

Distribution of Tobacco Receipts

Attached are six tables comparing the state allocation of tobacco receipts by the existing Federal child care matching and Title I formulas to the allocation of receipts by FY 1996 Medicaid spending. **Under any formulation, all states will receive new federal dollars for child care and class size reduction.** The calculation of the allocation by Medicaid spending includes allocations by Federal Medicaid spending, State Medicaid spending, and total Federal and State Medicaid spending, and each of those by spending on benefits only, and benefits plus administrative costs.

- **For Child Care, the distribution of funds under any Medicaid formulation differs substantially from the allocation under the Federal child care matching formula, producing relative gains for New York and, under most scenarios, relative losses for California.** Other states with large losses, relative to the child care formula, include Texas and Florida.
- **For the Class Size Reduction initiative, states with gains, relative to the distribution of funds under Title I, include New York, New Jersey, Massachusetts, and Connecticut; states with relative losses are Texas, Michigan, and Florida, and under the Federal share formula, California.**
- For both Child Care and the Class Size Reduction initiative, smaller states, such as Hawaii and Wyoming, would gain or lose (relative to the existing child care and Title I formulas) amounts that are small in dollar terms, but that constitute around 50 percent of their program size.
- Using Federal, State or Total Medicaid Spending - No Formulation Matches Child Care or Title I: The decision to use Federal, State or total Medicaid spending alters the distribution of funds, causing some state's relative wins or losses to shift up or down by up to \$70 million. If an allocation of funds according to Medicaid has to be used, then, of the choices given, a good rationale exists for allocating funds according to Federal Medicaid spending since doing so would compare the Federal share of Medicaid spending to spending of Federal matching dollars under child care and Title I. **However, no one allocation of funds according to Medicaid spending stands out as most closely approximating the Title I or Child Care formulas.** For instance, for child care, allocating funds according to the Federal share of Medicaid spending results in the smallest relative win for New York (\$81 million) but also produces the largest relative loss for California (\$43 million).
- Using Benefits versus Benefits plus Administrative Costs Makes Little Difference: The decision to use spending on Medicaid benefits or spending on benefits plus administration costs does not make much difference. A logical argument can be made for using either formulation. On the one hand, administration costs are capped in Child Care and Title I, so it makes sense to just use the Medicaid benefits allocation. On the other hand, the costs of tobacco litigation are allowable state administrative costs under

Medicaid. Including benefits and administration could reward those states that have been most aggressive in pursuing tobacco legislation -- to the extent that states' Medicaid administration costs have increased because of tobacco litigation.

- Child Care - States with Relative Gains and Losses: For Child Care, some states with large relative gains or losses (i.e., gains or losses of large dollar values or exceeding more than 20 percent of their tobacco allocation under the child care formula) include:

States with relative gains: **New York** (\$80 to \$130 million); **Massachusetts** (\$5 to \$15 million).

States with relative losses: **California** (\$6 to \$43 million); **Florida** (\$12 to \$15 million); **Texas** (\$14 to \$28 million).

- Class Size Reduction - States with Relative Gains and Losses: For Class Size, some states with large relative gains or losses (i.e., gains or losses of large dollar values or exceeding more than 20 percent of their tobacco allocation under Title I) include:

States with relative gains: **Connecticut** (\$6-11 million), **Massachusetts** (\$11-16 million), **Minnesota** (\$6-9 million), **New Jersey** (\$9-19 million), **New York** (\$52-98 million). In addition, **Pennsylvania** wins under the total and State share (\$6-10 million), and **North Carolina** under the total and Federal shares (\$6-12 million).

States with relative losses: **Florida** (\$8-10 million), **Michigan** (\$11 million), **Mississippi** (\$3-13 million), **Texas** (\$21-37 million). Other big losers include **California** (\$16 million) and **Illinois** (\$10 million) under the Federal share and **Alabama** (\$5-9 million), **Arizona** (\$5-7 million), **Kentucky** (\$4-9 million) and **Louisiana** (\$7-20 million) under the total and State shares.

DISTRIBUTION OF TOBACCO RECEIPTS ACCORDING TO TOTAL MEDICAID SPENDING: BENEFITS
(All dollars in thousands)

	Child Care Formula 1/	Child Care Allocation under child care formula	Medicaid Distribution	Child Care Allocation under Medicaid	Difference	States with more than 20% gain or loss	Title I - Formula	Class Size Funds Based on Title I	Class Size Allocation Under Medicaid	Difference	States with more than 20% gain or loss
Alabama	1.53%	17,224	1.33%	14,986	(2,238)	L	1.71%	18,790	14,630	(4,160)	L
Alaska	0.28%	3,149	0.22%	2,427	(722)	L	0.23%	2,583	2,420	(163)	-
Arizona	1.76%	19,810	1.09%	12,208	(7,602)	L	1.54%	16,948	11,990	(4,958)	L
Arkansas	0.92%	10,287	0.81%	9,143	(1,144)	-	1.02%	11,255	8,910	(2,345)	L
California	13.29%	149,256	10.74%	120,637	(28,618)	-	11.25%	123,776	118,140	(5,636)	-
Colorado	1.42%	15,963	0.90%	10,064	(5,899)	L	0.95%	10,487	9,900	(587)	-
Connecticut	1.18%	13,285	1.70%	19,105	5,820	W	0.93%	10,227	18,700	8,473	W
Delaware	0.26%	2,949	0.27%	3,011	61	-	0.25%	2,723	6,270	3,548	W
District of Columbia	0.18%	1,997	0.57%	6,431	4,434	W	0.29%	3,209	2,970	(239)	-
Florida	4.97%	55,821	3.80%	42,682	(13,139)	L	4.54%	49,894	41,800	(8,094)	-
Georgia	2.79%	31,356	2.33%	26,199	(5,157)	-	2.64%	28,997	25,630	(3,367)	-
Hawaii	0.46%	5,159	0.41%	4,618	(541)	-	0.27%	3,002	4,510	1,508	W
Idaho	0.48%	5,421	0.23%	2,636	(2,785)	L	0.30%	3,264	2,530	(734)	L
Illinois	4.56%	51,259	3.95%	44,389	(6,870)	-	4.41%	48,546	43,450	(5,096)	-
Indiana	2.11%	23,738	1.66%	18,679	(5,059)	L	1.55%	17,030	18,260	1,230	-
Iowa	1.01%	11,329	0.80%	8,950	(2,379)	L	0.70%	7,751	8,800	1,049	-
Kansas	0.99%	11,059	0.62%	6,952	(4,107)	L	0.74%	8,778	6,820	(1,958)	-
Kentucky	1.36%	15,309	1.37%	15,359	49	-	1.73%	19,019	15,070	(3,949)	L
Louisiana	1.76%	19,735	2.00%	22,439	2,705	W	2.59%	28,537	22,000	(6,537)	L
Maine	0.43%	4,837	0.63%	7,132	2,295	W	0.39%	4,317	6,930	2,613	W
Maryland	1.89%	21,212	1.60%	17,961	(3,251)	-	1.34%	14,781	17,600	2,819	-
Massachusetts	2.12%	23,866	3.04%	34,094	10,228	W	1.98%	21,759	33,440	11,681	W
Michigan	3.62%	40,691	3.39%	38,112	(2,579)	-	4.43%	48,682	37,290	(11,392)	L
Minnesota	1.78%	19,965	1.82%	20,435	471	-	1.18%	12,936	20,020	7,084	W
Mississippi	1.07%	12,039	1.05%	11,786	(253)	-	1.69%	18,600	11,550	(7,050)	L
Missouri	1.97%	22,129	1.91%	21,474	(656)	-	1.71%	18,785	21,010	2,225	-
Montana	0.33%	3,680	0.25%	2,863	(818)	L	0.35%	3,801	2,750	(1,051)	L
Nebraska	0.63%	7,046	0.46%	5,144	(1,902)	L	0.43%	4,734	5,060	326	-
Nevada	0.59%	6,671	0.31%	3,441	(3,230)	L	0.30%	3,296	3,410	114	-
New Hampshire	0.43%	4,815	0.45%	5,058	242	-	0.24%	2,657	4,950	2,293	W
New Jersey	2.90%	32,556	3.44%	38,623	6,068	W	2.19%	24,058	37,840	13,782	W
New Mexico	0.72%	8,092	0.59%	6,661	(1,430)	-	0.85%	9,318	6,490	(2,828)	L
New York	6.71%	75,411	15.94%	178,990	103,579	W	9.20%	101,247	175,340	74,093	W
North Carolina	2.62%	29,414	2.68%	30,086	673	-	1.89%	20,748	29,480	8,732	W
North Dakota	0.24%	2,671	0.20%	2,248	(423)	-	0.24%	2,656	2,200	(456)	L
Ohio	4.08%	45,878	4.12%	46,281	403	-	4.06%	44,660	45,320	660	-
Oklahoma	1.24%	13,961	0.75%	8,475	(5,486)	L	1.18%	12,949	8,250	(4,699)	L
Oregon	1.13%	12,710	0.98%	10,971	(1,740)	-	0.92%	10,167	10,780	613	-
Pennsylvania	4.19%	47,046	4.97%	55,849	8,803	W	4.49%	49,373	54,670	5,297	-
Rhode Island	0.35%	3,920	0.49%	5,471	1,551	W	0.33%	3,657	5,390	1,733	W
South Carolina	1.35%	15,220	0.32%	14,818	(402)	-	1.28%	14,036	14,520	484	-
South Dakota	0.29%	3,252	0.21%	2,386	(866)	L	0.26%	2,895	2,310	(585)	L
Tennessee	1.87%	21,041	2.06%	23,087	2,046	W	1.74%	19,192	22,660	3,468	-
Texas	7.88%	88,522	6.03%	67,744	(20,777)	L	8.56%	94,146	66,330	(27,816)	L
Utah	0.94%	10,611	0.39%	4,424	(6,187)	L	0.45%	4,930	4,290	(640)	-
Vermont	0.21%	2,357	0.23%	2,618	261	-	0.24%	2,618	2,530	(88)	-
Virginia	2.36%	26,466	1.39%	15,595	(10,871)	L	0.49%	16,408	15,290	(1,118)	-
Washington	2.05%	22,999	2.00%	22,449	(550)	-	1.47%	16,163	22,000	5,837	W
West Virginia	0.57%	6,418	0.80%	9,544	3,126	W	0.00%	10,947	8,800	(2,147)	L
Wisconsin	1.92%	21,510	1.58%	17,788	(3,723)	-	1.70%	18,681	17,380	(1,301)	-
Wyoming	0.49%	5,091	0.25%	1,306	(3,785)	L	0.22%	2,418	1,320	(1,098)	L

