Published in final edited form as:

J Adolesc Health. 2019 June ; 64(6): 804–806. doi:10.1016/j.jadohealth.2019.02.011.

Screening and Counseling for Alcohol use in Adolescents with Chronic Medical Conditions in the Ambulatory Setting

Julie Lunstead, MPH^{1,2}, Elissa R. Weitzman, ScD, MSc^{3,4,5}, Elizabeth Harstad, MD, MPH^{2,3}, Fatma Dedeoglu, MD^{3,6}, Jonathan M. Gaffin, MD, MMSc^{3,7}, Katherine C. Garvey, MD, MPH^{3,8}, Andrew MacGinnitie, MD, PhD^{3,9}, Paul A. Rufo, MD, MMSc^{3,10}, Laurie Newman Fishman, MD^{3,10}, Lauren E. Wisk, PhD^{3,4}, and Sharon Levy, MD, MPH^{1,2,3}

⁽¹⁾Adolescent Substance Use and Addiction Program, Boston Children's Hospital

⁽²⁾Division of Developmental Medicine, Boston Children's Hospital

⁽³⁾Department of Pediatrics, Harvard Medical School

⁽⁴⁾Division of Adolescent/Young Adult Medicine, Boston Children's Hospital

⁽⁵⁾Computational Health Informatics Program, Boston Children's Hospital

⁽⁶⁾Division of Immunology, Rheumatology Program, Boston Children's Hospital

⁽⁷⁾Division of Respiratory Diseases, Boston Children's Hospital

⁽⁸⁾Division of Endocrinology, Boston Children's Hospital

⁽⁹⁾Division of Immunology, Boston Children's Hospital

⁽¹⁰⁾Division of Gastroenterology, Boston Children's Hospital

Abstract

Background: We seek to determine how youth with chronic medical conditions experience alcohol screening and counseling.

Method: Adolescents with type 1 diabetes, juvenile idiopathic arthritis, moderate persistent asthma, cystic fibrosis, attention deficit hyperactivity disorder, or inflammatory bowel disease were surveyed. Descriptive statistics and regression analysis quantified rates of asking and counseling about alcohol.

Results: Of 390 participants (75.1% white/non-Hispanic, 51.8% female, average age 16.4 years), 70% reported being asked about their alcohol use by a healthcare provider and 76% reported receiving at least one message regarding alcohol and health. Of past year drinkers 54% disclosed use to their provider. Only 2.0% of youth reported receiving the message "I should not drink".

Address correspondence to: Sharon Levy, MD, MPH, Boston Children's Hospital, 300 Longwood Avenue, 3114, Boston, MA 02115, Tel: 857-218-4308, sharon.levy@childrens.harvard.edu.

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Conclusion: Most youth with chronic medical conditions were asked and counseled about alcohol use though few heard unambiguous recommendations to avoid alcohol consumption.

Implications and Contribution: Youth with medical conditions are commonly asked and counseled about alcohol. Asking about alcohol use seems to increase the likelihood of counseling. Improving screening implementation and delivering unambiguous advice not to use alcohol may increase the effectiveness of this practice.

INTRODUCTION

Adolescent alcohol use is associated with both acute and chronic health harms¹ and youth with chronic medical conditions are uniquely vulnerable.² This group has high motivation to protect their health³ and accurate knowledge about alcohol is associated with less alcohol consumption.⁴ Frequent healthcare visits made by youth with chronic illnesses afford the opportunity to deliver disease specific alcohol counseling though little is known about whether chronically ill youth are being screened or counseled. We seek to assess whether youth with chronic medical conditions were asked about their alcohol use and received counseling from their healthcare teams.

METHODS

We analyzed data from a study to validate the National Institute on Alcoholism Alcohol Abuse youth alcohol screening tool (NIAAA screen) among youth with chronic medical conditions. This convenience sample (n=390, 76.7% consent rate) consisted of youth aged 14-18 who had been diagnosed with type 1 diabetes, juvenile idiopathic arthritis, moderate persistent asthma or cystic fibrosis, attention deficit hyperactivity disorder, or inflammatory bowel disease presenting for care at Boston Children's Hospital. Youth were consented with a waiver of parental consent under the approval of the Boston Children's Hospital Institutional Review Board. Detailed methods have been published previously.⁵

The Diagnostic Interview Schedule for Children (DISC) and NIAAA screen were used to measure past year alcohol use (any vs none). All participants reported whether they had been asked about use in the past year ("Other than today, in the past year, did your doctor or a member of your health care team ask you if you drink alcohol?"; yes/no) and if they disclosed any alcohol use ("In the past year, did you tell your doctor or a member of your health care team that you drink alcohol?"; yes/no response). Participants were also asked "Other than today, in the past year did your doctor or a member of your health care team tell you any of the following?" and asked to check all that apply: "Alcohol use is not healthy", "Alcohol can make my condition worse", "Alcohol could interfere with or get in the way of my medications", "I should not drink at all or I should stop drinking", "I should cut down on my drinking", "We did not discuss alcohol use at all", and "Other" accompanied by free text explanations that were coded into appropriate response categories. Participants that endorsed any response item other than "We did not discuss alcohol use at all" were coded as having been counseled.

Analyses were conducted using SAS 9.4 software (SAS Institute, Inc., Cary, North Carolina). Descriptive statistics were used to characterize rates of asking and counseling for

alcohol use by demographics (table 1). Differences were compared using the Wilcoxon rank-sum test or Chi-Square (χ^2) test, as appropriate. Multivariate regression using Generalized Estimating equations (GEE) to account for clustering within recruitment clinic were performed to examine the association between having been asked about alcohol use and receipt of counseling messages; models adjusted for age and race/ethnicity.

