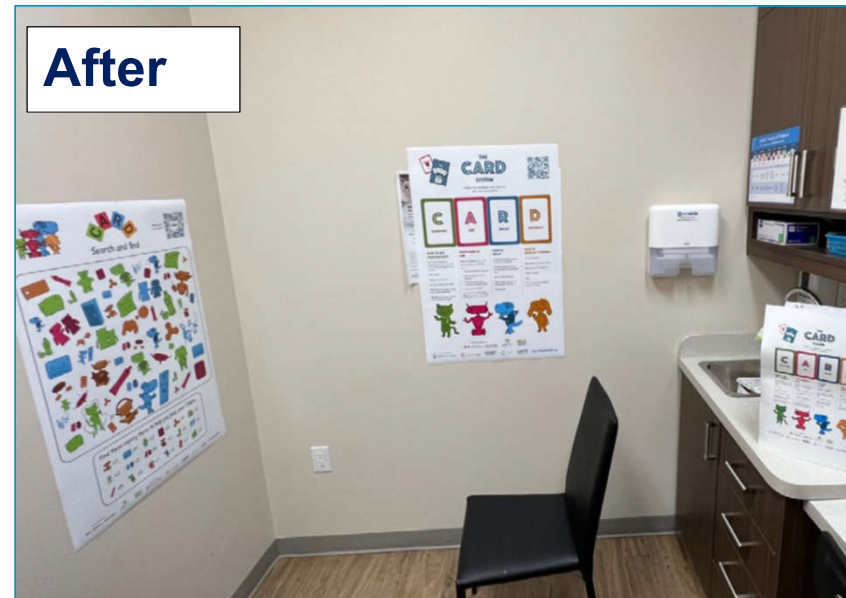


## Environmental changes to vaccination area

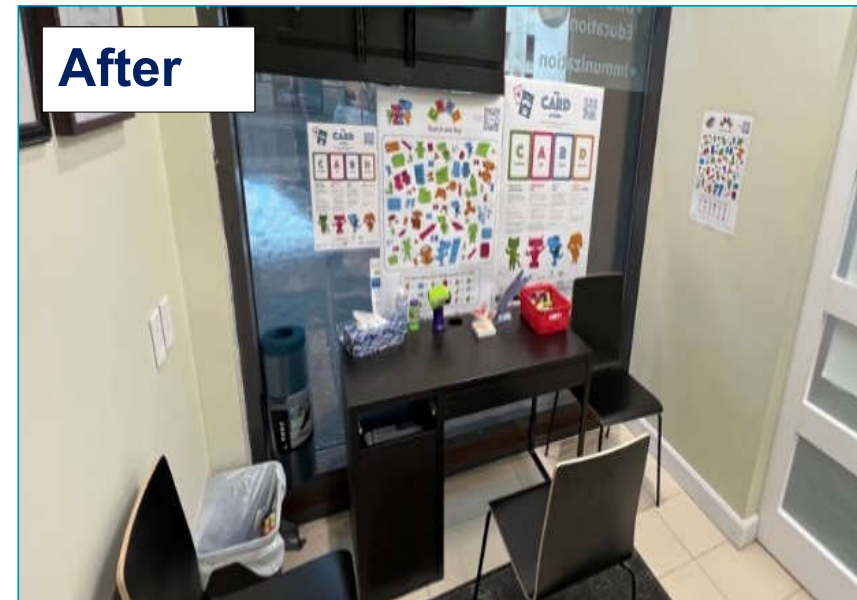




## Environmental changes to vaccination area (cont'd)



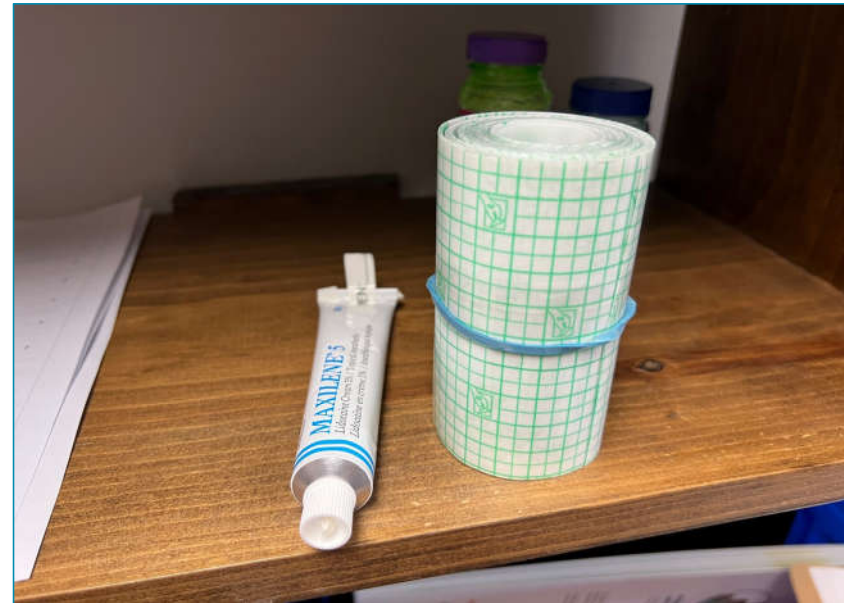
## Environmental changes to vaccination area (cont'd)



# Coping interventions




Distraction activities



# CARD checklist

“The difference of having this piece of paper in front of me, prior to giving the vaccination, it gives me a lot of perspective already as to what this child would prefer.”





## CARD CHECKLIST:

What cards are you playing today?

We use the CARD (Comfort Ask Relax Distract) system to help make you more comfortable during your vaccination. Fill in the CARD survey below to tell us how we can make your vaccination a more positive experience. If you would like to use a strategy that is not listed, let us know and we will try to do it. To learn more about CARD, visit [CardSystem.ca](http://CardSystem.ca).

CARD System	Choose all options you want for your vaccination
<b>Comfort</b> What would you like to do to make yourself more comfortable?	<input type="checkbox"/> Privacy (separate room with closed door) <input type="checkbox"/> Sit upright on a chair <input type="checkbox"/> Sit on a parent's or caregiver's lap <input type="checkbox"/> Lay down <input type="checkbox"/> Eat a snack or treat <input type="checkbox"/> Arm the needle goes in (left or right): _____ <input type="checkbox"/> Other: _____
<b>Ask</b> What questions do you have about the vaccine or your appointment?	<input type="checkbox"/> I have questions about the vaccine <input type="checkbox"/> I have questions about what will happen during my appointment <input type="checkbox"/> I have questions about using a medicine on the skin (topical anesthetic) to make the pain from the needle hurt less <input type="checkbox"/> Other: _____
