



ALCOHOL PURCHASE STUDIES*
Integrated Report

January 14, 2010

Paul C. Friday, Ph.D.**
Qingli Meng, MPA
Riane Miller

Department of Criminal Justice
University of North Carolina-Charlotte

*This project was funded by the Division of Mental Health, Developmental Disabilities, and Substance Abuse Services/N.C. Department of Health and Human Services through an award from the Office of Juvenile Justice and Delinquency Prevention. It is administered by Innovation Research and Training, Inc. based in Durham, NC. Award # 2003-AH-FX-0056.

*** For further information: pfriday@uncc.edu or 704-699-8866



UNDERAGE ALCOHOL PURCHASE STUDY*

EXECUTIVE SUMMARY

This report includes findings from the sixth alcohol purchase study to determine how easy it is to purchase alcohol without providing legitimate identification in fall 2009 and previous studies, including one funded by the University of North Carolina-Charlotte in the University City area. The Fall, 2009 study was a random sample of 163 establishments throughout Mecklenburg County permitted to sell alcohol for off premise consumption, excluding ABC stores. Purchase attempts were made between October 19 and December 14, 2009, at 152 locations[†]

Results : Fall 2009

The proportion of establishments selling alcohol without checking for identification has consistently decreased since April 2007.

- **25% (38) of establishments in the county sold without requiring identification – 8 fewer than the last study**

The percent selling in the previous studies were 39.2%, 41.6%, 42.4%, 36.3%, and 29.7%

- **While not statistically significant, there has been a substantial decrease in the proportion of establishments selling alcohol without asking for identification.**

The proportion of establishments selling alcohol without checking for identification in the University area is less than the proportion in other regions of the county.

- **There is a one in five chance a person appearing under 21 will be able to purchase alcohol at a store in the University City area without providing identification.**
 - **21.1% (8) of the establishments in the university area sold without requiring identification**
- **At least 50% of the attempts were successful in zip codes 28202, 28214, 28211, and 28206.**

* This project was funded by the Division of Mental Health, Developmental Disabilities, and Substance Abuse Services/N.C. Department of Health and Human Services through an award from the Office of Juvenile Justice and Delinquency Prevention. It is administered by Innovation Research and Training, Inc. based in Durham, NC. ***. The research was done by Dr. Paul C. Friday, Research and Training Specialists, Inc. Concord, NC. www.RTSpecialists.com

[†] 11 stores were either out of business, lost license to sell alcohol, required a membership card for purchase, purchasers did not feel safe entering the establishment or purchasers could not locate.

- For 2007/2008 and 2008/2009, zip code 28206 sold over 50% of the time.
- No establishments in zip codes 28018, 28031, 28036, 28105, 28203, 28204, 28212, 28215, 28270, 28271, and 28280 sold without an ID.
- There were no differences in the probability of making a purchase by actual age or race of the buyer.
- Differences were found in the probability of making a purchase by gender ($p < .006$).
 - Male 21 of 56 successful purchases (37.5%)
 - Female 17 of 96 successful purchases (17.7%)
 -

A sale of alcohol was made to a student at a bar/restaurant in the university area 38.5% of the time.

If the students were females, the success of buying without being checked for identification was 64.3%. Males served without identification 8.3%

- There were no differences in the probability of making a purchase by perceived age of the clerk, clerk's gender or the race/ethnicity of the clerk.

Zip Code characteristics

A multivariate analysis of social-demographic variables[‡] was performed on the relationship between the percent of sales in each zip code - using the fall 2008 data. Only one variable was found to be significantly correlated to the percent of sales: percent of home ownership ($r = -.496$, $p = .022$).

The lower the percent of home ownership the higher the percent of sales without ID.

The one anomaly to this appears to be zip code 28078 which has a 67% owned, 22% rental, 11% vacant[§].

