# Health Communication & Social Marketing: Health Communication Campaigns That Include Mass Media and Health-Related Product Distribution

## Summary Evidence Tables - Economic Review

### Child Car Seats (Boosters)

Lead Author, Year Product Study Design Economic Method	Study Location Sample Size Population Characteristics Time Horizon	Intervention Description	Effect Size	Program Costs	Direct Medical Costs Averted Productivity Losses Averted	Economic Summary Measure
St. Louis	Two inner city	Booster seat promotion	Evaluation conducted by U of	Two communities were	No	No summary
2008	communities in	intervention with different	MI Transportation Research	awarded \$50,000 each.	productivity	economic measures
	Michigan, one	components tailored to the two	Institute. Performed direct		losses	reported beyond
Car Seats	with low income	communities.	observations of booster use	Staff included 3 child	estimated or	grant amount.
and	and the other		before and after intervention,	passenger safety (CPS)	reported.	
Booster	with majority	Following provides activities	with comparison communities	technicians (about 10		The intervention in
Seats	Hispanic. Note MI did not have	and effort in the 2 communities:	matched by income, race. Observation sites chosen for	hrs/week), 1 health educator, and a	No health care	the Hispanic
Intervention	a booster seat	communities:	those typically visited by 4-8	supervisor. See labor	costs averted estimated or	community produced
funded by	law.	Low Hispanic	year olds.	hours in Table which	reported in	significantly positive
CDC & MI	iaw.	Income		includes staff and	monetized	results for booster
Dept	Target area is		Low Income Community	volunteer time.	form.	seat use. There was
Community	low income with	Media events 201 637	Booster Use			no difference in
Health	population	Fitting station			No base year	restraint use in
	197,846 with	Fitting station events 35 58	Intervention:		provided. Use	either community
Pre-post	20.4% Black,	events 55 56	Before - 19.0±5.3%; After -		end year of	and no difference in
with	67% White, 13%	Workshops 8 8	$16.9\pm3.6\%$ implying no		intervention	booster use in the
comparison	Hispanic	Labor hours 300 900	difference		(=2006) and CPI – 1.06.	low income
groups	Hispanic community		Comparison:		CPI – 1.06.	community. The authors note based
Cost analysis	population was	Seats	Before - 9.7±5.7%; After -			on the Table that
– minimal	11,355	distributed 216 358	$16.8\pm2.1\%$ implying no			the process in the
program	,		difference			Hispanic community
grant	Baseline	Note that vouchers were for free and low-cost seats,				was probably more
amount	measures	including booster and other	Hispanic Community Booster			intense and had
	performed June	types. Major component was	Use			better reach, with
	20–July 1, 2005	fitting station with 3 to 17	Intervention:			program staff rather
	and post	volunteers at any time. The	Before - 9.7±2.5%; After -			than volunteers.
	measure October 13–22, 2006.	fitting stations distributed 183	14.9±2.1% implying a significant increase			Calculated by
	Appears to be 15	seats and checked 646.	significant increase			Reviewers
	month program.	Educational workshops along	Comparison:			Effect size for
		with seat distribution held at	Before - 18.2±2.7%; After -			Hispanic
		churches, county fair, and through elementary school	14.8±1.7% implying no			Community:

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		kids. Ads were run 3 times, articles 6 times, and photographs 2 times in local newspapers. Radio spots ran a total of 600 times in the 4 <sup>th</sup> and 14 <sup>th</sup> months.	difference In the case of child restraints in general, there was no difference observed for either communities in pre post measures.			Inter: 5.2% Comparison: -3.4 Difference: 8.6%

#### Pedometers

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Brown 2006	Rockhampton,	Whole community intervention to	Measurement for effectiveness based	Authors note difficulty	No health care	Authors quote
2008 Eakin 2007	Australia. (pop 60K)	increase physical activity. Informed by social-ecological framework	Australian PA guidelines.	in calculating program cost due to significant	utilization or workplace	national study: 1% increase in PA -
2007	Comparison	where physical activity is	Australian i A galacinics.	in-kind contributions.	productivity	>averted 122
Intervention	MacKay (pop	determined at multiple levels.	Percent active in 2001:		effects	deaths from CVD,
funded by	75K) both in	<ul> <li>Advice to individuals by health</li> </ul>	Interv –41.9%	Grant from State –	considered.	Diabetes, Colon
state of	Queensland	professional	Control - 48.3%	A\$800,000		Cancer ->Save
Queensland	E a constant a de da	<ul> <li>Media campaign at population</li> </ul>	Demonstrative in 2000	A	No base year	1,764 years of life
Pedometer	Focus on adult population.	<ul><li>level</li><li>Environmental changes at</li></ul>	Percent active in 2003: Interv –42.8%	Approximate 70% allocatable to	provided. Use end year of	and A\$3.6 Mil
Fedometer	Survey included	policy level	Control – 41.9%	intervention cost –	program	However, reviewers
Pre and post	over 2478			A\$560,000 (A\$14 per	(=2003) and	didn't attempt to
with	individuals	1. 2500 pedometers and logbooks	After adjustment for	adult resident)	ČPI – 1.17,	translate this to the
comparison.	(Interv – 1242;	available for purchase through	relevant sociodemographic		PPP – 1.35.	intervention's effect
	Control – 1236).	project office and pharmacies, and	variables, there was no	Paid advertising and		in Rockhampton
Cost analysis	<b>D</b> "	500 on loan from the library. 5	significant difference in	event marketing -		since intervention
	Baseline	large employers made 2000	activity levels between	AUD\$20,000, with a further AUD\$50,000		was not significantly
	measure Aug- Sep 01 and	available. Also available from sports stores and Heart Foundation.	Rockhampton and Mackay in 2003.	"in-kind".		effective.
	follow-up Aug-	stores and ricart roundation.	11 2003.			Even though there
	Sep 03.	2. Print, radio, TV campaign first 3	Exposure-Heard of	Total grant plus in-		was no significant
	•	months, followed by paid and	Intervention:	kind marketing –		effect due to
	Program length 2	unpaid marketing efforts: mailing	Interv – 95%	A\$610K (\$15.25 per		intervention for the

