Pediatric Pain and Mental Health in a Pandemic

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Paediatric Project ECHO – Pain Management
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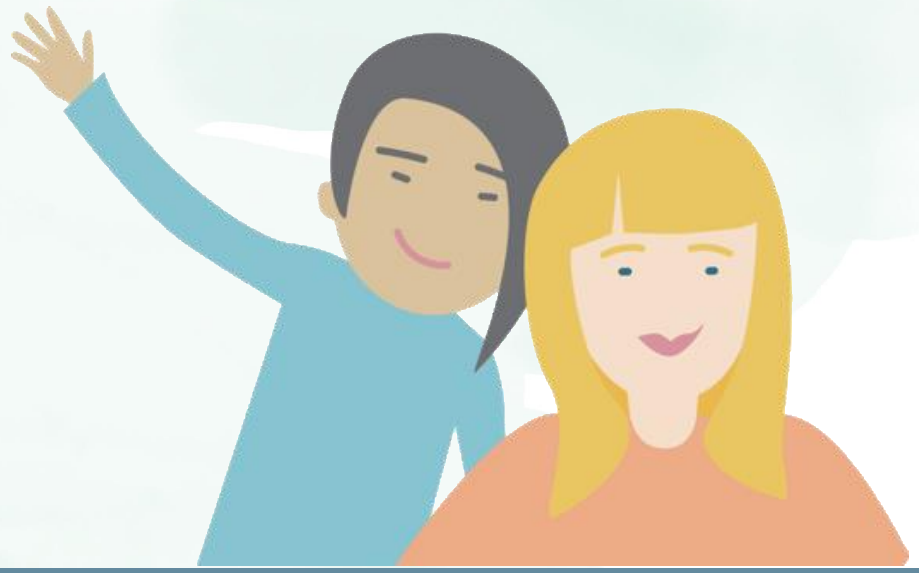
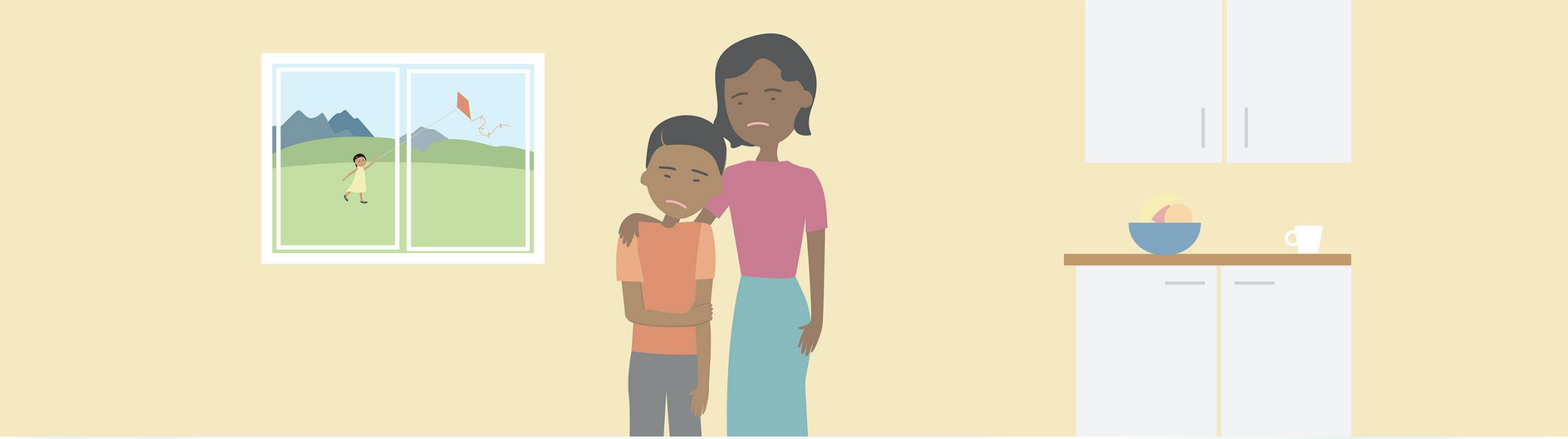




New onset and worsening pain and mental health symptoms in youth during the COVID-19 pandemic.

