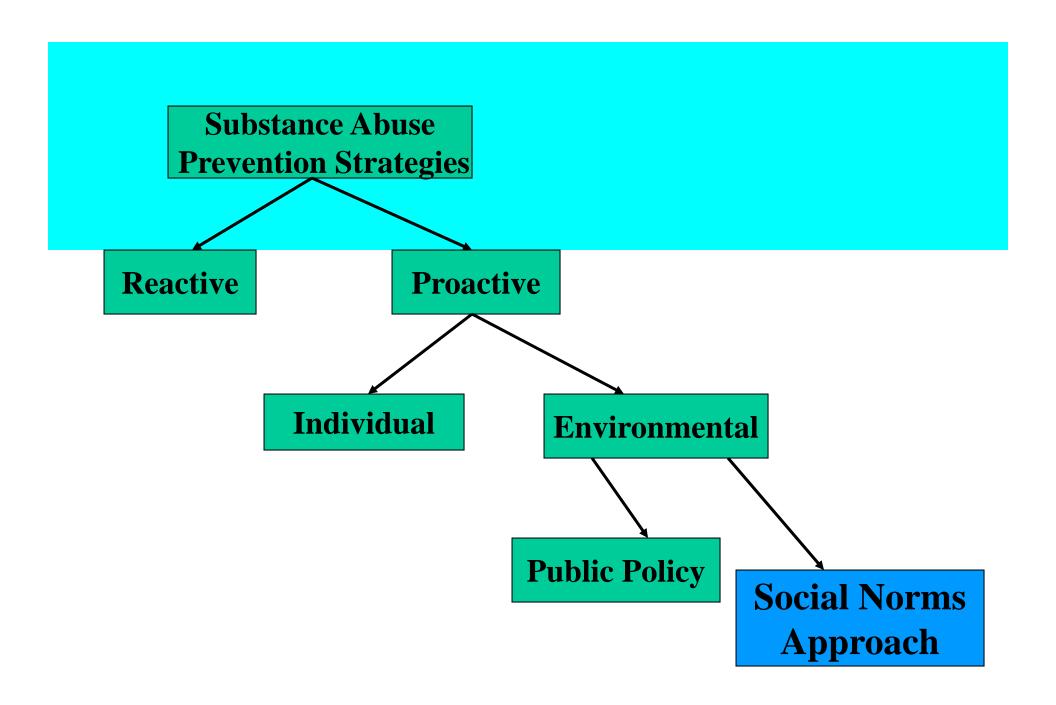
BD295

Traditional Prevention Strategies and the Social Norms Approach to Reducing Substance Abuse

H. Wesley Perkins, Ph.D.

Professor of Sociology
Hobart and William Smith Colleges
Geneva, New York

www.AlcoholEducationProject.org



Source: HW Perkins, Alcohol Education Project

Prevention Today Requires Science Based Strategies

1. Good Theoretical Reasoning

2. Good Data (Evidence Based)

Current Theoretical Models for Substance Abuse Prevention

- Health Education
- Health Terrorism
- Social Control
- Social Norms

Starting Point for Social Norms Approach

Humans are group oriented.

We are largely influenced by and conform to peer norms.

Long Tradition of Theory and Research on Peer Influence and Conformity to Peer Norms

What about Perceptions of Peer Norms?

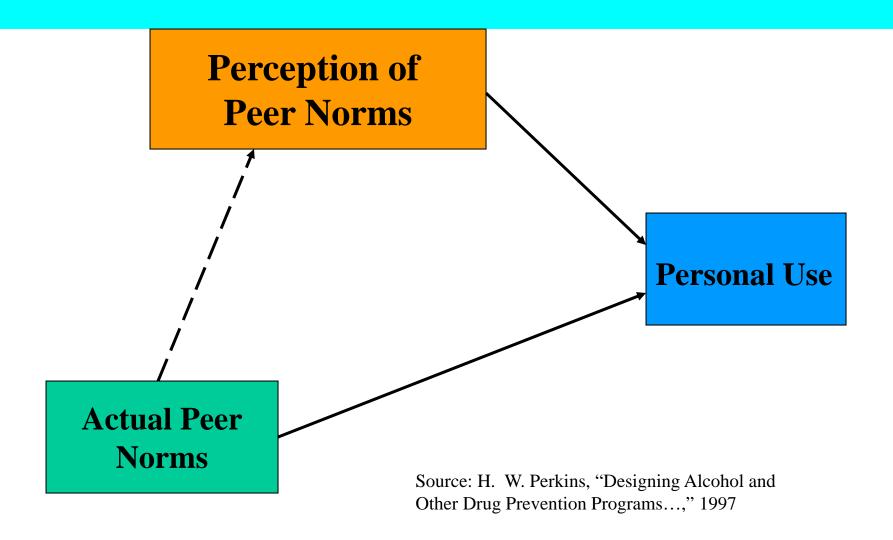
First came observations

Personal Attitudes and Perceived Norms about Alcohol Use among College Students (Source: Perkins and Berkowitz, 1986)

Items	Personal Attitudes	Perceived Norm		
1) One should not drink, 2) never get drunk, or 3) never drink to an intoxicating level that interferes with academics or other responsibilities.	81 %	37%		
4) Occasional drunkenness interfering with academics or responsibilities is OK, or 5) a frequent drunk is okay.	1 9 %	63 %		



Peer Influence on Substance Use





ALCOHOL

• Actual Norm - Drinking Twice/Month or Less Often (60%); only 5% drinking daily

 Perceived Norm - 89% Believe the Typical Student Drinks at least Weekly.
 25% Believe Daily Drinking is the Norm.

TOBACCO

• Actual Norm - No Use (54%) with only 26% using daily

• **Perceived Norm** - 94% Believe the Typical Student is a User. 69% Believe Daily Use is the Norm.

MARIJUANA

• Actual Norm - No Use (66%) with only 13% using weekly

• **Perceived Norm** - 92% Believe the Typical Student is a User. 65% Believe Weekly Use is the Norm.

HALLUCINOGENS

• Actual Norm - No Use (91%)

• **Perceived Norm** - 61% Believe the Typical Student is a User . 15% Believe Weekly Use is the Norm.

COCAINE

• Actual Norm - No Use (95%)

• **Perceived Norm** - 61% Believe the Typical Student is a User . 16% Believe Weekly Use is the Norm.

STEROIDS

• Actual Norm - No Use (99%)

• **Perceived Norm** - 56% Believe the Typical Student is a User. 17% Believe Weekly Use is the Norm.

Students' Misperceptions of the Norm for the Number of Drinks Consumed the Last Time Other Students "Partied"/Socialized at Their School

(NCHA Nationwide Data from 72,719 Students Attending 130 Schools, 2000-03)

Source: HW Perkins, M Haines, and R Rice, Journal of Studies on Alcohol, 2005.

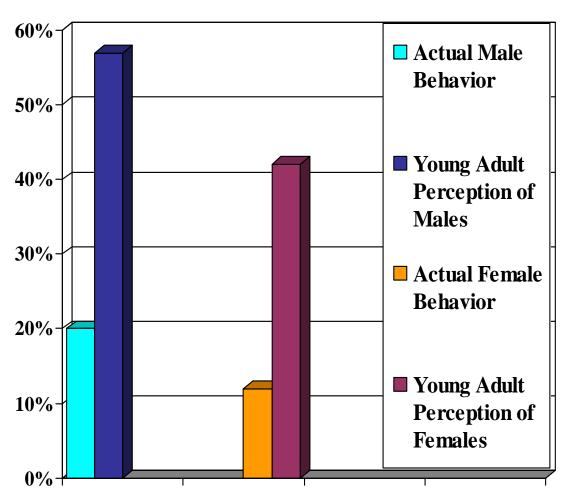
Accuracy of Perceived Drinking Norm							
Under- estimate by 3+ Drinks	Under- estimate by 1-2 Drinks	Accurate Estimate	Over- estimate by 1-2 Drinks	Over- estimate by 3+ Drinks			
3%	12%	14%	32%	39%			

71% Overestimate Peer Drinking!

Actual Gender Norms vs. Young Adult Perceptions of Gender Norms

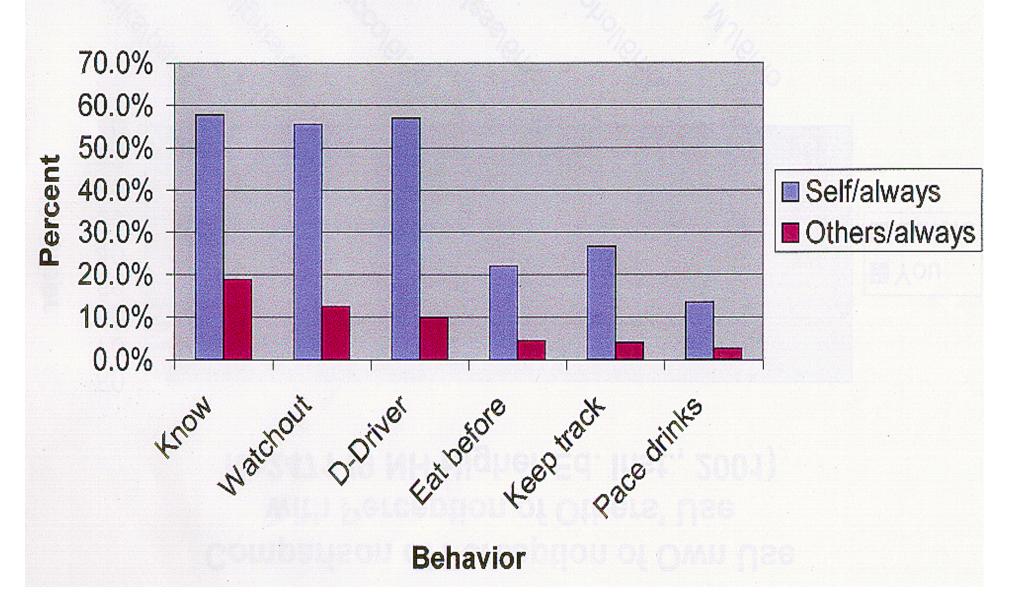
(1998 Survey of 18-24 Year Olds, N=500)

Percent who drove within one hour after drinking 2+ drinks in the past month.

