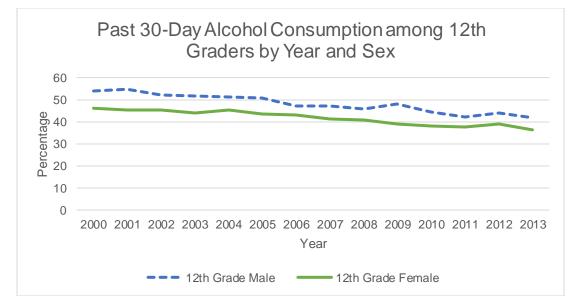
Women, Girls, and Alcohol

SCOPE OF THE PROBLEM:

In 2015, 66% of female high school students had ever drunk alcohol compared to 62% of male high school students.¹The gender gap between girls' and boys' past 30-day alcohol use closed for 8th graders and is narrowing for 12th graders.²



- From 2002 to 2012, binge drinking declined for both 12 to 20-year-old males and 12 to 17-year-old females but not 18 to 20-year-old females.³
- The percentage of males age 12+ who abuse or are dependent on alcohol decreased between 2002 and 2012, but there was no such decrease for females.³

YOUTH EXPOSURE TO ALCOHOL ADVERTISING:

- Longitudinal data shows 7th grade girls' frequency of exposure to alcohol advertising predicts alcohol consumption and alcohol-related problems by 9th grade. These relationships hold even after controlling for alcohol problems in 7th grade, age, friend's/adult's drinking, general TV watching, acculturation, and parent's job/education.⁴
- Girls are more likely to prefer alcopops than boys. Specifically, flavored alcohol brands Smirnoff Ice, Mike's, and Bartles & Jaymes are twice as popular among underage girls as they are among underage boys.⁵
- Girls may be particularly susceptible to alcohol advertising, especially to alcohol-branded merchandise (ABM). One study found that 10-to 14-year-old girls who owned ABM were 3.3 times more likely to start using alcohol within 1-2 years than girls who did not own ABM. There was no relationship between owning ABM and early initiation of drinking in boys in this age group.⁶

 Underage women aged 18-20 years old were exposed to more advertising than adult women for 16 of the top 25 brands they consumed.⁷

HEALTH CONSEQUENCES:

- Women generally drink smaller amounts and less often than men. However, women drinkers are at higher risk for certain medical problems, including liver, brain, and heart damage than are men who drink comparable amounts.[®]
- Women metabolize alcohol differently than men. When women and men of the same body weight drink the same amount of alcohol, women reach higher peak blood alcohol levels.⁹
- Several meta-analyses risk of breast cancer rises as the level of consumption increases; the risk of breast cancer rises by 2% to 12% for each additional standard drink consumed per day.¹⁰
- Approximately 6,133 breast cancer deaths in the United States are attributable to alcohol consumption.^{12 13}

DRINK DRIVING:

- From 1990 to 2007, the rate of self-reported drunk driving decreased 12% for men age 18 years or older, but the rate of women's drunk driving only fell by 2%. During that same time, men's arrests for driving under the influence decreased by 32% while women's arrests only declined by 5%.¹⁴
- The sex differences are striking among those younger than 18 years old. Between 1998 and 2007, boys' DUI arrest rates fell by 23.7% but girls' rates rose 28.0%.¹⁵

PREGNANCY & MATERNAL HEALTH:

- No amount of alcohol is safe during pregnancy, and there is a dose-response relationship between binge drinking and adverse outcomes for the fetus.¹⁶
- Fetal alcohol spectrum disorders (FASDs) include cognitive, behavioral, and physical abnormalities due to prenatal alcohol exposure.¹⁵ Up to 2.4%-4.8% of 1st grade students (24-48 cases of FASD per 1,000 first grade children) have an FASD, and they are 100% preventable.¹⁷
- In a study using BRFSS data from 2011-2013, 1 in 10 (10.2%) pregnant women aged 18-44 years reported drinking while pregnant. One in 33 (3.1%) pregnant women reported binge drinking during their pregnancy.¹⁸
- Early initiation of alcohol use increases the likelihood that a teen mother will drink during pregnancy.¹⁹