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	years. Elsewhere, states 18 months Jan 02- June 03.	<ul> <li>from City Council; Newsletter; email; special events.</li> <li>3. 21 of 23 GP's trained and given posters, brochures, pedometers.</li> <li>62% used the posters, 70% pedometers, and 81% used brochures.</li> <li>4. Environmental change involved working with the city council to improve the local environment, by enhancing key footpaths, erecting "10,000 Steps" signs, and distributing maps.</li> </ul>	Control – 33% Use pedometer: Interv–18% Control-5.6%.	adult resident) Note from Eakin 2007 that pedometers cost about A\$40		population, it appears women improved their PA somewhat more than men and were more adoptive of the PA suggestions.

#### Condoms

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Alstead	Three King	The Condom Campaign – 1995 HIV	73% recognized some	5 radio spots on 3 radio	No	No summary
1999	County,	prevention program promoting	component of the	stations – 3 times a	productivity	economic measures
	Washington	condom use among adolescents.	campaign (51% radio;	night, 5 times a week	losses	reported beyond
Condom	urban	There are 3 major components:	35% campaign poster;	First wave – 90 exterior	estimated or	partial program
	communities.		32% bus/billboard).	bus signs	reported.	cost.
Intervention	Focus on those	1. Mobilize all levels of target	Those sexually active	Second wave – 210		
funding from	15-17 years old	communities to obtain support	showed high condom use	exterior and 600	No health care	The authors note
Washington	(54%).		throughout survey period.	interior signs	costs averted	the insignificant
State		2. Mass media campaign targeting	No statistically significant	One billboard in each	estimated or	intervention effect
Department	Intervention	sexually active youth regarding	difference between those	community	reported in	may be because of
of Health.	length appears	correct and consistent condom use	using condoms at last	100 T-shirts distributed	monetized	the short duration
	to be about 7		intercourse at baseline	and 1000 campaign	form.	and the high
Pre-post.	months.	<ol><li>Recruit public agencies,</li></ol>	(75%) compared to those	posters		baseline rates.
		community organizations,	who had any exposure	25 condom machines –	No base year	
Average cost	Randomized 341	businesses to distribute condoms in	(69%) or compared to no	3000 vended over 6	provided. Use	Authors note that
analysis –	baseline	bins and vending machines	exposure (68%). Similarly,	months	year of	TV spots were not

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partial intervention cost information.	interviews in March 1995. After start of campaign, 478 interviews in May 1995 and 606 in Oct 1995.	Conducted formative research based on literature review, focus groups, and interviews with youth service providers. Messages and materials developed with help of professional advertising agency on a pro bono basis. These processes took 6 months to complete. Campaign through 1.posters 2. Billboards/bus signs 3.radio spots. Included T-shirts and radio contests to develop campaign. Developed condom availability network – vending machines placed in restrooms and lockers and bins in local stores and community centers frequented by teens. Data collected from 3 waves of interviews collected by 10-15 hired and trained (10 hours) interviewers in each wave.	there was no difference in intentions to use condoms.	22 free condom bins – 1000 condoms per week over 9 months Cost of condoms at \$0.25 ~\$10K Costs Media production and placement - \$140,000 Agency services gratis - \$50,000 Condom distribution for material and vendor services - \$6,500 1 Coordinator over 1 year- no cost assigned	intervention (=1995) and CPI – 1.41.	used because they were too expensive.
Kahn 2001	Initially	Based on the Mpowerment project	Pre and post intervention	Cost data abstracted	No	Societal Cost per
Condom	implemented over 8 month	mobilizing gay youth to consider HIV prevention. The original	surveys of longitudinal cohorts recruited	from project ledgers and staff interviews,	productivity losses	averted HIV in Steady State
Intervention funded by U.S. National Institute of Mental Health. Pre-post	period in Eugene, OR with Santa Barbara, CA as control. Subsequently implemented also in Santa Barbara, CA.	effectiveness paper is: Kegeles et al. Mobilizing young gay and bisexual men for HIV prevention: a two-community study. AIDS 1999, 13:1753–1762. Program components designed by gay men from community under guidance. Peer outreach was an	independent of intervention to assess sexual behaviors. The focus is on unprotected anal intercourse (UAI) from Kegeles 99. In particular, the change is calculated as	retrospectively. Major cost items included personnel, consultation, computer equipment, supplies, outreach materials and publicity, travel, and space rental. Following	estimated or reported but may be reflected in QALY. Estimated lifetime medical	(Increasing State): 1 Year - \$46400 (\$39,300) 5 Years - \$18,300 (\$14,600) 20 Years - reduced by 80% from 1 Year Societal Net
with	Targeted gay	important activity, for education	change in intervention	are 8 month costs.	treatment	Savings Based on
comparison groups.	men age 18-27. Number of intervention	dissemination and for recruitment. Several social events created for gay men to attend and be targeted	minus change in control with change defined as (Pre Prevalence-Post	Personnel - \$64,282 (Paid – 1 supervisor, 1	costs for HIV/AIDS is drawn from	Averted Medical Costs in Steady State (Increasing
Net cost analysis	participants=168 (1,100 estimated for area young gay population) Intervention	such as dances. Also held small group 3-hour meetings of 8-10 men to discuss, educate, and role-play. Small campaign used articles, ads, word of mouth, and outreach.	Prevalence)/Pre Prevalence. This effect is reduced by 10% to account for 90% protection by condoms and sensitivity analysis performed with	expert, 4 coordinators - \$38,131 Volunteers - \$26,151 Consultation - \$864 Computers - \$2,500 Supplies - \$5,997	literature- \$98,361- \$159,330 Based on literature, the QALY gained	State): 1 Year - \$212,000 (\$267,000) 5 Years - \$700,000 (\$902,000) 20 Years -

