Acad Pediatr

Actions

* [Search in PubMed](https://pubmed.ncbi.nlm.nih.gov/?term=%22Acad+Pediatr%22%5Bjour%5D)
* [Search in NLM Catalog](https://www.ncbi.nlm.nih.gov/nlmcatalog?term=%22Acad+Pediatr%22%5bTitle+Abbreviation%5d)
* [Add to Search](https://pubmed.ncbi.nlm.nih.gov/31401229/?dopt=Abstract&utm_source=dlvr.it&utm_medium=twitter)

. Jan-Feb 2020;20(1):128-135.

doi: 10.1016/j.acap.2019.08.003. Epub 2019 Aug 8.

**Internet Alcohol Marketing Recall and Drinking in Underage Adolescents**

[Auden C McClure](https://pubmed.ncbi.nlm.nih.gov/?term=McClure+AC&cauthor_id=31401229) [1](https://pubmed.ncbi.nlm.nih.gov/31401229/?dopt=Abstract&utm_source=dlvr.it&utm_medium=twitter#affiliation-1) , [Joy Gabrielli](https://pubmed.ncbi.nlm.nih.gov/?term=Gabrielli+J&cauthor_id=31401229) [2](https://pubmed.ncbi.nlm.nih.gov/31401229/?dopt=Abstract&utm_source=dlvr.it&utm_medium=twitter#affiliation-2) , [Samantha Cukier](https://pubmed.ncbi.nlm.nih.gov/?term=Cukier+S&cauthor_id=31401229) [3](https://pubmed.ncbi.nlm.nih.gov/31401229/?dopt=Abstract&utm_source=dlvr.it&utm_medium=twitter#affiliation-3) , [Kristina M Jackson](https://pubmed.ncbi.nlm.nih.gov/?term=Jackson+KM&cauthor_id=31401229) [4](https://pubmed.ncbi.nlm.nih.gov/31401229/?dopt=Abstract&utm_source=dlvr.it&utm_medium=twitter#affiliation-4) , [Zoe L B Brennan](https://pubmed.ncbi.nlm.nih.gov/?term=Brennan+ZLB&cauthor_id=31401229) [5](https://pubmed.ncbi.nlm.nih.gov/31401229/?dopt=Abstract&utm_source=dlvr.it&utm_medium=twitter#affiliation-5) , [Susanne E Tanski](https://pubmed.ncbi.nlm.nih.gov/?term=Tanski+SE&cauthor_id=31401229) [6](https://pubmed.ncbi.nlm.nih.gov/31401229/?dopt=Abstract&utm_source=dlvr.it&utm_medium=twitter#affiliation-6)

Affiliations Expand

**Affiliations**

* 1 Department of Pediatrics (AC McClure and SE Tanski), Geisel School of Medicine at Dartmouth, Lebanon, NH; Cancer Control, Norris Cotton Cancer Center (AC McClure and SE Tanski), Lebanon NH; C. Everett Koop Institute (AC McClure, S Cukier, ZLB Brennan, and SE Tanski), Geisel School of Medicine at Dartmouth, Lebanon NH. Electronic address: auden.c.mcclure@hitchcock.org.
* 2 Department of Biomedical Data Science (J Gabrielli and ZLB Brennan), Geisel School of Medicine at Dartmouth, Lebanon NH; Department of Clinical and Health Psychology (J Gabrielli), University of Florida, Gainesville, Fla.
* 3 C. Everett Koop Institute (AC McClure, S Cukier, ZLB Brennan, and SE Tanski), Geisel School of Medicine at Dartmouth, Lebanon NH; Clinical Epidemiology Program (S Cukier), Ottawa Hospital Research Institute, Ottawa, Ontario, Canada.
* 4 Center for Alcohol and Addiction Studies, Brown University (KM Jackson), Providence, RI.
* 5 Department of Biomedical Data Science (J Gabrielli and ZLB Brennan), Geisel School of Medicine at Dartmouth, Lebanon NH; C. Everett Koop Institute (AC McClure, S Cukier, ZLB Brennan, and SE Tanski), Geisel School of Medicine at Dartmouth, Lebanon NH.
* 6 Department of Pediatrics (AC McClure and SE Tanski), Geisel School of Medicine at Dartmouth, Lebanon, NH; Cancer Control, Norris Cotton Cancer Center (AC McClure and SE Tanski), Lebanon NH; C. Everett Koop Institute (AC McClure, S Cukier, ZLB Brennan, and SE Tanski), Geisel School of Medicine at Dartmouth, Lebanon NH.
* PMID: **31401229**
* PMCID: [PMC7055537](http://www.ncbi.nlm.nih.gov/pmc/articles/pmc7055537/) (available on 2021-01-01)
* DOI: [10.1016/j.acap.2019.08.003](https://doi.org/10.1016/j.acap.2019.08.003)

Free PMC article

Item in Clipboard

**Internet Alcohol Marketing Recall and Drinking in Underage Adolescents**

Auden C McClure et al. Acad Pediatr. Jan-Feb 2020.