<b>Relax</b> How do you want to keep yourself calm?	<input type="checkbox"/> No or low levels of noise <input type="checkbox"/> People I want to be with me (nobody or give names): _____ <input type="checkbox"/> No extra people around that can see me <input type="checkbox"/> Take deep belly breaths (like blowing up a balloon) <input type="checkbox"/> No alcohol wipe beforehand <input type="checkbox"/> Other: _____
<b>Distract</b> Do you want to be distracted during vaccination?	<input type="checkbox"/> Tell me when it will happen <input type="checkbox"/> Do not tell me when it will happen <input type="checkbox"/> No conversation with me while I am distracting myself <input type="checkbox"/> Keep my eyes closed or look away <input type="checkbox"/> Play with a toy or comfort item from home <input type="checkbox"/> Use my cell phone to listen to music or watch a video <input type="checkbox"/> Use a distraction toy or activity provided by the clinic <input type="checkbox"/> Other: _____

Did you review information about CARD before coming today?  
☐ No. Please explain: \_\_\_\_\_  
☐ Yes. Please explain: \_\_\_\_\_

→ For children: Did you play the CARD online game? ☐ Yes ☐ No

How old are you? \_\_\_\_\_ What is your gender? \_\_\_\_\_

Some people are afraid of needles. How afraid are you? ☐ Not at all ☐ A little bit ☐ Medium amount ☐ A lot

Do you ever feel dizzy or faint during needles? ☐ Yes ☐ No

Tell us about anything else you want us to know: \_\_\_\_\_


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[About Kids Health](#)



# Client feedback survey

(extract)



## TELL US HOW YOU FEEL!

For individuals aged 8 years and older

Tell us about what happened so we can help to make needles a better experience for you if you ever need to get another needle. It's ok if you don't know or don't want to answer any of these questions.