Conclusions

- The checking of identification for the sale of alcohol is increasing as focus on the practice is increasing. However, on average 25% of attempts to purchase alcohol without showing identification are still successful.
- The greatest success has been with drug stores and supermarkets.
- The follow-up responses of store managers have been nearly 100% positive. This type of education is critically important to enable managers to provide adequate training for their employees and to reinforce the community's concern about underage drinking.
- While it is not required by law that sellers of alcohol check for identification under NC §18B-302 (a), it is a defense under sections d(1) and d(2). We suggest that the checking of identification should be considered a "best practice" for retailers to follow.

[‡] These factors included population density, percent by race, household income, percent rent/owned, crime rates etc.

[§] Statistics calculated from data on <http://www.pahomes.com/page47.htm> [insert any zip code].

- Some clerks ask for identification and then, when one is not provided, none-the-less make sales. This occurred in 10 of the 38 sales made. This needs to be addressed in training.
- There needs to be stronger legislation on the state or local level to require identification in retail sales. Given the resource restraints on alcohol enforcement the community would be well-served if identification was required.
- Establishments in certain zip codes appear to be more lax in requiring identification. An environment scan of these areas and the establishments in them should be conducted to see what may be impacting this difference so that new strategies to address the problem can be developed.

PRIMARY REPORT

Introduction

Underage drinking is, and has been, a central focus of the Charlotte-Mecklenburg Drug Free Coalition. Drinking by underage youth has had considerable attention in the community over the past few years highlighted by a number of auto accident deaths caused by underage drinkers and some deaths of youths from excessive blood alcohol levels.

The Coalition received a grant from the North Carolina Office of Juvenile Justice and Delinquency Prevention as part of the coalition's underage drinking initiative. Part of the grant is designed to conduct underage "buys" to monitor the extent to which local establishments adhere to the best practice of requiring age verification by checking for identification before selling.

This project is the sixth study conducted by the Coalition to ascertain the extent to which underage appearing youth can successfully purchase alcohol themselves without showing identification in establishments that sell, but do not serve, alcohol on the premises. One goal of the Coalition is to reduce the availability of alcohol to youth; retail establishments are one means and consistent monitoring of sales provides us empirical evidence any impact our initiatives may have.

The University of North Carolina-Charlotte contracted with the Charlotte-Mecklenburg Drug Free Coalition to conduct a study in the University City area. Their study included both retail establishments and bars and restaurants selling alcohol.

Methodology

An absolute random sample of 163 (25.3%) establishments from a total of 644 with Malt Beverage-Off Premise Permits (active and temporary) was initially selected. Attempts were made at 152 establishments – 11 were either out of business, lost their license to sell alcohol, purchasers felt unsafe entering establishment, or purchasers could not locate.

The university area study was an absolute random sample of 65 (50%) establishments from a total of 130 with Malt Beverage-Off Premise Permits (active) was initially selected from five zip codes with the highest proportion of sales in the fall 2008 study. Attempts were made at 55 establishments – 10 were omitted because they were either closed, out of business, required a membership card, or due to safety concerns.

A pool of potential buyers was recruited from students at UNC Charlotte. All students were required to be at least 21 years of age. Each was interviewed and selected if they appeared to be underage. Attempts were made between October and December on every day of the week; however, most (69.8%) were made on Monday and Tuesday. All buy attempts were made between 2 and 11 pm. We suspended purchase attempts during the Thanksgiving holiday. All buyers were asked to buy a 6-pack of a domestic beer without voluntarily offering identification.

The sale was either consummated by the clerk or not. If a sale was made, the alcohol was marked with the name of the establishment and the date and time of the purchase. It was decided that an actual sale would be made to 1) not significantly disrupt the purchase process if legitimate customers were in line,

2) to have a clearly defined “sale” verifying that the identification was not checked and to have “proof” of receipt to provide to managers who consistently requested this information when informed of the sale on the follow-up visit, and 3) to be able to photograph the beer itself for publicity highlighting the ease of sales in the community.