Free PMC article Show details

Acad Pediatr

Actions

* [Search in PubMed](https://pubmed.ncbi.nlm.nih.gov/?term=%22Acad+Pediatr%22%5Bjour%5D)
* [Search in NLM Catalog](https://www.ncbi.nlm.nih.gov/nlmcatalog?term=%22Acad+Pediatr%22%5bTitle+Abbreviation%5d)
* [Add to Search](https://pubmed.ncbi.nlm.nih.gov/31401229/?dopt=Abstract&utm_source=dlvr.it&utm_medium=twitter)

. Jan-Feb 2020;20(1):128-135.

doi: 10.1016/j.acap.2019.08.003. Epub 2019 Aug 8.

**Authors**

[Auden C McClure](https://pubmed.ncbi.nlm.nih.gov/?term=McClure+AC&cauthor_id=31401229) [1](https://pubmed.ncbi.nlm.nih.gov/31401229/?dopt=Abstract&utm_source=dlvr.it&utm_medium=twitter#affiliation-1) , [Joy Gabrielli](https://pubmed.ncbi.nlm.nih.gov/?term=Gabrielli+J&cauthor_id=31401229) [2](https://pubmed.ncbi.nlm.nih.gov/31401229/?dopt=Abstract&utm_source=dlvr.it&utm_medium=twitter#affiliation-2) , [Samantha Cukier](https://pubmed.ncbi.nlm.nih.gov/?term=Cukier+S&cauthor_id=31401229) [3](https://pubmed.ncbi.nlm.nih.gov/31401229/?dopt=Abstract&utm_source=dlvr.it&utm_medium=twitter#affiliation-3) , [Kristina M Jackson](https://pubmed.ncbi.nlm.nih.gov/?term=Jackson+KM&cauthor_id=31401229) [4](https://pubmed.ncbi.nlm.nih.gov/31401229/?dopt=Abstract&utm_source=dlvr.it&utm_medium=twitter#affiliation-4) , [Zoe L B Brennan](https://pubmed.ncbi.nlm.nih.gov/?term=Brennan+ZLB&cauthor_id=31401229) [5](https://pubmed.ncbi.nlm.nih.gov/31401229/?dopt=Abstract&utm_source=dlvr.it&utm_medium=twitter#affiliation-5) , [Susanne E Tanski](https://pubmed.ncbi.nlm.nih.gov/?term=Tanski+SE&cauthor_id=31401229) [6](https://pubmed.ncbi.nlm.nih.gov/31401229/?dopt=Abstract&utm_source=dlvr.it&utm_medium=twitter#affiliation-6)

**Affiliations**

* 1 Department of Pediatrics (AC McClure and SE Tanski), Geisel School of Medicine at Dartmouth, Lebanon, NH; Cancer Control, Norris Cotton Cancer Center (AC McClure and SE Tanski), Lebanon NH; C. Everett Koop Institute (AC McClure, S Cukier, ZLB Brennan, and SE Tanski), Geisel School of Medicine at Dartmouth, Lebanon NH. Electronic address: auden.c.mcclure@hitchcock.org.
* 2 Department of Biomedical Data Science (J Gabrielli and ZLB Brennan), Geisel School of Medicine at Dartmouth, Lebanon NH; Department of Clinical and Health Psychology (J Gabrielli), University of Florida, Gainesville, Fla.
* 3 C. Everett Koop Institute (AC McClure, S Cukier, ZLB Brennan, and SE Tanski), Geisel School of Medicine at Dartmouth, Lebanon NH; Clinical Epidemiology Program (S Cukier), Ottawa Hospital Research Institute, Ottawa, Ontario, Canada.
* 4 Center for Alcohol and Addiction Studies, Brown University (KM Jackson), Providence, RI.
* 5 Department of Biomedical Data Science (J Gabrielli and ZLB Brennan), Geisel School of Medicine at Dartmouth, Lebanon NH; C. Everett Koop Institute (AC McClure, S Cukier, ZLB Brennan, and SE Tanski), Geisel School of Medicine at Dartmouth, Lebanon NH.
* 6 Department of Pediatrics (AC McClure and SE Tanski), Geisel School of Medicine at Dartmouth, Lebanon, NH; Cancer Control, Norris Cotton Cancer Center (AC McClure and SE Tanski), Lebanon NH; C. Everett Koop Institute (AC McClure, S Cukier, ZLB Brennan, and SE Tanski), Geisel School of Medicine at Dartmouth, Lebanon NH.
* PMID: **31401229**
* PMCID: [PMC7055537](http://www.ncbi.nlm.nih.gov/pmc/articles/pmc7055537/) (available on 2021-01-01)
* DOI: [10.1016/j.acap.2019.08.003](https://doi.org/10.1016/j.acap.2019.08.003)

