



# THE IMPACT OF THE LATE COVID-19 PANDEMIC ON A COHORT OF YOUTH AGED 10-13 YEARS IN CALGARY, ALBERTA

EXECUTIVE SUMMARY

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## Executive Summary

### Background

The All Our Families (AOF) study is a prospective cohort study of approximately 3,200 women and their children. AOF was originally designed to examine maternal and infant outcomes during the perinatal period and to identify current barriers and facilitators to accessing health care services in Calgary, Alberta, and then later expanded to examine child development and parenting outcomes. Initial data collection began in 2008 with 2 questionnaires during pregnancy and one 4-months postpartum. Additional follow-up questionnaires were developed at 1, 2, 3, 5, and 8 years, and development is underway for a 13-year follow-up. Maternal and youth COVID-19 surveys were administered three times during the COVID-19 pandemic beginning in Spring 2020. The first maternal COVID-19 survey (CV1) and the first youth COVID-19 survey (YCV1) were administered early in the pandemic from May 2020 to July 2020 and from July 2020 to August 2020, respectively. The second maternal COVID-19 survey (CV2) and the second youth COVID-19 survey (YCV2) were administered midway through the pandemic from March 2021 to April 2021. The third maternal COVID-19 survey (CV3) and the third youth COVID-19 survey (YCV3) were administered late in the pandemic from November 2021 to January 2022.

**The aim of this project is to summarize the data collected between November 2021 and January 2022 from the Youth COVID-19 Impact Survey #3 (YCV3) (i.e., the late pandemic youth survey, more than 18 months since the start of the pandemic).** Specifically, this report describes youth participants' demographics, activities, physical activity, sleep habits, social connectedness, school experiences, feelings, behaviours, screen time, well-being, and family activities late in the COVID-19 pandemic. Information was integrated from pre-COVID-19 data points, such as the pre-pandemic 8-year descriptive report (Q8)<sup>1</sup> and the early (YCV1)<sup>2</sup> and mid-pandemic youth surveys (YCV2)<sup>2</sup>.

### Objectives

1. To describe the demographics, activities, physical activity, sleep habits, social connectedness, school experiences, feelings, behaviours, screen time, well-being, and family activities of youth in the cohort during late COVID-19.
2. To compare the activities, physical activity, sleep habits, school experiences, behaviours, screen time, and well-being of youth in the cohort during late COVID-19 to previous data from pre-pandemic, early pandemic, and mid-pandemic time points.

### Methods

Women who participated in the prenatal questionnaires and indicated at the time of enrollment that they would be willing to participate in future research were eligible to provide consent for their youth to participate in the late pandemic youth survey (YCV3). In November 2021, eligible maternal participants in the AOF study received an email cover letter inviting their youth to complete the late pandemic youth survey. To grant their youth consent to participate in the survey, maternal participants had to complete an informed youth consent form. Once granted access by their mothers, youth participants completed an assent form before continuing to the survey questions. The online survey launched on November 22, 2021 and remained open until January 17, 2022. The late pandemic youth survey included questions about activities, physical activity, sleep habits, social connectedness, school experiences, feelings, behaviours, screen time, well-being, and family activities during COVID-19. In this report, select constructs of the late pandemic youth survey will be compared to previous data from pre-pandemic,

early pandemic, and mid-pandemic time points.\* Of note, pre-pandemic data was maternal reported, whereas the early, mid and late pandemic data included in this report was youth reported. In total, 2,380 maternal participants were eligible to provide consent for their youth to participate in the late pandemic survey. A total of 1,034 youth participants completed the survey, which was 43% of eligible youth.

## Highlighted Results

### Baseline Characteristics

More than one-half of the youth (52.1%) in the late pandemic survey were male, and approximately 40% (41.2%) were in grade 6 (range 4 to 8). At the time of the survey, the participants ranged in age from 10 to 13 years, with a mean age of 11.6 years. Sixty percent of youth reported that they completed the survey by themselves, and 90% of youth reported that their answers to the survey were *very much true* or *pretty much true*.

### Activities

Forty-six percent of youth reported that they read for fun at least once a day, and 45% of youth reported that they helped with household activities at least once a day. Sixty-six percent of youth participated in outdoor activities in the two weeks prior to survey completion. Approximately one-fifth (19.4%) of youth were following physical activity guidelines recommend by The Canadian 24-Hour Movement Guidelines for Children and Youth (5-17 years)<sup>3</sup>, which was a decrease from early (42%) and mid (28%) pandemic time points.\*

### Sleep Habits

Nearly 60% (56.9%) of youth slept for 9 or more hours nightly and met sleep duration guidelines set by The Canadian 24-Hour Movement Guidelines for Children and Youth (5-17 years)<sup>3</sup>. This was a decrease from early (77%) and mid (67%) pandemic time points. Over one-third (37.1%) of youth used digital devices in the hour before bedtime each night, which was an increase from pre-pandemic (17%). Approximately 70% (66.8%) of youth did not have a TV, computer, laptop, or video game console in their bedroom.

### Social Connectedness

Nearly one-half (47%) of youth had low connections with adults at home. In comparison, 35% and 53% of youth had low connections with adults at home in the early and mid-pandemic, respectively. Similarly, nearly half (47.0%) of youth felt like they belonged amongst their peers, and 71% of youth had at least one good friend with whom they could discuss their problems.