1/ Matching Funds are allocated according to the proportion of children under age 13 using Census data as of July, 1995 (in accordance with the At-Risk Child Care program allocation formula). Each State's maximum allocation is shown; unused funds will be redistributed among States.

children under 5, school lunch, per capita income factor

3 streams
- disc, mand., matching
↓
based on 1994 or 1995 (whichever higher) -- historical state data
↓
old at risk formula -- no poverty factor
↓
FMAP - 56 - 44% → 80-20 match under our proposal

DISTRIBUTION OF TOBACCO RECEIPTS ACCORDING TO FEDERAL MEDICAID SPENDING: BENEFITS
(All dollars in thousands)

	Child Care Allocation under child care formula	Medicaid Distribution	Child Care Allocation under Medicaid	Difference	States with more than 20% gain or loss	Title I * Formula	Class Size Funds Based on Title I	Class Size Allocation Under Medicaid	Difference	States with more than 20% gain or loss
Alabama	1.53%	17,224	1.64%	18,414	1,190	—	1.71%	18,790	18,040	(750) —
Alaska	0.28%	3,149	0.21%	2,364	(784)	L	0.23%	2,583	2,310	(273) —
Arizona	1.76%	19,810	1.28%	14,420	(5,390)	L	1.54%	16,948	14,080	(2,868) —
Arkansas	0.92%	10,287	1.05%	11,835	1,548	—	1.02%	11,255	11,550	295 —
California	13.29%	149,256	9.45%	106,138	(43,118)	L	11.25%	123,776	103,730	(20,046) —
Colorado	1.42%	15,963	0.83%	9,295	(6,668)	L	0.95%	10,487	9,130	(1,357) —
Connecticut	1.18%	13,285	1.50%	16,811	3,526	W	0.93%	10,227	16,390	6,163 W
Delaware	0.26%	2,949	0.24%	2,668	(281)	—	0.25%	2,723	2,640	(83) —
District of Columbia	0.18%	1,997	0.50%	5,658	3,661	W	0.29%	3,209	5,500	2,291 W
Florida	4.97%	55,821	3.73%	41,869	(13,952)	L	4.54%	49,894	40,920	(8,974) —
Georgia	2.79%	31,356	2.54%	28,556	(2,799)	—	2.64%	28,997	27,940	(1,057) —
Hawaii	0.46%	5,159	0.36%	4,058	(1,101)	L	0.27%	3,002	3,960	958 W
Idaho	0.48%	5,421	0.28%	3,187	(2,234)	L	0.30%	3,264	3,080	(184) —
Illinois	4.56%	51,259	3.48%	39,102	(12,157)	L	4.41%	48,546	38,280	(10,266) L
Indiana	2.11%	23,738	1.83%	20,586	(3,152)	—	1.55%	17,030	20,130	3,100 —
Iowa	1.01%	11,329	0.90%	10,116	(1,213)	—	0.70%	7,751	9,900	2,149 W
Kansas	0.99%	11,099	0.64%	7,223	(3,877)	L	0.74%	8,178	7,040	(1,138) —
Kentucky	1.36%	15,309	1.69%	18,969	3,659	W	1.73%	19,019	18,590	(429) —
Louisiana	1.76%	19,735	2.93%	32,930	13,195	W	2.59%	28,537	32,230	3,693 —
Maine	0.43%	4,837	0.71%	7,951	3,114	W	0.39%	4,317	7,810	3,493 W
Maryland	1.89%	21,212	1.41%	15,815	(5,398)	L	1.34%	14,781	15,510	729 —
Massachusetts	2.12%	23,866	2.67%	30,015	6,150	W	1.98%	21,759	29,370	7,611 W
Michigan	3.62%	40,691	3.39%	38,082	(2,609)	—	4.43%	48,682	37,290	(11,392) L
Minnesota	1.78%	19,965	1.73%	19,421	(543)	—	1.18%	12,936	19,030	6,094 W
Mississippi	1.07%	12,039	1.44%	16,185	4,145	W	1.69%	18,600	15,840	(2,760) —
Missouri	1.97%	22,129	2.02%	22,706	577	—	1.71%	18,785	22,220	3,435 —
Montana	0.33%	3,680	0.32%	3,567	(113)	—	0.35%	3,801	3,520	(281) —
Nebraska	0.63%	7,046	0.48%	5,390	(1,655)	L	0.43%	4,734	5,280	546 —
Nevada	0.59%	6,671	0.27%	3,054	(3,617)	L	0.30%	3,296	2,970	(326) —
New Hampshire	0.43%	4,815	0.40%	4,455	(360)	—	0.24%	2,657	4,400	1,743 W
New Jersey	2.90%	32,556	3.03%	34,034	1,478	—	2.19%	24,058	33,330	9,272 W
New Mexico	0.72%	8,092	0.77%	8,621	530	—	0.85%	9,318	8,470	(848) —
New York	6.71%	75,411	14.05%	157,785	82,373	W	9.20%	101,247	154,330	53,083 W
North Carolina	2.62%	29,414	3.05%	34,242	4,828	—	1.89%	20,748	33,440	12,692 W
North Dakota	0.24%	2,671	0.24%	2,746	75	—	0.24%	2,656	2,640	(16) —
Ohio	4.08%	45,878	4.36%	48,985	3,107	—	4.06%	44,660	47,850	3,190 —
Oklahoma	1.24%	13,961	0.93%	10,452	(3,509)	L	1.18%	12,949	10,230	(2,719) L
Oregon	1.13%	12,710	1.06%	11,861	(850)	—	0.92%	10,167	11,550	1,383 —
Pennsylvania	4.19%	47,046	4.63%	52,057	5,011	—	4.49%	49,373	50,930	1,557 —
Rhode Island	0.35%	3,920	0.46%	5,189	1,270	W	0.33%	3,657	5,060	1,403 W
South Carolina	1.35%	15,220	1.65%	18,488	3,268	W	1.28%	14,036	18,040	4,004 W
South Dakota	0.29%	3,252	0.25%	2,855	(397)	—	0.26%	2,895	2,750	(145) —
Tennessee	1.87%	21,041	2.37%	26,628	5,587	W	1.74%	19,192	26,070	6,878 W
Texas	7.88%	88,522	6.62%	74,365	(14,157)	—	8.56%	94,146	72,710	(21,436) L
Utah	0.94%	10,611	0.51%	5,701	(4,910)	L	0.45%	4,930	5,610	680 —
Vermont	0.21%	2,357	0.25%	2,811	454	—	0.24%	2,618	2,750	132 —
Virginia	2.36%	26,466	1.26%	14,120	(12,345)	L	1.49%	16,408	13,860	(2,548) —
Washington	2.05%	22,999	1.77%	19,854	(3,145)	—	1.47%	16,163	19,360	3,197 —
West Virginia	0.57%	6,414	1.03%	11,519	5,106	W	1.00%	10,947	11,220	273 —
Wisconsin	1.92%	21,510	1.67%	18,703	(2,807)	—	1.70%	18,681	18,260	(421) —
Wyoming	0.19%	2,091	0.12%	1,380	(711)	L	0.22%	2,418	1,320	(1,098) L

