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## Minimum Financial Outlays for Purchasing Alcohol Brands in the U.S

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### Abstract

**Background**—Low alcohol prices are a potent risk factor for excessive drinking, underage drinking, and adverse alcohol-attributable outcomes. Presently, there is little reported information on alcohol prices in the U.S., in particular as it relates to the costs of potentially beneficial amounts of alcohol.

**Purpose**—To determine the minimum financial outlay necessary to purchase individual brands of alcohol using online alcohol price data from January through March 2012.

**Methods**—The smallest container size and the minimum price at which that size beverage could be purchased in the U.S. in 2012 were determined for 898 brands of alcohol, across 17 different alcoholic beverage types. The analyses were conducted in March 2012.

**Results**—The majority of alcoholic beverage categories contain brands that can be purchased in the U.S. for very low minimum financial outlays.

**Conclusions**—In the U.S., a wide variety of alcohol brands, across many types of alcohol, are available at very low prices. Given that both alcohol use and abuse are responsive to price, particularly among adolescents, the prevalence of low alcohol prices is concerning. Surveillance of alcohol prices and minimum pricing policies should be considered in the U.S. as part of a public health strategy to reduce excessive alcohol consumption and related harms.

### Background

Low alcohol prices are a potent risk factor for excessive drinking, underage drinking, and adverse alcohol-attributable outcomes.<sup>1–7</sup> Conversely, raising the price of alcohol through taxes or by other means may be one of the most effective ways to reduce excessive alcohol consumption and related harms.<sup>3,4</sup> For example, a recent study reported that an alcohol tax of \$0.25 per drink would result in a 9.2% reduction in alcohol consumption, including an 11.4% reduction in heavy drinking.<sup>5</sup>

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Inflation-adjusted alcohol prices have dropped in recent decades, due to alcohol excise taxes not being increased to keep up with inflation, but also to real declines in those taxes in some jurisdictions.<sup>8–10</sup> Because alcohol consumption is responsive to price, these decreases have had important public health ramifications. Presently, there is little reported information on trends in alcohol prices in the U.S. These data would be useful to monitor current prices and price trends, to identify cheap alcohol brands that may contribute disproportionately to both excessive drinking and youth drinking, and to evaluate the impact of interventions to raise the price of alcohol.

Using online alcohol price data, DiLoreto et al.<sup>11</sup> provided the first comprehensive review and analysis of the ethanol content and price of specific alcohol brands. The current study extends that initial investigation by examining the total price (and price per drink) for the smallest container in which each brand is sold, meaning the minimum amount of money that must be spent to buy each brand. In some cases, the price per ounce of alcohol might be relatively high, yet purchasing that particular brand might still require only a minimal financial outlay for a small container. This analysis is particularly relevant for understanding purchasing behavior among adolescents, who typically have limited funds, and it will provide additional insight into the availability of low-priced alcohol products.

## Methods

The brand list developed for the DiLoreto et al. study<sup>11</sup> catalogued the prices for 898 alcohol brands across 17 different alcoholic beverage types: table wine (306), beer (132), vodka (86), cordials/liqueurs (77), flavored alcoholic beverages (62), rum (54), tequila (33), whiskey (29), gin (27), scotch (25), bourbon (23), brandy (15), alcoholic energy drinks (11), cognac (9), low-end fortified wine (5), and grain alcohol (5). From January through early March 2012, an Internet search was performed using the Google search engine's "shopping" option to determine the smallest container size and corresponding price (i.e., the "minimum financial outlay") for each of the 898 alcohol brands.

Each search was performed by starting with the smallest typical volume size for each alcohol type and then decreasing the volume amount from there until the smallest container size was identified. The brand's availability for purchase in that container was verified by clicking through to the Google-located online store through which it had been identified. Next, again using the Google "shopper" option, a new search was done to determine the lowest price available for each brand's smallest container size (e.g., by typing in *Seagram's Gin 50 ml \$*).

The number of standard drinks was calculated by multiplying the beverage's total volume by the percentage alcohol (ethanol) by volume, and then dividing by the size of a standard drink in the U.S. (0.6 fluid ounces of ethanol). All analyses were conducted at the end of March 2012.

## Results

Across alcoholic beverage categories, there is wide variability in the minimum financial outlays required to purchase alcohol brands in their smallest available container. For example, the median minimum outlay is \$1.49 for beer and \$1.89 for fortified wine, whereas the median minimum outlay for wine is \$8.05. Several beverage categories have a median minimum outlay in the \$2.00 to \$3.00 range, including bourbon (\$2.79), brandy (\$2.99), cordials/liqueurs (\$2.99), vodka (\$2.49), whiskey (\$2.35), and flavored alcoholic beverages (\$2.90).

