Averting the Perfect Storm: Addressing Youth Substance Use Risk From Social Media Use

Parissa K. Salimian, BA; Rumi Chunara, PhD; and Elissa R. Weitzman, ScD, MSc

Abstract

Adolescents are developmentally sensitive to pathways that influence alcohol and other drug (AOD) use. In the absence of guidance, their routine engagement with social media may add a further layer of risk. There are several potential mechanisms for social media use to influence AOD risk, including exposure to peer portrayals of AOD use, socially amplified advertising, misinformation, and predatory marketing against a backdrop of lax regulatory systems and privacy controls. Here the authors summarize the influences of the social media world and suggest how pediatricians in everyday practice can alert youth and their parents to these risks to foster conversation, awareness, and harm reduction. [Pediatr Ann. 2014;43(10):e242-e247.]

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Adolescents are among the heaviest users of online social media sites like Facebook, Twitter, and Instagram. As a group, adolescents are at peak risk for onset and intensification of alcohol and other drug (AOD) use. Information about peers’ AOD-related beliefs and behaviors are readily communicated through social media, along with marketing and promotional content. Adolescence is an impressionable time of life where such content may exacerbate AOD risk. To guide pediatricians on this issue, the authors review the main mechanisms for risk and offer suggestions for addressing this topic in the clinic.

**ALCOHOL AND OTHER DRUG USE AMONG YOUTH**

Concern that social media use by youth will influence AOD use exists in a context of high secular concern about youth substance use and persisting patterns of risk behaviors. Alcohol, marijuana, and tobacco are the substances most often used by adolescents in the United States. Twelve percent of 8th graders and more than half (52%) of 12th graders have been drunk, and more than a quarter (27%) of 12th graders have 20 or more experiences consuming alcohol. Marijuana is the most commonly used illicit drug; nearly half (46%) of 12th graders and just over one-third (36%) of 10th graders have used marijuana. Daily cigarette use is on the decline among high school students; as of 2013, 8.5% of 12th graders smoke cigarettes daily, down from 12% in 2006. Yet, e-cigarettes, which deliver nicotine via vapor instead of smoke, threaten to attract increasing numbers of youth to nicotine with flavors like cotton candy and bubble gum. One-half (50%) of 12th graders have used an illicit drug, and among them, one-half (25%) report use of an illicit drug other than marijuana. A substantial minority (18%) of high school students have used prescription drugs (eg, Adderall®, Oxycontin®) without a prescription.

**HOW SOCIAL MEDIA USE MAY AFFECT YOUTH ALCOHOL AND OTHER DRUG USE**

Social media use by youth has the potential to amplify the risk of using AODs via exposure to (1) content posted by peers that may influence norms and model use; (2) industry advertising and promotions that may shape attitudes and increase access to substances, including unregulated prescription drugs; and (3) inaccurate information that substances are safe and acceptable. In addition, posting about AOD use on social media sites leaves a digital footprint that can adversely affect school, social, and employment opportunities. For these reasons, pediatricians should ask patients about risks, advise about harm reduction, and advocate for safer social media platforms, tools, and controls (Table 1).

**Peer Influence**

Attitudes, beliefs, and behaviors of online peers shared through social media can reinforce norms conducive to experimentation and regular use. Substance use references abound in social media. Nearly half (45%) of teenagers surveyed nationally have seen pictures on social networking sites of other youth getting drunk, passed out, or using drugs. These teenagers were three times more likely to have used alcohol, four times more likely to have used marijuana, and nearly three times more likely to have used tobacco than their peers who did not report seeing such pictures. The large majority (73%) of 300 undergraduate freshmen in an observational study of a college sample posted about alcohol use on Facebook. A prospective study of 338 youth documented the sharp uptake in posting about alcohol on Facebook during their transition to college from high school, with 20% of high school youth posting about alcohol and 60% of college freshman having done so by the end of their first year. Content posted by peers in social media can influence other teenagers’ perceptions about AOD use prevalence and can shape risk. Models of peer influence through social media hold for other substances, including marijuana and prescription drugs with high abuse potential. Analyses of Twitter posts (or “tweets”) confirm that Adderall is frequently used as a college study aid. Mentions about Adderall peak during college exam periods, and a clear pattern of multi-substance use is apparent in many tweets. Members of the social networks of prescription drug abusers on Twitter typically also post about abusing prescription drugs, and the number of users conversing with others about prescription drugs correlates with the degree of abuse observed within tweets.