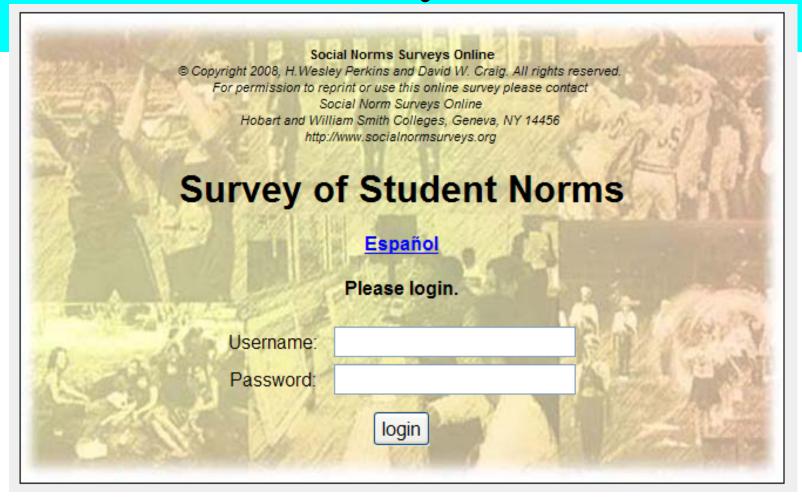


Source: JW Linkenbach & HW Perkins, 2003

Comparison of Perception of Behavior of Self with Perception of Behavior of Others N=2471 (9 NH Higher Ed. Inst.,2001)



Web Surveys Online



Drinking Norm and Perceived Norms Among 9th Graders in a Secondary School in Central New York State

7. How many alcoholic drinks, if any, do you think each of the following students on average typically consume at parties or social occasions? Just give your best estimate of what is most typical for each category (a through h).

	0	1	2	3	4	5	6	7+
a. Yourself		0	0	0	0	0	0	0
b. Your Friends	0		0	0	0	0	0	0
c. Students in your Grade	0	0		0	0	0	0	0
d. Males	0	0	0		0	0	0	0
e. Females	0	0		0	0	0	0	0
f. Juniors and Seniors	0	0	0	0		0	0	0
g. Drop Outs	0	0	0	0	0	0	0	
h. High School Athletes	0		0	0	0	0	0	0

Median Response

Myth and Reality at Midwest High School:

Results from a Fall 2005 Survey of Student Norms Conducted at a Midwestern School

http://alcohol.hws.edu

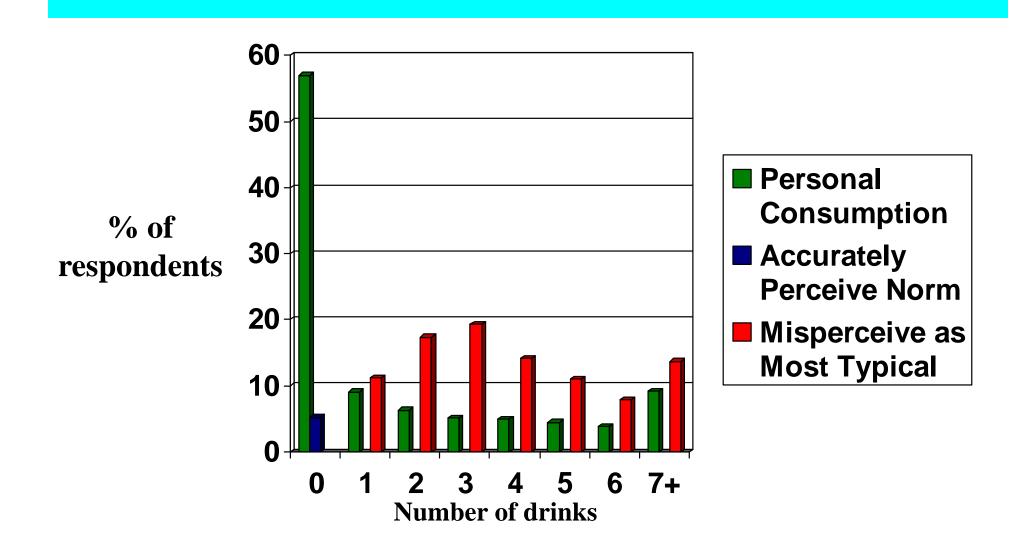
Who Participated?

Almost Everyone!

1,116 students took the survey

96% of the entire student body

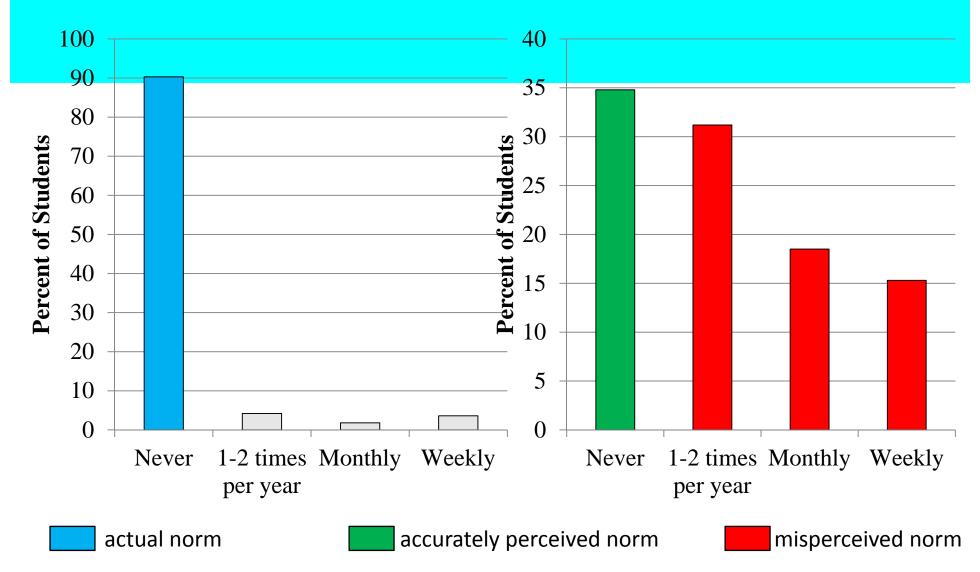
Quantity of Alcohol Typically Consumed at Parties and Social Gatherings



Sample Secondary School Data

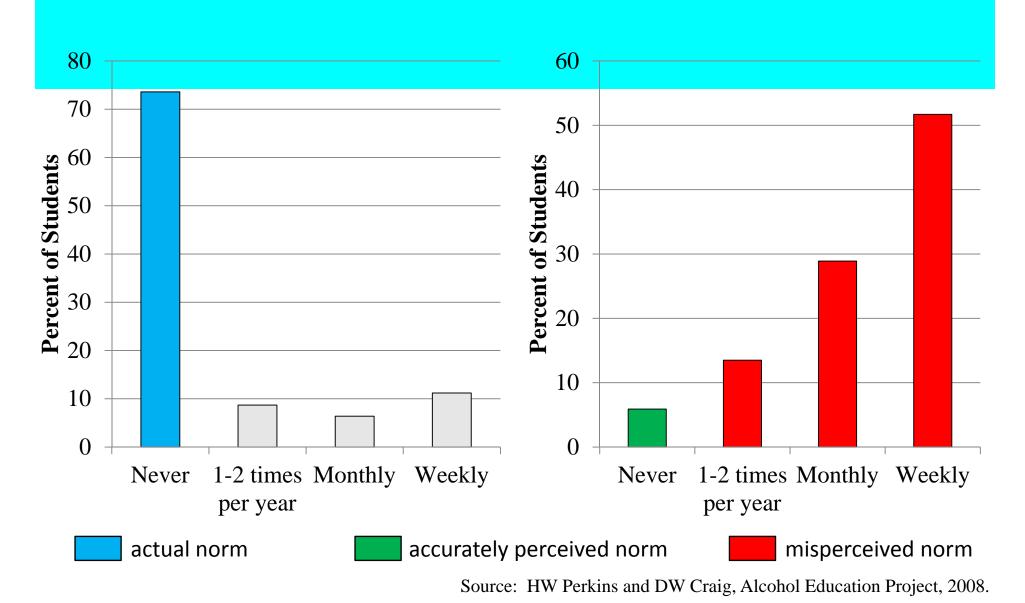
119 School Cohorts Surveyed
Grade (Year) Levels Ranged from 6 -12
12 States across the USA
52,462 Respondents

Grades 6 - 8 Personal Tobacco Use and Perceived Norm

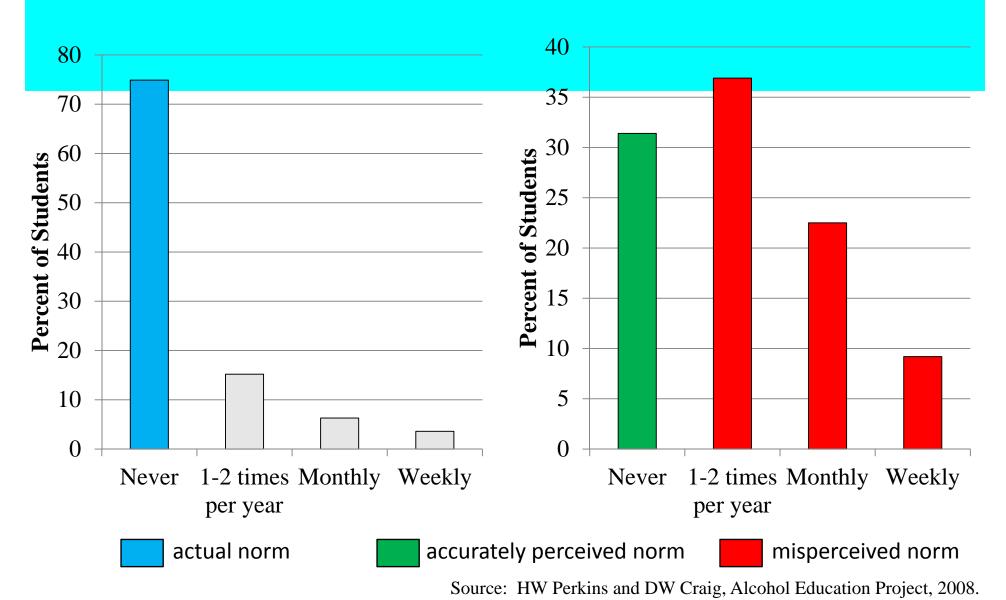


Source: HW Perkins and DW Craig, Alcohol Education Project, 2008.

