Analysis of South Dakota
24-7 Sobriety Program Data

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Introduction

A significant concern for the safety of South Dakota citizens is the drinking and driving of the multiple DUI offender. National statistics sited by the National Highway Transportation Safety Administration (NHTSA) indicate that approximately one-third of all first-time DUI offenders will have a second offense. Therefore, prevention of alcohol consumption by multiple DUI offenders can greatly reduce the risk to the general population and reduce future offenses.

Support for this effort is provided via contract from the South Dakota Department of Public Safety, Office of Highway Safety as part of highway safety funding provided by the National Highway Safety Administration (NHTSA).

Source Data

The data included in this analysis was exported from the 24-7 sobriety program web-based management information system maintained by the Office of the Attorney General for oversight of the program. Data provided for analysis included all participants with a DUI offense collected via the management information system from inception of the program through the end of November 2006. The data was stripped of all personal identifiers by Attorney General staff prior to release for data analysis in order to protect the privacy of program participant and for security.

Analysis

The data set included individual participant information on 1,074 individuals. Approximately 48% of the program participants were identified as having three or more DUIs.

Program Participant by Offense Type

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2nd DUI	558	52.0	52.0	52.0
	3rd DUI	386	35.9	35.9	87.9
	4th DUI	108	10.1	10.1	98.0
	5th and up DUI	22	2.0	2.0	100.0
	Total	1074	100.0	100.0	

Over 95% of the participants were classified as "Pre-Trial" conditions.

Legal Status of Participant

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Condition of Sentence	17	1.6	1.6	1.6
	Post-Conviction/Pre-Sentence	3	.3	.3	1.9
	Post-Sentencing	32	3.0	3.0	4.8
	Pre-Trial	1022	95.2	95.2	100.0
	Total	1074	100.0	100.0	

The majority (63%) of individuals participating in the program are being tested in Minnehaha and Pennington counties.

County/Location of Testing

Testing County		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bennett	12	1.1	1.1	1.1
	Brookings	22	2.0	2.0	3.2
	Brown	180	16.8	16.8	19.9
	Clay	5	.5	.5	20.4
	Hughes	76	7.1	7.1	27.5
	Lincoln	4	.4	.4	27.8
	Mellette	20	1.9	1.9	29.7
	Minnehaha	356	33.1	33.1	62.8
	Pennington	328	30.5	30.5	93.4
	Spink	9	.8	.8	94.2
	Tripp	27	2.5	2.5	96.7
	Union	1	.1	.1	96.8
	Walworth	7	.7	.7	97.5
	Yankton	27	2.5	2.5	100.0
	Total	1074	100.0	100.0	

All individuals were identified in the database as being required to test twice per day.

Number of Test Per Day

Number of Tests Per Day		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	1074	100.0	100.0	100.0

The average age of program participants 35.2 years of age with a standard deviation of 10.7 years. The youngest participant is reported as being 20 years of age and the oldest participant was 81 years of age. The largest age group participating in the program individuals less than 30 years (36.5%).

Descriptive Statistics – Participant Age

	N	Minimum	Maximum	Mean	Std. Deviation
Age	1074	20.00	81.70	35.1637	10.75732
Valid N (listwise)	1074				