Chronic pain in youth is already a **health emergency.**

Law et al., 2021; Killackey et al., 2021; Racine et al., 2020; Canadian Pain Task Force, 2020; 2021; Cui et al., 2020

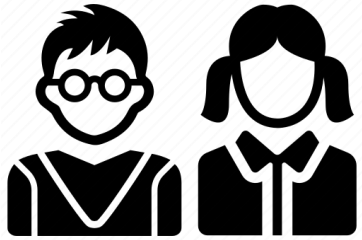
CTV NEWS

CORONAVIRUS | News

Depression and anxiety symptoms have doubled among youth during pandemic: study

1 in 4 youth had
clinically elevated depressive symptoms
**worse in older youth*

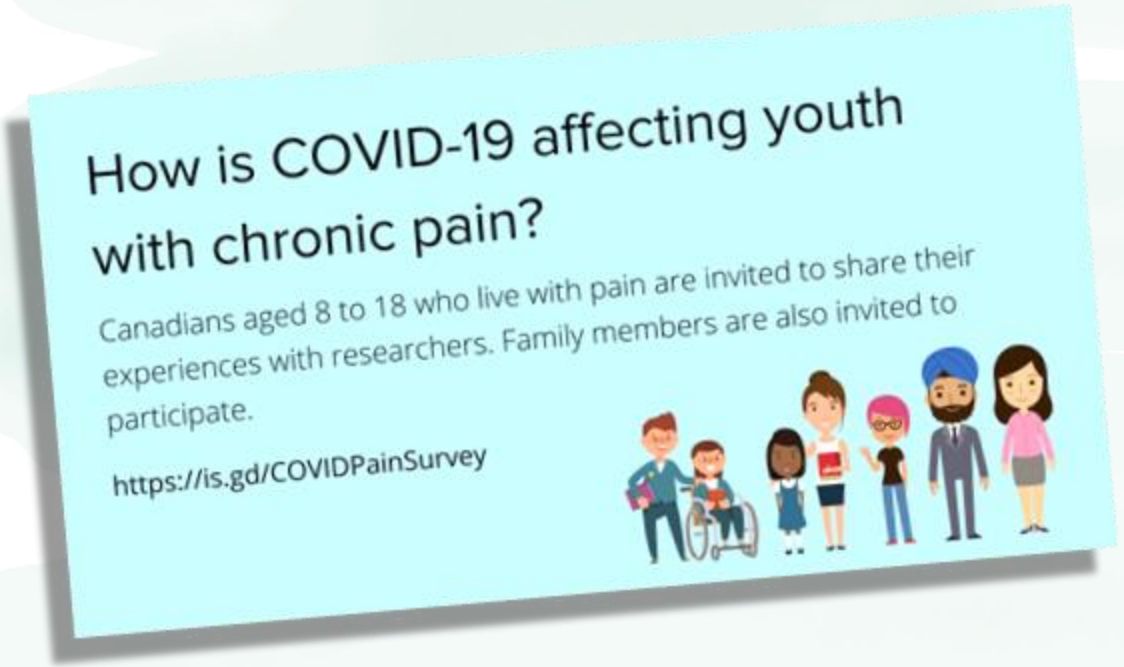
1 in 5 youth had
clinically elevated anxiety symptoms



Youth mental health worse later in the pandemic and for girls.

Racine et al. *JAMA Pediatr.* 2021;175(11):1142-1150.