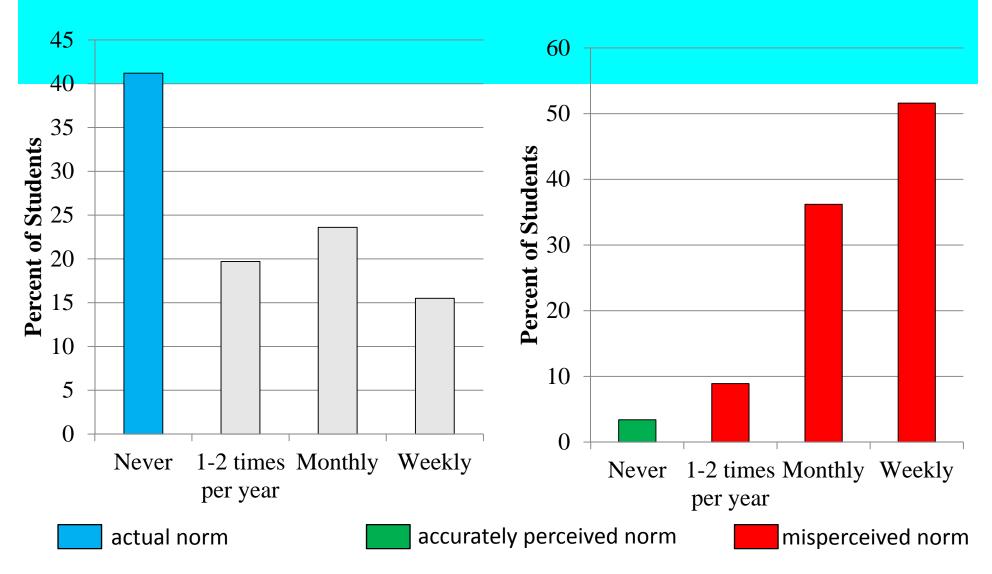
Grades 9 - 12 Personal Tobacco Use and Perceived Norm



Grades 6 - 8 Personal Alcohol Use and Perceived Norm



Grades 9 - 12 Personal Alcohol Use and Perceived Norm



Source: HW Perkins and DW Craig, Alcohol Education Project, 2008.

Two indisputable findings in the research literature:

- 1. The peer norm is one of the strongest predictors of personal behavior.
- 2. Peer norms about substance use and other risk behaviors are grossly misperceived in the direction of overestimated behavior and permissiveness in attitudes.

Research Shows Misperceived ATOD Norms Exist

- In All Types of Colleges (Regions, Size, Programs, Actual Norms)
- In Primary and Secondary Schools
- Across Subpopulations of Youth
- In a State-wide Population of Young Adults
- For Attitudes, Use, Policy Support, and Protective Behaviors
- For All Types of Drugs

Back to Theory

Cause of Misperceptions

- Psychological mental attribution processes
- Social psychological memory and conversation patterns
- Cultural entertainment, advertising, news and health advocacy media

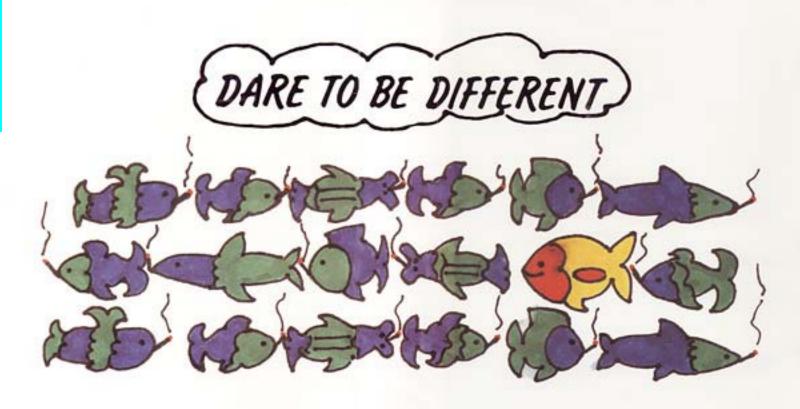
The quotable file



Rocker Courtney Love says her much publicized drug problems are not unusual:

"Every woman in

America is on Xanax (an anxiety reliever). You can go to a taco stand in L.A. and get it. It's the No. 2 drug in America, and it's completely addictive."



PLEASE DON'T SMOKE!



Illinois Attorney General Jim Ryan & Illinois Association of Park Districts



Consequences of Misperceptions

- Definition of the situation produces a "Reign of Error"
- Actual Use and Abuse Increases
- Layers of Misperceptions Compound
- Opposition is Discouraged from Speaking
- Intervention by Others Declines
- "Carriers" of Misperception Contribute to the Problem

Translating Social Norms Theory into Prevention Strategies

The Social Norms Model

Baseline
Identify Actual &
Misperceived Norms

Intervention
Intensive Exposure to
Actual Norm Messages

Less Exaggerated
Misperceptions of Norms

Predicted Result
Less Harmful or Risky
Behavior

A <u>HEALTHY</u> Dose of Reality...





A HEALTHY Dose of Reality...



The majority of entering students in 1999 reported never smoking cigarettes.

Students most typically drink

Among athletes, 87% never miss or due to drinking 3 perform poorly in an athletic contest due to drinking.3

Examples of Strategies to Reduce Misperceptions and Strengthen Positive Norms

Print media campaigns



SOURCE: Spring 2011 Survey of all HWS students with 836 respondents, conducted by BIDS 295

www.hws.edu/JustFacts

This message is part of a program presenting facts about HWS students. These facts which may be personally surprising, affirming or disturbing, are intended to challenge commonly held misperceptions and generate conversation about actual characteristics of the HWS community. Research demonstrates that people frequently misperceive peer attitudes and behaviors and may be influenced by these misperceptions. Only the most accurate information available based on representative data about HWS students is provided here. For more information about this fact and the survey from which it was drawn see "BIDS Survey" at: www.hws.edu/JustFacts.



The majority of HWS students (54%) typically consume four or fewer drinks or no drinks with alcohol when partying.



SOURCE: Spring 2011 Survey of all HWS students with 836 respondents, conducted by BIDS 295

www.hws.edu/JustFacts

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90% of HWS studentathletes believe that students should not drink to an intoxicating level that affects academic work or other responsibilities.

SOURCE: Spring 2010 web survey of 334 HWS student-athletes.





This message is part of a program presenting facts about HWS students. These facts which may be personally surprising, affirming or disturbing, are intended to challenge commonly held misperceptions and generate conversation about actual characteristics of the HWS community. Research demonstrates that people frequently misperceive peer attitudes and behaviors and may be influenced by these misperceptions. Only the most accurate information available based on representative data about HWS students are provided here. For more information about this fact and the survey from which it was drawn see "Athlete Survey" at: www.hws.edu/JustFacts.

What is your protective strategy?

of HWS students usually or always

EAT BEFORE
ORDURING A

PARTY

where they may be
consuming alcohol
or they do not drink at all.

SOURCE

Fall 2010 National College Health Assessment Survey conducted anonymously online with 389 HWS respondents.

www.hws.edu/JustFacts

This message is part of a program presenting facts about HMS students. These facts which may be personally surprising, affirming or disturbing, are intended to challenge commonly held misperceptions and generate convensation about actual characteristics of the HMS community. Research demonstrates that people frequently mispercelve peer attitudes and behaviors and may be influenced by these misperceptions. Only the most accurate information available based on representative data about HMS students is provided here. For more information about this fact and the survey from which it was drawn see "BIDS Survey" at: www.hea.odu/JustFacts.



What is your protective strategy?

of HWS students always use a DESIGNATED DRIVER when they have been drinking at a PARTY or they do not drink at all.

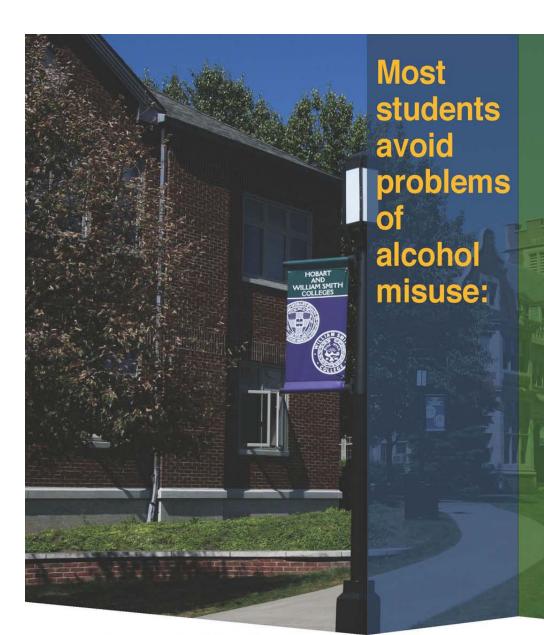
SOURCE

Fall 2010 National College Health Assessment Survey conducted anonymously online with 389 HWS respondents.

www.hws.edu/JustFacts

This message is part of a program presenting facts about HMS students. These facts which may be personally surprising, affirming or disturbing, are intended to challenge commonly held misperceptions and generate conversation about actual characteristics of the HMS community. Research demonstrates that people frequently mispercelve peer attitudes and behaviors and may be influenced by these misperceptions. Only the most accurate information available based on representative data about HMS students is provided here. For more information about this fact and the survey from which it was drawn see "SIDS Survey" at www.lnes.edu/JustFacts.





92% of HWS students NEVER submit late papers or exams as a result of drinking during the academic year.