Each establishment was re-visited by a member of the Coalition, but especially members of the 108th Division, National Guard Regional Reserve Command. The follow-up visit involved an interview with the store manager, a certificate of “no sale” for businesses not selling, a review of training options for employees and a packet of stickers highlighting the need to check for identification.

Findings: Fall 2009

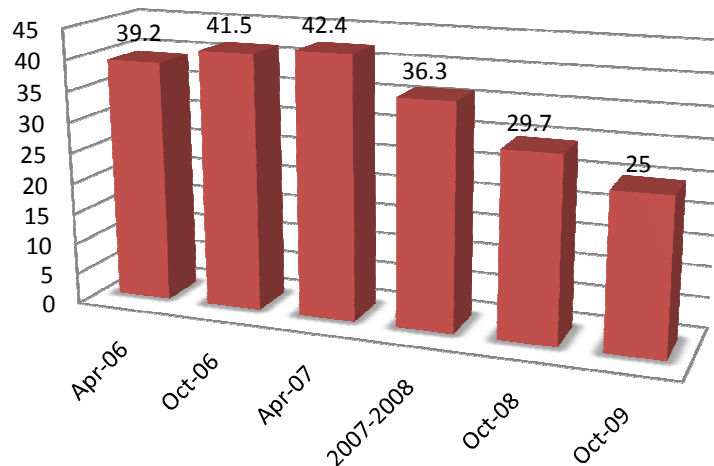
Purchases – County-wide

- 25% (38) of 152 retail establishments sold without asking for identification.

This is the lowest percent of all the purchase studies and down from the 29.7% of buys during the 2008 study.

These data suggest that in Mecklenburg County the purchase of alcohol by a young person without being checked for identification is possible about 30% of the time.

Percent Total Buys



There were three possible sale outcomes: ID requested – no sale; ID requested, none shown but sale made, and no ID requested at all.

- While representing a small proportion of the sales, some clerks ask for identification and then, when one is not provided, none-the-less make sales. This needs to be addressed in training.

Attempt Outcome	April '06	October '06	April '07	2007/2008	October '08	October '09
A sale was made without ID	29 (28.4%)	36 (35.6%)	23 (39.0%)	40 (27.4%)	33 (21.3%)	28 (18.4%)
ID was asked for, none provided, sale anyway	11 (10.8%)	6 (5.9%)	2 (3.4%)	13 (8.9%)	13 (8.4%)	10 (6.6%)
ID asked for, no sale	62 (60.8%)	59 (58.4%)	34 (57.6%)	93 (63.7%)	109 (70.3%)	114 (75%)
Number of Attempts	102	101	59	146	155	152

The most significant change in where sales are most likely is for drug stores and supermarkets. In the first studies, purchases at these types of establishment occurred about 30% of the time. Last year, purchases were made 36.4% of the time for drug stores and 33.3% of the time for supermarkets; this autumn, purchases were made in only 10% of the attempts at drug stores and 4.8% of the attempts at supermarkets.

Another significant change in where sales are most likely is for convenience stores with no gas. While sales were high during the first two years of the study, they greatly decreased in October 2008. While still lower than previous years (excluding October 2008), October 2009 experienced an increase in sales in convenience stores with no gas.

	2006	2007/2008	October 2008	October 2009
Convenience Store – No gas	61.5%	50.0%	15.4%	42.1%
Convenience Store – with gas	41.1%	35.5%	33.8%	29.3%
Drug Stores	21.4%	33.3%	36.4%	10.0%
Supermarkets	29.4%	30.6%	33.3%	4.8%

ZIP codes

There are observable differences by zip codes. The following shows the number and percent of sales by zip code for the 2009 project. Of the 152 attempts, overall, 25% sold without an ID check and 75% did not sell.