Pediatric Pain and Mental Health During COVID-19

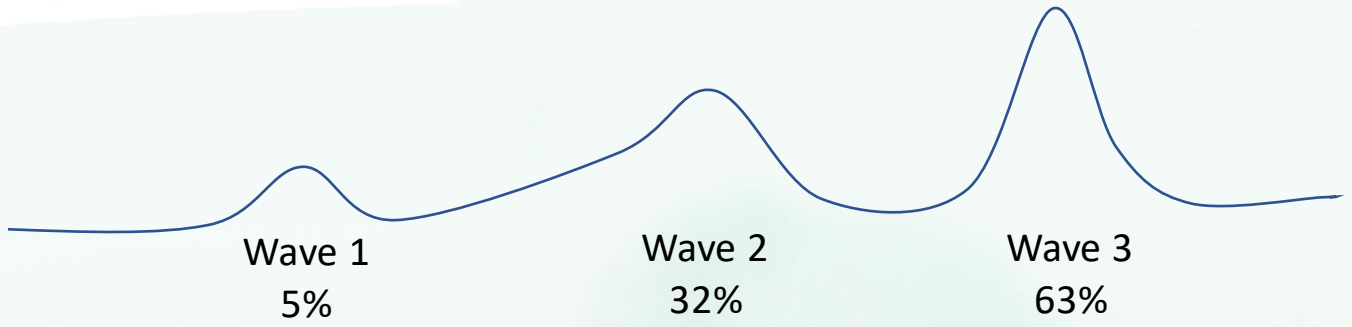


National Survey

- **357 youth with chronic pain**
  58.9% female; 8-18 years old; *M*=15.8
- **234 parents**
  82.4% female; 35-44 year old
- **156 siblings**
  63.2% female; 8-18 years old; *M*=15.7

Dr. Jen Stinson

Dr. Melanie Noel



Soltani et al., submitted
COVIDChildPain Team

Youth, siblings, and parents more impacted by the pandemic had worse symptoms of anxiety, depression, PTSD, and quality of life.

Youth with chronic pain had greater average pain intensity, but no relation with pain inference.

Soltani et al., submitted
COVIDChildPain Team

Healthcare utilization was high.

In the past 2 weeks for youth with chronic pain…

- **54.1%** consulted family doctor for pain
- **22.3%** consulted a pharmacist for pain
- **17.6%** visited a walk in clinic for pain
- **14.1%** visited an Emergency department for pain
- **10.4%** called a health information line for pain

In the past 2 weeks siblings …

- **27.9%** consulted family doctor for pain
- **7.3%** consulted a pharmacist for pain
- **12.5%** visited a walk in clinic for pain
- **12.6%** visited an Emergency department for pain
- **7.8%** called a health information line for pain

In the past 2 weeks for parents of youth with chronic pain…

- **48.9%** consulted family doctor for youths' pain
- **33.8%** consulted a pharmacist for youths' pain
- **15.1%** visited a walk in clinic for youths' pain
- **15.1%** visited an Emergency department for pain
- **9.0%** called a health information line for pain

Soltani et al., submitted

COVIDChildPain Team

Change in mental health from before the pandemic

Two cohorts of youth (with pain or at-risk for mental health) + their parents

N = 156 youth (67% female)
(12-18 years old; *M*=14.12)

N = 156 parents (90% female)