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	length is 8 months and occurred in 1991.	Condoms, lubricants, etc. were included in outreach materials.	<ul> <li>+/-50% band.</li> <li>The base estimate of risk reduction is estimated at 27% with linear return to pre levels within 3 years.</li> <li>Decay of effect is also subjected to sensitivity analysis.</li> <li>Without intervention, new infections in Eugene, OR would be:</li> <li>Steady-State 1Year- 7; 5 Years-32; 20 Years-99.</li> <li>Increasing prevalence 1Year- 8; 5 Years-40; 20 Years-137. This paper estimates HIV infections averted for 1, 5, and 20 years based on a dynamic epidemic model in steady- state and pre-steady-state.</li> </ul>	Outreach/Publicity - \$9,071 (Condoms - \$1,440 Travel - \$3,911 Space - \$3,436 Communication - \$852 Total (Societal)- \$90,913 Total without Volunteer - \$64,762 Total for Community Organization (CBO)- \$58,865	per HIV averted for this age group is about 12.7. Base year is 2000 and CPI – 1.25.	\$1,371,000 (\$1,996,000)
Kennedy,	Sacramento, CA	Prevention Marketing Initiative	Data from CATI surveys.	Only provides total	Not considered	Not considered.
2000	Adolescents 14- 18 years who	(PMI) as part of social marketing initiative composed of 1. Radio	Survey response rates ranged from 64% to 70%.	program cost of \$250,000		
Condom Intervention and study funding from CDC Before-after time series showing trend in condom use. Economic model is cost-analysis	use condoms inconsistently. 2/3 drawn from various lists and referrals and 1/3 from random digit dialing (RDD). Target about 6-10K adolescents. Race/Ethnicity – Black-9%; Asian-9%; White-60%; Hispanic-22%	spots 2. Posters and promotion on public transport 3. Skills workshops – lectures, discussions, video, role- play 4. Peer outreach 5. Phone info line. Workshops co-facilitated by adolescents. Estimated exposures (persons): Radio spots (2,000 30 second spots) – 7K Phone line – 2,300 Workshops – 894 Promotions – 2.6-4K In round 5 survey, 70% exposed to	Effects measured as 1. Condom use at last intercourse 2. Condom carrying 3. Intent to use condom. Dosage variable defined as variable taking value between 0 and 6, with 1 point for each channel of exposure to marketing defined by the intervention.	Authors note the cost reported include: Staff salaries Creative materials Operating expenses Air time		