RISKY SEXUAL BEHAVIOR AND SEXUAL ASSAULT:

 A 2006 study of 551 college females found 20.4% experienced an alcohol-related sexual assault.²⁰

- Forty-seven percent of women aged 18 to 24 years old who were raped or sexually assaulted between 1995 and 2013 thought their attacker was under the influence of alcohol/drugs.²¹
- Young women's first sexual intercourse that involves alcohol is more likely to be unplanned and consist of casual sex with an older partner.²²
- Each year between 1995 and 2013, an estimated 96,970 youth aged 18 to 24 years were sexually assaulted or date raped by another youth who had been drinking.²³

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Notes

1 Calculated using 2015 YRBS data available at: https://www.cdc.gov/healthyyouth/data/yrbs/data.htm

2 Johnston, L.D., O'Malley, P.M., Bachman, J.G., Schulenberg, J.E., and Miech, R.A. (2014). Demographic Subgroup Tends among Adolescents in The Use of Various Licit and Illicit Drugs, 1975– 2013 (Monitoring the Future Occasional Paper 81). Ann Arbor, MI: Institute for Social Research. Accessed November 6, 201 at: <u>http://www.monitoringthefuture.org/pubs/occpapers/mtf-occ81.pdf</u>

3 White, A., Castle, I. J., Chen, C. M., Shirley, M., Roach, D., and Hingson, R. (2015). Converging Patterns of Alcohol Use and Related Outcomes among Females and Males in the United States, 2002 to 2012. *Alcoholism, Clinical and Experimental Research,* 39(9):1712-1726.

4 Grenard, J. L., Dent, C.W., and Stacy, A. W. (2013). Exposure to Alcohol Advertisements and Teenage Alcohol-Related Problems. *Pediatrics*, 131(2):e369–e379. Accessed November 9, 2015 at: <u>http://pediatrics.aappublications.org/content/131/2/e369.long</u>

5 Siegel, M., Ayers, A. J., DeJong, W., Naimi, T. S., and Jernigan, D. H. (2015). Differences in Alcohol Brand Consumption among Underage Youth by Age, Gender, and Race/Ethnicity – United States, 2012. *Journal of Substance Use*, 20(6):430–438.

6 McClure, A. C., Dai Cin, S., Gibson, J. and Sargent, J.D. (2006). Ownership of Alcohol-Branded Merchandise and Initiation of Teen Drinking. *American Journal of Preventive Medicine*, 30(4):277-283.

7 Ross CS, Ostroff J, Siegel MB, DeJong W, Naimi TS, Jernigan DH. Youth Alcohol Brand Consumption and Exposure to Brand Advertising in Magazines. *J Stud. Alcohol Drugs.* 2014;75(4):615-622.

8 National Institute on Alcohol Abuse and Alcoholism. (1999). Are Women More Vulnerable to Alcohol's Effects? *Alcohol Alert,* 46. Available at: <u>http://pubs.niaaa.nih.gov/publications/aa46.htm</u>

9 U.S. Department of Health and Human Services, Public Health Service. (2000) 10th Special Report to the U.S. Congress on Alcohol and Health, 254. Available at: http://pubs.niaaa.nih.gov/publications/10report/intro.pdf

10 One standard drink is equivalent to 10-12 g of pure ethanol. Scoccianti, C., Lauby-Secretan, B., Bello, P. Y., Chajes, V., and Romieu, I. (2014). Female Breast Cancer and Alcohol Consumption: A Review of the Literature. *American Journal of Preventive Medicine*, 46(3 Suppl 1):S16–S25. Accessed November 9, 2015 at: <u>http://www.ajpmonline.org/article/S0749-3797(13)00646-6/fulltext</u>

11 Brooks, P. J. and Zakhari, S. (2013). Moderate Alcohol Consumption and Breast Cancer in Women: From Epidemiology to Mechanisms and Interventions. *Alcoholism: Clinical and Experimental Research*, 37(1):23–30. Accessed November 9, 2015 at: <u>http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4551426/</u>