Item in Clipboard

Full-text links Cite

[Favorites](https://www.ncbi.nlm.nih.gov/labs/account/?back_url=https%3A//pubmed.ncbi.nlm.nih.gov/31401229/%3Fdopt%3DAbstract%26utm_source%3Ddlvr.it%26utm_medium%3Dtwitter%23add-to-favorites)

**Abstract**

**Objective:** Evidence suggests that adolescents are exposed to alcohol marketing in digital media. We aimed to assess recall of Internet alcohol marketing and its association with underage drinking.

**Methods:** New England adolescents age 12 to 17 years (N = 202) were recruited from a pediatric clinic. Subjects completed an online survey assessing: 1) general simple recall of Internet alcohol marketing and 2) image-prompted recall of specific Internet alcohol marketing channels (display ads, commercials, brand websites, and brand social media pages). Cross-sectional associations between recall (simple and image-prompted) and ever-drinking were each assessed in regression analysis adjusting for age, gender, race, parent education, ever-smoking, media use, sensation-seeking, peer/parent drinking, parent monitoring/responsiveness, and parent Internet monitoring.

**Results:** In this sample (Mage = 14.5 years; 55% female; 89% white; high parent education), 20% reported ever-drinking and 87% recalled Internet alcohol marketing. Of the latter, 67% recalled display ads, 67% Internet commercials, 5% websites, and 5% social media pages. In logistic regression, higher simple Internet alcohol advertising recall was independently associated with higher odds of ever-drinking for simple (adjusted odds ratio: 2.66 [1.04,6.83]) but not for image-prompted recall.

**Conclusions:** Despite controlling for potential confounders, simple recall of Internet alcohol marketing was significantly associated with underage drinking whereas image-prompted recall was significant only in bivariate analysis, likely due to small sample and a more limited range of specific channels assessed than those accessed by adolescents. Further longitudinal studies using image-prompted recall and capturing a broader range of internet platforms could be used to better understand adolescent engagement with alcohol marketing and guide policy and prevention efforts.

**Keywords:** Internet; adolescence; advertising; alcohol use; marketing; youth.

Copyright © 2019 Academic Pediatric Association. Published by Elsevier Inc. All rights reserved.

**Conflict of interest statement**

Conflict of Interest: The Authors have no conflicts of interest to report.

**Similar articles**

* [A New Recall of Alcohol Marketing Scale for Youth: Measurement Properties and Associations With Youth Drinking Status.](https://pubmed.ncbi.nlm.nih.gov/31603759/)

Gabrielli J, Brennan ZLB, Stoolmiller M, Jackson KM, Tanski SE, McClure AC.Gabrielli J, et al. J Stud Alcohol Drugs. 2019 Sep;80(5):563-571. doi: 10.15288/jsad.2019.80.563.J Stud Alcohol Drugs. 2019. PMID: 31603759

* [Internet Alcohol Marketing and Underage Alcohol Use.](https://pubmed.ncbi.nlm.nih.gov/26738886/)

McClure AC, Tanski SE, Li Z, Jackson K, Morgenstern M, Li Z, Sargent JD.McClure AC, et al. Pediatrics. 2016 Feb;137(2):e20152149. doi: 10.1542/peds.2015-2149. Epub 2016 Jan 6.Pediatrics. 2016. PMID: 26738886 Free PMC article.