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providing only total program cost.	Aver per cap income - \$20K Employment – Govt-29%; Agri- 20% Total surveyed N=1,402 over 5 surveys with 248-303 per survey. 1-year intervention with baseline 6 months prior and 4 surveys between Dec 1996 to Oct 1998.	at least 1 channel. Other ongoing programs: 1. Sacramento schools providing HIV info only 2. Statewide social marketing on HIV risks but ended before PMI.	Logistic Regression with Sex, Age, Race, RDD, and Dosage: Odds of condom use with main partner at last intercourse (dosage) (n=441) – 1.26 CI-1.07, 1.49 Odds of condom carrying (dosage) (n=637) – 1.27 CI-1.15, 1.41 The effects measured by odds ratio was stronger with African Americans and with males.			
Rebchook 2006 Condom Study supported by NIMH. CBOs likely to be funded by CDC and state departments of health. Process evaluation. Cost analysis – important program budgets	Nationwide organizations with existing or implementing Mpowerment program. Target gay or bisexual men. Longitudinal dataset of all implementers of Mpowerment. Data collected through base plus 3 interviews at 6 month intervals over 18 months. 69 CBOs (91%) participated in project. Majority in operation 2 years or less.	This is an assessment of how CBOs have been implementing the Mpowerment intervention in practice. See Kegeles 99 and Kahn 01 for original intervention. Authors had developed a structural intervention called the 'Mpowerment Project Technology Exchange System' to assist the CBOs in implementing with fidelity. The following provides the ideal setup: <b>Personnel:</b> Core group is made up of 10-20 gay/bisexual youth meeting weekly, usually volunteers. Part of the core group are coordinators who are paid, and 1.5 FTEs are required. Also involved are elders from the community that form a Community Advisory Board. <b>Project Space</b> The project requires a dedicated physical space for meetings and	Not applicable. This is a process analysis of implementations.	The authors estimate it would cost \$70K to \$90K per year to fully implement the project. Most organizations had small budgets (>\$2 mil - 27%). Question about Mpower budget posed only later. Hence, only 26 organizations provided information: Annual operating budget: >\$150K-19%; \$70K- \$150K-19%; \$20K- \$150K-19%; \$20K- \$70K- 15%; <=\$20K- 23%; Don't Know – 23%. Average budget \$98,746 (median annual budget = was \$70,500; range = \$7,000-\$345,920.		Not applicable Unfortunately, the authors don't provide the target population or the number of individuals served. Hence, per person cost can't be computed. Authors note that a significant minority of organizations dropped significant and core components of the Mpowerment intervention. Authors note that any program with less than \$20K in budget would be

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	Across all states with most in population >200K More than 1/3 target men of color. Data collected 2002-2005.	administration. <b>Small Groups</b> 3-hr small group meetings of 8-10 youth with condom and other distribution <b>Informal Outreach</b> Outreach by youth participants. <b>Publicity Campaign</b> Campaign through word of mouth and through flyers, other small media, articles and advertisements in gay newspapers, and the Internet				quite handicapped.

#### **Recreational Helmets**

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Bergman	Seattle, WA	Multifaceted community-wide	Effectiveness measured as	No details regarding	No health care	No economic
1990 Rivara	Comparison City – Portland, OR	intervention to increase bicycle helmet use.	change in sales and use of helmets.	complete program cost.	costs considered.	summary measure
1994		neimer use.	neimets.		However, the	provided or
	Target	Coalition formed from	Helmet Sales	Bulk of school-based	number of	calculated.
Study and	elementary	community private and public	Of 109,450 coupons	campaigns done by 1 paid	head injuries	
intervention	school children	organizations that could	distributed, 5,155 (4.7%) were	staffer and volunteers from	are provided	Program cost is
funded by	and parents (Pop	contribute service or in-kind.	redeemed. Count sales from	local bicycle club.	for 1992 and	not provided.
CDC and WA	5-14		second helmet sponsor	Based on survey, the	1987. But, we	Only cost of
State Dept	yrs=56179).	Increase awareness through	increased: 1986-1.5K;1987-	authors found the average	can't attribute	helmets and the
of Soc and		health care provider contacts,	5K;1988-22K;Part 1989-30K	cost of helmets was a	this entirely to	effective
HIth Services		trade shows for parents, with		barrier (\$40-\$60). Note	the campaign.	discount is
<b>_</b>	3 year campaign	fact sheets, brochures, coupons	Helmet Use at 16 Months	local manufacturer and	Further, the	available.
Recreation	that appears to	distributed. Also toll-free	9827 observations	local retailer produced	value is not	
al Helmet	have started in	number for supplies and info	Seattle – 5% to 16%	helmets for \$19.95 but	monetized to	It is significant to
Dro post with	1987.	for physicians. Newspaper, TV,	Portland – 1% to 3%	subsequently went out of	reflect health	note the increase
Pre post with	Post measure taken 16 months	and radio spots with victim stories. Two 30-second TV	Note baseline measure for	operation. Another manufacturer donated \$5K	care costs	in sales of discounted
control.			Seattle was done 2 years into		averted.	
No program	after campaign	spots produced, 1 for materials	campaign.	for publicity as long as	No	helmets,
No program	start.	only and the other for free.		posters included their	INO	whether due to