Purchases over 50% of attempts

Zip Code		Sale		Total
		No Sale	Sale	
28211	Count	1	4	5
	% within Zip	20.0%	80.0%	100.0%
28206	Count	1	3	4
	% within Zip	25.0%	75.0%	100.0%
28202	Count	2	2	4
	% within Zip	50.0%	50.0%	100.0%
28214	Count	2	2	4
	% within Zip	50.0%	50.0%	100.0%

Purchases 20-45% of attempts

Zip Code		Sale		Total
		No Sale	Sale	
28208	Count	8	5	13
	% within Zip	61.5%	38.5%	100.0%
28209	Count	3	2	5
	% within Zip	60.0%	40.0%	100.0%
28273	Count	7	3	10
	% within Zip	70.0%	30.0%	100.0%
28207	Count	2	1	3
	% within Zip	66.7%	33.3%	100.0%
28210	Count	7	3	10
	% within Zip	70.0%	30.0%	100.0%
28227	Count	3	1	4
	% within Zip	75.0%	25.0%	100.0%
28262	Count	3	1	4
	% within Zip	75.0%	25.0%	100.0%
28269	Count	3	1	4
	% within Zip	75.0%	25.0%	100.0%
28205	Count	11	3	14
	% within Zip	78.6%	21.4%	100.0%
28217	Count	4	1	5
	% within Zip	80.0%	20.0%	100.0%
28078	Count	9	2	11
	% within Zip	81.8%	18.2%	100.0%

Purchases less than 10% of attempts

		Sale		Total
		No Sale	Sale	
28226	Count	5	1	6
	% within Zip	83.3%	16.7%	100.0%
28213	Count	6	1	7
	% within Zip	85.7%	14.3%	100.0%
28227	Count	7	1	8
	% within Zip	87.5%	12.5%	100.0%
28216	Count	8	1	9
	% within Zip	88.9%	11.1%	100.0%

Purchases 0% of attempts

28203	Count	2	0	2
	% within Zip	100.0%	.0%	100.0%
28204	Count	3	0	3
	% within Zip	100.0%	.0%	100.0%
28212	Count	2	0	2
	% within Zip	100.0%	.0%	100.0%
28215	Count	4	0	4
	% within Zip	100.0%	.0%	100.0%
28031	Count	3	0	3
	% within Zip	100.0%	.0%	100.0%
28036	Count	2	0	2
	% within Zip	100.0%	.0%	100.0%
28105	Count	5	0	5
	% within Zip	100.0%	.0%	100.0%
28270	Count	1	0	1
	% within Zip	100.0%	.0%	100.0%

A multivariate analysis of social-demographic variables** was performed on the relationship between the percent of sales in each zip code - using the fall 2008 data. Only one variable was found to be significantly correlated to the percent of sales: percent of home ownership ($r=-.496$, $p=.022$).