RESULTS

The mean age of the sample was 16 years, approximately half were female and the majority were white non-Hispanic (table 1). Seventy percent of participants were asked about alcohol use. Only 48 of 89 (54%) patients that identified themselves as past year drinkers chose to disclose their use when asked. 298 participants (76%), including 108 past year drinkers, reported receiving at least one counseling message. Participants that were asked about alcohol were significantly more likely to have been counseled (AOR 5.92, 95% CI 4.30-8.17).

Participants reported receiving the following messages regarding alcohol: “Alcohol use is not healthy” (61%), “Alcohol could interfere or get in the way of my medications” (44%), “Alcohol could make my disease worse” (37%), “I should cut down on my drinking” (13%), and “I should not drink at all or stop drinking.” (2%).

DISCUSSION

A majority of adolescents with a chronic medical condition reported being asked about their alcohol use and receiving a counseling message, in accordance with the American Academy of Pediatrics (AAP) and other professional organizations recommendations.⁶ We found that asking about substance use is associated with counseling and may be a logical, convenient or comfortable way for providers to begin counseling conversations, while not asking questions may lead to missed opportunities to identify and intervene. Still, the United States Preventive Services Task Force latest review finds the state of evidence insufficient to recommend screening adolescents for alcohol use.⁷

Asking about alcohol use does not necessarily lead to honest disclosure. Here, nearly half of past year drinkers did *not* disclose their use, consistent with other reports.⁸ We did not ascertain how providers asked youth about their alcohol use or whether screening tools were used. Adolescents prefer screening tools administered on paper or by computer⁹ and use of these modalities may improve disclosure. However, self-administration could preclude the need for clinicians to bring up the topic of alcohol. Further research is needed to optimize screening protocols in clinical settings.

Receipt of general health-related counseling messages was common though personalized messages regarding the impact of alcohol use (i.e. “on my condition” or “on my medications”) were less common and very few participants acknowledged receiving an explicit message not to drink alcohol, as recommended by the AAP.⁶

Our sample reflects high participation and medical heterogeneity, both strengths. It drew from a single hospital, is predominantly white non-Hispanic from upper socioeconomic

status homes, limiting generalizability. Information on the order in which participants received screening or counseling was unavailable, though a logical assumption is that asking preceded counseling. Pre-defined response items could not have captured the richness of counseling. Recall and response biases may misclassify some participants.

Conclusion

Rates of health professionals asking and counseling about alcohol were high among medically vulnerable youth, though disclosure rates were relatively low and counseling messages did not align with AAP recommendations. As alcohol use is known to be harmful, this is a missed opportunity. Our findings suggest the need for further improvements in alcohol screening and counseling for these youth. Health care providers should consistently reinforce the message that choosing not to use alcohol is the healthiest choice for adolescents.

Acknowledgements:

"The authors acknowledge the contributions of Aria Wiseblatt in assisting with the preparation of this manuscript for submission."

Funding Source: NIAAA R01-AA021913

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Table 1-

Sample sociodemographic characteristics in aggregate and by alcohol screening and counseling

	Total	Asked about Alcohol use	p-value	Counseled for Alcohol Use	p-value
Total N (%)	390 (100%)	273 (70.0%)		298 (76.4%)	
Age in years			0.0115		0.1277
Mean	16.4	16.5		16.4	
Standard Deviation	1.3	1.3		1.3	
Median (IQR)	16.0 (15-18)	17.0 (16-18)		17.0 (16-17)	
Grade			0.0133		0.4629
9 th	55 (14.1%)	31 (56.4%)		38 (69.1%)	
10 th	81 (20.8%)	58 (71.6%)		59 (72.8%)	
11 th	101 (25.9%)	66 (65.3%)		78 (77.2%)	
12 th	93 (23.8%)	67 (72.0%)		75 (80.6%)	
College	60 (15.4%)	51 (85.0%)		48 (80.0%)	
Sex			0.5653		0.5751
Female	202 (51.8%)	144 (71.3%)		152 (75.2%)	
Male	188 (48.2%)	129 (68.6%)		146 (77.7%)	
Race/Ethnicity			0.0229		0.1579
White, Non-Hispanic	293 (75.1%)	214 (73.0%)		229 (78.2%)	
Non-white	97 (24.9%)	59 (60.8%)		69 (71.1%)	
Parental Education			0.3591		0.4281
Parent has less than a college degree	98 (25.1%)	65 (66.3%)		72 (73.5%)	
Parent is a college graduate	292 (74.9%)	208 (71.2%)		226 (77.4%)	
Parents Living in Home			0.0943		0.4718
Less than two or foster care	95 (24.4%)	60 (63.2%)		70 (73.7%)	
Two or more	295 (75.6%)	213 (72.2%)		228 (77.3%)	
Clinic/Disease Group			0.0503		0.0022
Pulmonary Medicine (Asthma/Cystic Fibrosis)	81 (20.8%)	48 (59.3%)		51 (63.0%)	
Endocrinology (type 1 Diabetes Mellitus)	78 (20.0%)	55 (70.5%)		60 (76.9%)	
Gastroenterology (Inflammatory Bowel Disease)	82 (21.0%)	61 (74.4%)		73 (89.0%)	
Rheumatology (Juvenile Idiopathic Arthritis)	81 (20.8%)	54 (66.7%)		59 (72.8%)	
Developmental Medicine (Attention Deficit Hyperactive Disorder)	68 (17.4%)	55 (80.9%)		55 (80.9%)	
Asked about Alcohol Use					<.0001
Yes	273 (70.0%)			238 (87.2%)	
No	117 (30.0%)			60 (51.3%)	

'Total' column displays column percent while row percent is displayed elsewhere

P-values derived from the χ^2 or Wilcoxon tests

IQR = Interquartile Range