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cost but product price and discount provided.		Local manufacturer and local retailer produced helmets for \$19.95. This business closed down. Another manufacturer donated \$5K for publicity under agreement that posters would show its helmets for \$25 with coupon. Used prominent sports figures to promote use of helmets to children.	As second observation (n=921) in Seattle in Sep 1989 indicated helmet use had risen to 23%. From the Rivara 1994 paper, it is observed that helmet use by school-age children increased from 5.5% in 1987 to 40.2% in 1992. Based on a particular HMO data, bicycle-related head injuries per 100K decreased 66.6% for 5-9 year olds (from 283 to 94.6) and by 67.6% for 10-14 year olds (from 188 to 60.9).	helmet at \$25 with coupon. Assuming a retail price of \$76, it may be approximately computed that the discount program cost these private sector sponsors about \$1,811,273 over 3 years. 2 <sup>nd</sup> and 3 <sup>rd</sup> years – full time health educator and part- time PR expert. There was substantial in-kind contributions.	productivity measured. No base year reported. Will use program start year 1987 as base (CPI – 1.89)	discount or due to the campaign.
Levy 2007 Recreation al Helmet Intervention funded by local St. Anthony Health Foundation and several hospitals and neuro practices. Pre post with control. No program cost but usual helmet rental cost provided.	West of Denver, CO Target skiers and snowboarders. Campaign occurred during the 1998-99 ski season. Pilot helmet loans during 98-99 in 3 chain stores and then expanded to 24 stores statewide in next 3 seasons.	Social-marketing campaign and a helmet loaner program to increase helmet use among skiers and snowboarders. The main objective of the intervention was to prevent traumatic brain injury (TBI). Media messages disseminated through multiple medical and layperson formats, including newspapers, magazines, and television. Messages provided information about the risk of TBI from recreation accidents and the availability of helmets on loan from local sporting stores. The helmets were offered for free when equipment was rented from the stores. Store managers and technicians were trained and brochures were offered along	Effectiveness of free loaner program estimated by comparing helmet acceptance at participating and non- participating stores. Ski Helmet Acceptance Rate Among Renters Pre Post Interv 13.8 33.5 Control 1.38 4.48 Pre to Post Observed Helmet Use on Slopes: Front Range Ski Areas Snowboarders 24.2 to 34.0- 44.2 Skiers 7.7 to 13.7-20.3 Note observed helmet use includes intervention and control groups. Note the acceptance among ski patrollers and instructors was disappointing.	No details regarding complete program cost. Helmets were offered for free when ski or snowboard equipment was rented from select sporting stores. Generally, stores charged \$3-\$10 per day for helmets. Based on average rental of \$8.10 and the helmet days from effect size, the discounts offered by stores totaled \$1434664 and annual average of \$358,666. Chain retailer provided advertisement and public campaign the first season. Substantial donations and in-kind support provided by physician groups, hospitals, foundations for	No health care costs considered. No productivity measured. No base year reported. Will use mid program year 2000 as base (CPI – 1.25)	No economic summary measure provided or calculated. Program cost is very incomplete. Only available information is the usual rental cost for helmets. Note the loaner program was not self-sustaining with donations continuing to be necessary and the retailer covering 50% of helmet cost.

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		with helmets during rental. Ski patrollers provided educational training and free helmets to promote use.		campaign and purchase of helmets. Helmet manufacturers also offered discounts below wholesale. However, no monetary values are provided.		
Rouzier 1995 Recreation al Helmet Intervention funding and in-kind contribution from local hospitals, HMOs, providers, pharma, and others organiza- tions. Pre post. No program cost but product price, discount, and # sold provided.	Grand Junction, CO Population 76K Target 8600 elementary school children and parents. Intervention began in 1992 and evaluated after 2 years. Length of program not provided. Helmet use observed July of 1992, 1993, and 1994.	Multifaceted community-wide intervention to increase bicycle helmet use. Main component of program is discounted helmets, where average going price is \$25 to \$75. Discounts provided through coupons distributed to children. Coupons contained helmet education materials. Media coverage in local TV and newspaper. Posters in every primary care and in elementary schools. Police provide free milkshake coupons to kids wearing helmets.	Percent helmet use observed during 3 years           Age         1992         1993         1994           5-13         5.6         12.5         30.0           14-21         3.2         0.0         25.0           >21         28.9         41.2         47.1           Note that age 5-13 years was the targeted group.         sears         sears	<ul> <li>Phase 1 (1992 to 1993): Helmets purchased wholesale for \$12 -\$17 and sold to: 2400 helmets sold Low Income - 45% (1080) for \$5</li> <li>Mid to Upper Income - 45% (1080) for \$15 to children 10% (240) for \$17 to parents</li> <li>Phase 2 (1993 to 1994) Local retailer agreed to sell helmets at \$12.99</li> <li>Sold 4000 helmets to children and then general public A total of 6400 helmets were sold to children and parents of elementary school children in an elementary population of about 8600. Informal studies had shown 15-35% previous helmet ownership. Note there is no program cost information for: Media costs for TV and posters The loss to retailer in Phase 2 In kind donations, volunteers, milkshakes hamburgers incentives</li> </ul>	No health care costs considered. No productivity measured. No base year reported. Will use program start year 1992 as base (CPI – 1.53)	No economic summary measure provided or calculated. Sustainability of the program may be questionable given the dependence on volunteer, in- kind contributions, and donations.