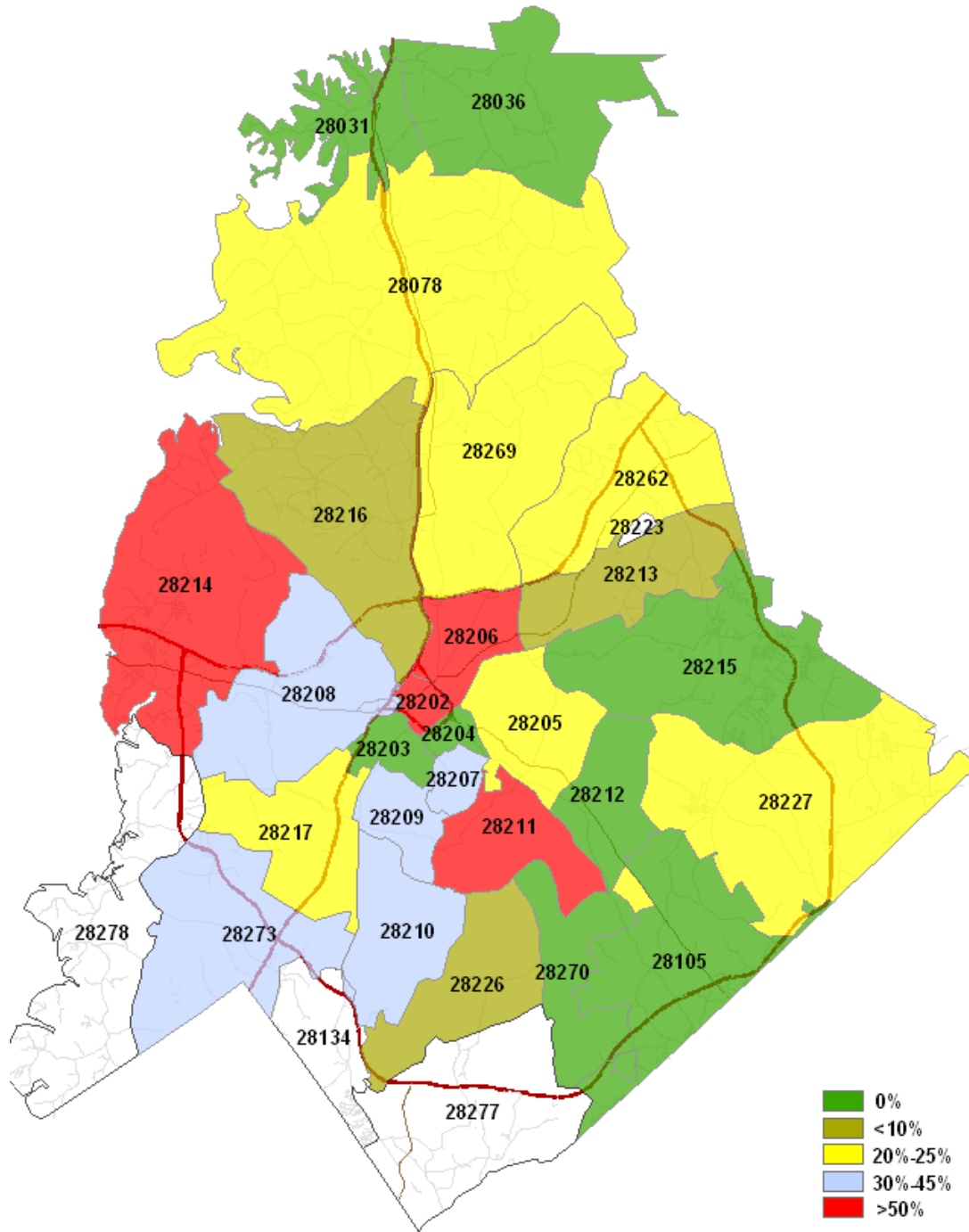
The lower the percent of home ownership the higher the percent of sales without ID.

The one anomaly to this appears to be zip code 28078 which has a 67% owned, 22% rental, 11% vacant††.

** These factors included population density, percent by race, household income, percent rent/owned, crime rates etc.

†† Statistics calculated from data on <http://www.pahomes.com/page47.htm> [insert any zip code].

Figure 1 Zip Codes by Percent of Sales without Identification^{**}



^{**} Areas in white had no establishments in the random selection

Serendipity

In the course of doing the analysis of social-demographic analysis, the following statistically significant relationships were found with the number of outlets in a zip code:

		Number of alcohol outlets
Number of alcohol outlets	Pearson Correlation	1
	Sig. (2-tailed)	
	N	27
% of White population	Pearson Correlation	-.580(**)
	Sig. (2-tailed)	.002
	N	27
% of African American population	Pearson Correlation	.498(**)
	Sig. (2-tailed)	.008
	N	27
% of Hispanic population	Pearson Correlation	.595(**)
	Sig. (2-tailed)	.001
	N	27
% of high school graduate population	Pearson Correlation	.565(**)
	Sig. (2-tailed)	.002
	N	27
% of graduate population	Pearson Correlation	-.603(**)
	Sig. (2-tailed)	.001
	N	27
Median Household Income (in Dollars) - Half of the households have an income above the amount listed, half have an income below it.	Pearson Correlation	-.479(*)
	Sig. (2-tailed)	.012
	N	27
Average Household Income (in Dollars) - Average combined income of households in the area.	Pearson Correlation	-.566(**)
	Sig. (2-tailed)	.002
	N	27
Per Capita Income (in Dollars) - Average individual income of people in the area.	Pearson Correlation	-.608(**)
	Sig. (2-tailed)	.001
	N	27