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(All dollars in thousands)

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Alabama	1.53%	17,224	0.93%	10,460	(6,764)	L	1.71%	18,790	10,230	(8,560)	L
Alaska	0.28%	3,149	0.22%	2,510	(639)	L	0.23%	2,583	2,420	(163)	—
Arizona	1.76%	19,810	0.83%	9,289	(10,522)	L	1.54%	16,948	9,130	(7,818)	L
Arkansas	0.92%	10,287	0.50%	5,588	(4,699)	L	1.02%	11,255	5,500	(5,755)	L
California	13.29%	149,256	12.44%	139,780	(9,476)	—	11.25%	123,776	136,840	13,064	—
Colorado	1.42%	15,963	0.99%	11,080	(4,883)	L	0.95%	10,487	10,890	403	—
Connecticut	1.18%	13,285	1.97%	22,134	8,849	W	0.93%	10,227	21,670	11,443	W
Delaware	0.26%	2,949	0.31%	3,462	513	—	0.25%	2,723	7,260	4,538	W
District of Columbia	0.18%	1,997	0.66%	7,452	5,455	W	0.29%	3,209	3,410	201	—
Florida	4.97%	55,821	3.90%	43,755	(12,066)	L	4.54%	49,894	42,900	(6,994)	—
Georgia	2.79%	31,356	2.06%	23,087	(8,269)	L	2.64%	28,997	22,660	(6,337)	L
Hawaii	0.46%	5,159	0.48%	5,358	199	—	0.27%	3,002	5,280	2,278	W
Idaho	0.48%	5,421	0.17%	1,909	(3,512)	L	0.30%	3,264	1,870	(1,394)	L
Illinois	4.56%	51,259	4.57%	51,369	110	—	4.41%	48,546	50,220	1,674	—
Indiana	2.11%	23,738	1.44%	16,161	(7,577)	L	1.55%	17,030	15,840	(1,190)	—
Iowa	1.01%	11,329	0.66%	7,410	(3,919)	L	0.70%	7,751	7,260	(491)	—
Kansas	0.99%	11,099	0.59%	6,594	(4,506)	L	0.74%	8,178	6,490	(1,688)	L
Kentucky	1.36%	15,309	0.94%	10,593	(4,717)	L	1.73%	19,019	10,340	(8,679)	L
Louisiana	1.76%	19,735	0.76%	8,589	(11,146)	L	2.59%	28,537	8,360	(20,177)	L
Maine	0.43%	4,837	0.54%	6,051	1,214	W	0.39%	4,317	5,940	1,623	W
Maryland	1.89%	21,212	1.85%	20,795	(417)	—	1.34%	14,781	20,350	5,569	W
Massachusetts	2.12%	23,866	3.51%	39,478	15,612	W	1.98%	21,759	38,610	16,851	W
Michigan	3.62%	40,691	3.40%	38,151	(2,540)	—	4.43%	48,682	37,400	(11,282)	L
Minnesota	1.78%	19,965	1.94%	21,774	1,809	—	1.18%	12,936	21,340	8,404	W
Mississippi	1.07%	12,039	0.53%	5,978	(6,062)	L	1.69%	18,600	5,830	(12,770)	L
Missouri	1.97%	22,129	1.77%	19,847	(2,282)	—	1.71%	18,785	19,470	685	—
Montana	0.33%	3,680	0.17%	1,932	(1,748)	L	0.35%	3,801	1,870	(1,931)	L
Nebraska	0.63%	7,046	0.43%	4,818	(2,228)	L	0.43%	4,734	4,730	(4)	—
Nevada	0.59%	6,671	0.35%	3,952	(2,719)	L	0.30%	3,296	3,850	554	—
New Hampshire	0.43%	4,815	0.52%	5,853	1,038	W	0.24%	2,657	5,720	3,063	W
New Jersey	2.90%	32,556	3.98%	44,682	12,126	W	2.19%	24,058	43,780	19,722	W
New Mexico	0.72%	8,092	0.36%	4,074	(4,018)	L	0.85%	9,318	3,960	(5,358)	L
New York	6.71%	75,411	18.43%	206,986	131,575	W	9.20%	101,247	202,730	101,483	W
North Carolina	2.62%	29,414	2.19%	24,601	(4,813)	—	1.89%	20,748	24,090	3,342	—
North Dakota	0.24%	2,671	0.14%	1,589	(1,081)	L	0.24%	2,656	1,540	(1,116)	L
Ohio	4.08%	45,878	3.80%	42,710	(3,168)	—	4.06%	44,660	41,800	(2,860)	—
Oklahoma	1.24%	13,961	0.52%	5,864	(8,097)	L	1.18%	12,949	5,720	(7,229)	L
Oregon	1.13%	12,710	0.87%	9,796	(2,915)	L	0.92%	10,167	9,570	(597)	—
Pennsylvania	4.19%	47,046	5.42%	60,856	13,810	W	4.49%	49,373	59,620	10,247	W
Rhode Island	0.35%	3,920	0.52%	5,842	1,922	W	0.33%	3,657	5,720	2,063	W
South Carolina	1.35%	15,220	0.89%	9,973	(5,247)	L	1.28%	14,036	9,790	(4,246)	L
South Dakota	0.29%	3,252	0.16%	1,767	(1,485)	L	0.26%	2,895	1,760	(1,135)	L
Tennessee	1.87%	21,041	1.64%	18,413	(2,629)	—	1.74%	19,192	18,040	(1,152)	—
Texas	7.88%	88,522	5.25%	59,003	(29,519)	L	8.56%	94,146	57,750	(36,396)	L
Utah	0.94%	10,611	0.24%	2,738	(7,873)	L	0.45%	4,930	2,640	(2,290)	L
Vermont	0.21%	2,357	0.21%	2,363	6	—	0.24%	2,618	2,310	(308)	—
Virginia	2.36%	26,466	1.56%	17,541	(8,924)	L	1.49%	16,408	17,160	752	—
Washington	2.05%	22,999	2.30%	25,976	2,976	—	1.47%	16,163	25,900	9,737	—
West Virginia	0.57%	6,414	0.50%	5,566	(848)	—	1.00%	10,947	5,500	(5,447)	L
Wisconsin	1.92%	21,510	1.48%	16,579	(4,931)	L	1.70%	18,681	16,280	(2,401)	—
Wyoming	0.19%	2,091	0.11%	1,209	(882)	L	0.22%	2,418	1,210	(1,208)	L

1/ Matching Funds are allocated according to the proportion of children under age 13 using Census data as of July, 1995 (in accordance with the At-Risk Child Care program allocation formula). Each State's maximum allocation is shown; unused funds will be redistributed among States.