Table 1 presents the 25 cheapest brands in terms of minimum financial outlay, the number of standard drinks in each brand's smallest container size, the price per drink, and the number of standard drinks that can be purchased with \$5.00. Spirits (20 of the 25 brands) dominate the list, and the vast majority of brands were available in a package size equivalent to at least one standard drink. In addition, because the price per drink was less than \$1.00 for 21 of the brands, an outlay of \$5.00 purchased five or more drinks for 80% of these brands. For example, a 50-ml container size of New Amsterdam gin holds 1.13 standard drinks, so that \$5.00 can purchase almost ten standard drinks (9.72). A complete listing of the brand-specific minimum financial outlays can be found at [www.youthalcoholbrands.com/outlay.html](http://www.youthalcoholbrands.com/outlay.html).

## Discussion

To the best of our knowledge, this is the first study to examine the minimum amount of money required to purchase the smallest available containers for a wide range of brands in the U.S. The majority of alcoholic beverage categories—particularly spirits—contain brands that can be purchased for very little money. In addition, there are a number of brands for which customers can spend \$5.00 or less and buy enough alcohol to become legally intoxicated.

Since low-priced brands are available in most beverage categories, policies that raise taxes on only certain types of alcoholic beverages will not necessarily limit the ability of underage youth to purchase inexpensive alcohol. Therefore, both broad-based pricing policies (e.g., standardized excise taxes across beverage types, minimum pricing) and specific measures to address the availability of alcohol products with low minimum financial outlays are warranted. For example, the ability of youth to access alcohol might be curtailed by regulating the availability of single-serve, ready-to-drink alcoholic beverages, or by setting minimum prices that cover all alcoholic beverages.

Several recent studies suggest that these types of alcohol policies may be effective.<sup>6,12,13</sup> These investigations found that establishing a minimal alcohol price<sup>6,12</sup> and restricting the sale of single-serve containers<sup>13</sup> were effective in reducing alcohol consumption<sup>6,12</sup> or reducing rates of neighborhood violent crime.<sup>13</sup> More recently, England has proposed<sup>14</sup> and Scotland has passed a minimum pricing policy,<sup>15</sup> which, as suggested, may be even more effective than merely raising excise taxes because it ensures that there are no low-priced products on the market that may appeal specifically to underage or high-volume drinkers.

Several limitations should be acknowledged. First, little is known about youth access to small alcohol container sizes and how that relates to per-ounce prices or minimum financial outlays. Importantly, alcoholic beverages that can be purchased in larger container sizes but at lower cost are exceptions to the “minimum financial outlay” analyses presented in this paper. Second, the data set was created using stores with posted Internet prices, which do not necessarily represent a systematic store sample. However, these data reflect current Internet prices in the marketplace and therefore lend an essential snapshot of low alcohol pricing in the U.S.<sup>11</sup> In addition, Internet prices from store to store for particular brands are similar, as expected with web-based products in which price comparisons are readily available for comparable products.

The minimum financial outlay data show that a wide variety of alcohol brands, across many types of alcoholic beverages, are available at extremely low prices in the U.S. Given that alcohol use and abuse are responsive to price, particularly among adolescents, the prevalence of very low alcohol prices is concerning. Surveillance of alcohol prices,

minimum pricing policies, and increased taxes should be considered in the U.S. as part of a public health strategy to reduce excessive alcohol consumption and related harms.

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## References

1. Grossman M, Chaloupka FJ, Sirtalan I. An empirical analysis of alcohol addiction: results from the monitoring the future panels. *Econ Inq*. 1998; 36(1):39–48.
2. Laixuthai A, Chaloupka FJ. Youth alcohol use and public policy. *Contemp Policy Issues*. 1993; 11(4):70–81.
3. Anderson P, Chisholm D, Fuhr DC. Effectiveness and cost-effectiveness of policies and programmes to reduce the harm caused by alcohol. *Lancet*. 2009; 373 (9682):2234–46. [PubMed: 19560605]
4. Wagenaar AC, Salois MJ, Komro KA. Effects of beverage alcohol price and tax levels on drinking: a meta-analysis of 1003 estimates from 112 studies. *Addiction*. 2009; 104(2):179–190. [PubMed: 19149811]
5. Daley JI, Stahre MA, Chaloupka FJ, Naimi TS. The impact of 25-cent-per-drink alcohol tax increase. *Am J Prev Med*. 2012; 42(4):382–389. [PubMed: 22424251]
6. Stockwell T, Auld MC, Zhao J, Martin G. Does minimum pricing reduce alcohol consumption? The experience of a Canadian province. *Addiction*. Published online February 11, 2012. 10.1111/j.1360-0443.2011.03763.x
7. Hahn RA, Middleton JC, Elder R, et al. Effects of alcohol retail privatization on excessive alcohol consumption and related harms. *Am J Prev Med*. 2012; 42(4):418–427. [PubMed: 22424256]
8. Chaloupka FJ, Grossman M, Saffer H. The effects of price on alcohol consumption and alcohol-related problems. *Alcohol Res Health*. 2002; 26(1):22–34. [PubMed: 12154648]
9. Xu X, Chaloupka FJ. The effects of prices on alcohol use and its consequences. *Alcohol Res Health*. 2011; 34(2):236–45. [PubMed: 22330223]
10. Godfrey J. Alcohol taxes: from the whiskey rebellion to the 1990 budget summit. *Tax Notes*. 1990; 48(2):137.
11. DiLoreto JT, Siegel M, Hinchey D, et al. Assessment of the average price and ethanol content of alcoholic beverages by brand – U.S. *Alcoholism: Clinical & Experimental Research*. 2011 Published online February 8, 2012. 10.1111/j.1530-0277.2011.01721.x
12. Purshouse, Meier, Brennan, Taylor, Rafia. Estimated effect of alcohol pricing policies on health and health economic outcomes in England: an epidemiological model. *Lancet*. 2010; 375(9723): 1355–64.22. [PubMed: 20338629]
13. Parker RN, McCaffree KJ, Skiles D. The impact of retail prices on violence: The case of single serve alcohol beverage containers. *Drug Alcohol Rev*. 2011; 30(5):496–504. [PubMed: 21896072]
14. Secretary of State for the Home Department. The Government's Alcohol Strategy. London, UK: Drugs and Alcohol Unit; 2012. [ranzetta.typepad.com/files/alcohol-strategy-2012.pdf](http://ranzetta.typepad.com/files/alcohol-strategy-2012.pdf)
15. Scottish Parliament, Alcohol (Minimum Pricing) (Scotland Bill [as passed]). May 24. 2012 [scottish.parliament.uk/help/43354.aspx](http://scottish.parliament.uk/help/43354.aspx)

