Confronting the disparity in nonmedical prescription opioid use among rural and urban youth: A call for broader recognition in the era of clandestine fentanyl

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Abstract

Nonmedical prescription opioid use (NMPOU) among Canada's rural youth is a public health problem largely overshadowed by the opioid crisis in metropolitan centres. In this commentary, the author explores the unique socioeconomic factors that underpin NMPOU among rural youth and draws attention to its potential to prime and promote exposure to increasingly prevalent clandestine fentanyl, often disseminated and disguised as common prescription opioids. In turn, the author argues for mitigating strategies to curb NMPOU, informed by greater awareness of the unique vulnerabilities of rural youth.

In 2017, the Canadian Institute for Health Information identified youth aged 15-24 as one of the fastest growing cohorts in terms of opioid-related hospitalization,[1] driven in part by the increasing prevalence of clandestine fentanyl, particularly in British Columbia and Alberta.[2,3] While the urban impact of this phenomenon has been widely covered, the threat to Canada's rural communities has received less attention. This is concerning not only because of the relative undersupply of rural mental health and addictions treatment services compared to urban communities, but also owing to the higher prevalence of nonmedical prescription opioid use (NMPOU) among rural youth.[4] As its name implies, NMPOU involves taking prescription opioids in any manner inconsistent with how they were prescribed or by a person for whom they were not prescribed; it can involve borrowing from friends or family, using higher–than–recommended doses, or pure recreational use.[5] Apart from serving as a gateway to heroin,[6] greater NMPOU may be priming Canadian rural youth to the threat posed by the spread of potent clandestine fentanyl, often masquerading as prescription pain medicine.[7] Averting the attendant morbidity and mortality in rural communities will require broader recognition of the geographic disparity in NMPOU, which is also a prerequisite to developing viable public health responses.

Despite its potential impact, lack of awareness of greater NMPOU among rural youth is unsurprising given the recently emergent literature on geographic differences in prescription drug misuse. While rurality has been broadly identified as a risk factor for youth prescription drug misuse, including pain medication,[8,9] the most direct evidence stems from a recent analysis of the 2011-12 U.S. National Survey on Drug Use and Health† by Monnat and Riggs, which identified a 35% greater adjusted odds of past–year NMPOU in rural versus urban youth.[10] This parallels Canadian data from the 2011 Ontario Student Drug Use and Health Survey‡, which identified a 95% greater adjusted odds of past–year NMPOU among rural female students in Ontario.[11] Explanations for the geographic disparity in youth prescription drug misuse, including NMPOU, generally invoke three related factors: 1) greater availability; 2) adverse economic drivers of use; and 3) social parameters that facilitate misuse.[12] In the first case, rural communities are often older demographically and more reliant on physically demanding industries (e.g., agriculture or resource extraction).[13] Both of these factors increase the prevalence of acute and chronic pain, for example via injury or chronic arthritis, resulting in greater overall medical opioid use and yielding opportunities for subsequent NMPOU through youth diversion.[14] Also, greater use within rural populations may distort youth perception of the harms of prescription opioids, promoting normalization,[15] and this may explain the earlier age of initiation noted in rural localities.[16] Finally, it has been suggested that NMPOU within rural communities may be facilitated by more efficient circulation of diverted opioids, enabled by the close kinship networks less frequently found in urban settings.[17]

Beyond greater prescription opioid availability, economic determinants may drive NMPOU among rural youth. For example, Carpenter et al. recently noted that higher unemployment rates are associated with a greater incidence of opioid use disorder,[18] and lower income status is a known risk factor for NMPOU.[19] This is relevant as rural communities often exhibit higher unemployment rates,[13] with geographic differences in financial stressors potentially driving differences in youth NMPOU. For example, relative to comparators, higher rates of depression, anxiety, and suicide have been noted among farming families in the U.S. struggling to maintain financial solvency and, in this context, youth NMPOU may represent a maladaptive coping strategy.[20] Moreover, when misuse evolves into dependence, limited financial means can undermine access to important harm reduction strategies. For example, while buprenorphine/naloxone (Suboxone®) and methadone hydrochloride (Methadose®) for opioid substitution are eligible for full coverage under B.C. Pharmacare, they are still subject to its deductible policy.[21] As such, B.C. rural youth whose families do not qualify for income assistance, while still potentially financially constrained, must fund at least part of the costs of these treatments, potentially limiting access.

Apart from economic factors, unique aspects of rural life may promote NMPOU as a coping strategy for mental health adversities, or limit access to resources that might otherwise curb NMPOU. For example, data from the B.C. Adolescent Health Survey, administered every five years to youth in grades 7-12, indicate that rural youth are more likely to have family or friends that have attempted suicide, more

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†The *U.S. National Survey on Drug Use and Health* is an annual survey of approximately 70,000 youth aged 12 and older.
‡The *Ontario Student Drug Use and Health Survey* is a biennial survey administered to Ontario students in grades 7-12.

likely to report problematic drinking, and are more likely to report a lack of mental health services in their community.[22] Additionally, excessive idle time and boredom among rural youth has been identified as a driver of NMPOU, owing in part to limited extracurricular activities in their communities.[23] Perhaps most problematic, rural youth may avoid seeking treatment resources, even when available, for fear of being recognized by neighbours or due to cultural prohibitions on acknowledging vulnerability, rooted in small–town value systems.[24]

With a fuller appreciation of possible social and economic determinants of rural NMPOU, mitigating strategies can be developed. For example, dedicated funding for life skills training programs in middle school might reduce rates of NMPOU among rural youth, a strategy proven effective in the United States.[25] In conjunction, delivering joint parental–adolescent education programs, which explore the harms of prescription drug misuse, might counteract normalization of NMPOU, further limiting its incidence.[26] Finally, expanding rural cultural competency training for Canadian medical leaners, adapted from successful approaches in the U.S.,[27] might yield broader awareness of cultural drivers of NMPOU. This could position future rural physicians for earlier intervention. Ultimately, as Canada's opioid crisis continues to evolve, it's unlikely that rural NMPOU and related harms of clandestine opioids can be completely neutralized. Nevertheless, recognizing and counteracting the specific vulnerabilities of rural youth might keep a manageable problem from becoming an outright disaster.

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