DISTRIBUTION OF TOBACCO RECEIPTS ACCORDING TO TOTAL MEDICAID SPENDING: BENEFITS AND ADMIN
(All dollars in thousands)

Child Care Formula 1/	Child Care Allocation under child care formula	Medicaid Distribution	Child Care Allocation under Medicaid	Difference	States with more than 20% gain or loss	Title I % Formula	Class Size Funds Based on Title I	Class Size Allocation Under Medicaid	Difference	States with more than 20% gain or loss
Alabama	1.53%	17,224	1.30%	14,640	(2,584)	1.71%	18,790	14,300	(4,490)	L
Alaska	0.28%	3,149	0.22%	2,422	(727)	0.23%	2,583	2,420	(163)	—
Arizona	1.76%	19,810	1.10%	12,395	(7,415)	1.54%	16,948	12,100	(4,848)	L
Arkansas	0.92%	10,287	0.81%	9,147	(1,140)	1.02%	11,255	8,910	(2,345)	L
California	13.29%	149,256	11.08%	124,425	(24,831)	11.25%	123,776	121,880	(1,896)	—
Colorado	1.42%	15,963	0.89%	9,998	(5,965)	0.95%	10,487	9,790	(697)	—
Connecticut	1.18%	13,285	1.67%	18,762	5,477	0.93%	10,227	18,370	8,143	W
Delaware	0.26%	2,549	0.27%	3,048	997	0.25%	2,723	6,160	3,438	W
District of Columbia	0.18%	1,997	0.56%	6,325	4,328	0.29%	3,209	2,970	(239)	—
Florida	4.97%	55,821	3.74%	42,014	(13,807)	4.54%	49,894	41,140	(8,754)	—
Georgia	2.79%	31,356	2.32%	26,044	(5,312)	2.64%	28,997	25,520	(3,477)	—
Hawaii	0.46%	5,159	0.41%	4,589	(570)	0.27%	3,002	4,510	1,508	W
Idaho	0.48%	5,421	0.25%	2,773	(2,648)	0.30%	3,264	2,750	(514)	—
Illinois	4.56%	51,259	3.99%	44,864	(6,395)	4.41%	48,546	43,890	(4,656)	—
Indiana	2.11%	23,738	1.64%	18,369	(5,368)	1.55%	17,030	18,040	1,010	—
Iowa	1.01%	11,329	0.80%	8,569	(2,760)	0.70%	7,751	8,800	1,049	—
Kansas	0.99%	11,099	0.62%	6,973	(4,127)	0.74%	8,178	6,820	(1,358)	—
Kentucky	1.36%	15,309	1.34%	15,085	(224)	1.53%	19,019	14,740	(4,279)	—
Louisiana	1.76%	19,735	1.94%	21,823	2,088	2.59%	28,537	21,340	(7,197)	L
Maine	0.43%	4,837	0.63%	7,087	2,250	0.39%	4,317	6,930	2,613	W
Maryland	1.89%	21,212	1.62%	18,164	(3,049)	1.34%	14,781	17,820	3,039	W
Massachusetts	2.12%	23,866	2.98%	33,467	9,601	1.98%	21,759	32,780	11,021	W
Michigan	3.62%	40,691	3.43%	38,547	(2,144)	4.43%	48,682	37,730	(10,952)	L
Minnesota	1.78%	19,965	1.84%	20,678	713	1.18%	12,936	20,240	7,304	W
Mississippi	1.07%	12,039	1.03%	11,549	(491)	1.69%	18,600	11,330	(7,270)	L
Missouri	1.97%	22,129	1.89%	21,146	(983)	1.71%	18,785	20,790	2,005	—
Montana	0.33%	3,680	0.26%	2,928	(752)	0.35%	3,801	2,860	(941)	L
Nebraska	0.63%	7,046	0.46%	3,184	(3,862)	0.43%	4,234	5,060	826	—
Nevada	0.59%	6,671	0.31%	3,465	(3,206)	0.30%	3,296	3,410	114	—
New Hampshire	0.43%	4,815	0.44%	4,972	157	0.24%	2,657	4,840	2,183	W
New Jersey	2.90%	32,556	3.39%	38,102	5,546	2.19%	24,058	37,290	13,232	W
New Mexico	0.72%	8,092	0.59%	6,638	(1,454)	0.85%	9,318	6,490	(2,828)	L
New York	6.71%	75,411	15.72%	176,576	101,165	9.20%	101,247	172,920	71,673	W
North Carolina	2.62%	29,414	2.64%	29,694	280	1.89%	20,748	29,040	8,292	W
North Dakota	0.24%	2,671	0.20%	2,250	(421)	0.24%	2,656	2,200	(456)	—
Ohio	4.08%	45,878	4.06%	45,575	(303)	4.06%	44,660	44,660	(0)	—
Oklahoma	1.24%	13,961	0.79%	8,840	(5,121)	1.18%	12,949	8,690	(4,259)	L
Oregon	1.83%	12,710	1.01%	11,355	(1,355)	0.92%	10,167	11,110	943	—
Pennsylvania	4.19%	47,046	4.95%	55,575	8,529	4.49%	49,373	54,450	5,077	—
Rhode Island	0.35%	3,920	0.49%	5,491	1,571	0.33%	3,657	5,390	1,733	W
South Carolina	1.35%	15,220	1.31%	14,741	(478)	1.28%	14,036	14,410	374	—
South Dakota	0.29%	3,252	0.21%	2,350	(902)	0.26%	2,895	2,310	(585)	L
Tennessee	1.87%	21,041	2.02%	22,728	1,687	1.74%	19,192	22,220	3,028	—
Texas	7.88%	88,522	6.05%	67,969	(20,553)	8.56%	94,146	66,550	(27,596)	L
Utah	0.94%	10,611	0.41%	4,552	(6,059)	0.45%	4,930	4,510	(420)	—
Vermont	0.21%	2,357	0.24%	2,682	325	0.24%	2,618	2,640	22	—
Virginia	2.36%	26,466	1.38%	15,487	(10,979)	1.49%	16,408	15,180	(1,228)	—
Washington	2.05%	22,999	2.05%	23,057	57	1.47%	16,163	22,550	6,387	W
West Virginia	0.57%	6,414	0.79%	8,832	2,418	1.00%	10,947	8,690	(2,257)	L
Wisconsin	3.52%	41,110	2.55%	37,448	(3,662)	1.70%	31,681	37,050	5,369	W
Wyoming	0.19%	2,091	0.12%	1,338	(753)	0.22%	2,418	1,320	(1,098)	L

1/ Matching Funds are allocated according to the proportion of children under age 13 using Census data as of July, 1995 (in accordance with the At-Risk Child Care program allocation formula). Each State's maximum allocation is shown; unused funds will be redistributed among States.

DISTRIBUTION OF TOBACCO RECEIPTS ACCORDING TO FEDERAL MEDICAID SPENDING: BENEFITS AND ADMIN
(All dollars in thousands)