Table 1

## Top 25 Brands with Lowest Minimum Financial Outlays

Alcohol Brand	Alcoholic Beverage Type	Minimum Financial Outlay (\$) <sup>a</sup>	Number of Standard Drinks <sup>b</sup>	Price per Standard Drink (\$) <sup>c</sup>	Number of Standard Drinks for \$5,000 <sup>d</sup>
1. New Amsterdam	Gin	\$0.58	1.13	\$0.51	9.72
2. Jacquin	Vodka	\$0.69	1.06	\$0.65	7.69
3. Fleischmann's	Vodka	\$0.75	1.12	\$0.67	7.46
4. Mr. Boston Liqueurs	Cordials/Liqueurs	\$0.75	0.67	\$1.12	4.47
5. Fleischmann's Gin	Gin	\$0.75	1.13	\$0.67	7.51
6. Admiral Nelson's	Rum	\$0.79	1.06	\$0.74	6.74
7. Kamora	Cordials/Liqueurs	\$0.79	0.66	\$1.21	4.15
8. Gilbey's	Vodka	\$0.79	1.13	\$0.70	7.13
9. Raspberry di Amore	Cordials/Liqueurs	\$0.79	0.46	\$1.70	2.94
10. UV	Vodka	\$0.79	1.08	\$0.73	6.84
11. Bacardi	Rum	\$0.84	1.16	\$0.73	6.90
12. Lord Calvert	Whiskey	\$0.85	1.13	\$0.75	6.63
13. Olde English	Beer	\$0.86	1.50	\$0.58	8.70
14. Jack Daniel's Cocktails	Flavored alcoholic beverage	\$0.87	1.33	\$0.65	7.66
15. E & J	Cordials/Liqueurs	\$0.88	0.48	\$1.85	2.71
16. Seagram's Vodka	Vodka	\$0.88	1.10	\$0.80	6.23
17. Canadian Mist	Whiskey	\$0.89	1.13	\$0.79	6.33
18. Gordon's	Vodka	\$0.89	1.13	\$0.79	6.33
19. Pabst	Beer	\$0.89	0.98	\$0.91	5.49
20. Icehouse	Beer	\$0.89	1.10	\$0.81	6.18
21. Skol	Vodka	\$0.89	1.13	\$0.79	6.33
22. Margaritaville	Tequila	\$0.92	1.13	\$0.82	6.13
23. Tarantula Cocktails	Flavored alcoholic beverage	\$0.95	0.62	\$1.53	3.26
24. Canadian Rich & Rare	Whiskey	\$0.96	1.13	\$0.85	5.87
25. Yukon Jack Cordials	Cordials/Liqueurs	\$0.96	1.41	\$0.68	7.34

Note: Smallest container size for all drink types was 50 ml, except for Olde English, Pabst, and Icehouse (12 ounces each); Jack Daniel's Cocktails (473 ml); and Tarantula Cocktails (200 ml).

<sup>a</sup>Minimum financial outlay is the amount of money that must be spent to purchase a particular brand in its smallest available container.

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<sup>b</sup>Number of standard drinks was calculated by dividing the volume of alcohol in a beverage (ounces of alcohol x percentage alcohol by volume) by a standard drink (0.6 ounces). This measure describes the number of drinks that is equivalent to each minimum financial outlay.

<sup>c</sup>Price per standard drink was calculated by dividing the minimum financial outlay by the number of standard drinks.

<sup>d</sup>Number of standard drinks for \$5.00 was calculated by dividing the minimum financial outlay into \$5.00 and then multiplying that figure by the number of standard drinks in the smallest container size.