**Advertising Influence**

Social media use can influence attitudes and norms regarding AOD use and inform youth about opportunities to obtain substances via online channels and brick-and-mortar outlets. Online advertising, promotion, and sale of alcohol to youth is well documented. Youth exposure to industry marketing on Facebook is up dramatically over the past several years despite age constraints on accessing alcohol brand pages. In the viral marketing model of the social web, user-generated content interlaces with commercial advertising and is amplified throughout networks. Content that users post on industry-controlled social media pages, including comments and photos, becomes part of brand advertising, and the sharing of user preferences and behaviors among networks makes everyday users brand ambassadors. Alcohol brands’ Facebook pages are amassing user activity in increasing patterns that correspond to brand popularity among underage binge drinkers.
There are thousands of websites that sell alcohol. Many of these websites leverage the social web to sell products; nearly half of the most popular websites offer refer-a-friend social promotions. Alcohol companies shoulder the responsibility of regularly monitoring user-generated activity for compliance with the industry’s self-regulatory codes that encourage responsible online marketing practices. Yet monitoring is not done in real time, and the rate is variable. In a similar fashion, a recent survey found that seven of the nine largest e-cigarette companies sell e-cigarettes online and use social media to market to youth. An examination of Twitter posts referencing e-cigarettes found that the majority (90%) were commercial promotional messages. More than one-third of those tweets were price or discount mentions, and most tweets linked to sites that sell or advertise the sale of e-cigarettes, with extensive varieties and flavors that can entice youth.

Social media sites rely on users to affirm their age, and “age-gating” controls

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<tr>
<th>Mechanism</th>
<th>What Pediatricians Can Do</th>
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<tr>
<td><strong>Peer influence from shared content</strong></td>
<td>- Ask youth whether their friends are sharing information about AOD use via social media.</td>
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<tr>
<td>Text and images describing substance use may be shared via social media. Content may be authored by friends or others and can reinforce norms conducive to alcohol and other drug (AOD) experimentation and use, consistent with social modeling of AOD behaviors.</td>
<td>- Advise youth that it is important to delay/avoid use to protect their health, regardless of friends’ opinions and behaviors, and cite the scientific evidence for why.</td>
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<td>- Encourage parents to consensually Facebook “friend” their children or the equivalent on other sites and co-view risky activity that may originate with their children, peers, or the industry.</td>
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<td><strong>Exposure to AOD advertising and promotions</strong></td>
<td>- Remind youth that they are a “juicy target” for advertising.</td>
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<td>Direct-to-consumer (DTC) marketing by retailers and suppliers of alcohol, tobacco, and marijuana products and prescription drugs with abuse potential may increase youth risk for AOD use. Promotion to youth via social media of information about their friends’ AOD-related preferences, tastes, and endorsements—viral marketing—may similarly increase risk. Both DTC and viral marketing may increase desire to obtain and use substances; some DTC regulatory controls exist, although they are poorly enforced. Viral marketing is not controlled/regulated.</td>
<td>- Reinforce youth beliefs that their health and bodies are not “for sale” and encourage healthy skepticism of marketing practices.</td>
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<td>- Advocate for stricter enforcement of controls on DTC advertising through social media and enforcement of extant controls.</td>
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<td><strong>Misinformation and poor use of safety regulations</strong></td>
<td>- Ask youth what they think about AOD use, including novel drugs like e-cigarettes and legalized marijuana.</td>
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<td>Social media content is generally not filtered for accuracy or safety. Youth who are exposed to inaccurate information about the safety of substances and their use may pick up AOD behaviors, and their beliefs and attitudes toward use may be altered deleteriously. Lax use of safety regulations may expose youth to illegal online drug markets, including those selling prescription drugs.</td>
<td>- Educate youth about AOD while keeping the reality of its prevalence and their developmental vulnerabilities in mind.</td>
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<td>- Inform youth of American Academy of Pediatrics positions, including that e-cigarettes are not approved by the US Food and Drug Administration nor proven safe for use, and that medical marijuana is not adequately studied in the pediatric population and not approved for use until the normal regulatory processes ascertain safety/efficacy.</td>
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<td>- Advise youth that prescription drugs should not be shared or used without direct medical supervision.</td>
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<td><strong>Breach of privacy</strong></td>
<td>- Refer patients and parents to Internet safety resources (see Table 2).</td>
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<td>Information about AOD use may be shared among networks/users in unintended ways. Youth with problems may be identified, which could elicit help or generate stigma. A digital footprint of AOD use or involvement may be created through images and text references shared among network affiliates. This footprint may persist into the future and impact school, job, and social relations in ways many youth do not understand or anticipate. Because it is difficult, if not impossible, to erase this information, the best approach may be prevention.</td>
<td>- Advise parents to teach their children the meaning of “digital footprint” and discourage posting about AOD use on social media profiles.</td>
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<td>- Advise parents to keep abreast of changing privacy settings on social media sites and co-manage their children’s settings accordingly.</td>
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are easy to outsmart.14 Anyone can view an alcohol brand’s Twitter account, and users are only prompted to enter their date of birth if they want to follow the account’s feed.14 According to recent governmental reviews of the largest alcohol and e-cigarette companies, age gates are not universally adopted for company-controlled pages on Facebook, Twitter, and YouTube.18,19 Whereas all alcohol companies have age-gated Facebook and Twitter pages, YouTube’s age gate feature remains underused.18 Age gating by e-cigarette companies is inconsistent and similarly undermined by reliance on corporate self-regulation and lax approaches to verifying age.19