	Child Care Formula 1/	Child Care Allocation under child care formula	Medicaid Distribution	Child Care Allocation under Medicaid	Difference	States with more than 20% gain or loss	Title I Formula	Class Size Funds Based on Title I	Class Size Allocation Under Medicaid	Difference	States with more than 20% gain or loss
Alabama	1.53%	17,224	1.60%	17,950	726	—	1.71%	18,790	17,600	(1,190)	—
Alaska	0.28%	3,149	0.21%	2,386	(763)	L	0.23%	2,583	2,310	(273)	—
Arizona	1.76%	19,810	1.29%	14,502	(5,308)	L	1.54%	16,948	14,190	(2,758)	—
Arkansas	0.92%	10,287	1.05%	11,738	1,451	—	1.02%	11,255	11,550	295	—
California	13.29%	149,256	9.83%	110,421	(38,835)	L	11.25%	123,776	108,130	(15,646)	—
Colorado	1.42%	15,963	0.83%	9,276	(6,687)	L	0.95%	10,487	9,130	(1,357)	—
Connecticut	1.18%	13,285	1.48%	16,587	3,302	W	0.93%	10,227	16,280	6,053	W
Delaware	0.26%	2,949	0.24%	2,728	(221)	—	0.25%	2,723	5,500	2,778	W
District of Columbia	0.18%	1,997	0.50%	5,598	3,601	W	0.29%	3,209	2,640	(569)	—
Florida	4.97%	55,821	3.67%	41,227	(14,594)	L	4.54%	49,894	40,370	(9,524)	—
Georgia	2.79%	31,356	2.52%	28,321	(3,035)	—	2.64%	28,997	27,720	(1,277)	—
Hawaii	0.46%	5,159	0.36%	4,044	(1,115)	L	0.27%	3,002	3,960	958	W
Idaho	0.48%	5,421	0.29%	3,309	(2,112)	L	0.30%	3,264	3,190	(74)	—
Illinois	4.56%	51,259	3.54%	39,763	(11,496)	L	4.41%	48,546	38,940	(9,606)	—
Indiana	2.11%	23,738	1.80%	20,183	(3,555)	—	1.55%	17,030	19,800	2,770	—
Iowa	1.01%	11,329	0.90%	10,090	(1,239)	—	0.70%	7,751	9,900	2,149	W
Kansas	0.99%	11,099	0.65%	7,254	(3,845)	L	0.74%	8,178	7,150	(1,028)	—
Kentucky	1.36%	15,309	1.65%	18,558	3,249	W	1.73%	19,019	18,150	(869)	—
Louisiana	1.76%	19,735	2.86%	32,070	12,335	W	2.59%	28,537	31,460	2,923	—
Maine	0.43%	4,837	0.70%	7,873	3,036	W	0.39%	4,317	7,700	3,383	W
Maryland	1.89%	21,212	1.43%	16,083	(5,129)	L	1.34%	14,781	15,730	949	—
Massachusetts	2.12%	23,866	2.64%	29,610	5,744	W	1.98%	21,759	29,040	7,281	W
Michigan	3.62%	40,691	3.43%	38,505	(2,186)	—	4.43%	48,682	37,730	(10,952)	L
Minnesota	1.78%	19,965	1.75%	19,691	(273)	—	1.18%	12,936	19,250	6,314	W
Mississippi	1.07%	12,039	1.41%	15,797	3,757	W	1.69%	18,600	15,510	(3,090)	—
Missouri	1.97%	22,129	1.99%	22,396	267	—	1.71%	18,785	21,890	3,105	—
Montana	0.33%	3,680	0.32%	3,603	(77)	—	0.35%	3,801	3,520	(281)	—
Nebraska	0.63%	7,046	0.48%	5,414	(1,632)	L	0.43%	4,734	5,280	546	—
Nevada	0.59%	6,671	0.28%	3,090	(3,581)	L	0.30%	3,296	3,080	(216)	—
New Hampshire	0.43%	4,815	0.39%	4,395	(420)	—	0.24%	2,657	4,290	1,633	W
New Jersey	2.90%	32,556	3.00%	33,733	1,177	—	2.19%	24,058	33,000	8,942	W
New Mexico	0.72%	8,092	0.76%	8,532	441	—	0.85%	9,318	8,360	(958)	—
New York	6.71%	75,411	13.92%	156,307	80,895	W	9.20%	101,247	153,120	51,873	W
North Carolina	2.62%	29,414	3.00%	33,657	4,243	—	1.89%	20,748	33,000	12,252	W
North Dakota	0.24%	2,671	0.24%	2,730	59	—	0.24%	2,656	2,640	(16)	—
Ohio	4.08%	45,878	4.29%	48,208	2,330	—	4.06%	44,660	47,590	2,930	—
Oklahoma	1.24%	13,961	0.95%	10,703	(3,258)	L	1.18%	12,949	10,450	(2,499)	—
Oregon	1.13%	12,710	1.09%	12,200	(510)	—	0.92%	10,167	11,990	1,823	—
Pennsylvania	4.19%	47,046	4.62%	51,924	4,878	—	4.49%	49,373	50,820	1,447	—
Rhode Island	0.35%	3,920	0.47%	5,276	1,357	W	0.33%	3,657	5,170	1,513	W
South Carolina	1.35%	15,220	1.63%	18,265	3,046	W	1.28%	14,036	17,930	3,894	W
South Dakota	0.29%	3,252	0.25%	2,801	(451)	—	0.26%	2,895	2,750	(145)	—
Tennessee	1.87%	21,041	2.32%	26,071	5,030	W	1.74%	19,192	25,520	6,328	W
Texas	7.88%	88,522	6.61%	74,266	(14,255)	—	8.56%	94,146	72,710	(21,436)	L
Utah	0.94%	10,611	0.51%	5,773	(4,838)	L	0.45%	4,930	5,610	680	—
Vermont	0.21%	2,357	0.26%	2,875	518	W	0.24%	2,618	2,860	242	—
Virginia	2.36%	26,466	1.25%	14,078	(12,388)	L	1.49%	16,408	13,750	(2,658)	—
Washington	2.05%	22,999	1.83%	20,512	(2,487)	—	1.47%	16,163	20,430	3,967	W
West Virginia	0.57%	6,414	1.01%	11,306	4,892	W	1.00%	10,947	11,110	163	—
Wisconsin	1.92%	21,510	1.63%	18,346	(3,165)	—	1.70%	18,681	17,930	(751)	—
Wyoming	0.19%	2,091	0.13%	1,417	(674)	L	0.22%	2,418	1,430	(988)	L

1/ Matching Funds are allocated according to the proportion of children under age 13 using Census data as of July, 1995 (in accordance with the At-Risk Child Care program allocation formula). Each State's maximum allocation is shown; unused funds will be redistributed among States.

DISTRIBUTION OF TOBACCO RECEIPTS ACCORDING TO STATE MEDICAID SPENDING: BENEFITS AND ADMIN

(All dollars in thousands)

	Child Care Formula 1/	Child Care Allocation under child care formula	Medicaid Distribution	Child Care Allocation under Medicaid	Difference	States with more than 20% gain or loss	Title I Formula	Class Size Funds Based on Title I	Class Size Allocation Under Medicaid	Difference	States with more than 20% gain or loss
Alabama	1.53%	17,224	0.92%	10,306	(6,918)	L	1.71%	18,790	10,120	(8,670)	L
Alaska	0.28%	3,149	0.22%	2,474	(675)	L	0.23%	2,583	2,420	(163)	--
Arizona	1.76%	19,810	0.86%	9,642	(10,168)	L	1.54%	16,948	9,460	(7,488)	L
Arkansas	0.92%	10,287	0.51%	5,750	(4,537)	L	1.02%	11,255	5,610	(5,645)	L
California	13.29%	149,256	12.74%	143,154	(6,102)	--	11.25%	123,776	140,140	16,364	--
Colorado	1.42%	15,963	0.98%	10,969	(4,994)	L	0.95%	10,487	10,780	293	--
Connecticut	1.18%	13,285	1.93%	21,669	8,384	W	0.93%	10,227	21,230	11,003	W
Delaware	0.26%	2,949	0.31%	3,477	528	--	0.25%	2,723	7,150	4,428	W
District of Columbia	0.18%	1,997	0.65%	7,297	5,300	W	0.29%	3,209	3,410	201	--
Florida	4.97%	55,821	3.84%	43,139	(12,682)	L	4.54%	49,894	42,240	(7,654)	--
Georgia	2.79%	31,356	2.06%	23,097	(8,259)	L	2.64%	28,997	22,660	(6,337)	L
Hawaii	0.46%	5,159	0.47%	5,318	159	--	0.27%	3,002	5,170	2,168	W
Idaho	0.48%	5,421	0.18%	2,071	(3,349)	L	0.30%	3,264	1,980	(1,284)	L
Illinois	4.56%	51,259	4.60%	51,685	426	--	4.41%	48,546	50,600	2,054	--
Indiana	2.11%	23,738	1.43%	16,017	(7,721)	L	1.55%	17,030	15,730	(1,300)	--
Iowa	1.01%	11,329	0.67%	7,511	(3,818)	L	0.70%	7,751	7,370	(381)	L
Kansas	0.99%	11,099	0.59%	6,617	(4,483)	L	0.74%	8,178	6,490	(1,688)	L
Kentucky	1.36%	15,309	0.94%	10,536	(4,773)	L	1.73%	19,019	10,340	(8,679)	L
Louisiana	1.76%	19,735	0.74%	8,355	(11,379)	L	2.59%	28,537	8,140	(20,397)	L
Maine	0.43%	4,837	0.54%	6,065	1,228	W	0.39%	4,317	5,940	1,623	W
Maryland	1.89%	21,212	1.86%	20,945	(267)	--	1.34%	14,781	20,460	5,679	W
Massachusetts	2.12%	23,866	3.44%	38,624	14,758	W	1.98%	21,759	37,840	16,081	W
Michigan	3.62%	40,691	3.44%	38,684	(2,007)	--	4.43%	48,682	37,840	(10,842)	L
Minnesota	1.78%	19,965	1.96%	22,021	2,057	W	1.18%	12,936	21,560	8,624	W
Mississippi	1.07%	12,039	0.53%	5,971	(6,069)	L	1.69%	18,600	5,830	(12,770)	L
Missouri	1.97%	22,129	1.75%	19,700	(2,430)	--	1.71%	18,785	19,250	465	--
Montana	0.33%	3,680	0.18%	2,044	(1,636)	L	0.35%	3,801	1,980	(1,821)	L
Nebraska	0.63%	7,046	0.44%	4,890	(2,156)	L	0.43%	4,734	2,840	(1,894)	L
Nevada	0.59%	6,671	0.35%	3,968	(2,703)	L	0.30%	3,296	3,850	554	--
New Hampshire	0.43%	4,815	0.51%	5,755	940	--	0.24%	2,657	5,610	2,953	W
New Jersey	2.90%	32,556	3.91%	43,943	11,387	W	2.19%	24,058	43,010	18,952	W
New Mexico	0.72%	8,092	0.37%	4,154	(3,938)	L	0.85%	9,318	4,070	(5,248)	L
New York	6.71%	75,411	18.13%	203,677	128,266	W	9.20%	101,247	199,430	98,183	W
North Carolina	2.62%	29,414	2.18%	24,530	(4,884)	L	1.89%	20,748	23,980	3,232	--
North Dakota	0.24%	2,671	0.14%	1,621	(1,050)	L	0.24%	2,656	1,540	(1,116)	L
Ohio	4.08%	45,878	3.76%	42,199	(3,679)	--	4.06%	44,660	41,360	(3,300)	--
Oklahoma	1.24%	13,961	0.57%	6,400	(7,561)	L	1.18%	12,949	6,270	(6,679)	L
Oregon	1.13%	12,710	0.91%	10,264	(2,447)	--	0.92%	10,167	10,010	(157)	--
Pennsylvania	4.19%	47,046	5.39%	60,506	13,460	W	4.49%	49,373	59,290	9,917	W
Rhode Island	0.35%	3,920	0.52%	5,785	1,866	W	0.33%	3,657	5,720	2,063	W
South Carolina	1.35%	15,220	0.90%	10,125	(5,095)	L	1.28%	14,036	9,900	(4,136)	L
South Dakota	0.29%	3,252	0.16%	1,760	(1,491)	L	0.26%	2,895	1,760	(1,135)	L
Tennessee	1.87%	21,041	1.64%	18,367	(2,675)	--	1.74%	19,192	18,040	(1,152)	--
Texas	7.88%	88,522	5.32%	59,807	(28,714)	L	8.56%	94,146	58,520	(35,626)	L
Utah	0.94%	10,611	0.26%	2,952	(7,660)	L	0.45%	4,930	2,860	(2,070)	L
Vermont	0.21%	2,357	0.22%	2,434	77	--	0.24%	2,618	2,420	(198)	--
Virginia	2.36%	26,466	1.55%	17,377	(9,088)	L	1.49%	16,408	17,050	642	--
Washington	2.05%	22,999	2.56%	26,460	3,461	W	1.47%	16,163	25,960	9,797	W
West Virginia	0.57%	6,414	0.50%	5,587	(827)	--	1.00%	10,947	5,500	(5,447)	L
Wisconsin	1.92%	21,510	1.45%	16,301	(5,209)	L	1.70%	18,681	15,950	(2,731)	--
Wyoming	0.19%	2,091	0.11%	1,236	(855)	L	0.22%	2,418	1,210	(1,208)	L