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Smith 1991 Recreation al Helmet Intervention funded by CDC and MI Dept of Public Health Pre post. Limited program cost.	Oakland County, MI (Pop 1,052,475) 3100 middle and junior high students and parents from 6 schools. Planning and preparation took 15 months. Intervention itself was over 1 or 2 days in each school, other than media activity. 30-second PSAs in late '89 and early '90 over 5 months 1 week pre and 3 week post phone survey of parents.	School-based pilot intervention to increase helmet use. High Intensity (3 schools) 200 Helmet giveaway All-school assembly with professional athletes Theme was positive aspects of wearing helmets Low Intensity (3 schools) 63 Helmet giveaway Theme was to promote helmets for injury prevention High and Low Parent and student brochures Posters Discount helmets PSAs – Detroit TV and local school CTV Curriculum guide 1-800 Number	<ul> <li>159 (38%) in post survey recalled receiving brochure in mail</li> <li>Parents who recall brochure more likely to talk to child about helmets (60-78%)</li> <li>Authors note that only 2% of children ages 5-14 in Michigan use helmets.</li> <li>Households sampled – Pre-427, Post-414</li> <li>Due to giveaway, helmet ownership went up from 5% to 18.5%.</li> <li>Parent report of helmet wearing 50% of the time Pre and Post.</li> <li>Low Intensity - ~2% to ~4% High Intensity - ~2% to ~11%</li> <li>Informal Observations by principal and County Health Educator</li> <li>Zero students observed with helmets</li> <li>No information from manufacturers regarding coupon redemption 2 local stores stated 3-4 Bell helmet coupons were redeemed</li> </ul>	Total grant from MI Dept of Health and CDC - \$119,750+\$98,759 =\$218,509 (as stated on cover page of report) <b>PSAs</b> Talent and location - \$5K, Video - \$5380, Tapes - @\$15 each, Note broadcasts are free <b>Posters and Brochures</b> Posters - @\$0.96, (50 to each of 6 schools and 1 to each bicycle shop), Student brochures - @\$0.92 to each student, Parent brochures - @\$0.92 to each student, Parent brochures - @\$0.78 mailed to each parent <b>School Assembly</b> Production & Appearance - \$3500 <b>Helmet Coupons</b> Masterlite-\$25; Troxel- 40% off; Bell-\$10 off. <b>Helmet Giveaway</b> 200 helmets given away at each of 3 HI schools @\$14.92 for total \$8952 63 helmets giveaway at each of 3 LI school @\$14.92 for total \$2820 <b>Data Collection</b> \$10,000 No cost info for the curriculum, FT project director, teachers, health educator, coordinator.	No health care costs considered. No productivity measured. No base year reported. Will use program end year 1990 as base (CPI – 1.64)	No economic summary measure provided or calculated. Note that the hired project director fell seriously ill and could not contribute expertise. The grant amount may be usable as program cost if we can subtract the evaluation component.

Year Product Study Design	Study Location Sample Size Population Characteristics Time Horizon	Intervention Description	Effect Size	Program Costs	Direct Medical Costs Averted Productivity Losses Averted	Economic Summary Measure
Recreation al HelmetASubstantial funding for intervention from State of VictoriaS	/ictoria, Australia Study focuses on he campaign starting in 1984 and rebate orograms that extended into early 1985.	See last column for pre-1984 activities <b>1984 TV and radio helmet</b> <b>campaign and rebate</b> <b>program.</b> <b>Components</b> Formative research performed Several agencies competed and 2 campaigns were chosen Discount on approved helmet Formed helmet promotion Task Froce Promotional materials to retailers, cycling clubs, school principals Article series in newspapers Posters to all 7K physicians in State By 1984 end – 6 helmets met standard TV and radio spots in pre- Christmas Organized and assisted bulk purchases – over 20K sold at A\$10 savings Rebate Scheme First scheme offering A\$10 government rebate – 38K rebates received (Dec 1984) Second scheme offering A\$5 rebate – 5K rebates received (Feb 1985)	Percent Observed with Helmets in Metro Melbourne [Total # (%Helmeted)] from 1983 to 1984-85Primary Kids - 681 (4.6) to 687 (13.3)-536 (38.6)Primary Kids - 1774 (1.6) to $681 (5.1)$ -741 (14.0)Adult Commuters - 502 (26.1) to 360 (33.6)-421 (42.0)1985 Percent Observed with Helmets in 10 Non-Metro Towns [Total # (%Helmeted)]Primary Kids1836 (30.5)Secondary Kids2205 (5.4)Adults457 (9.4)The rate of head injuries for cyclists in collision with motor vehicles in Victoria in 1982 & 1983 combined compared to 1984, shows a 20% decline. The following are 12 month moving sum from Figure 2 in paper. 1983 – ~178 1984 – ~126 In early 1986, helmet use had increased for primary children to 58% in metro area usage was 18% and rural was 14%. Metro commuter cyclists usage had risen to 44%.	Note retail cost of standard approved helmet was about A\$45. The radio and TV campaigns cost A\$160K There is no information regarding the program costs of the campaign. The approximate cost of the rebate program to government was about: A\$380K+A\$25K=A\$405K	No health care costs considered. No productivity measured. No base year reported. Will use campaign begin year 1984 as base (PPP- 1.12 CPI – 2.06)	No economic summary measure provided or calculated. Pre 1984 Activities Since 1980, school-based Bike Ed program. 1981 – first helmet manufacturer standards approved 1982 – trial bulk purchase in 1 school district (over 1000 sold at 1/3 retail) 1982 – second manufacturer standard approved 1983 – Posters distributed to all schools. Required helmet at all school bicycling events.