12 Fifteen percent of breast cancer deaths are attributable to alcohol consumption. Nelson, D. E., Jarman, D. W., Rehm, J., Greenfield, T. K., Rey, G., Kerr, W. C., Miller, P., Shield, K. D., Ye, Y., and Naimi, T. S. (2013). Alcohol-Attributable Cancer Deaths and Years of Potential Life Lost in the

United States. American Journal of Public Health, 103(4):641–648. Accessed November 11, 2015 at: <u>http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3673233/</u>

13 There are 40,890 estimated breast cancer deaths in the United States in 2016. American Cancer Society. Cancer Facts & Figures 2016. Atlanta: American Cancer Society; 2016. Available at: http://www.cancer.org/acs/groups/content/@research/documents/document/acspc-047079.pdf

14 Schwartz, J. and Daravan, A. (2013). Enforcement Following 0.08% BAC Law Change: Sex-Specific Consequences of Changing Arrest Practices? *Addictive Behaviors*, 38(10):2506-2512.

15 FBI Uniform Crime Report. Driving under the influence from Table 33 FBI Crime in the US 1998 - 2007 Trends by sex. Accessed April 24, 2016 at: https://www2.fbi.gov/ucr/cius2007/data/table_33.html

16 Williams, J. F., Smith, V. C., and the Committee on Substance Abuse. (2015). Fetal Alcohol Spectrum Disorders. *Pediatrics*, 136(5):e1395-e1406. Accessed November 10, 2015 at: http://pediatrics.aappublications.org/content/pediatrics/early/2015/10/13/peds.2015-3113.full.pdf

17 May, P. A., Baete, A., Russo, J., Elliott, A. J., Blankenship, J., Kalberg, W. O., Buckley, D., Brooks, M., Hasken, J. Abdul-Rahman, O., Adam, M. P., Robinson, L. K., Manning, M., and Hoyme, H. E. (2014). Prevalence and Characteristics of Fetal Alcohol Spectrum Disorders. *Pediatrics*, 134:855–66. Accessed November 10, 2015 at:

http://pediatrics.aappublications.org/content/pediatrics/early/2014/10/21/peds.2013-3319.full.pdf

18 Tan, C. H., Denny, C. H., Cheal, N. E., Sniezek, J. E., and Kanny, D. (2015) Alcohol Use and Binge Drinking Among Women of Childbearing Age — United States, 2011–2013. *Morbidity and Mortality Weekly Report*, 64(37):1042-1046. Accessed November 10, 2015 at: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6437a3.htm

19 De Genna, N. M., Larkby, C., and Cornelius, M. D. (2007). Early and Adverse Experiences with Sex and Alcohol are Associated with Adolescent Drinking Before and During Pregnancy. *Addictive Behaviors*, 32(12):2799-2810. Available at: <u>http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2072931/</u>

20 Howard, D. E., Griffin, M. A., Boekeloo, B. O. (2008). Prevalence and Psychosocial Correlates of Alcohol-Related Sexual Assault among University Students. *Adolescence*, 43(172):733-50.

21 US Department of Justice Office of Justice Programs. (2014). Rape and Sexual Assault Victimization among College-Age Females, 1995–2013. Accessed November 7, 2015 at: <u>http://www.bjs.gov/content/pub/pdf/rsavcaf9513.pdf</u>

22 Livingston, J. A., Testa, M., Windle, M., and Bay-Cheng L. Y. (2015). Sexual Risk at First Coitus: Does Alcohol Make a Difference? *Journal of Adolescence*, 43:148–158.

23 Sexual assault and rape includes threatened, attempted, and completed rape and sexual assault. Sinozich, S. Langton, L. (2014). Rape and Sexual Assault among College-Age Females 1995-2013. Bureau of Justice Statistics Special Report, NCJ 248471. Accessed April 24, 2016 at: <u>http://www.bjs.gov/content/pub/pdf/rsavcaf9513.pdf</u>