Program Participants Average Age

Mean = 35.1637
Std. Dev. = 10.75732
N = 1,074
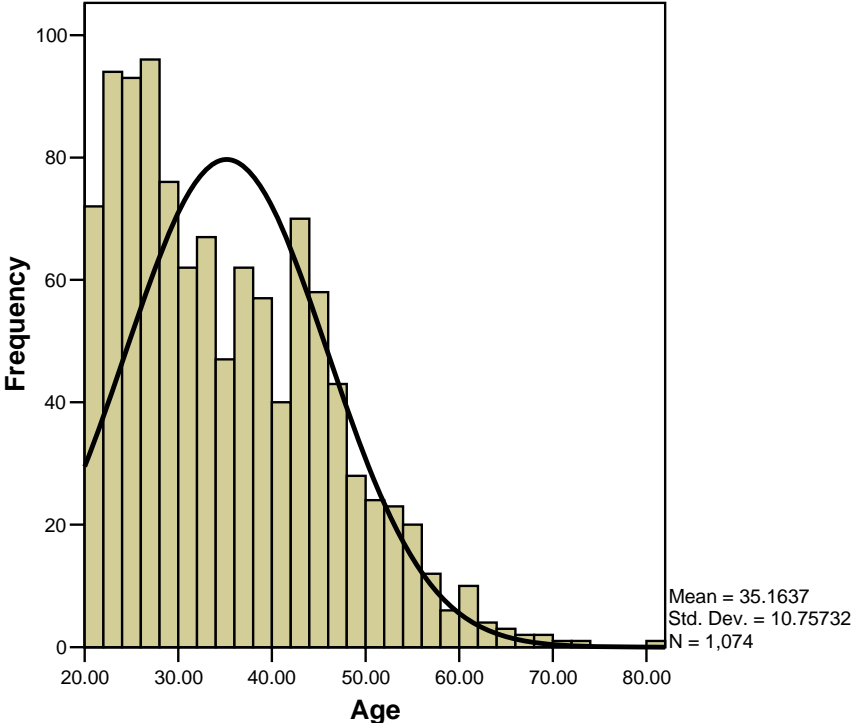
Age Groups

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 30	392	36.5	36.5	36.5
	30 to 39	310	28.9	28.9	65.4
	40 to 49	249	23.2	23.2	88.5
	50 to 59	97	9.0	9.0	97.6
	60 and over	26	2.4	2.4	100.0
	Total	1074	100.0	100.0	

Age Groups
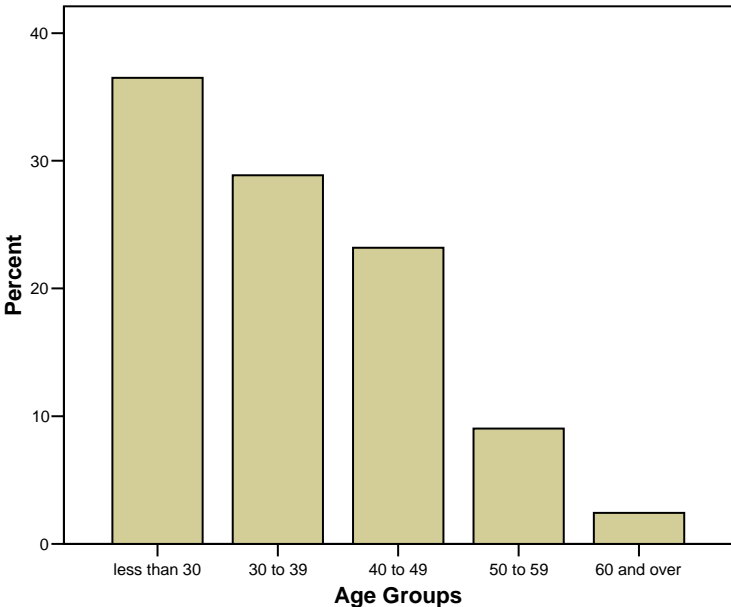
Age Groups * Offense Name Crosstabulation

			Offense Name				
			2nd DUI	3rd DUI	4th DUI	5th and up DUI	Total
Age Groups	less than 30	Count	243	124	22	3	392
		% within Age Groups	62.0%	31.6%	5.6%	.8%	100.0%
		% within Offense Name	43.5%	32.1%	20.4%	13.6%	36.5%
	30 to 39	Count	152	120	35	3	310
		% within Age Groups	49.0%	38.7%	11.3%	1.0%	100.0%
		% within Offense Name	27.2%	31.1%	32.4%	13.6%	28.9%
	40 to 49	Count	103	95	37	14	249
		% within Age Groups	41.4%	38.2%	14.9%	5.6%	100.0%
		% within Offense Name	18.5%	24.6%	34.3%	63.6%	23.2%
	50 to 59	Count	48	37	10	2	97
		% within Age Groups	49.5%	38.1%	10.3%	2.1%	100.0%
		% within Offense Name	8.6%	9.6%	9.3%	9.1%	9.0%
	60 and over	Count	12	10	4	0	26
		% within Age Groups	46.2%	38.5%	15.4%	.0%	100.0%
		% within Offense Name	2.2%	2.6%	3.7%	.0%	2.4%
Total		Count	558	386	108	22	1074
		% within Age Groups	52.0%	35.9%	10.1%	2.0%	100.0%
		% within Offense Name	100.0%	100.0%	100.0%	100.0%	100.0%