## Nicotine Replacement Therapy

Lead Author, Year Product Study Design Economic Method	Study Location Sample Size Population Characteristi cs Time Horizon	Intervention Description	Effect Size	Program Costs	Direct Medical Costs Averted Productivity Losses Averted	Economic Summary Measure
Bauer 2006 NRT Intervention funded by New York State Tobacco Control Program? Pre post with control. Limited program cost. and Cost Effectiveness	Erie and Niagara Counties in Western New York State (Buffalo?) Interv 1 Open to smokers = >18 and smoke = >20 cigs/day Total receiving NRT-2461 Selected Survey – 1100 Final completed sample - 732 Comparison group prior to free NRT – 515 Interv 1 promotion for 4 weeks from Jul 10– Aug 6 '03. Interv 2 No details regarding response and survey sample for Interv 2. Interv 2 ad ran May 3 '04 and May 24 '04	<ul> <li>2 interventions with the New York State Smokers' Quitline.</li> <li>Telephone quitline for smoking cessation along with population-based promotions for free cessation products.</li> <li>Intervention 1</li> <li>Press announcement in broadcast, newspaper (300K coverage), and magazine (100K) to call the quitline to obtain voucher for free 2-week supply of patch or gum (Nicotine Replacement Therapy - NRT). Voucher redeemable at Eckerd. Coincident with NY's clean air act and campaign banning all indoor smoking.</li> <li>Follow-up with those receiving NRT in Dec 03-Feb 04. Note half of these had received NRT+ Cigarette Lookalike (BQ)</li> <li>Intervention 2</li> <li>Two newspaper ads, to call quitline to obtain a guide to stop smoking on May 3 2004 and the other to call for a guide plus plastic cigarette lookalike (BQ) on May 24, 2004.</li> </ul>	Effectiveness of promotion measured by monitoring calls to the quitline. Final effectiveness estimated by self-reported quits (no smoking past 7 days). Intervention 1 Median daily calls to quitline from Erie and Niagara: 2 weeks prior $- 6.0$ During Interv $- 148.0$ 2 weeks after $- 26.5$ Ouitrates: 732 surveyed; 79% attempted to quit; 22% of those who redeemed NRT did not smoke past 7 days (Quit rate among those who did not redeem was 6% and quitrate in pre-NRT survey was 12% indicating RR=1.77) Intervention 2 Median daily calls to quitline from Erie and Niagara: Control 1 week before $- 7.0$ 2 days after interv $- 14.0$ Treatment 2 weeks before $- 7.0$ During interv $-$ 2 days after $- 27.5$ Quitrates: 20% for those who received BQ compared to 24% for those who did not.	Intervention 1: NRT Program Cost of NRT voucher - @\$24 (Total – 2461*24=\$59064 Paid magazine ad - \$1100 Authors state the total cost of this program was \$51304 Intervention 2: BQ Cost of BQ - @\$1.50 Newspaper ad - \$3342	No health care costs considered. No productivity measured. No base year reported. Will use campaign begin year 2004 as base (CPI – 1.14)	Summary measure is cost of intervention per additional calls to quitline. Intervention 1 Total cost - \$51304 Incremental calls over 30 day promotion – 4724 Cost per incremental call - \$11 Intervention 2 Newspaper Ad Only Ad cost - \$3342 Incremental calls over 2 days – 14 Cost per incremental call - \$239 Newspaper Ad Plus BO Cost per incremental call - \$82 (Not entirely clear how this is estimated) Authors claim the NRT program is favored over the newspaper ad. Authors claim that the \$210 per additional quit due to NRT program compares to \$3779 estimated for physician counseling and pharmacotherapy.

Lead Author, Year Product Study Design Economic Method	Study Location Sample Size Population Characteristi cs Time Horizon	Intervention Description				Prog	ram Costs	Direct Medical Costs Averted Productivity Losses Averted	Ecor	nomic Summary Measure		
					combi receiv	le logistic re ned data fro ing NRT and o program.						
Cumming 2006a NRT Intervention funded by New York State Department of Health Pre post. Cost Effectiveness	State of New York 4 regions of New York used different programs promoting tobacco quitline plus NRT supply, tagged here as I, II, III, and IV. See dates, location, enrollment in next column. Followup at 4 months Pre-NRT – 2001 survey	State of New Interv NRT Avail Dates Geog Campaign No. Enroll (Surveyed)	v York tobacco V York tobacco V Voucher 2 weeks 2004 Buffalo area Press release, posters, competition 1099 (500) III 2 week NRT Voucher		Ratio during before I II III IV %Qui Pre NRT I II III III IV Quits o	of call volu g intervente During/B 5.0 4.97 15.5	tion to Before RR 1.0 2.9 2.0 2.4 3.8 none at all	include marke purcha mailing registe counse	ting, asing,	No health care costs considered. No productivity measured. No base year reported. Will use 2004 as base (CPI – 1.14)	Uncleal attribut computis the of NRT. Cost p I II III IV Author NRT we 6-week prografis supplie former rates. Author that the from in agreed	er quit provided. how NRT table quits ted. The numerator cost of quitline plus er Quit Cost per enrollee 274 306 347 347 347 s note that more ent to waste in the s supply than the ms with smaller s, though the had highest quit s also point out e responses were dividuals who to be surveyed lowed up.
		NRT Avail Dates months	6 progs 2 days to 4 weeks in 2004	~5 weeks in 2003								