Pre-pandemic
pre March 2020

During pandemic
July-September 2020

Birnie et al., submitted

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Pre-pandemic
pre March 2020

→

During pandemic
July-September 2020

Poorer mental health and pain
anxiety, depression, insomnia

→

Poorer mental health and pain
anxiety, depression, insomnia

Youth — Decreased anxiety and pain interference

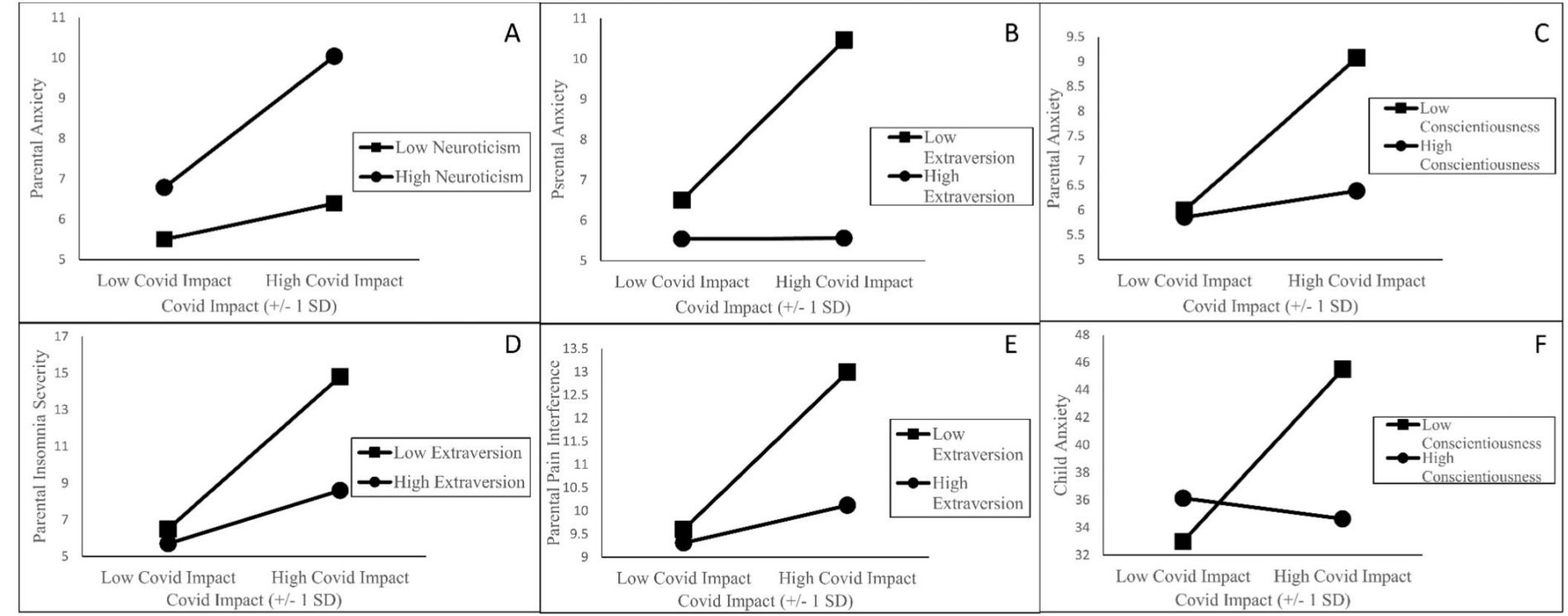
Parents — Increased depressive symptoms

Worse with greater personal COVID-19 impact

Birnie et al., submitted

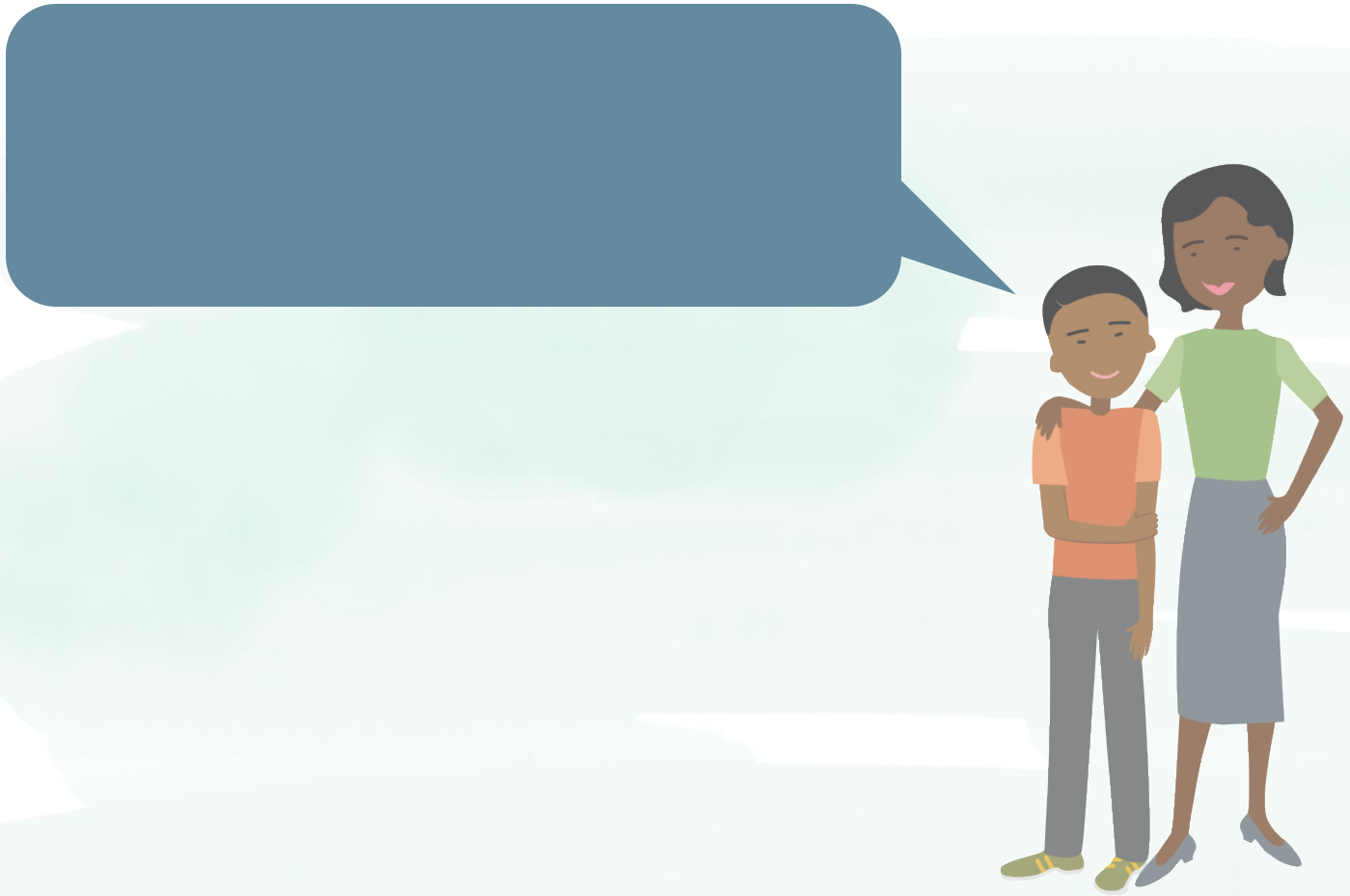
Change in mental health from before the pandemic

The impact of COVID-19 on mental health depended on personality characteristics.



Higher extroversion and conscientiousness, and lower neuroticism was protective.

Birnie et al., submitted



During pandemic

Qualitative interviews with 20 parent-child dyads

Neville et al. *J Pain.* 2021

Temporality, mental health and pain

At the beginning…I felt a correlation between when my stress would increase and how much the pain was bothering me. Usually, I'm very good at just pushing it to the side and just moving on with my day, but all of the sudden I'm stuck at home and there's nothing to move on with.

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Coping with pain during a global pandemic

I mean for me I was distracting myself so, I haven't been able to do that as well. I don't hang out with my friends- it [pain] was getting bad and I just wanted to take my mind off of it and I couldn't really do that. Just frustrating cause I kind of lost my support system... I think it's been harder for me to deal with like a spike or flare

If anything, actually my pain's been a fair bit better, because I haven't been aggravated by moving around to go to a bunch of different places and everything.

