Understanding Risk Factors for Persistent Opioid Use Among Youths

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Opioid use disorders continue at epidemic proportions in the US. There is growing evidence that youths exposed to opioids for legitimate medical purposes have an increased risk of opioid use disorders in the future.1,2 Adolescents and young adults are especially susceptible to negative consequences of opioid misuse because of their ongoing biological, social, and psychological development. In the study by Wilson et al,3 the authors provide additional evidence on subgroups of youths at risk for persistent opioid use after an initial opioid prescription.

Wilson et al3 describe a cohort study of Pennsylvania Medicaid enrollee claims data among children, adolescents, and young adults aged 10 to 21 years, from 2010 through 2016. The purpose of the study was to identify distinct patterns of opioid prescribing following a first opioid prescription, using group-based trajectory modeling. The primary outcome used to define trajectory groups was opioid fills during the first 12 months following the initial prescription; those who filled 2 or more prescriptions during this period were included in the trajectory analysis. There were 189 477 youths who received an initial opioid prescription during this period, with 47 477 (25.1%) filling at least 1 additional prescription (ie, 2 or more prescriptions). The median (interquartile range) age at first prescription was 16.9 (14.6-18.8) years with a higher percentage of female youths (56.8% [107 562 female youths]) and non-Latinx White youths (59.6% [112 911 non-Latinx White youths]) in the sample. The trajectories modeling indicated 2 distinct groups: a high-risk group with 1380 youths (3.1% of the sample) and a low-risk group with 46 097 youths (96.9% of the sample). In the high-risk group, 65.3% (901 youths) persisted filling opioid prescriptions at month 12, whereas in the low-risk group only 13.1% (6031 youths) did so. In the high-risk group, 30.0% (412 youths) received a diagnosis of opioid use disorder compared with 10.1% (4638 youths) in the low-risk group. In a final model estimating risk group trajectory membership, the authors found associations with older age, non-Latinx White ethnicity/race, prior diagnosis with cancer (excluding nonmelanoma skin cancer), supply and dosage at the index month, mental health diagnoses over the observation period (depression, anxiety), and general medicine clinician type.

The strengths of this analysis by Wilson and colleagues3 include the use of Medicaid claims data over a yearlong period, which allows for analysis across health systems and over time, increasing validity, and focusing attention on a socially and economically disadvantaged group of youths and young adults in Pennsylvania, a state that is one of the epicenters of the opioid epidemic. The analysis highlights the concentration of very high risk in a small subgroup of youths with comorbid mental health and other diagnoses. This underscores the importance of screening for mental health symptoms at first opioid prescription as well as rescreening and close monitoring while under prescription, particularly among young women, who are higher risk of mental health symptoms and posttraumatic stress. Although the analysis highlights factors associated with very high risk, in absolute numbers, those who filled a prescription in the lower risk group were many times more numerous (6031 youths filled prescriptions at 12 months in the low-risk group vs 901 youths who filled prescriptions in the high-risk group); thus, we need to continue to investigate individual-level factors not highlighted in this analysis. Studying outcomes beyond a year could also help us better understand long-term consequences, including factors associated with overdose-related mortality.

White race was associated with high-risk group membership in this study by Wilson and colleagues,3 although it's important to also recognize that the opioid crisis crosses all socioeconomic and racial/ethnic categories. In the larger US population, we see similar rates of opioid use disorder among Black communities compared with non-Latinx White communities; however, Black people die
at disproportionate rates from opioid overdoses. This devastating inequity must be addressed through outreach efforts that promote access to quality and effective substance use screening and treatment across racial and ethnic groups.

In the study by Wilson et al, dentistry was the source of the plurality of prescriptions (37.7%), but general medicine was the most prevalent source of prescription among those in the high-risk group (47.5%), who were also older. These findings are consistent with work by Volkow and McLellan, which found that dentists were the primary prescriber for youths aged 10 to 19 years, whereas general practitioners and internal medicine clinicians were the top prescribers for individuals aged 20 to 29 years. These findings underscore the importance of providing education about the development of opioid use disorder for general practitioners, who may not be aware of the importance of close monitoring even for prescriptions of low dosage and strength.

There are a variety of sources through which youths and young adults are exposed to prescription opioids. Wilson et al evaluated legitimate opioid prescriptions, which is the second most common way youths and young adults obtain opioids for nonmedical use or misuse; the first being from a friend or relative for free. Thus, to strengthen prevention and treatment efforts to include family and community-based intervention, future studies should examine interventions to address the variety of methods by which youths are obtaining opioids outside of a clinician's prescription.

At present, no validated tools exist to screen youths for the risk of developing opioid use disorder after an initial opioid prescription. Although the study by Wilson et al begins to shine light on a subgroup at high risk, much more research is needed to translate disparate findings on risk factors into clinical applications to identify youths who may be candidates for opioid-sparing pain management, to address modifiable risk factors, and to leverage protective factors. In the absence of this type of identification and screening, clinicians should consider making substance use screening routine care by incorporating it into standard practice for all adolescents and young adults, especially for those prescribed opioids. In primary care or emergency department settings, screening followed by brief intervention and referral for more intensive treatment has been shown to be effective at reducing substance use among adolescents and young adults. Lastly, medical organizations should establish intervention plans and referral options to maximize the opportunity to provide substance use treatment to this population.

As we strive to intervene in this deadly opioid crisis, we should continue with compassionate treatment of pain together with efforts to address substance misuse. We need to avoid swinging the pendulum too far in the opposite direction so as not to leave people ignored and in need of help. This is particularly true in the context of the COVID-19 pandemic, which has hit teens particularly hard. Social distancing measures, although critical to slow COVID-19 transmission, reduce social support and access to community programs needed for adolescent substance use treatment, especially for vulnerable youth. Additionally, adolescents with substance use disorders treated with medications may face additional barriers to obtaining their prescriptions (eg, buprenorphine) or accessing syringe service programs.

It is critical that we become more successful at preventing opioid use disorders, expanding developmentally appropriate, evidence-based treatment options, addressing co-occurring mental health conditions, destigmatizing addiction, and improving access to medications for adolescents and young adults to save lives.

**ARTICLE INFORMATION**


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