Lead Author, Year Product Study Design Economic Method	Study Location Sample Size Population Characteristi cs Time Horizon	Intervention Description			Effect Size	Program Costs	Direct Medical Costs Averted Productivity Losses Averted	Economic Summary Measure
		Geog Campaign	15 counties Press	NY City Press				
			release, 2 news- Paper ads	release & confer- ence,				
		No. Enroll	2323 (500)	35,334 (884)				
Fellows 2007	State of Oregon		acco Preventi program (TPEF		Increase in calls to Ouitlines Per month – 602	In pre patch period, cost of TV and radio ads	No health care costs considered.	Reference Case Pre Period Callers 6428
<b>NRT</b> Intervention	In Oct 04- reduce radio/TV ads	TV and radio ads used in pre Free Patch period.		Projected annual - 7218	included air time, talent fees, tagging and	No productivity	Quits (%) 527 (8.2) LYS 1246 Total Cost 1970085	
funded by Oregon Department of Human	and increase quitline calls with 'free patch'. Survey	to a state to Free patch i	e patch progr obacco quitlin initiative pron	e. noted	%Quits (Surveyed) Quits based on survey of individuals 6 months after first call in pre and post	duplication. Production costs to CDC not included here.	measured. No base year reported. Will	Promo. Cost 1385137 Interv. Cost 584948 Cost/Quit 3738
Services Pre post.	of callers six months after first call from	to counties.	e media kits c Used "earned t sheets, cost	d media".	period. Quit defined as 30 days abstinence at 6 months.	Annual Promotion and Media Costs	use 2004 as base (CPI – 1.14)	Patch Period Callers 13646 Quits (%) 2142 (15.7)

Lead Author, Year Product Study Design Economic Method	Study Location Sample Size Population Characteristi CS Time Horizon	Intervention Description	Effect Size	Program Costs	Direct Medical Costs Averted Productivity Losses Averted	Economic Summary Measure
Cost Effective.	pre (n=1018; 320 completed survey) and post patch period (n=1574; 639 completed survey).	smoking charts, sample news releases and advisories. Also e- mails and letters to state agencies, newsletters to public and private sectors, and free patch card to targeted groups and quitline callers. Note that initially free patches were offered to all and was later not offered to those whose insurance would cover NRT.	With intent to treat analysis, quits were 15.7% (CI: 13.7,17.8) in the free patch period and 8.2% (CI: 6.1,10.3) in the pre period.	TV and Radio cost in pre-patch period - \$1,385,537 Patch costs include \$37000 for contractor time, about \$3600 for additional staff time for programme planning and implementation and \$8000 for supplies and postage. One 30-minute telephone counseling session - \$91. Two weeks of NRT - \$42.82 (Incl S/H) Costs calculated as 1 year of promotion and counseling during pre and post free patch, with 2 months of paid ads assumed for free patch period.		LYS 4502 Total Cost 2250484 Promo. Cost 424376 Interv. Cost 1826108 Cost/Quit 1050 Incr. Cost/Quit 174 Incr. Cost/LYS 86 <b>Worst Case:</b> Lower CI for quits, higher discount, and higher paid ads cost Incremental cost per quit and per LYS are <b>\$525</b> <b>and \$353</b> <b>Best Case:</b> Upper CI for quits, lower discount, and lower paid ads cost Incremental cost per quit and per LYS are <b>\$70</b> , <b>\$22</b> Lower promotion costs in the free patch period because the paid ads were reduced and the higher intervention cost due to free NRT

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Tinkelman 2007 NRT Intervention funded by Ohio Tobacco Cessation Foundation? Pre post with control. Limited program cost.	State of Ohio Callers to quitline who receive NRT compared to those that don't receive NRTs. Since July '05, state made free NRT available to participating insured callers to quitline who agree to counseling. Sampled followup at base, 3, 6, and 12 months with 2 groups: Pre-NRT - Entry and exit 11 July 2004 and 30 April 2005 Post-NRT - Entry and exit 11 July 2005 and 30 April 2005	<ul> <li>Ohio tobacco quitline.</li> <li>Important info that 18 state quitlines provide free treatment aids and 5 provided some discounts.</li> <li>5 proactive calls with experienced counselors after initial contact. Those not ready to quit provided educational resources and info about local resources.</li> <li>Callers ready to quit asked to set a quit date.</li> <li>Starting July 05, callers offered 4-week supply of NRT. If they remain in program they become eligible for another 4-week supply.</li> </ul>	Call Volume 78 calls/day Oct 04-June 05. 188 calls/day Jul 05-Apr06 7-day point prevalence of abstinence at 6 month folowup: All Callers 10.3% in pre to 14.9% post NRT. Post_NRT Callers Counseling Only - 11.2% Counseling Y NRT - 20.2% Logistic regression odds of 7-day point prevalence abstinence at six months for post-NRT versus pre-NRT. Note the difference between pre and post NRT groups: % from participating insurance or employer groups: PreNRT-66.8%; PostNRT-87.9%. However, the regression controlled for this difference.	Authors state the statewide NRT program and campaign Sep 05- Apr 06 cost \$3 million No further details regarding component costs provided.	No health care costs considered. No productivity measured. No base year reported. Will use 2005 as base for PreNRT cost and 2006 as base for PostNRT cost (CPI – '05- 1.10; '06- 1.06)	No summary measure provided. Authors note the statewide promotional cost of quitline in pre-NRT (Jul 04-Apri 05) was \$4.2 million. The promotion cost during the NRT period (Sep 05-Apr 06) was only \$3 million. The lower cost is partly because funds had to be shifted to operations to manage the large increase in call volume. It appears the program costs mentioned here are for promotion and the quitlines only. In particular, the NRT costs are not included.