Misinformation and Poor Safety Regulation

Adolescents frequently use the Internet to find information about sensitive health issues and are particularly interested in tapping online resources using social media to address substance use issues.21,22 However, little is known about how well even the central factual and advisory content of health-related online social networking sites align with published literature and professional guidelines. Select studies of the quality and safety of health-related social networking sites have found considerable misinformation, gaps in transparency around advertising, and inscrutable privacy rules.23 Moderation of peer communications within online health networks is typically undertaken by volunteers and insufficient to guarantee accuracy and thus safety for the vast number of users.

Consumers, particularly adolescents, may have little perceived need and limited ability to verify information they obtain through social media. Regulation and oversight of safety within social media environments have not kept pace with the inexorable growth in consumer engagement, and there are few, if any, requirements for sites and platforms to use meaningful technologies to promote safety and verify the accuracy or quality of content. Hence, social media platforms offer potential for rapid, population-scalable diffusion of accurate as well as misleading information by peers or industry agents. For example, online “pharmacies” are prevalent on social media sites and are an avenue for direct-to-consumer marketing of pharmaceuticals without a prescription.13 Most (97%) sites that sell prescription drugs do not meet pharmacy laws and practice standards,24 and many college-educated young people cannot discern signs that online pharmacies are illegitimate.25 In sum, it may be challenging for adolescents to separate accurate from misleading information diffused through social media, including information that would help distinguish the legitimate from the rogue online sellers of prescription substances.

Privacy Risks

Active social media users may be unaware of how their data are shared and ignorant of risks from third-party tracking and the potential for discriminatory use of information. The Children’s Online Privacy Protection Act (COPPA) imposes limits on the type of personal data social media sites can collect from children. COPPA applies only to individuals younger than 13 years, and companies are thus permitted to capture the digital data of teenagers. The COPPA rule requires sites to obtain parental permission prior to collecting children’s personal information. Sites such as Facebook have avoided confronting this rule by prohibiting children under 13 from joining. Facebook, like other major social media platforms, relies on user age verification, opening the door for an estimated 5.6 million youth to misrepresent their age to obtain Facebook accounts.26 Youth who falsify their age to set up a Facebook account jeopardize their own online privacy and also that of their Facebook friends who did not lie at registration. Parents are complicit in lying; more than half (55%) of parents of 12-year-olds report that their children have Facebook accounts, and the majority (76%) of parents helped them create the accounts.27 When parents facilitate their underage children’s Facebook access, they undermine COPPA’s privacy protections for their children and other children, and they model skirt the rules.

DISCUSSION

The confluence of social media use and substance use vulnerability among youth represent the potential for a perfect storm of risk. Although the novelty and dynamism of social media may still be foreign to many pediatricians, practical guidance to minimize risk can be delivered to patients and parents and build on established messages and practice recommendations. Guidance can leverage the legitimacy of the physician’s role to reinforce health and safety.

As a fundamental step, pediatricians should follow clinical practice recommendations to apply routine universal screening for substance use using validated tools, brief intervention, and/or referral to treatment with adolescents.28 Also, pediatricians can ask youth about online and offline communications about AOD with peers, as either may signal a risk for youth involvement. Pediatricians should be aware that youth references to alcohol use on their social media profiles correlate with clinical measures of real-world alcohol use.29,30 In cases where patients or parents notify a pediatrician of AOD-related social media posting behavior, screening for substance use is particularly important. Pediatricians can also ask about the use of social media to obtain substances, discounts, or promotions and about exposure to online marketing, even where such content is not sought out by youth. These activities can be discouraged and recommended against, and youth can be
engaged through a truth-in-advertising approach centered on the deceptiveness of the industry. Finally, pediatricians should counsel parents to teach their children to use social media mindfully and to maintain a participatory presence in their children’s online world. Beyond these clinically oriented activities, pediatricians can engage with advocacy efforts and stay abreast of technologies and policies oriented to promote safety (Table 2). Keeping the lines of communication open with patients and parents about these issues may help to combat AOD risk.

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