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Impact on care

I think that is something that's super important and that especially during a pandemic, these children that have so much engagement and involvement with community resources, hospital resources, and then to have that sort of gone, and just be expected for it to be delivered in an online or telephone or telehealth way is super unrealistic.

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Re-appraisal in the context of adolescent development and pandemic life

I see COVID more as like a delay than a change. I feel like it won't change what'll happen. I feel like it just paused my life, stuck something, and I'm going to continue my life once it's over.

It's strange that you adapt, and you think you can't, and you can, and I think it probably showed, I'm stronger than I thought I was. . . it [the pandemic] made us stronger as a family unit, but it's um, it's had its challenges that's for sure, but, um, and we're still in it

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Improving access, delivery, and coordination of care with a view to **reduce disparities** is a top patient-oriented priority for pediatric chronic pain.

Virtual care is a necessity.

Birnie et al., 2019; http://cmajopen.ca/content/7/4/E654.full

Taking Action Together –
Equitable and inclusive engagement

CIHR IRSC

skip solutions
for kids in pain
pour la douleur chez les enfants

Canadian Foundation for Healthcare Improvement
Fondation canadienne pour l'amélioration des services de santé

PAIN BC™

ONTARIO SPOR SUPPORT UNIT

CHILD-BRIGHT Network

CCKO
Complex Care Kids Ontario

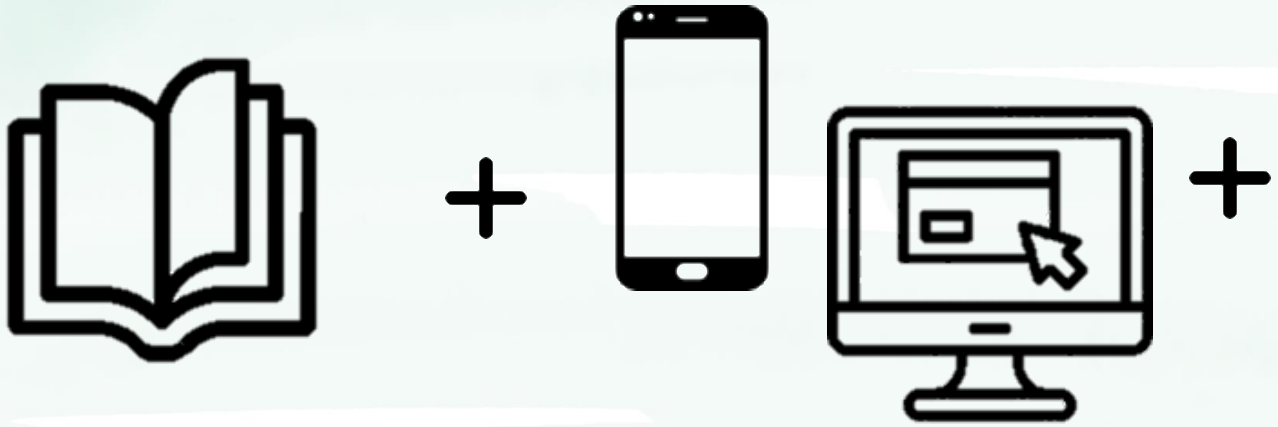
SCAGO
Sickle Cell Awareness Group of Ontario

Phase 1: To identify virtual care solutions and create an evidence and gap map (EGM) to guide multisectoral stakeholders regarding virtual stepped care solutions for youth with pain and their families during the COVID-19 pandemic and beyond.

Phase 2: To identify recommendations for virtual care best practices for youth with pain and their families.