87% of HWS students
NEVER cause property damage
as a result of drinking during
the academic year.

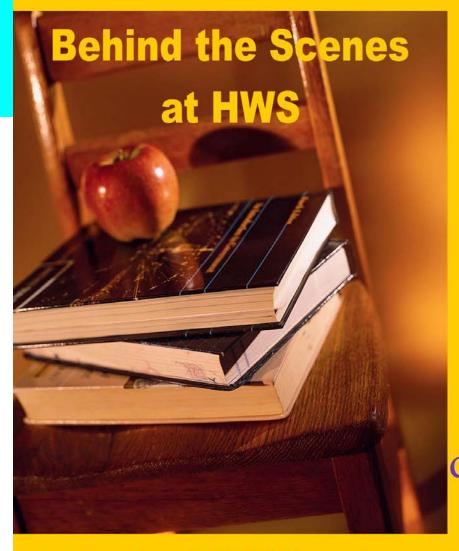
81% of students NEVER cause damage to relationships as a result of drinking during the academic year.

www.hws.edu/JustFacts

This message is part of a program presenting facts about HWS students. These facts which may be personally surprising, affirming or disturbing, are intended to challenge commonly held misperceptions and generate conversation about actual characteristics of the HWS community. Research demonstrates that people frequently misperceive peer attitudes and behaviors and may be influenced by these misperceptions. Only the most accurate information available based on representative data about HWS students is provided here. For more information about this fact and the survey from which it was drawn see "BIDS Survey" at: www.hws.edu/JustFacts.



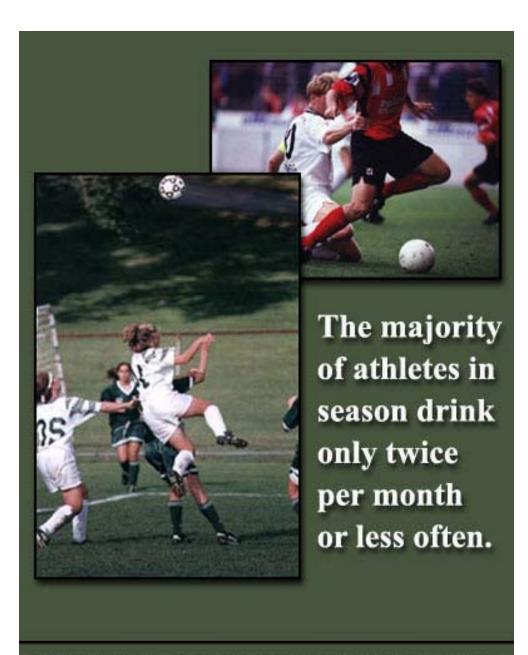
SUURGE: Spring 2011 Survey of all HWS students with 836 respondents, conducted by BIDS 295



88%

of HWS students
NEVER submit
late papers or exams
as a result of drinking
during the academic year.

Data drawn from a Spring 2005 survey of a representative cross-section of HWS students with 272 respondents.



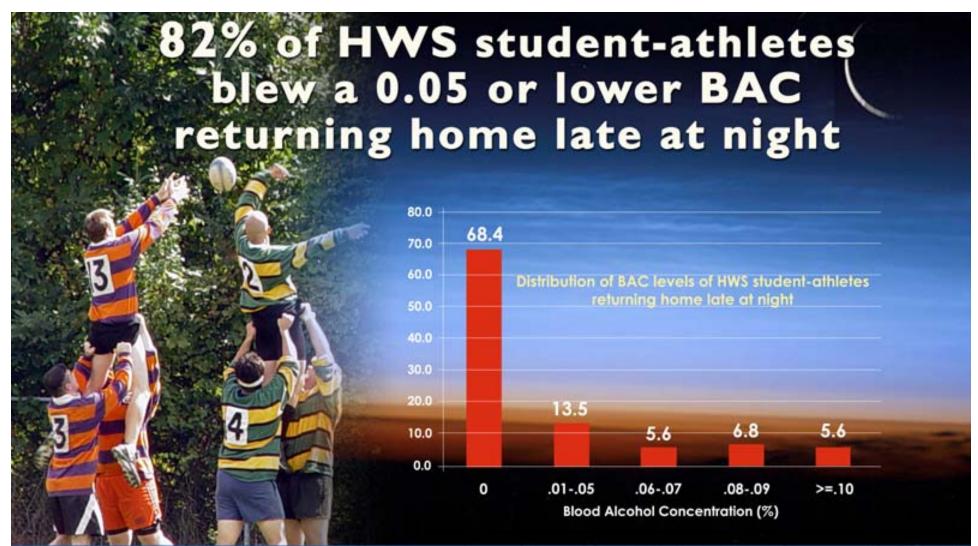
Source: Data drawn from all intercollegiate athletes (N=99) participating in a Spring 2000 mail survey of a representative cross-section of HWS students.

Did you know that...



7 out of 10 HWS student-athletes (70%)
believe one should never use tobacco

Source: Fall 2005 Web survey of all HWS student-athletes with 369 respondents (79% of all student-athletes on campus).



Source: Data collected from 194 randomly selected student-athletes returning to residence halls late at night between 11pm and 3am every night of the week during Fall '04, Spring '05, and Fall '05.

These results were obtained from chemistry department independent study and honors students advised by Professor David W. Craig: Jeffrey Quinto (H05), Lauren Gianniny (WS05), Andrew Stern (H05), Adam Bordonaro (H06), John Bowie (H06), Patrick O'Brien-Gorman (H06), Sam Breier (H06), Alana Braren (WS06), and Lia Blue (WS06)

82% of HWS student-athletes never injure themselves or others as a result of alcohol consumption during the academic term.



Source: Data drawn from a November 2001 survey of 414 HWS student-athletes (86% of all athletes on campus).

Most HWS Student-Athletes



Source: November 2006 web survey of 345 HWS student-athletes (71% of all intercollegiate athletes on campus).



United We Stand



Most of Us

4 out of 6

DeKalb & Sycamore Study, DCP/SAFE, (N=1172, 2001)

Haven't used alcohol during the past 30 days



DeKalb & Sycamore Study, D CP/SAFE, (N=654, 2000)

Funded in whole or in part by ID HS and the Center for Substance Abuse Prevention

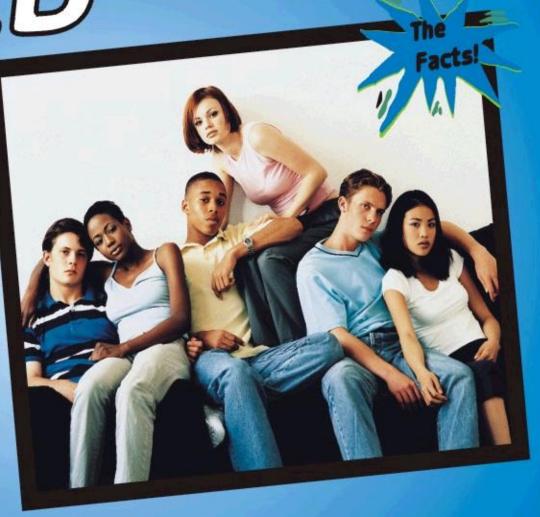
UKITED

Most of Us
Most of Us Are Healthy
Most of Us Don't Drink
Most of Us



DeKalb & Sycamore Study, DCP/SAFE, (N=1172, 2001)





Funded in whole or in part by IDHS and the Center for Substance Abuse Prevention

8 out of 10 don't smoke!



Health tools to share:

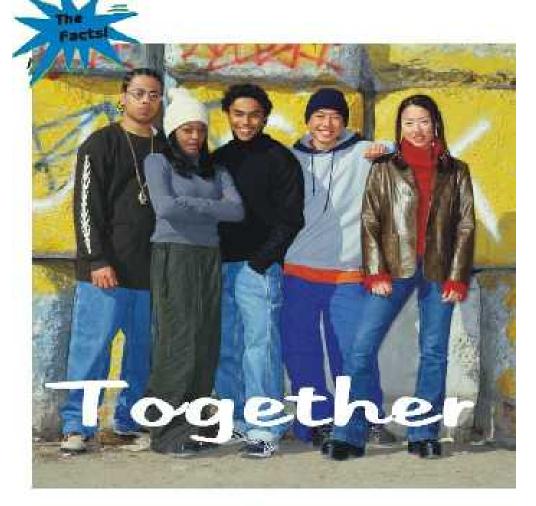
- 1. Leave places where people are smoking
- 2. Say "No thanks" if someone offers you tobacco
- 3. Avoid places where people are smoking

DeKalb & Sycamore Study, DCP/SAFE, (N=654, 2000)

Funded in whole or in part by IDHS and the Center for Substance Abuse Prevention

Most of Us Don't Smoke

DeKalb & Sycamore Study, DCP/SAFE, (N=1172, 2001)