* [Self-Reported Youth and Adult Exposure to Alcohol Marketing in Traditional and Digital Media: Results of a Pilot Survey.](https://pubmed.ncbi.nlm.nih.gov/28219114/)

Jernigan DH, Padon A, Ross C, Borzekowski D.Jernigan DH, et al. Alcohol Clin Exp Res. 2017 Mar;41(3):618-625. doi: 10.1111/acer.13331. Epub 2017 Feb 20.Alcohol Clin Exp Res. 2017. PMID: 28219114

* [Alcohol marketing and youth alcohol consumption: a systematic review of longitudinal studies published since 2008.](https://pubmed.ncbi.nlm.nih.gov/27565582/)

Jernigan D, Noel J, Landon J, Thornton N, Lobstein T.Jernigan D, et al. Addiction. 2017 Jan;112 Suppl 1:7-20. doi: 10.1111/add.13591. Epub 2016 Nov 8.Addiction. 2017. PMID: 27565582 Review.

* [The commercial use of digital media to market alcohol products: a narrative review.](https://pubmed.ncbi.nlm.nih.gov/27327239/)

Lobstein T, Landon J, Thornton N, Jernigan D.Lobstein T, et al. Addiction. 2017 Jan;112 Suppl 1:21-27. doi: 10.1111/add.13493. Epub 2016 Oct 11.Addiction. 2017. PMID: 27327239 Review.

* [Cued recall of alcohol advertising on television and underage drinking behavior.](https://pubmed.ncbi.nlm.nih.gov/25599526/)

Tanski SE, McClure AC, Li Z, Jackson K, Morgenstern M, Li Z, Sargent JD.Tanski SE, et al. JAMA Pediatr. 2015 Mar;169(3):264-71. doi: 10.1001/jamapediatrics.2014.3345.JAMA Pediatr. 2015. PMID: 25599526 Free PMC article.

* [Aspirational Brand Choice and Underage Alcohol Use.](https://pubmed.ncbi.nlm.nih.gov/29885148/)

McClure AC, Gabrielli J, Sargent JD, Tanski SE.McClure AC, et al. J Stud Alcohol Drugs. 2018 May;79(3):408-416. doi: 10.15288/jsad.2018.79.408.J Stud Alcohol Drugs. 2018. PMID: 29885148 Free PMC article.

* [Media alcohol advertising with drinking behaviors among young adolescents in Taiwan.](https://pubmed.ncbi.nlm.nih.gov/28599213/)

Chen CY, Huang HY, Tseng FY, Chiu YC, Chen WJ.Chen CY, et al. Drug Alcohol Depend. 2017 Aug 1;177:145-152. doi: 10.1016/j.drugalcdep.2017.03.041. Epub 2017 May 30.Drug Alcohol Depend. 2017. PMID: 28599213

* [Alcohol marketing receptivity, marketing-specific cognitions, and underage binge drinking.](https://pubmed.ncbi.nlm.nih.gov/23256927/)

McClure AC, Stoolmiller M, Tanski SE, Engels RC, Sargent JD.McClure AC, et al. Alcohol Clin Exp Res. 2013 Jan;37 Suppl 1(Suppl 1):E404-13. doi: 10.1111/j.1530-0277.2012.01932.x. Epub 2012 Dec 19.Alcohol Clin Exp Res. 2013. PMID: 23256927 Free PMC article. Clinical Trial.

* [The relationship between brand-specific alcohol advertising on television and brand-specific consumption among underage youth.](https://pubmed.ncbi.nlm.nih.gov/24986257/)

Ross CS, Maple E, Siegel M, DeJong W, Naimi TS, Ostroff J, Padon AA, Borzekowski DL, Jernigan DH.Ross CS, et al. Alcohol Clin Exp Res. 2014 Aug;38(8):2234-42. doi: 10.1111/acer.12488. Epub 2014 Jul 1.Alcohol Clin Exp Res. 2014. PMID: 24986257 Free PMC article.

Show more similar articles

[See all similar articles](https://pubmed.ncbi.nlm.nih.gov/?linkname=pubmed_pubmed&from_uid=31401229)

**Cited by *1* *article***

* [A New Recall of Alcohol Marketing Scale for Youth: Measurement Properties and Associations With Youth Drinking Status.](https://pubmed.ncbi.nlm.nih.gov/31603759/)

Gabrielli J, Brennan ZLB, Stoolmiller M, Jackson KM, Tanski SE, McClure AC.Gabrielli J, et al. J Stud Alcohol Drugs. 2019 Sep;80(5):563-571. doi: 10.15288/jsad.2019.80.563.J Stud Alcohol Drugs. 2019. PMID: 31603759