

Reducing Alcohol-Impaired Driving: Publicized Sobriety Checkpoint Programs

Summary Evidence Tables - Economic Review

Economic Impact of Sobriety Checkpoint Intervention

Study Details	Study and Sample Characteristics	Effect size	Program costs (in 2011 \$)	Economic benefit (in 2011 \$)	Economic summary measures (in 2011 \$)
<p>Author (Year): Miller et al. (2004)</p> <p>Study design: Interrupted Time Series</p> <p>Method: Cost-benefit analysis</p>	<p>Study location: New Zealand</p> <p>Sample size: National data LTSA's official crash data base</p> <p>Population: Not reported.</p> <p>Time horizon: 1993-1995</p> <p>1.2-1.5 million compulsory breath tests annually</p> <p>Intervention description:</p>	22.1% reduction in fatal and serious nighttime crashes	<p>\$34.12 million</p> <ul style="list-style-type: none"> • Checkpoint operation and management • Vehicle delay for testing • National publicity campaign 	<p>\$479.88 million</p> <ul style="list-style-type: none"> • Savings for fatalities / nonfatal injuries avoided • Savings for property damage avoided 	<p>Net benefits: \$445.76 million</p> <p>Benefit-to-cost ratio: 14:1</p>
<p>Author (Year): Lacey et al. (1999)</p> <p>Study design: Interrupted Time Series</p> <p>Method: Cost-Effectiveness Analysis</p>	<p>Study location: Tennessee, U.S.</p> <p>Sample size:</p> <p>Population:</p> <p>Intervention description: Regular-manpower Tennessee's Statewide Sobriety Checkpoint On each weekend of the year in at least four counties in the state.</p> <p>Time horizon: 2 years, 900 checkpoints</p>	20.4% reduction in alcohol-involved crashes extending at least 21 months after conclusion of the formal program	<p>\$1.25million</p> <ul style="list-style-type: none"> • Equipment • Police salaries • Program evaluation • Cost of media <p>\$1,470 per checkpoint</p>	n/a	\$5,787 per alcohol-involved crash averted

Study Details	Study and Sample Characteristics	Effect size	Program costs (in 2011 \$)	Economic benefit (in 2011 \$)	Economic summary measures (in 2011 \$)
<p>Author (Year): Lacey et al. (2006)</p> <p>Study design: Interrupted Time Series with comparison</p> <p>Method: Cost-Effectiveness Analysis</p>	<p>Study location: West Virginia, U.S.</p> <p>Sample size:</p> <p>Population:</p> <p>Time horizon:</p> <p>Intervention description: Low-manpower checkpoints, SBT 2003.8-3004.8, weekly a total of 90 checkpoints</p>	<p>Percentage point reduction in nighttime drinking drivers with BAC≥0.08: 1%</p>	<p>The low-manpower checkpoints costing from \$391 to \$446 per checkpoint</p>	<p>n/a</p>	<p>\$35,146-\$40,168 per percentage point reduction in nighttime drinking drivers with BAC≥0.08</p>
<p>Author (Year): Clapp et al. (2005)</p> <p>Study design: Controlled Before and After</p> <p>Method: Cost-Effectiveness Analysis</p>	<p>Study location: California, U.S.</p> <p>Sample size:</p> <p>Population:</p> <p>Time horizon:</p> <p>Intervention description: DUI checkpoints (4 in 17 months), media coverage, and student-designed social marketing campaign. Spring semester 2002 – Spring semester 2003, follow up: 17 months. 4 checkpoints</p>	<p>Percentage point reduction in self-reported driving after drinking: 8%</p>	<p>Each DUI checkpoint cost \$3,445 to operate</p>	<p>n/a</p>	<p>\$1,723 per percentage point reduction in self-reported driving after drinking</p>

Economic Impact of Publicity

Study	Description of publicity	Average media cost per year (in 2011\$)	Average population (census data)	Cost per 100 population per year	Seen or heard of checkpoint, before/ after	Costs additional 100 persons aware of sobriety checkpoint, per year
Author (Year): Lacey et al., (2008) Study design: Interrupted Time Series with Comparison Group	Delaware: Paid/Earned Media	\$74,871	545,279	\$14	35.2%, 51.0%	\$87
	Maryland: Paid/Earned Media	\$96,752	3,667,867	\$3	26.8%, 30.2%	\$78
	West Virginia: Paid/Earned Media	\$128,309	1,205,692	\$11	36.7%, 43.8%	\$150
	District of Columbia: Paid/Earned Media	\$164,627	372,954	\$44	n/a	n/a
	Pennsylvania: Paid/Earned Media	\$297,696	8,239,629	\$4	n/a	n/a
	Virginia: Paid/Earned Media	\$575,900	4,922,464	\$12	n/a	n/a
Author (Year): Syner et al., (2006) Study design: Before and After	Paid/Earned Media, press/conference, local media events, TV/Radio Spots	\$121,544	8,912,518	\$1	71.7%, 76.3%	\$29
Author (Year): Zwicker et al., (2004) Study design: Interrupted time series with Comparison Group	Paid/Earned media campaign	\$2,857,274	3,485,881	\$82	20.1%, 52.0%	\$257
Author (Year): Clapp et al., (2005) Study design: Controlled Before and After	Paid/Earned media, Social marketing campaign, school newspaper, advertisement, promotion cards	\$4,065	23,772	\$17	n/a	n/a

NOTE: Details of the economic evidence for the other studies in this updated review were from the 2000 Community Guide review on Sobriety Checkpoints, and can be found in: Shults RA, Elder RW, Sleet DA, et al. Reviews of evidence regarding interventions to reduce alcohol-impaired driving.  [PDF - 67KB] *Am J Prev Med* 2001;21(4S):66–88.