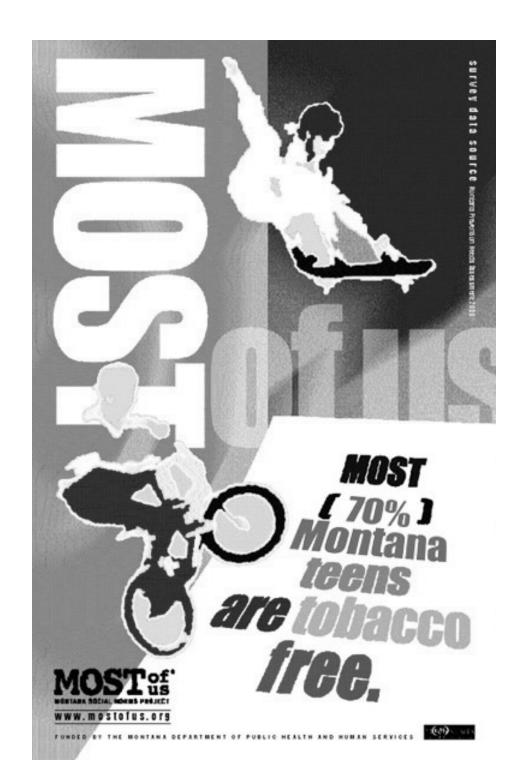
83 % choose not to



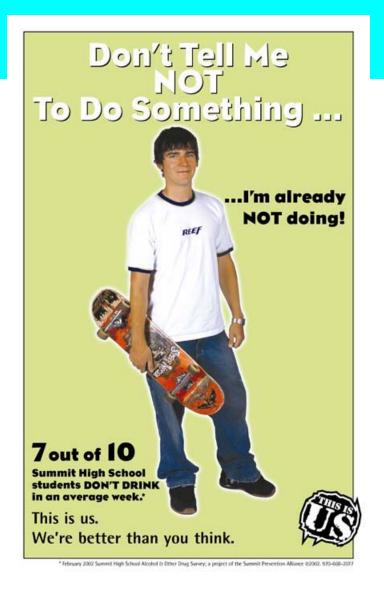




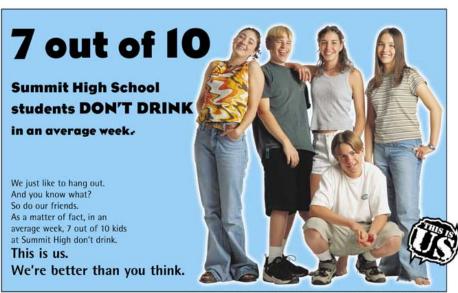




Sample Print Media – Summit, CO







strength in Numbers

Just the Facts:

When Grand Canyon High School South students were asked about their last 30 days in a Fall 2006 survey, the majority—

...had NOT used tobacco (84%)

...had NOT used alcohol (67%)

...had NOT used marijuana (87%).

Results are based on a Fall 2006 anonymous survey of 806 Grand Canyon High School South students from all grades.



High School Teens in the City of Rochester Did You Know?

87% of high school teens do not smoke cigarettes.

3 out of 4 do not use marijuana.

Two-thirds (66%) do not drink alcohol.

4 out of 5 do not ride with a driver who has been drinking alcohol.

8 out of 10 teens know their parents think it is wrong for them to drink alcohol.

9 out of 10 teens know their parents think it is wrong for them to smoke cigarettes.

Source: 2007 Youth Risk Behavior Survey of 4,223 teens age 14-18



FACT:

Most Roc teens give back. <u>Each week, 51% volunteer in their community</u>

information based on over 4,000 high school student responses to the 2007 Youth Risk Behavior Survey (Rochester City School District).

Visit www.drugfreerochester.com or Call 585-428-7287





FACT:

Most Roc teens make healthy choices. 66% did not drink alcohol and 74% did not use marijuana in the past month

Information based on over 4,000 high school student responses to the 2007 Youth Risk Behavior Survey (Rochester City School District).

Visit www.drugfreerochester.com or Call 585-428-7287









Most Cascade County Young Adults (82%) Don't Drink and Drive

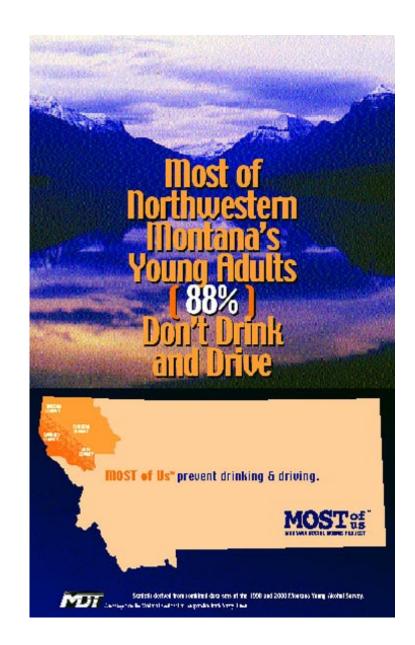
MOST of Us™ prevent drinking & driving.



A message from the Montana Department of Fansportation and the **Caseade County D.W. Task Force.** Statistic derived from combined data sets of the 1998 and 2000 Montana Young Adult Alcohol Survey.

Any amount of alcohol may be illegal or dangerous, 89% of the young adults (18 through 24 surveyed reported not driving after consuming 2+drinks within one hour in the month before the survey.





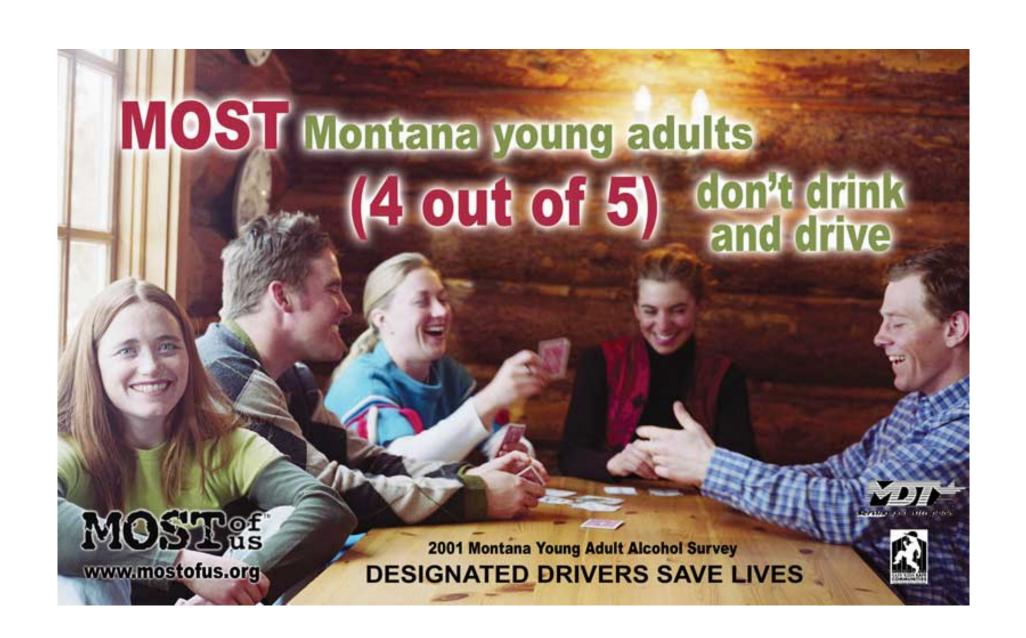


Campaign support from Montana Department of Transportation • Montana Safe Kids Safe Communities

*Data source: 2001 Montana Young Adult Alcohol Survey

ANY AMOUNT OF ALCOHOL MAY BE ILLEGAL OR DANGEROUS.

Photo © Anne Sherwood



Examples of Strategies to Reduce Misperceptions and Strengthen Positive Norms

- Print media campaigns
- PSA campaigns
- Peer education programs and workshops for targeted risk groups http://www.alcoholeducationproject.org/mvp/peer.html
- New student orientation presentations
- Counseling interventions
- Curriculum infusion
- Electronic multimedia

Data Testing the Theory

Research on Effects of Perceived Norms and Social Norms Intervention Programs

- Multi-site cross-sectional studies
- Longitudinal panel studies
- Brief intervention experiments using random assignment
- Longitudinal pre/post case studies of school populations
- Experiments with experimental and control counties
- Experiments with experimental and control classroom interventions
- Longitudinal experiments randomly assigning institutions to experimental and control conditions

Evaluation of Program Effects of First 18 Months at HWS

(Rates of Change)

• Frequent Heavy Drinking:

- memory loss

-	•	0	
• Conseque	nces of 1	Drinking	
<pre>- property</pre>	damage		- 36%
– missing c	lass		- 31%
inefficien	t in worl	k	- 25%
– unprotect	ted sex		- 40%

Source: Perkins and Craig, HWS Alcohol Education Project

- 25%

- 21%

Similar Initial Effects in Rates of Heavy Drinking Reduction at Different Schools Over 2 Years

•	Hobart & Wm. Smith Colleges, NY	-21%
•	University of Arizona	-21%
•	Western Washington University	-20%
•	Rowan University, NJ	-20%
•	Northern Illinois University	-18%

Source: H. W. Perkins (ed.), The Social Norms Approach to Preventing School and College Age Substance Abuse, 2003.

Results of HWS "MVP" Project: A Social Norms Intervention to Reduce High-Risk Drinking among Student-Athletes

- 46% reduction in the proportion of student-athletes drinking more than once per week
- 30% reduction in the proportion of student-athletes reaching an estimated BAC of .08% or greater when drinking at parties and bars
- 34% reduction in the proportion of student-athletes experiencing frequent negative consequences due to drinking during the academic term

Source: Perkins and Craig, J. of Studies on Alcohol, 2006

- 38% reduction in the proportion of student-athletes using tobacco weekly
- a 2.5 hours per week increase in time spent in academic activities, on average, for each student-athlete

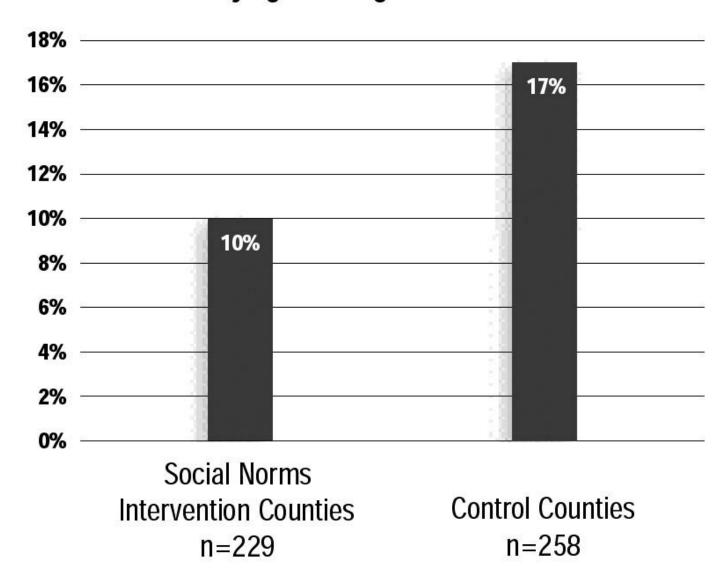
Table 14.2 Self-Reported Alcohol and Cigarette Use by 10th Grade Students

	Year	Percent	N	
More than a few sips of alcohol	1999	45%	317	*
in the last 30 days	2001	33%	379	19994.3
Five or more drinks in a row in	1999	27%	318	*
the last two weeks	2001	19%	382	100001
Got drunk	1999	32%	319	*
in the last 30 days	2001	26%	382	88000
Smoked cigarettes	1999	27%	319	*
in the last 30 days	2001	19%	380	

Note: An asterisk denotes a significant decrease (p < .05) from the 1999 survey year.