1/ Matching Funds are allocated according to the proportion of children under age 13 using Census data as of July, 1995 (in accordance with the At-Risk Child Care program allocation formula). Each State's maximum allocation is shown; unused funds will be redistributed among States.

Percent Share based on Title I

STATE TOBACCO SETTLEMENT FUNDS

May 15, 1998

- **\$196 billion over 25 years** from the legislation will be allocated to states from a trust fund. These grants will be a mandatory, permanent appropriation. Federal spending for new options on children's health outreach will be netted from this amount.
- **50 percent** of the grants may be used by states for any purpose. The remaining 50 percent will be used for specified restricted purposes, described below.
- **Options for restricted funds.** States can use the restricted funds in any amount that they choose (except for CHIP) to add to any one or all of the following options:
 - Maternal and Child Health Bureau's Title V program
 - Child Care and Development Block Grant
 - Child welfare programs (Title IV-B)
 - Substance Abuse and Mental Health Services Administration grant programs
 - Safe and Drug-Free Schools program
 - Professional Development (Eisenhower) grants
 - Match for the Children's Health Insurance Program (limited to 6 percent of restricted funds)
- **Each program's current matching rules** will be used except for an increased Federal match of 80 percent for child care block grant funds above the appropriated amount.
- **Supplement, not supplanting spending:** Funds from the restricted portion of the grants may not be used as state match for Federal programs (except for CHIP). There will be a maintenance of effort on a program-specific basis, that consists of:
 - 95 percent of the FFY 1997 state spending on the programs listed below, trended by the lower of inflation (CPI) or the Federal appropriation growth.
- **Options for the use of restricted funds will be re-assessed every 5 years.** An independent organization (e.g., General Accounting Office or National Academy of Sciences) will conduct evaluations and assessments of spending options every 5 years, and make recommendations on improvements.

SPENDING OPTIONS UNDER THE RESTRICTED SHARE OF THE STATE FUNDS
Additional Federal Funding over 5 Years
If States Increase Spending in Each Program Equally

	Fiscal Year 1997		5-Year Spending
	Federal Spend.	Percent	With Equal Increases
	\$ billions	of Total	\$ billions
Maternal & Child Health	0.70	10%	1.30
Child Care & Development Block Grant	2.70	40%	5.00
Child Welfare Programs (IV-B)	0.50	7%	0.93
Substance Abuse & Mental Health Adm. programs	1.60	24%	2.96
Safe & Drug Free Schools	0.50	7%	0.93
Professional Dev'l (Eisenhower) grants	0.35	5%	0.65
Children's Health Insurance Program match (6%)*	0.41	6%	0.75
TOTAL	6.76	100%	12.50

* "Fiscal Year Spending in 1997" is a place holder that assures that 6 percent of the total is reserved for CHIP

McCain Bill State Spending Language

SEC. 452. GRANTS TO STATES.

(a) Amounts._ From the amount made available under section 451(a) for each fiscal year, each State shall receive a grant on a quarterly basis according to a formula.

(b) Use of Funds._

(1) Unrestricted funds._ A State may use funds, not to exceed 50 percent of the amount received under this section in a fiscal year, for any activities determined appropriate by the State.

(2) Restricted funds._ A State shall use not less than 50 percent of the amount received under this section in a fiscal year to carry out additional activities or provide additional services under_

(A) the State program under the maternal and child health services block grant under title V of the Social Security Act (42 U.S.C. 701 et seq.);

(B) the State program for child care under the funding for child care under section 418 of the Social Security Act, notwithstanding subsection (b)(2) of that section;

(C) the State program for child welfare and abuse under the Federally-funded child welfare and abuse programs under title IV-B of the Social Security Act;

(D) programs administered within the State under the authority of the Substance Abuse and Mental Health Services Administration under title XIX, part B of the Public Health Service Act;

(E) the Safe and Drug-Free Schools Program under title IV, part A, of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 7111 et seq.);

(F) the Department of Education's Dwight D. Eisenhower Professional Development program under title II of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6601 et seq.); and

(G) the State Children's Health Insurance Program authorized under title XXI of the Social Security Act (42 U.S.C. 1397aa et seq.), provided that the amount expended on this program does not exceed 6 percent of the total amount of restricted funds available to the State each fiscal year.

(c) No Substitution of Spending._ Amounts referred to in subsection (b)(2) shall be used to supplement and not supplant other Federal, State, or local funds provided for any of the programs described in subparagraphs (A) through (G) of subsection (b)(2). Restricted funds, except as provided for in subsection (b)(2)(G), shall not be used as State matching funds. Amounts provided to the State under any of the provisions of law referred to in such subparagraph shall not be reduced solely as a result of the availability of funds under this section.

(d) Federal-State Match Rates. Matching requirements, as provided in the statutory authority for the programs described in subsection (b)(2), apply to each program listed under subsection (b)(2), except for the program described under subsection (b)(2)(B). For the program described under subsection (b)(2)(B), after an individual State has expended resources sufficient to receive its full Federal amount under section 418(a)(2)(B) of the Social Security Act (subject to the matching requirements in section 418(a)(2)(C) of such Act), the Federal share of expenditures shall be 80 percent.

(e) Maintenance of Effort. To receive funds under this subsection, States must demonstrate a maintenance of effort. This maintenance of effort is defined as the sum of

(1) an amount equal to 95 percent of Federal fiscal year 1997 State spending on the programs under subparagraphs (B), (c), and (D) of subsection (b)(2); and

(2) an amount equal to the product of the amount described in paragraph (1) and

(A) for fiscal year 1999, the lower of

(i) general inflation as measured by the consumer price index for the previous year; or

(ii) the annual growth in the Federal appropriation for the program in the previous fiscal year; and

(B) for subsequent fiscal years, the lower of

(i) the cumulative general inflation as measured by the consumer price index for the period between 1997 and the previous year; or

(ii) the cumulative growth in the Federal appropriation for the program for the period between fiscal year 1997 and the previous fiscal year.

The 95-percent maintenance-of-effort requirement in paragraph (1), and the adjustments in paragraph (2), apply to each program identified in paragraph (1) on an individual basis.

(f) Options for Children's Health Outreach. In addition to the options for the use of grants described in this section, the following are new options to be added to States' choices for conducting children's health outreach:

(1) Expansion of presumptive eligibility option for children.