Bar Chart
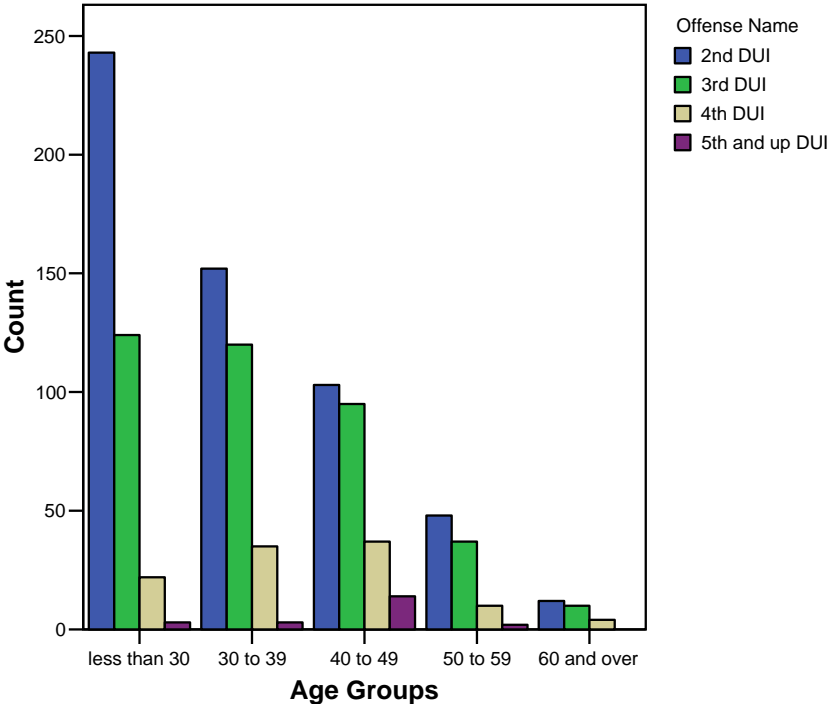
**Number of Testing Days**

Comparing program participants first test date to a program participants last test date yields an average of 111.3 days of program participation.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Number of Test Days	1024	.00	658.04	111.3350	114.68043
Valid N (listwise)	1024				

Distribution of Number of Testing Days

Mean = 111.335
Std. Dev. = 114.68043
N = 1,024
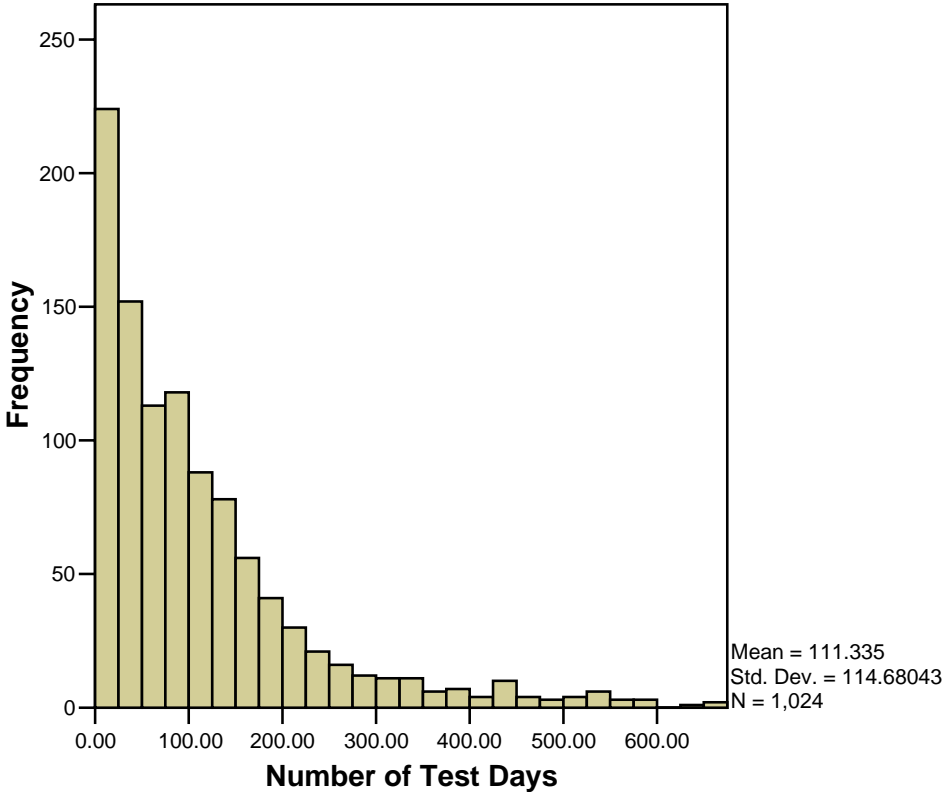
Testing Time