### School Experiences

Almost one-quarter of youth (21.6%) felt worried, anxious, or concerned about getting COVID-19 at school in the two weeks prior to completing the survey in the late pandemic. In the six months prior to

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\* Pre-pandemic corresponds to January 2017-May 2020, early pandemic corresponds to July-August 2020, mid-pandemic corresponds to March-April 2021, and late pandemic corresponds to November 2021-January 2022.

\* The early pandemic survey was administered during summer, and the mid-pandemic survey was administered during spring, whereas the late pandemic survey was administered during winter, which affected the physical activity numbers due to weather conditions and the pandemic restrictions that were in place at the time.

survey completion, 12% of youth reported that they had been cyberbullied by another kid, and 3% of youth reported that they had cyberbullied another kid.

### Aches and Pains

More than one-quarter (26.3%) of youth had aches or pains 2 to 3 times in the month prior to survey completion, and approximately 40% (38.6%) of youth experienced aches or pains consistently for 3 months prior to survey completion. With 0 indicating *no pain* and 10 indicating the *worst pain possible*, 58% of youth rated their aches or pains from 2 to 4, and 34.4% rated them from 5 to 7. Aches and pains were most commonly experienced in the muscles and joints (34.8%), head (32.3%), and legs (31.0%). Most youth (71.4%) *never* or *almost never* had trouble sleeping due to their aches and pains, and similarly, most youth (68.9%) *never* or *almost never* had trouble paying attention due to their aches and pains. However, some youth experienced more negative impacts of their aches and pains, including the 27% who reported that they *often* or *almost always* found it hard to run due to their aches and pains.

### Behaviour

“At risk” corresponds to individuals who were either “at risk” or “clinically significantly at risk” for a given behavioural construct. Twenty-three percent of youth were at risk for attention problems, 17% were at risk for hyperactivity, 19% were at risk for anxiety, and one-fifth (20%) were at risk for depression in the late pandemic. Importantly, the percent of youth at risk for each behavioural construct was higher in the late pandemic than pre, early or mid-pandemic time points, showing the largest increase for youth at risk for depression from early (11%) to late (20%) in the pandemic.

### Screen Time & Social Media

On a typical weekday, one-half of youth (49.6%) had 2 hours or less of screen time, thereby meeting screen time guidelines recommend by The Canadian Paediatric Society.<sup>4</sup> This was similar to mid-pandemic (49%) but lower than early pandemic (62%). On a typical weekend day, approximately one-fifth (21.5%) of youth were following recommended screen time guidelines, and 41% reported 5 or more hours of daily screen time. Over one-half (51.8%) of youth streamed movies, videos and shows daily, 44% sent texts or messages daily, and 42% played video or app games daily. Fifteen percent of youth *often* or *almost always* wished their parent or caregiver would spend less time on their devices. In the month prior to survey completion, over one-third (34.8%) of youth had difficulty unplugging from their devices when they needed to or when they were asked to.

### Well-Being

Forty-three percent of youth had low optimism in the late pandemic. In the early pandemic and in the mid-pandemic, 40% and 41% of youth had low optimism, respectively. Thirty-four percent of youth had low happiness, while 36% and 39% of youth had low happiness in the early and mid-pandemic, respectively.

### Family Activities

Youth were asked about the activities that they or their families, not necessarily including the youth, participated in during the COVID-19 pandemic. Three-quarters (75%) of youth or their families played board games and puzzles, 60% of youth or their families read, and 54% of youth or their families played sports. The least common activity reported by youth was blogging (2%).

## Conclusions

In the late pandemic between November 2021 and January 2022, less than 20% of youth were meeting physical activity guidelines, a decrease from both early (42%) and mid (28%) pandemic time points. In addition, fewer youth were sleeping for 9 or more hours on a typical night in the late pandemic compared to early (77%) and mid (67%) pandemic surveys. The percentage of youth who used digital devices in the hour before bedtime each night increased from pre-pandemic (17%) to early (25%) and late (37%) pandemic times.

On a typical weekday, one-half of youth were following the recommended guidelines for screen time, and on typical weekend day approximately four-fifths (78.5%) were not following these recommended guidelines. Fewer youth were following the recommended screen time guidelines in the late pandemic compared to pre-pandemic. This was most pronounced during weekdays with a 27% decrease of the proportion of youth meeting screen time guidelines from age 8 (pre-pandemic, 77%) to age 11.6 (late pandemic, 50%).

Nearly one-half (47%) of youth had low connections with adults at home, 43% had low optimism, and 34% had low happiness. Almost one-quarter of youth (21.6%) felt worried, anxious, or concerned about getting COVID-19 at school in the two weeks prior to survey completion. Nearly one-quarter (23.0%) of youth were at risk for attention problems, 17% were at risk for hyperactivity, 19% were at risk for anxiety, and one-fifth of youth were at risk for depression. The percentage of youth at risk for attention problems, hyperactivity, anxiety, and depression increased by 2-9% from the pre or early pandemic to the late pandemic, depending on the construct.

The results from the AOF late pandemic youth survey suggest initiatives to promote increased youth engagement in activities that promote greater physical activity, less screen time, and greater connectedness to parents, caregivers, friends, and peers, such as sports and board games, may be important during pandemic recovery. Continued monitoring of longer-term impacts on youth mental health is warranted, including examining supports such as virtual mental health services.