The above suggests that the lowest socio-economic level zip codes have proportionately **more** outlets for off premise alcohol and higher income, higher educated and proportionately white areas.

Buyer Characteristics

There were no differences in the probability of making a successful purchase by actual age or race of the buyer. However, there was a difference in the probability of making a successful purchase based on the gender of the buyer. Males were more successful at purchasing alcohol without an ID than females were.

- **Male** **21 of 56 successful purchases (37.5%)**
- **Female** **17 of 96 successful purchases (17.7%)**

The results are the opposite when the students went to bars. In those cases, the female was more likely than the male to receive alcohol without being asked for identification.

- **Only once in the 12 attempts (8.3%) by the male student was a sale made while 9 of the ten sales and 9 of her 14 attempts (64.3%) a sale was made to the female student. The difference is significant, $p < .002$.**

Sale without ID by Buyer's Gender					
			Buyer Gender		Total
			Male	Female	
Sale	Yes, drink purchased without asking for ID	Count	0	9	9
		Percent	.0%	64.3%	34.6%
	Yes, identification requested, none provided	Count	1	0	1
		Percent	8.3%	.0%	3.8%
	No Sale	Count	11	5	16
		Percent	91.7%	35.7%	61.5%
Total	Count	12	14	26	
	Percent	100.0%	100.0%	100.0%	

Clerk Characteristics

There were no differences in the probability of making a successful purchase based on the perceived age of the clerk, clerk's gender or clerk's race/ethnicity. This was also true for the bar study.

Each establishment was re-visited by a member of the Coalition, but especially members of the 108th Division, National Guard Regional Reserve Command. The follow-up visit involved an interview with the store manager, a certificate of "no sale" for businesses not selling, a review of training options for employees and a packet of stickers highlighting the need to check for identification.

The follow-up in the university area was done by the University's Health and Wellness Center and a member of the University's Campus Safety Committee.

Conclusion s

- The checking of identification for the sale of alcohol is increasing as focus on the practice is increasing but on average 25% of attempts to purchase alcohol without showing identification are still successful. This is good news and suggests that the concerted efforts by the Coalition and the community are beginning to have an impact.
- More needs to be done since purchases are still possible about 25% of the time.
- The greatest success has been with drug stores and supermarkets.
- While convenience stores that do not sell gas experienced a drastic decrease in sales in October 2008, the success was short lived. Attempts to purchased alcohol without an ID at convenience stores that do not sell gas were successful 41.2% of the time.
- The follow-up meetings with managers have been nearly 100% positive. This type of education is critically important to enable managers to provide adequate training for their employees and to reinforce the community's concern about underage drinking.
- While it is not required by law that sellers of alcohol check for identification under NC §18B-302 (a), it is a defense under sections d(1) and d(2). We suggest that the checking of identification should be considered a "best practice" for retailers to follow.
- Some clerks ask for identification and then, when one is not provided, none-the-less make sales. This occurred in 10 of the 38 sales made. This needs to be addressed in training.
- There needs to be stronger legislation on the state or local level to require identification in retail sales. Given the resource restraints on alcohol enforcement the community would be well-served if identification was required.
- Establishments in certain zip codes appear to be more lax in requiring identification. An environment scan of these areas and the establishments in them should be conducted to see what may be impacting this difference so that new strategies to address the problem can be developed.