All individuals included in this analysis where scheduled to be tested twice per day. The average time of the morning test was shortly after 8 a.m. in the morning with the majority of morning tests occurring between 6 a.m. and 10 a.m.

Average AM Test Time

Mean = 8.1285
Std. Dev. = 1.12412
N = 1,015
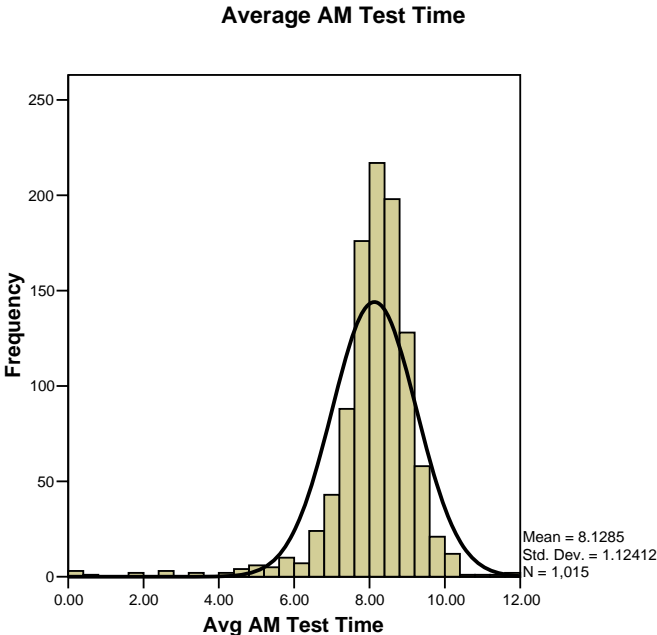
The average time of the evening test occurred around 7:30 p.m. in the evening with the majority of evening tests occurring between 6 p.m. and 8:30 p.m.