1. Tell us how much the needle hurt.  
Pick a number from 0 to 10, where 0 is no pain at all and 10 is the most pain possible.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

2. Tell us how scared/worried you were about the needle.  
Pick a number from 0 to 10, where 0 is not scared/worried at all and 10 is the most scared/worried possible.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

3. Tell us how dizzy you were before, during and after the needle.  
Pick a number from 0 to 10, where 0 is not dizzy at all and 10 is most dizzy possible.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ I fainted

4. Compared to the last time you got a needle, tell us if today's needle was better, worse, or the same.

☐ Better ☐ The same ☐ Worse ☐ I don't know ☐ I don't remember

Please explain. \_\_\_\_\_

## CARD outcomes - children

Outcomes	Control (n=71)	CARD (n=81)	p- value
Fear, No (%) <sup>*</sup>	57 (80)	47 (58)	0.01
Pain, No (%) <sup>*</sup>	36 (51)	26 (32)	0.03
Fear score, Mean (SD) <sup>*</sup>	3.7 (3.5)	2.5 (3.1)	0.02
Pain score, Mean (SD) <sup>*</sup>	3.0 (2.5)	2.4 (2.5)	0.15
Experience, Median (25 <sup>th</sup> , 75 <sup>th</sup> centile) <sup>*</sup>	2 (1,2) <sup>a</sup>	1 (1,2) <sup>b</sup>	0.01
CARD helped, Median (25 <sup>th</sup> , 75 <sup>th</sup> centile) <sup>**</sup>	N/A	3 (2,4) <sup>c</sup>	N/A

<sup>\*</sup> Fear and pain measured from 0-10; fear dichotomized (yes/no) using cut-off of 0; pain dichotomized using cut-off of 2

<sup>\*</sup> Experience vs. last needle; scores range from 1=better, 2=same, 3=worse

<sup>\*\*</sup> How much CARD helped; scores range from 1=not at all, 2=a little bit, 3=medium amount, 4=a lot;

<sup>a</sup>n=45; <sup>b</sup>n=48; <sup>c</sup>n=50

## CARD outcomes - parents

Outcomes	Control (n=71)	CARD (n=81)	p-value
Child experience, Median (25 <sup>th</sup> , 75 <sup>th</sup> centile)*	2 (1,2) <sup>a</sup>	1 (1,2) <sup>b</sup>	0.05
Parent experience, Median (25 <sup>th</sup> , 75 <sup>th</sup> centile)*	2 (1,2) <sup>a</sup>	1 (1,2) <sup>c</sup>	0.01
CARD helped, Median (25 <sup>th</sup> , 75 <sup>th</sup> centile)**	N/A	4 (2,4) <sup>d</sup>	N/A

\* Experience vs. last needle; scores range from 1=better, 2=same, 3=worse

\*\* How much CARD helped; scores range from 1=not at all, 2=a little bit, 3=medium amount, 4=a lot