(A) In general. Section 1920A(b)(3)(A)(I) of the Social Security Act (42 U.S.C. 1396r-1a(b)(3)(A)(I)) is amended

(i) by striking "described in subsection (a) or (II) is authorized" and inserting "described in subsection (a), (II) is authorized"; and

(ii) by inserting before the semicolon ``eligibility for benefits under part A of title IV, eligibility of a child to receive benefits under the State plan under this title or title XXI, (III) is a staff member of a public school, child care resource and referral center, or agency administering a plan under part D of title IV, or (IV) is so designated by the State".

(B) Technical amendments. _ Section 1920A of that Act (42 U.S.C. 1396r-1a) is amended _

(i) in subsection (b)(3)(A)(ii), by striking ``paragraph (1)(A)" and inserting ``paragraph (2)(A)"; and

(ii) in subsection (c)(2), in the matter preceding subparagraph (A), by striking ``subsection (b)(1)(A)" and inserting ``subsection (b)(2)(A)".

(2) Removal of requirement that children's health insurance program allotments be reduced by costs related to presumptive eligibility determinations. _

(A) In general. _ Section 2104(d) of the Social Security Act (42 U.S.C. 1397dd(d)) is amended by striking ``the sum of \_" and all that follows through the paragraph designation ``(2)" and merging all that remains of subsection (d) into a single sentence.

(B) Effective date. _ The amendment made by subsection (a) shall be deemed to have taken effect on August 5, 1997.

(3) Increased funding for administrative costs related to outreach and eligibility determinations for children. _ Section 1931(h) of the Social Security Act (42 U.S.C. 1396u-1(h)) is amended _

(A) by striking the subsection caption and inserting ``(h) Increased federal matching rate for administrative costs related to outreach and eligibility determinations for children. _";

(B) in paragraph (2), by striking ``eligibility determinations" and all that follows and inserting ``determinations of the eligibility of children for benefits under the State plan under this title or title XXI, outreach to children likely to be eligible for such benefits, and such other outreach-and eligibility-related activities as the Secretary may approve.";

(C) in paragraph (3), by striking ``and ending with fiscal year 2000 shall not exceed \$500,000,000" and inserting ``shall not exceed \$525,000,000"; and

(D) by striking paragraph (4).

(g) Periodic reassessment of spending options. _ Spending options under subsection (b)(2) will be reassessed jointly by the States and Federal government every 5 years and be reported to the Secretary.

from Oct 1998

Dear Senator _____

RE: Effort to waive Federal Share of State Medicaid Settlements: Implications for Public health

On September 30, 1998 Senator Kay Bailey Hutchison announced her intention to introduce an amendment to the Labor, HHS, Education Appropriations vehicle that would waive the federal government's claim to the federal portion of any money the states receive as the result of the lawsuits the states brought against the tobacco companies to recover Medicaid funds spent to treat tobacco related diseases. Over 50 % of the money the states are seeking belong to the federal government as its share of Medicaid. The current legislative proposal would not require the states to spend any of these federal funds to reduce the number of Americans addicted to tobacco or to reduce the death toll from tobacco – the very purpose for which these cases were brought.

We do not object to legislation that would permit the states to retain the funds they receive in these cases, provided, however, that a significant amount of the funds recovered (no less than 20% of the federal portion of these funds) is earmarked to reduce tobacco use and the harms caused by tobacco.

We do oppose legislation that would waive the federal government's share of these funds if that legislation does not specifically set aside money to reduce tobacco use and the death and disease caused by tobacco

Over 400,000 Americans died from tobacco caused disease last year and over a million children started using tobacco for the first time. Funding for tobacco control programs can make a difference. It would be a national tragedy if cases that were brought to recoup billions of dollars spent because of tobacco caused disease were settled without any of the money being used to reduce the death toll from tobacco.

The amount of money at stake is substantial. Four states (Mississippi, Florida, Texas, and Minnesota) have already settled their cases for billions of dollars. The remaining states are in negotiations in an effort to settle all of the remaining cases. The media has reliably reported that the tobacco industry has offered to pay approximately \$200 billion over twenty-five years to settle these cases. Thus, the federal government's share could exceed \$100 billion over twenty-five years or approximately \$40 billion over ten years.

We urge you to insist that no less than 20% of the federal government's share of the funds from the state tobacco Medicaid cases be earmarked specifically for programs to reduce tobacco use and the harms caused by tobacco and to oppose any legislation that fails to do so.

American Cancer Society
American Heart Association
American Academy of Pediatrics
American College of Chest Physicians
American Academy of Family Physicians
National Center for Tobacco Free Kids
National Association of County and City Health Officials

November 1998 State Tobacco Settlement

X. EFFECT OF FEDERAL TOBACCO-RELATED LEGISLATION

(a) If federal tobacco-related legislation is enacted on or before November 30, 2002, and if such legislation provides for payment(s) by any Original Participating Manufacturer (whether by settlement payment, tax or any other means), all or part of which are actually made available to a Settling State ("Federal Funds"), each Original Participating Manufacturer shall receive a continuing dollar-for-dollar offset for any and all amounts that are paid by such Original Participating Manufacturer pursuant to such legislation and actually made available to such Settling State (except as described in subsections (b) and (c) below). Such offset shall be applied against the applicable Original Participating Manufacturer's share (determined as described in step E of clause "Seventh" of subsection IX(j)) of such Settling State's Allocated Payment, up to the full amount of such Original Participating Manufacturer's share of such Allocated Payment (as such share had been reduced by adjustment, if any, pursuant to the NPM Adjustment and has been reduced by offset, if any, pursuant to the offset for miscalculated or disputed payments). Such offset shall be made against such Original Participating Manufacturer's share of the first Allocated Payment due after such Federal Funds are first available for receipt by such Settling State. In the event that such offset would in any given year exceed such Original Participating Manufacturer's share of such Allocated Payment: (1) the offset to which such Original Participating Manufacturer is entitled under this section in such year shall be the full amount of such Original Participating Manufacturer's share of such Allocated Payment, and (2) all amounts not offset by reason of subsection (1) shall carry forward and be offset in the following year(s) until all such amounts have been offset.

(b) The offset described in subsection (a) shall apply only to that portion of Federal Funds, if any, that are either unrestricted as to their use, or restricted to any form of health care or to any use related to tobacco (including, but not limited to, tobacco education, cessation, control or enforcement) (other than that portion of Federal Funds, if any, that is specifically applicable to tobacco growers or communities dependent on the production of tobacco or Tobacco Products). Provided, however, that the offset described in subsection (a) shall not apply to that portion of Federal Funds, if any, whose receipt by such Settling State is conditioned upon or appropriately allocable to:

(1) the relinquishment of rights or benefits under this Agreement (including the Consent Decree); or

(2) actions or expenditures by such Settling State, unless:

(A) such Settling State chooses to undertake such action or expenditure;

(B) such actions or expenditures do not impose significant constraints on public policy choices; or

(C) such actions or expenditures are both: (i) related to health care or tobacco (including, but not limited to, tobacco education, cessation, control or enforcement) and (ii) do not require such Settling State to expend state matching funds in an amount that is significant in relation to the amount of the Federal Funds made available to such Settling State.

(c) Subject to the provisions of subsection IX(i)(3), Subsequent Participating Manufacturers shall be entitled to the offset described in this section X to the extent that they are required to pay Federal Funds that would give rise to an offset under subsections (a) and (b) if paid by an Original Participating Manufacturer.

(d) Nothing in this section X shall (1) reduce the payments to be made to the Settling States under this Agreement other than those described in subsection IX(c) (or corresponding payments under subsection IX(i)) of this Agreement; or (2) alter the Allocable Share used to determine each Settling State's share of the payments described in subsection IX(c) (or corresponding payments under subsection IX(i)) of this Agreement. Nothing in this section X is intended to or shall reduce the total amounts payable by the Participating Manufacturers to the Settling States under this Agreement by an amount greater than the amount of Federal Funds that the Settling States could elect to receive.

Section XXX shall apply if a state submits to the Secretary a certification, in such form and by such date as the Secretary may require, that the State will expend at least XXX percent of such amounts in such fiscal year on evidence-based state and community tobacco prevention activities and counter-marketing activities in accordance with tobacco-related guidelines promulgated by the Secretary.

Funds used to meet the requirement of subsection XXX shall not supplant state funds currently being expended for tobacco prevention related activities.