Average PM Test Time

Mean = 19.5543
Std. Dev. = 0.88251
N = 1,011
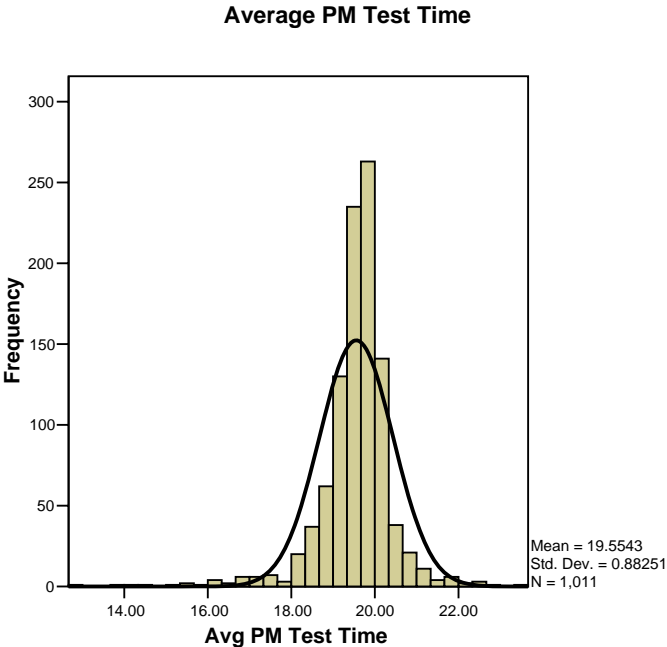
Combining the two graphs aids highlights that on average there is approximately 11 ½ hours between the morning test to the evening test and 12 ½ hours between the evening test and the morning test for all participants.
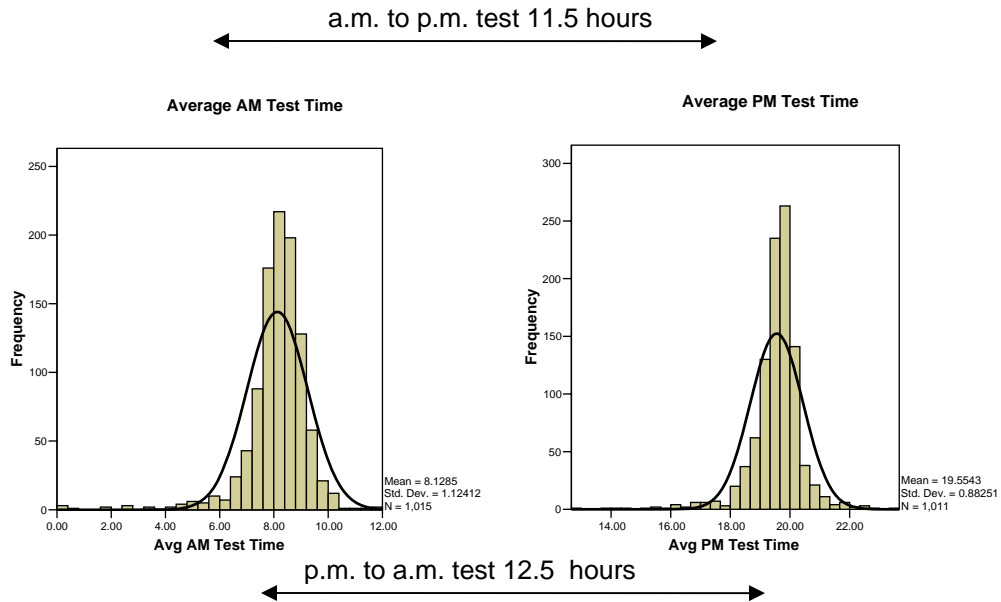
This suggests that it would be extremely difficult for individuals to "cheat" the system regularly and not be caught.

Testing Results

Data on testing results was available for analysis on 1,021 program participants. These program participants showed up and completed a total 165,456 tests of 166,222 tests scheduled and missed or 'No Showed' occurred 766 times. Of the 766 'No Shows', 407 of these were excused leaving only 359 'No Show' occurrences for which a documented excuse was not recorded in the database. Therefore, participants are showing up and testing or have excused missed tests for over 99.8% of the schedule test times.

Participants passed 165,105 (or 99.3%) of 166,222 scheduled tests. Participants failed 534 tests for which they showed up and were tested positive for alcohol. After review of the data, it is believed that the actual number of failed tests is lower than the 534 because numerous test failures appear to be entered more than once into the database. In addition in review of the records, it appears that when individuals fail and consequences are imposed subsequent compliance increases. Test data for failed tests needs further review and analysis to determine exact outcomes. In summary, individuals are showing up and being tested and for individuals who do not show up or who blow a positive test consequences are being imposed. Therefore one can conclude that the overall result of the program is a reduction in program participants drinking and driving.

Descriptive Statistics

	n Participants	Total number of Tests	Tests Per Participant			
			Minimum	Maximum	Mean	Std. Deviation
Number Tests	1021	166222	1	1149	162.80	158.022
Shows	1021	165456	1	1148	162.05	157.853
n No Show Excuses	114	407	1	74	3.57	7.880
n No Shows	261	766	1	75	2.93	5.826
n Neg Tests	1021	165105	1	1149	161.71	157.730
n Fail Tests	341	632	1	10	1.85	1.233

Of the 341 individuals who failed at least one tests, the majority of individuals (277 of 341) failed 1 or 2 tests.

Number of Shows & Fails

Mean = 1.85
Std. Dev. = 1.233
N = 341