# Inhalant Screening in Early Adolescence:

## Missed Opportunity to Prevent Escalation to Polysubstance Use and Related Consequences

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Inhalants are volatiles intended for household use and may lead to subsequent illicit substance use later in life.[1,2] They are popular among younger adolescents due to their legality, easy accessibility, low price, ease to conceal, and undetectability on drug screening.[3] In 2019–2020, inhalant use was more commonly reported by middle school students than by high school students in Hawaii.[4]

Unfortunately, there is a lack of routine screening tools specifically for inhalant use for adolescents in primary care. Common screening tools for risky behaviors in adolescents include the HEADSS[5] assessment, BSTAD (Brief Screener for Tobacco, Alcohol, and other Drugs),[6] and S2BI (Screening to Brief Intervention),[6] which do not screen for inhalant use unless use of more "mainstream" substances (tobacco, alcohol, and/or cannabis) is endorsed. The CRAFFT[7] (Car, Relax, Alone, Forget, Friends, Trouble) interview is more specific for substance use, but there are only 2 words alluding to inhalants, "sniff" and "huff." We present a case of polysubstance use in an adolescent for whom undetected inhalant use played a key role in the escalation of substance use and psychiatric comorbidities.

## Case Report

A female in her late teens with a history of polysubstance use, anxiety, depression, and past suicide attempt presented to our institution for vague neurological complaints. She reported first using inhalants at the age of 11 years, using 1 bottle of hairspray several times a day. She continued using inhalants for 2 years, later escalating to marijuana, 3,4-methylenedioxymethamphetamine, and psilocybin. This led to "behavioral issues," which led her to drop out of high school and worsened her preexisting psychiatric illnesses. She attended annual checkups with her pediatrician but was never asked about her inhalant use. She endorsed this admission was the first time her inhalant use was addressed and stated if inhalant use treatment was offered, she might not have suffered from polysubstance use leading to her admission.

## Discussion

Inhalant use is popular among younger adolescents, but it may not be screened in the primary care setting. Despite mixed findings about inhalant use leading to further substance use, Castaldelli-Maia et al[2] call for attention to individuals who have already used inhalants because of a higher chance of experimenting with other substances such as cannabis, cocaine, and prescription drugs. Inhalants also have physiological consequences including "sudden sniffing death,"[8-10] long-term cognitive decline,[11,12] and psychiatric comorbidities such as anxiety, depression, psychosis, panic disorders, and increased suicidality.[13,14] This aligns with the history of our patient, who escalated to illicit substance use resulting in worsening psychological and functional consequences.

The period of greatest risk for chronic brain damage from inhalants is 12–16 years old, which overlaps with the peak of its popularity,[15] making this a crucial time to screen for inhalant use. Inhalant use is not well addressed among adolescents despite its harmful effects. In 2003, a similar case report endorsed asking specific questions about inhalant use in adolescent screening[16,17]; however, this has yet to be implemented.[17] Therefore, providers should be educated that current screening tools may not detect inhalant use because adolescents may not consider inhalants as a "drug" due to their legality. It is crucial to include specific questions about inhalant use such as "have you ever inhaled something to get high such as cleaners, glues, sprays, gasses, paints, or markers?"

Although this patient's polysubstance use and comorbid mental health conditions may not strictly be from untreated/missed inhalant use, opportunities to offer treatment and the possibility of changing her outcomes were missed. Implementing specific screening questions for inhalant use increases opportunities for early intervention, which may prevent future substance use and its detrimental effects.


### Article Information

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