

Impact of a publicly-funded pharmacare program on prescription stimulant use among children and youth

A population-based observational natural experiment

Background

Why is this important?

- Stimulants are first-line medication treatment for individuals with attention-deficit hyperactivity disorder (ADHD). However, differences in drug coverage may contribute to inequitable access to this treatment.
- In January 2018, Ontario implemented a publicly-funded program (OHIP+) providing universal access to medications at no cost to children and youth between the ages of 0 and 24.
- In April 2019, the program was modified to cover only children and youth without private insurance.

What did we investigate?

- We studied whether these policy changes were associated with changes in prescription stimulant dispensing to Ontario children and youth.

Key Points

- OHIP+ implementation was associated with a significant immediate increase in the monthly rate of stimulant dispensing.
- The April 2019 OHIP+ program change (modified to cover only children and youth without private insurance) was associated with an increase in monthly stimulant dispensing trends.
- The most pronounced and consistent immediate increases were observed among males, those living in the highest income neighbourhoods, and individuals aged 20 to 24.

How was the study conducted?

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- *Design:* Population-based observational natural experiment.
- *Population:* Children and youth (24 years of age or younger) in Ontario who were dispensed a stimulant (i.e., amphetamine, dextroamphetamine, lisdexamfetamine, methylphenidate).
- *Study period:* Between January 2013 and March 2020.
- *Primary outcome:* Monthly rate of stimulant use per 100,000 children and youth.

For more information

Antoniou T, McCormack D, Kitchen S, Pajer K, Gardner W, Lunskey Y, Penner M, Tadrous M, Mamdani M, Juurlink DN, & Gomes T (2023). [Impact of a publicly-funded pharmacare program on prescription stimulant use among children and youth: a population-based observational natural experiment](#). *Canadian Journal of Psychiatry*.



What did we find?

- During our 7-year study period, 241,794 children and youth were dispensed a stimulant (median age of 13 years, 67.5% male).
- We observed a slight increase in stimulant dispensing among children and youth following the implementation of OHIP+:
 - Immediate increase of 53.6 individuals per 100,000 population (95% confidence interval [CI]; 36.8 to 70.5 per 100,000) after program implementation in January 2018.
 - 14.2% increase (95% CI 12.8% to 15.6%) between December 2017 and March 2019 (1198.6 vs. 1368.7 per 100,000 population).
 - The largest increases were observed among males (69.2 per 100,000; 95% CI 44.5 to 94.0), individuals aged 20 to 24 (82.3 per 100,000; 95% CI 67.2 to 97.3) and those living in the highest income neighbourhoods (73.3 per 100,000; 95% CI 49.6 to 96.9).
- Rates continued to increase following the modification of OHIP+ (to cover only children and youth without private insurance):
 - Monthly increase of 10.2 individuals per 100,000 population (95% CI 5.0 to 15.5) right after program modification in April 2019.
 - 7.5% increase (95% CI 6.2% to 8.7%) between March 2019 and March 2020 (1368.7 vs. 1470.8 per 100,000 population).
 - The largest changes in trend were observed among males (13.3 per 100,000; 95% CI 5.6 to 21.1), individuals aged 10 to 14 (22.1 per 100,000; 95% CI 10.7 to 33.4) and children and youth living in the second highest (12.4 per 100,000; 95% CI 5.9 to 18.9) and highest (14.0 per 100,000; 95% CI 6.5 to 21.4) income neighbourhoods.

Recommendations

Policymakers

- Interventions which address social or structural barriers to accessing ADHD testing and treatment are needed to address income-related disparities in care that remain or may be accentuated by universal drug coverage programs. Such interventions could include financial support to families to attend appointments or programs for parents and teachers to enhance knowledge about ADHD and its treatment.

Healthcare professionals

- Additional specialist-level training to treat children and youth with ADHD would help reduce barriers related to specialist access and sex-based inequity in stimulant use.