<sup>a</sup>n=68; <sup>b</sup>n=73; <sup>c</sup>n=71; <sup>d</sup>n=79

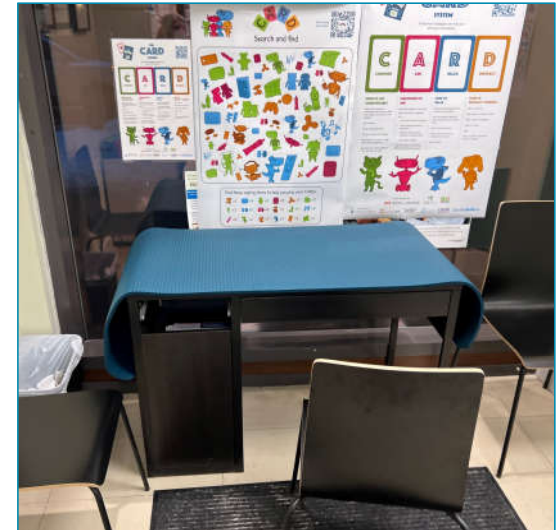
## Vaccinator-reported behaviors after CARD (vs. usual practice) (n=6)

Actions specific to vaccinators	Frequency n (%)		
	Less	Same	More
Obscure needles	0 (0)	1 (17)	5 (83)
Provide privacy to patients (door closed)	0 (0)	1 (17)	5 (83)
Omit alcohol swab from injection process	0 (0)	0 (0)	6 (100)
Ask about preferred coping strategies	0 (0)	0 (0)	6 (100)
Invite questions before injection	0 (0)	0 (0)	6 (100)



## Vaccinator-reported behaviors after CARD (vs. usual practice) (n=6)

Children's actions	Frequency n (%)		
	Less	Same	More
Use distraction items/activities	0 (0)	0 (0)	6 (100)
Use topical anesthetics	0 (0)	1 (17)	5 (83)
Have a support person present (e.g., parent)	1 (17)	3 (50)	2 (33)
Sit on parent's lap	1 (17)	4 (67)	1 (17)
Injection while lying down	1 (17)	3 (50)	2 (33)



## Key take-aways from the project

Pharmacists' feedback on CARD after the project:

"Separating the fearful children while they're getting immunized, so the other children are not getting worked up. Offering that privacy, it really helped the whole flow of the day!"

"CARD made the entire process less stressful: for myself, as a vaccinator, for the child, and also for the parents."

"Overall, it's a great process - It's like a prescription that you drop off, you fill, and you dispense. [...] You implement that approach in your workflow."



(Pending publication in [Canadian Pharmacists Journal](#)) 26

## Key take-aways from the project (cont'd)

Identify misconceptions and barriers	Address them with facts
CARD cannot be accommodated or adds time	<ul style="list-style-type: none"> <li>It takes <b>less time</b> and is <b>easier</b> to provide immunizations to a child who is less fearful.</li> </ul>
We can't educate vaccine clients before vaccination day	<ul style="list-style-type: none"> <li>Provide a <b>couple of sentences</b> about CARD upon arrival to the pharmacy.</li> <li>Offer the <b>checklist</b> to the child or parent, depending on age.</li> </ul>
Parents/caregivers may want family members together for all vaccinations	<ul style="list-style-type: none"> <li>Share that the best approach is to <b>follow the child's choices</b>.</li> <li>Vaccinate the most fearful child first: this will help avoid building up fear in siblings.</li> </ul>
Vaccine clients' coping choices not supported by family/caregivers	<ul style="list-style-type: none"> <li><b>Advocate</b> on the child's behalf.</li> <li>It is <b>best for children to be involved and participate</b> in their care, than to have choices imposed on them.</li> </ul>
CARD is too costly	<ul style="list-style-type: none"> <li>Initial investment may be needed: posters, reusable toys</li> <li>Afterwards: inexpensive items (e.g. papers, pipe cleaners)</li> </ul>

## Key take-aways from the project (cont'd)




### What can you do in your pharmacies?

- CARD checklist
- Make environment kid-friendly
- Provide distractions
- Address children directly
- Support children's decisions
- Separate children, most fearful first
- Always provide privacy
- Hide the needle
- No alcohol swabs
- Pharmacist sits beside child
- Remove extra clothing (sweaters, coats) before entering vaccination room

# CARD Resources for younger children < 3 years of age

## Comfort Positions



### CARD CHECKLIST FOR CHILDREN UP TO 3 YEARS OF AGE:


What cards are you playing with your child today?