Source: Haines, Barker, and Rice in H. W. Perkins (ed.), The Social Norms Approach to Preventing School and College Age Substance Abuse, 2003.

Montana Youth Trying Smoking For the First Time between 2000 and 2001

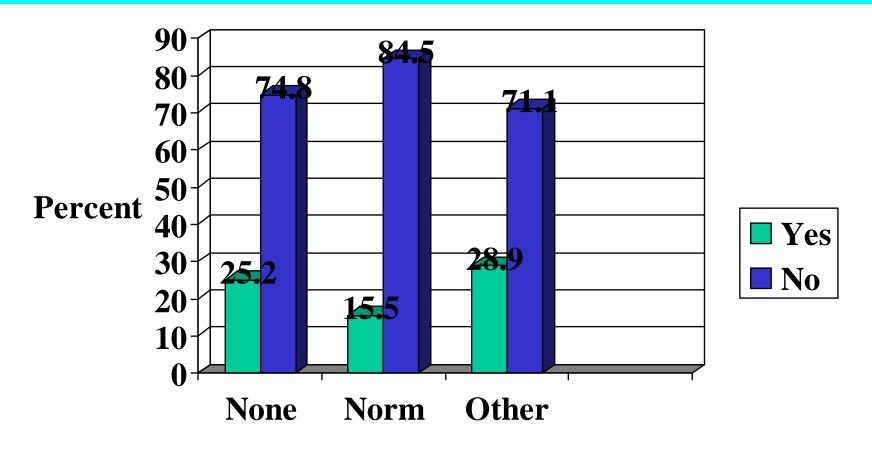


^{*}Significant difference between intervention and control groups at p < .05

Source: Linkenbach and Perkins, 2003.

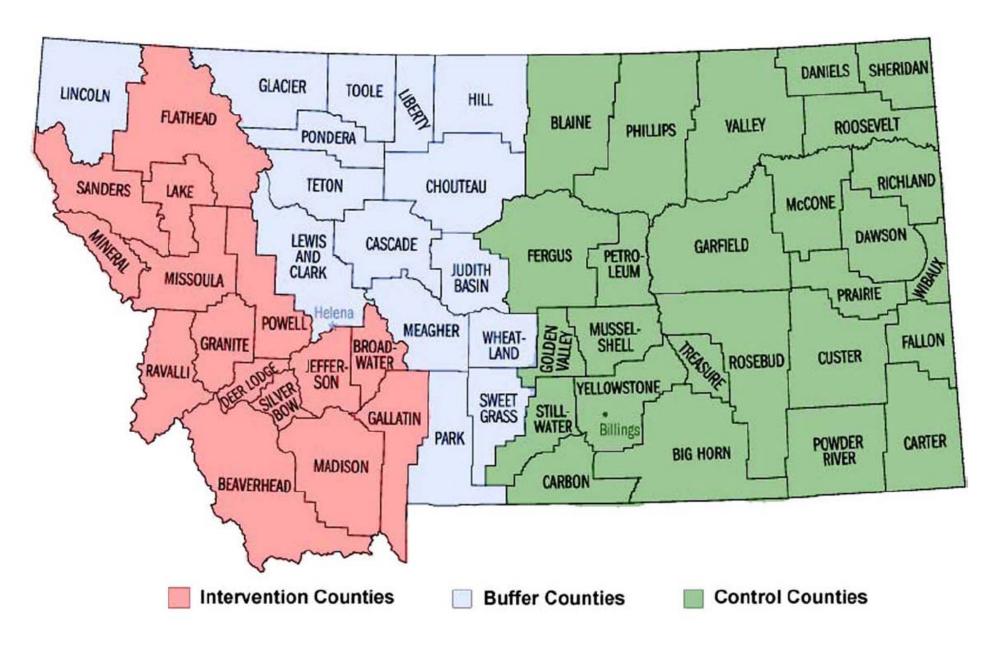
"MOST OF US DO NOT DRINK AND

DRIVE" Norm Message Recall Associated w/ Lower DUI Risk



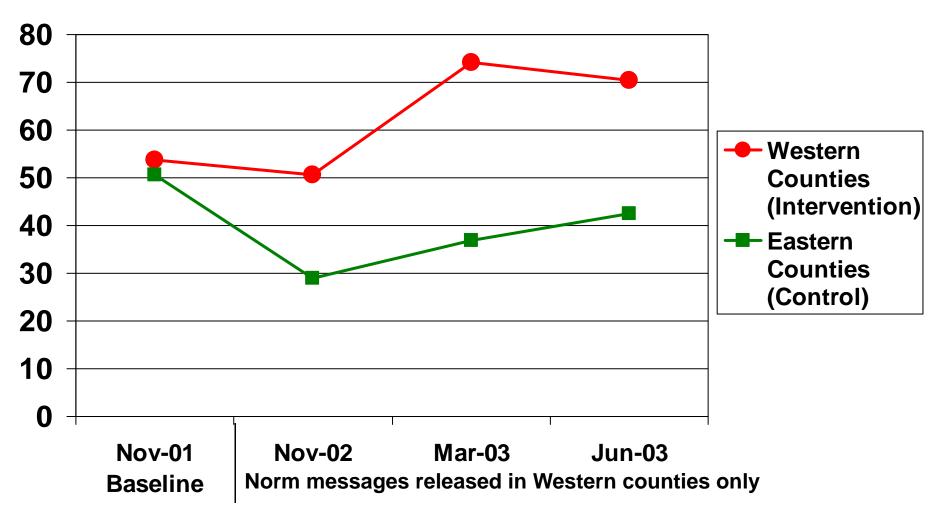
Message recalled

Source: Linkenbach, J. and H. W. Perkins. 2005.



Linkenbach, Jeff and H. Wesley Perkins. 2005. Montana's MOST of Us® Don't Drink and Drive Campaign: A Social Norms Strategy to Reduce Impaired Driving Among 21-to-34Year-Olds. National Highway Traffic Safety Administration (Report No. DOT HS 809 869), Washington, DC.

Percent Recalling Social Norms Message about Drinking as the Main Message From Media (compared to recalling other or no message)



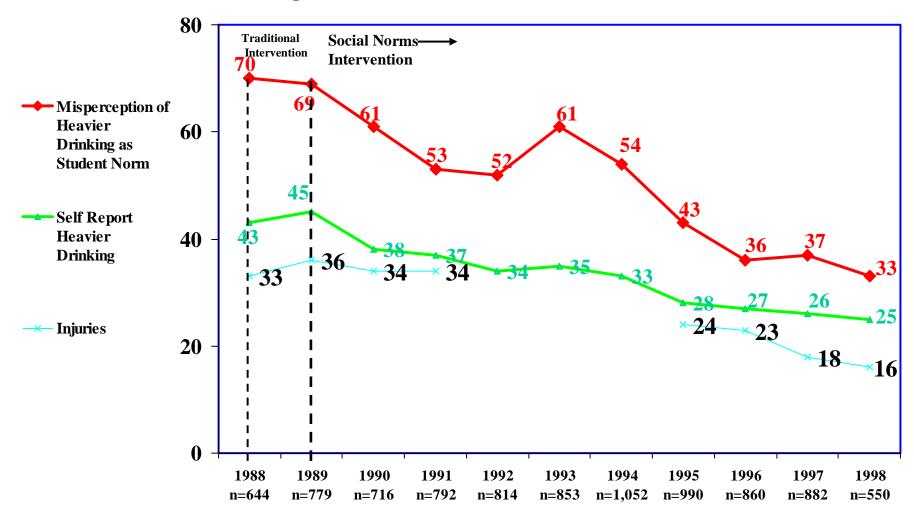
Survey Time Points

Results of Montana Young Adult Experiment on Drinking and Driving

- The campaign successfully reduced the misperceptions (overestimates) of impaired driving among peers in intervention counties.
- Intervention counties had a 14% relative decrease in reported driving after drinking and a 15% relative increase in using non-drinking designated drivers compared to the control counties

Multi-Year Assessments of Social Norms Campaign Impact

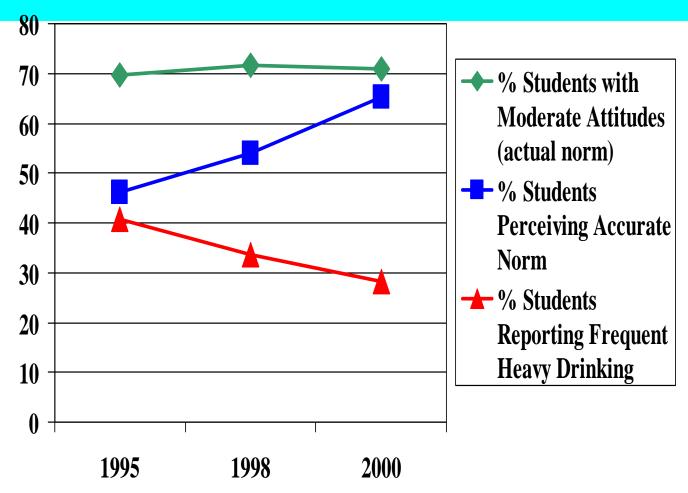
Heavier drinking, norm misperceptions, and injuries among NIU students, 1988-1998



Note: During survey years 1992 - 1994, comparable injury questions were not included.