Phase 3: To ensure equity and inclusion in virtual care best practices to support vulnerable populations of youth with chronic pain (Black youth with sickle cell disease, Indigenous youth, youth with complex medical needs)

Evidence and Gap Map of Virtual Care Solutions for Youth with Pain and their Families



Peer-reviewed literature

App stores (iOS & Android) & websites

Call for Innovations

Birnie et al., 2021 PAIN

Evidence and Gap Map of Virtual Care Solutions for Youth with Pain and their Families

Partnering for Pain
skip solutions for kids in pain pour la douleur chez les enfants
University of Calgary
PAIN BC™
CIHR IRSC
Canadian Foundation for Healthcare Improvement
Fondation canadienne pour l'amélioration des services de santé

Birnie et al., 2021 PAIN

www.partneringforpain.com/portfolio/virtual-care

#PartneringForPain
#PartenairesPourLaDouleur

Stepped Care Continuum

Evidence and Gap Map of Virtual Care Solutions for Youth with Pain and their Families

Take Aways

Where is there evidence?

- Most virtual care solutions were widely applicable to youth with any chronic pain condition
- >100 self-guided apps and websites (level 1 stepped care)
- Apps report the most customizability
- Psychological strategies are numerous and highest quality evidence (mostly levels 1 and 3 stepped care)

Where are the gaps?

- Most self-guided apps and websites lack scientific evidence (critically low or low quality of evidence)
- Lacking at higher levels of stepped care (levels 4 and 5).
- Rarely integrated into an electronic medical record or communication with health professionals.
- Moderate number engage parents, with very little peer or sibling support-
- Dearth addressing medication side effects and tracking, sleep, diet, substance use, school resources, information for teachers, and dealing with acute pain flares or crises (e.g., suicidality).
- <5% addressed web content accessibility

Birnie et al., 2021 PAIN

Virtual care solutions

https://cihr-irsc.gc.ca/e/52051.html
Birnie et al., 2021 PAIN REPORTS
Birnie et al, in press Healthcare Quarterly

✓OUR GOAL

To identify recommendations for virtual care for youth <18 years old with pain and their families, like using apps, websites, or therapy over video call.

Best practices for virtual care

for youth with pain and their families

Leveraging for Access and Care

- can increase healthcare access in home or community *(rural or remote areas)*
- less travel and associated costs
- under-used *(e.g. for real-time symptom assessment, psychological treatment)*
- can increase positive healthcare experiences, reducing stigma, bias, and discrimination
- opportunity for culturally inclusive practice *(e.g. in a youth's own space)*
- acceptable, reasonable and effective

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Improving Implementation

- freely available *(e.g., across telephone, apps, websites, videoconference)*
- training, terms of use, and guidelines for all users
- secure, encrypted, password protected platform
- developmentally appropriate for youth's abilities
- meet ethical standards of care
- transparent communication *(e.g., real vs. automated)*
- appointment time and duration honoured by all users
- clinical environments that are private with limited distraction

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Selecting Best Platforms

- backed by science, user-friendly and acceptable to all users
- provide technical support
- involve all users in development of virtual care platform
- meet accessibility standards and is customizable
- use multimedia content
- integrate peer support
- facilitate medical education for families
- access and manage health information
- coordinate care with multiple healthcare professionals in one visit

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Our knowledge and momentum is building

but there is still work to be done...

- standardized guidelines for implementation and evaluation
- confirm effectiveness for concerns identified by youth
- increasing equity *(e.g., access to Internet and technology)*
- how to integrate all aspects of care *(e.g., physical exam or manual therapies)*
- strategies to build and maintain the therapeutic relationship
- strategies to enhance engagement
- integration into electronic medical record
- shared decision-making between families and healthcare professionals *(for in-person vs. virtual care)*

Acknowledgments & Gratitude

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Isabel Jordan
Gillian Backlin
Laesa Kim
Christine Harris
Jenna Swidrovich
Frank Gavin

Partnering for Pain

Shaping pain research & care for kids, together.

CIHR IRSC | Ontario SPOR Support Unit | SickKids | skip solutions | PAIN BC | CHILD-BRIGHT Network | SCAGO Sickle Cell Awareness Group of Ontario | CCKO Complex Care Kids Ontario | Canadian Foundation for Healthcare Improvement / Fondation canadienne pour l'amélioration des services de santé

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Thank you!