We use the CARD (Comfort Ask Relax Distract) system to help make vaccinations more comfortable. Fill in the CARD survey below to tell us how we can make your child's vaccination a more positive experience. If you would like to use a strategy that is not listed, let us know and we will try to do it. To learn more about CARD, visit [CardSystem.ca](http://CardSystem.ca).

CARD System	Choose all options you want for your child's vaccination
<b>Comfort</b> What would you like to do to make your child more comfortable?	<input type="checkbox"/> Privacy (separate room with closed door) <input type="checkbox"/> Hold child on my lap <input type="checkbox"/> Breastfeed or bottle feed my child (starting before and continuing during and after vaccine injection) <input type="checkbox"/> Use a pacifier <input type="checkbox"/> Give my child a snack or treat before and/or after vaccination <input type="checkbox"/> Use a comfort item (e.g., stuffed animal, blanket) <input type="checkbox"/> Other: _____
<b>Ask</b> What questions do you have about the vaccine or your appointment?	<input type="checkbox"/> I have questions about the vaccine <input type="checkbox"/> I have questions about what will happen during my child's appointment <input type="checkbox"/> I have questions about using a medicine on the skin (topical anesthetic) to make the pain from the needle hurt less <input type="checkbox"/> I have questions about using sugar water to make the pain from the needle hurt less <input type="checkbox"/> Other: _____
<b>Relax</b> How do you want to keep yourself calm?	<input type="checkbox"/> No or low levels of noise <input type="checkbox"/> Use calm and normal voice with my child so they feel everything is OK <input type="checkbox"/> Take deep belly breaths if I am getting nervous (like blowing up a balloon) <input type="checkbox"/> People I want to be with my child (give names): _____ <input type="checkbox"/> No extra people around that can see <input type="checkbox"/> Other: _____
<b>Distract</b> Do you want to be distracted during vaccination?	<input type="checkbox"/> Tell me/my child when it will happen <input type="checkbox"/> Do not tell me/my child when it will happen <input type="checkbox"/> No conversation with me/my child while I am distracting my child <input type="checkbox"/> My child plays with a toy or comfort item from home <input type="checkbox"/> My child uses my cell phone to listen to music or watch a video <input type="checkbox"/> My child uses a distraction toy or activity provided by the clinic <input type="checkbox"/> Other: _____

Did you review information about CARD before coming today?  
☐ No. Please explain: \_\_\_\_\_  
☐ Yes. Please explain: \_\_\_\_\_

Children under 1 year of age are usually given vaccinations in the upper thigh. Children 1 year of age and older are usually given vaccinations in the arm.  
 How old is your child? \_\_\_\_\_ What is your child's gender? \_\_\_\_\_  
 Some people are afraid of needles. How afraid is your child? ☐ Not at all ☐ A little bit ☐ Medium amount ☐ A lot  
 Tell us about anything else you want us to know: \_\_\_\_\_

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### **CHEST TO CHEST:**

Your child will sit on your lap with their chest against your chest and their legs to either side.



### **BACK TO CHEST:**

Have your child sit on your lap with their back against your chest. Have their legs on either side of your legs or in between your legs.



### **LAP SITTING:**

Have your child sit on your lap in a sideways position.

Available at [cardsystem.ca](http://cardsystem.ca)

Available at [cardsystem.ca](http://cardsystem.ca)

## For more information about CARD

- SickKids: [www.cardsystem.ca](http://www.cardsystem.ca) or [www.aboutkidshealth.ca/card](http://www.aboutkidshealth.ca/card)
- Canadian Public Health Association
  - New: [CARD Game for Kids](#) (mobile web game for children)
  - New: [CARD e-module](#) (education for providers)
- [HELPinKids&Adults \(University of Toronto\) and resources](#)
- [Pediatric Pain, Health and Communication Lab](#) and [resources](#)
- Government of Canada: [Vaccination pain management for \*\*children\*\*: Guidance for health care providers](#)
- Government of Canada: [Vaccination pain management for \*\*adults\*\*: Guidance for health care providers](#)
- Canadian Paediatric Society's [statement on COVID-19 vaccinations](#)
- [World Health Organization 2015 guideline on pain mitigation during vaccination](#)
- Immunization stress-related responses: [full manual](#), [synopsis](#), [summary for clinicians](#)