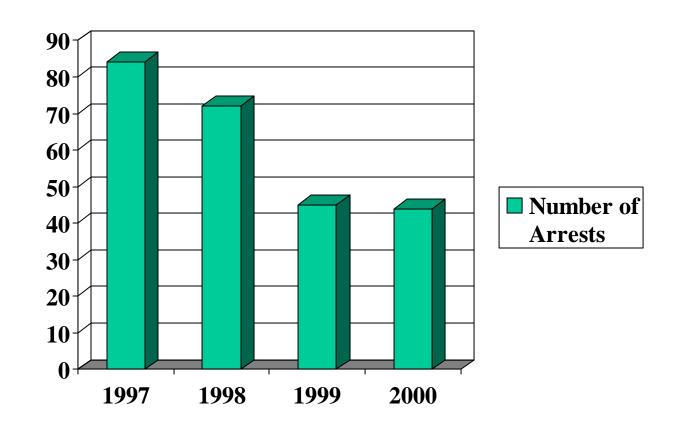
Source: M. Haines and G. Barker, "The Northern Illinois University Experiment: A Longitudinal Case Study of the Social Norms Approach." In Perkins (ed.), The Social Norms Approach to School and College Age Substance Abuse, 2003.

Multi-Year Assessment of Campaign Impact at HWS



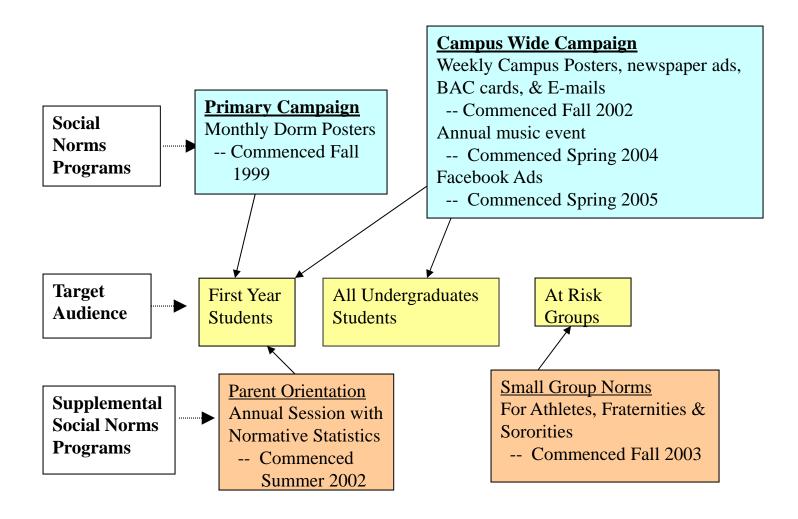
Source: H.W. Perkins and D. Craig. A Multifaceted Social Norms Approach to Reduce High-Risk Drinking: Lessons from Hobart and William Smit Colleges. Newton, MA: The Higher Education Center for Alcohol and Other Drug Prevention and the U.S. Department of Education, 2002.

Multi-Year Intervention Impact at HWS on Liquor Law Arrests



Source: H.W. Perkins and D. Craig. A Multifaceted Social Norms Approach to Reduce High-Risk Drinking: Lessons from Hobart and William Smit Colleges. Newton, MA: The Higher Education Center for Alcohol and Other Drug Prevention and the U.S. Department of Education, 2002.

Social Norms Marketing Programs at the University of Virginia



Source: James Turner, H. Wesley Perkins, and Jennifer Bauerle, "Declining Negative Consequences Related to Alcohol Misuse Among Students Exposed to a Social Norms Marketing Intervention on a College Campus," Journal of American College Health 2008.

Six Years of Declining Negative Consequences Related to Alcohol Misuse Among Students Exposed to a Social Norms Intervention at U of Virginia

Source: J Turner, H W Perkins, J Bauerle, Journal of American College Health, 2008

	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>
% No Consequences	33	38	44	46	48	51
% Multiple Consequences	44	40	36	34	31	26

Source: James Turner, H. Wesley Perkins, and Jennifer Bauerle, "Declining Negative Consequences Related to Alcohol Misuse Among Students Exposed to a Social Norms Marketing Intervention on a College Campus," Journal of American College Health 2008.

Personal Attitudes and Perceived Norms about Alcohol Use among College Students (Source: Perkins and Berkowitz, 1986)

Items	Personal Attitudes	Perceived Norm
1) One should not drink, 2) never get drunk, or 3) never drink to an intoxicating level that interferes with academics or other responsibilities.	81 %	37%
4) Occasional drunkenness interfering with academics or responsibilities is OK, or 5) a frequent drunk is okay.	1 9 %	63 %

Personal Attitudes and Perceived Norms about Alcohol Use among College Students (Source: Perkins and Berkowitz, 1986)

Items	Personal Attitudes	Perceived Norm
1) One should not drink, 2) never get drunk, or 3) never drink to an intoxicating level that interferes with academics or other responsibilities.	92 %	68 %
4) Occasional drunkenness interfering with academics or responsibilities is OK, or 5) a frequent drunk is okay.	8 %	32 %

Students' Misperceptions of the Norm for the Number of Drinks Consumed the Last Time Other Students "Partied"/Socialized at Their School

(NCHA Nationwide Data from 72,719 Students Attending 130 Schools, 2000-03)

Source: HW Perkins, M Haines, and R Rice, Journal of Studies on Alcohol, 2005.

Accuracy of Perceived Drinking Norm					
Under- estimate by 3+ Drinks	Under- estimate by 1-2 Drinks	Accurate Estimate	Over- estimate by 1-2 Drinks	Over- estimate by 3+ Drinks	
3%	12%	14%	32%	39%	

71% Overestimate Peer Drinking!

Students' Misperceptions of the Norm for the Number of Drinks Consumed at Parties and Social Occasions – 2011 HWS Survey

Actual Norm = 4-5 drinks

Accuracy of Perceived Drinking Norm					
Under- estimate by 3+ Drinks	Under- estimate by 1-2 Drinks	Accurate Estimate	Over- estimate by 1-2 Drinks	Over- estimate by 3+ Drinks	
.4%	14%	38%	25%	22%	

47% Overestimate Peer Drinking!

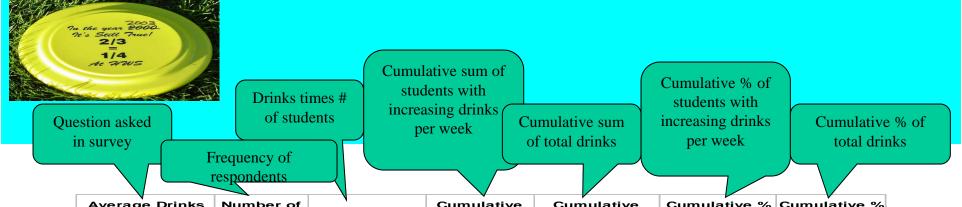
When is the Social Norms Approach Most Effective?

- Clear positive norm messages
- Credible data
- Absence of competing scare messages
- Dosage is high (ongoing and intense social marketing of actual norms)
- Synergistic strategies
- Broad student population receives message in addition to any high-risk target groups



Campus Survey Data Demonstrating the Norm for Student Alcohol Consumption

(spreadsheet data revealing the skewed distribution of student drinking patterns supporting the "2/3=1/4" campaign in 2003)



Average Drinks Per Week	Number of Students	\ Total Drinks	Cumulative Students	Cumulative Drinks	Cumulative % of Students	Cumulative % of Drinks
O	55	0	55	0	18%	0%
1	23	23	78	23	25%	1%
2	19	38	97	61	31%	2%
3	11	33	108	94	34%	3%
4	17	68	125	162	40%	5%
5	20	100	145	262	46%	8%
6	11	66	156	328	50%	11%
7	12	84	168	412	54%	13%
8	16	128	184	540	59%	17%
9	7	63	191	603	61%	19%
10	28	280	219	883	70%	28%
11	4	44	223	927	71%	30%
12	12	144	235	1071	75%	35%
13	3	39	238	1110	76%	36%
14	5	70	243	1180	77%	38%
15	12	180	255	1360	81%	44%
16	4	64	259	1424	82%	46%
18	4	72	263	1496	84%	48%
19	2	38	265	1534	84%	49%
20	20	400	285	1934	91%	62%
24	1	24	286	1958 🦝		63%
25	3	75	289	2033	70% of students	65%
26	1	26	290	2059	70% of students	66%
28	1	28	291	2087		67%
30	10	300	301	2387	06%	77%
32	2	64	303	2451	1:1 1 200/	C 11 9%
35	4	140	307	2591	drink only 28%	01 all 3%
40	1	40	308	2631	alcohol consum	ed 5%
45	1	45	309	2676	alcohol collsuill	6%
50	1	50	310	2726	99%	88%
58	1	58	311	2784	99%	90%
60	1	60	312	2844	99%	92%
120	1	120	313	2964	100%	95%
140	1	140	314	3104	100%	100%

Source: Alcohol Education Project, Hobart and William Smith Colleges, 2003 survey data presented in lecture on social norms for course on Alcohol Use and Abuse (Professors H.W. Perkins and D.W. Craig)

" $\frac{2}{3} = \frac{1}{4}$ " in 2013

The 2013 results on drinks per week at HWS show the same consistent skew as found in previous years and at other schools.

Most HWS students consume a relatively small portion of the overall consumption and a minority consume most of the drinks consumed per week.