# What's YOUR play?



[www.helpneedlepain.ca](http://www.helpneedlepain.ca)

[www.cardsystem.ca](http://www.cardsystem.ca)

# Public Health Agency of Canada resources for healthcare professionals:



Public Health Agency of Canada

[Vaccination webinars and webcasts for health professionals - Canada.ca](https://www.canada.ca/en/public-health/services/vaccines/vaccination-webinars-and-webcasts-for-health-professionals.html)



National Collaborating Centre  
for Infectious Diseases  
Centre de collaboration nationale  
des maladies infectieuses

National Collaborating Centre for Infectious diseases

[NCCID hosts the Public Health Agency of Canada webcasts for Health Care Providers](https://www.nccid.ca/en/webinars-and-webcasts-for-health-care-providers)



Canadian Vaccination Evidence Resource and Exchange Centre

[The Public Health Agency of Canada and CANVax Vaccine Confidence Webinars and Webcasts for healthcare providers](https://www.canva.ca/en/webinars-and-webcasts-for-healthcare-providers)



# Public Health Agency of Canada Vaccine Confidence InfoBulletin for healthcare professionals

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Public Health Agency of Canada

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## Vaccine Confidence InfoBulletin

Volume 2 | Issue 9 | September 2022 | Public Health Agency of Canada (PHAC)

Providing credible and timely information on vaccines to health care providers and public health decision makers to support vaccine confidence. Thank you for being a trusted source of vaccine information for individuals and communities across Canada.

### Trending topics

**Recommendations on the use of a first booster dose of Pfizer-BioNTech Comirnaty® COVID-19 vaccine in children 5 to 11 years of age**

On August 19, 2022, the Public Health Agency of Canada (PHAC) released recommendations from the National Advisory Committee on Immunization (NACI) on the use of a first booster dose of the Pfizer-BioNTech Comirnaty® (10 mcg) COVID-19 vaccine in children 5 to 11 years of age. This guidance is based on current evidence and NACI's expert opinion.

NACI published the following recommendations on the use of a booster dose of the Pfizer-BioNTech Comirnaty® (10 mcg) COVID-19 vaccine in children 5 to 11 years of age:

### In this issue

#### Trending topics

- Recommendations on the use of a first booster dose of Pfizer-BioNTech Comirnaty® COVID-19 vaccine in children 5 to 11 years of age
- Recommendations on the use of bivalent Omicron-containing mRNA COVID-19 vaccines

#### Featured article

- Leveraging lessons learned from projects funded by the PHAC Immunization Partnership Fund (IPF) to support seasonal influenza vaccine uptake

#### Science spotlight

- Hybrid immunity and COVID-19

#### In the clinic

- Comparison table of the Moderna Spikevax™ COVID-19 vaccines

#### Community spotlight

- Digital Public Square (DPS) – combating misinformation through certification

PHAC webinars and webcasts for health care providers

#### Annex

PROTECTING AND EMPOWERING CANADIANS  
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The Voice of Public Health  
La voix de la santé publique

# Thank you for joining us!

Scan the QR code using your phone's camera to  
complete the evaluation



## Other CARD Resources

Videos from original research with CARD for kids getting vaccinated:

- [School Vaccinations – Improving the vaccination experience at school](#)
- [School Vaccinations – What you need to know about vaccines at school](#)
- [School Vaccinations – The CARD™ System: Play your power CARD](#)

Some new stuff posted for adults:

- [CARD video playlist \(released Sept 2021\)](#)



Use  
  
to improve your  
vaccination experience



Utilisez le Système  
  
pour améliorer  
votre expérience  
vaccinale

## References

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