Average Drinks Per Week Students 0	
Per Week Students 0 44 1 59 2 44 3 49 4 50 5 37 6 38 7 20 8 40 9 7	
0 44 1 59 2 44 3 49 4 50 5 37 6 38 7 20 8 40 9 7	
1 59 2 44 3 49 4 50 5 37 6 38 7 20 8 40 9 7	
2 44 3 49 4 50 5 37 6 38 7 20 8 40 9 7	
3 49 4 50 5 37 6 38 7 20 8 40 9 7	
4 50 5 37 6 38 7 20 8 40 9 7	
5 37 6 38 7 20 8 40 9 7	
6 38 7 20 8 40 9 7	
7 20 8 40 9 7	
8 40 9 7	
9 7	
10 05	
11 2	
12 26	
13 1	
14 12	
15 31	
16 6	
17 2	
18 11	
20 25	
21 1	
22 1	
23 1	
24 4	
25 9	
27 2	
28 1	
30 17	
31 1	
35 2	
36 1	
40 7	
45 2	
50 3	
54 1	
60 1	
70 2	

Average Drinks	Number of		Cumulative		
Per Week	Students	Total Drinks	Students		
0	44	0	44		
1	59	59	103		
2	44	88	147		
3	49	147	196		
4	50	200	246		
5	37	185	283		
6	38	228	321		
7	20	140	341		
8	40	320	381		
9	7	63	388		
10	65	650	453		
11	2	22	455		
12	26	312	481		
13	1	13	482		
14	12	168	494		
15	31	465	525		
16	6	96	531		
17	2	34	533		
18	11	198	544		
20	25	500	569		
21	1	21	570		
22	1	22	571		
23	1	23	572		
24	4	96	576		
25	9	225	585		
27	2	54	587		
28	1	28	588		
30	17	510	605		
31	1	31	606		
35	2	70	608		
36	1	36	609		
40	7	280	616		
45	2	90	618		
50	3	150	621		
54	1	54	622		
60	1	60	623		
70	2	140	625		

Average Drinks Per Week Number of Students Cumulative Outlets Cumulative Drinks 0 44 0 44 0 1 59 59 103 59 2 44 88 147 147 3 49 147 196 294 4 50 200 246 494 5 37 185 283 679 6 38 228 321 907 7 20 140 341 1047 8 40 320 381 1367 9 7 63 388 1430 10 65 650 453 2080 11 2 22 455 2102 12 26 312 481 2414 13 1 13 482 2427 14 12 168 494 2595 15 31 46						
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16 6 96 531 3156 17 2 34 533 3190 18 11 198 544 3388 20 25 500 569 3888 21 1 21 570 3909 22 1 22 571 3931 23 1 23 572 3954 24 4 96 576 4050 25 9 225 585 4275 27 2 54 587 4329 28 1 28 588 4357 30 17 510 605 4867 31 1 31 606 4898 35 2 70 608 4968 36 1 36 609 5004 40 7 280 616 5284 45 2 90 618 5374	14	12	168	494	2595	
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18 11 198 544 3388 20 25 500 569 3888 21 1 21 570 3909 22 1 22 571 3931 23 1 23 572 3954 24 4 96 576 4050 25 9 225 585 4275 27 2 54 587 4329 28 1 28 588 4357 30 17 510 605 4867 31 1 31 606 4898 35 2 70 608 4968 36 1 36 609 5004 40 7 280 616 5284 45 2 90 618 5374	16	6	96	531	3156	
20 25 500 569 3888 21 1 21 570 3909 22 1 22 571 3931 23 1 23 572 3954 24 4 96 576 4050 25 9 225 585 4275 27 2 54 587 4329 28 1 28 588 4357 30 17 510 605 4867 31 1 31 606 4898 35 2 70 608 4968 36 1 36 609 5004 40 7 280 616 5284 45 2 90 618 5374	17	2	34	533	3190	
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23 1 23 572 3954 24 4 96 576 4050 25 9 225 585 4275 27 2 54 587 4329 28 1 28 588 4357 30 17 510 605 4867 31 1 31 606 4898 35 2 70 608 4968 36 1 36 609 5004 40 7 280 616 5284 45 2 90 618 5374	21	1	21	570	3909	
24 4 96 576 4050 25 9 225 585 4275 27 2 54 587 4329 28 1 28 588 4357 30 17 510 605 4867 31 1 31 606 4898 35 2 70 608 4968 36 1 36 609 5004 40 7 280 616 5284 45 2 90 618 5374	22	1	22	571	3931	
25 9 225 585 4275 27 2 54 587 4329 28 1 28 588 4357 30 17 510 605 4867 31 1 31 606 4898 35 2 70 608 4968 36 1 36 609 5004 40 7 280 616 5284 45 2 90 618 5374	23	1	23	572	3954	
27 2 54 587 4329 28 1 28 588 4357 30 17 510 605 4867 31 1 31 606 4898 35 2 70 608 4968 36 1 36 609 5004 40 7 280 616 5284 45 2 90 618 5374	24	4	96	576	4050	
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54 1 54 622 5578						
60 1 60 623 5638						
70 2 140 625 5778						

Average Drinks	Number of		Cumulative	Cumulative	Cumulative %	
Per Week	Students	Total Drinks	Students	Drinks	of Students	
0	44	0	44	0	7.0%	
1	59	59	103	59	16.5%	
2	44	88	147	147	23.5%	
3	49	147	196	294	31.4%	
4	50	200	246	494	39.4%	
5	37	185	283	679	45.3%	
6	38	228	321	907	51.4%	
7	20	140	341	1047	54.6%	
8	40	320	381	1367	61.0%	
9	7	63	388	1430	62.1%	
10	65	650	453	2080	72.5%	
11	2	22	455	2102	72.8%	
12	26	312	481	2414	77.0%	
13	1	13	482	2427	77.1%	
14	12	168	494	2595	79.0%	
15	31	465	525	3060	84.0%	
16	6	96	531	3156	85.0%	
17	2	34	533	3190	85.3%	
18	11	198	544	3388	87.0%	
20	25	500	569	3888	91.0%	
21	1	21	570	3909	91.2%	
22	1	22	571	3931	91.4%	
23	1	23	572	3954	91.5%	
24	4	96	576	4050	92.2%	
25	9	225	585	4275	93.6%	
27	2	54	587	4329	93.9%	
28	1	28	588	4357	94.1%	
30	17	510	605	4867	96.8%	
31	1	31	606	4898	97.0%	
35	2	70	608	4968	97.3%	
36	1	36	609	5004	97.4%	
40	7	280	616	5284	98.6%	
45	2	90	618	5374	98.9%	
50	3	150	621	5524	99.4%	
54	1	54	622	5578	99.5%	
60	1	60	623	5638	99.7%	
70	2	140	625	5778	100.0%	

A D:1	N 1 C		C 1.4	G 1.1	C 1 .: 0/	C 1 4' 0'
Average Drinks	Number of	Total Deinles	Cumulative	Cumulative Drinks	Cumulative %	
Per Week	Students	Total Drinks	Students		of Students	of Drinks
0	44	0	44	0	7.0%	0.0%
1	59	59	103	59	16.5%	1.0%
2	44	88	147	147	23.5%	2.5%
3	49	147	196	294	31.4%	5.1%
4	50	200	246	494	39.4%	8.5%
5	37	185	283	679	45.3%	11.8%
6	38	228	321	907	51.4%	15.7%
7	20	140	341	1047	54.6%	18.1%
8	40	320	381	1367	61.0%	23.7%
9	7	63	388	1430	62.1%	24.7%
10	65	650	453	2080	72.5%	36.0%
11	2	22	455	2102	72.8%	36.4%
12	26	312	481	2414	77.0%	41.8%
13	1	13	482	2427	77.1%	42.0%
14	12	168	494	2595	79.0%	44.9%
15	31	465	525	3060	84.0%	53.0%
16	6	96	531	3156	85.0%	54.6%
17	2	34	533	3190	85.3%	55.2%
18	11	198	544	3388	87.0%	58.6%
20	25	500	569	3888	91.0%	67.3%
21	1	21	570	3909	91.2%	67.7%
22	1	22	571	3931	91.4%	68.0%
23	1	23	572	3954	91.5%	68.4%
24	4	96	576	4050	92.2%	70.1%
25	9	225	585	4275	93.6%	74.0%
27	2	54	587	4329	93.9%	74.9%
28	1	28	588	4357	94.1%	75.4%
30	17	510	605	4867	96.8%	84.2%
31	1	31	606	4898	97.0%	84.8%
35	2	70	608	4968	97.3%	86.0%
36	1	36	609	5004	97.4%	86.6%
40	7	280	616	5284	98.6%	91.5%
45	2	90	618	5374	98.9%	93.0%
50	3	150	621	5524	99.4%	95.6%
54	1	54	622	5578	99.4%	95.6%
60		60	623			90.5%
	1			5638	99.7%	
70	2	140	625	5778	100.0%	100.0%

Average Drinks	Number of		Cumulative	Cumulative	Cumulative %	Cumulative %
Per Week	Students	Total Drinks	Students	Drinks	of Students	of Drinks
0	44	0	44	0	7.0%	0.0%
1	59	59	103	59	16.5%	1.0%
2	44	88	147	147	23.5%	2.5%
3	49	147	196	294	31.4%	5.1%
4	50	200	246	494	39.4%	8.5%
5	37	185	283	679	45.3%	11.8%
6	38	228	321	907	51.4%	15.7%
7	20	140	341	1047	54.6%	18.1%
8	40	320	381	1367	61.0%	23.7%
9	7	63	388	1430	62.1%	24.7%
10	65	650	453	2080	72.5%	36.0%
11	2	22	455	2102	72.8%	36.4%
12	26	312	481	2414	77.0%	41.8%
13	1	13	482	2427	77.1%	42.0%
14	12	168	494	2595	79.0%	44.9%
15	31	465	525	3060	84.0%	53.0%
16	6	96	531	3156	85.0%	54.6%
17	2	34	533	3190	85.3%	55.2%
18	11	198	544	3388	87.0%	58.6%
20	25	500	569	3888	91.0%	67.3%
21	1	21	570	3909	91.2%	67.7%
22	1	22	571	3931	91.4%	68.0%
23	1	23	572	3954	91.5%	68.4%
24	4	96	576	4050	92.2%	70.1%
25	9	225	585	4275	93.6%	74.0%
27	2	54	587	4329	93.9%	74.9%
28	1	28	588	4357	94.1%	75.4%
30	17	510	605	4867	96.8%	84.2%
31	1	31	606	4898	97.0%	84.8%
35	2	70	608	4968	97.3%	86.0%
36	1	36	609	5004	97.4%	86.6%
40	7	280	616	5284	98.6%	91.5%
45	2	90	618	5374	98.9%	93.0%
50	3	150	621	5524	99.4%	95.6%
54	1	54	622	5578	99.5%	96.5%
60	1	60	623	5638	99.7%	97.6%
70	2	140	625	5778	100.0%	100.0%