In order to meet the requirement of subsection XXX the amounts required to be expended for prevention and counter-advertising activities shall be used for the following:

- 1) Activities for tobacco use prevention and control including community-based programs similar to programs currently funded by the National Institutes of Health and assistance to local governmental entities to conduct appropriate anti-tobacco activities.
- 2) Counter-marketing programs designed to discourage the use of tobacco products by individuals, to encourage those who use such products to quit, and to educate the public about the hazards of exposure to environmental tobacco smoke implemented through contracts or grants to eligible entities.

Proposal Based on Hansen-Meehan

Add the following to the state menu listed under McCain sec. 452(b)(2)

(H) state tobacco control activities, which include:

- (i) public awareness campaigns to discourage the use of tobacco products;
- (ii) child-oriented and community-based programs to discourage the use of tobacco products; and
- (iii) tobacco use cessation programs, which are consistent with the most recent tobacco use cessation guidelines issued by the Agency for Health Care Policy Research or are approved as safe and effective for tobacco use cessation by the Food and Drug Administration.

Proposal Based on McCain

Add the following to the state menu listed under McCain sec. 452(b)(2)

(H) state tobacco control activities, which include:

- (i) a media-based counteradvertising campaign to discourage the use of tobacco products;
- (ii) state, community and school-based education and prevention programs to discourage the use of tobacco products;
- (iii) evidence-based tobacco use cessation programs, consistent with the most recent tobacco use cessation guidelines issued by the Agency for Health Care Policy Research or are approved as safe and effective for tobacco use cessation by the Food and Drug Administration; and
- (iv) activities to enforce youth access restrictions in order to reduce the sale and distribution of tobacco products to individuals under 18 years of age.

Proposal Based on McCain

Add the following to the state menu listed under McCain sec. 452(b)(2)

(H) state tobacco control activities, which include:

- (i) evidence-based activities for tobacco use prevention and control, including state, community and school-based initiatives;
- (ii) a statewide campaign to reduce tobacco usage through media-based (such as counter-advertising campaigns) and non-media based education, prevention and cessation campaigns designed to discourage the use of tobacco products by individuals, to encourage those who use such products to quit, and to educate the public about the hazards of exposure to environmental tobacco smoke;
- (iii) evidence-based cessation activities, which are consistent with the most recent tobacco use cessation guidelines issued by the Agency for Health Care Policy Research or are approved as safe and effective for tobacco use cessation by the Food and Drug Administration, including:
 - (aa) evidence-based programs designed to assist individuals to quit their use of tobacco products;
 - (bb) training in cessation methods for health professionals;
 - (cc) programs to encourage health insurers and health plans to provide coverage for evidence-based tobacco use cessation interventions or therapies; and
- (iv) implementing and enforcing a tobacco retailer licensing program in a manner that can reasonably be expected to reduce the sale and distribution of tobacco products to individuals under 18 years of age.

STATE TOBACCO SETTLEMENT FUNDS

May 15, 1998

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- **Options for the use of restricted funds will be re-assessed every 5 years.** An independent organization (e.g., General Accounting Office or National Academy of Sciences) will conduct evaluations and assessments of spending options every 5 years, and make recommendations on improvements.

Nicole -

Some

"evidence"

|

Cynthia

08/06/98 THE U.S. TREASURY DEPARTMENT

EFFECTS OF NON-PRICE INITIATIVES TO REDUCE TEEN SMOKING

U.S. Treasury Analysis

August 4, 1998

Introduction

As evidence on the adverse health effects of smoking has accumulated, so has evidence on the impact of a range of measures to reduce teen smoking. The strongest evidence exists for measures that raise the price of cigarettes, where the consensus of a large number of empirical studies is that higher prices lead to significant reductions in smoking rates. But many other initiatives to reduce teen smoking have been proposed, and in some cases implemented, that do not depend on raising the price of cigarettes. Initiatives include the FDA's 1996 regulations involving access and advertising restrictions – most of which have not yet been implemented due to court challenges from tobacco companies – as well as some elements of proposed state Attorneys General settlements and components of the McCain Bill.

This analysis reviews the non-price initiatives and the evidence on their likely effects on teen smoking. Related measures are grouped together and guidelines are provided for determining whether specific proposals should be characterized as limited – and likely to have little effect on teen smoking – or strong. Where previous studies are adequate, we provide quantitative *conservative* estimates of effects on teen smoking rates. In some cases, particular studies have found considerably larger effects of certain anti-smoking measures. These studies suggest that important details of a strong initiative – such as key features of how it is actually implemented, or whether it is part of a coordinated major policy initiative, leading to synergistic effects – may influence its consequences.

1. Restrictions on Tobacco Sales, Possession, and Use

Current laws in all states prohibit tobacco sales *to* minors, while 39 states prohibit either the purchase, possession, or use of tobacco *by* minors. Such laws are necessary but not sufficient to reduce teen smoking: they will not have any effect on smoking rates unless they are coupled with strong enforcement measures. In community after community, surveys and studies have found that minors have little trouble purchasing tobacco products over-the-counter. Chaloupka and Grossman (1996) present a comprehensive assessment of a range of state and local policies intended to restrict youth access to tobacco, including minimum legal purchase ages, which were enacted without substantial and active enforcement programs.¹ They generally found little impact of the legal restrictions on youth cigarette smoking.

¹ Chaloupka, F., and M. Grossman, "Price, Tobacco Control Policies, and Youth Smoking," NBER Working Paper #5740, September 1996.

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Many other restrictions besides prohibitions of sales to minors have been implemented or proposed. These include: vendor licensing requirements, requirements to supervise or restrict access to vending machines (for example, limiting to adults-only establishments); required identification checks; bans on self-service merchandising; and bans on small-quantity sales and distribution of free samples.² As with sales prohibitions, these measures appear to have little effect unless coupled with strong enforcement mechanisms, advertising initiatives, and other major initiatives. Because of their central importance for achieving teen smoking reductions, the remainder of this review presents more detailed evidence on all of these measures.

2. Enforcement of Restrictions on Sales, Possession, and Use

Enforcement initiatives to restrict underage access to tobacco have four key components: (1) methods used to assess whether vendors are complying with restrictions on sales to teens; (2) penalties on vendors for failing to comply; (3) penalties on underage teens for purchasing, possessing, or using tobacco products; and (4) incentives and support for state and local authorities to implement the measures effectively.

Economic models of the effects of enforcement programs consider the *expected penalty* for not complying with the restrictions for both vendors and teens. This is the product of the probability of detecting noncompliance and the magnitude of penalty if detected. Enforcement programs with *limited* provisions in some or all of these areas are those for which the expected penalty is small. Such programs are unlikely to reduce smoking rates, and as Chaloupka and Grossman (1996) found, many previous non-price initiatives fall into this category. Limited initiatives include:

- Limited detection of compliance: no specific provisions for monitoring vendor compliance; "local discretion" in monitoring compliance; no compliance checks or predictable timing of checks; limited restrictions of points of sale (creating a large burden on enforcement agencies to monitor them).
- Limited penalties for vendors: warnings or penalties that are small relative to underage tobacco sales, or fail to escalate with repeated violations.
- Limited penalties for teen purchases, possession, or use: warnings or penalties that impose small financial or time costs (e.g., brief suspension of driver's license, small community service requirement), or that result in parental notification only.

² A 1995 FDA analysis found that self-service tobacco displays increased the likelihood that youth will obtain tobacco products by making both purchases and shoplifting of these products easier. The same analysis concluded that small-quantity sales encourage consumption by minors, and that distributions of free samples allow young people to obtain tobacco products easily. See FDA, "Regulations Restricting the Sale and Distribution of Cigarettes and Smokeless Tobacco Products to Protect Children and Adolescents," *Federal Register*, vol. 60, no. 155, August 11, 1995, pp. 41324-6.

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- Limited support for state and local implementation: new Federal enforcement initiatives with no or limited provisions for funding at the state and local level; no or limited provisions for monitoring state compliance with enforcement; no or small (relative to enforcement costs) financial or other incentives for state and local authorities to comply with the enforcement initiatives.

Enforcement initiatives with these features will result in a small expected penalty for vendors or teens or both.

Strong provisions in all of these components lead to expected penalties that are large enough to change the behavior of teens and vendors:

- Likely detection of noncompliance: systematic, regular, funded program of random "sting" operations;³ tighter restrictions on points of sale, including limited issuance of vendor licenses (which also raises the value of maintaining a license) and elimination of vending machines.⁴ Local or regional initiatives must include a strong program for detecting tobacco possession and use as well as sales.
- Large penalties on vendors: substantial, escalating fines that are large relative to underage tobacco sales; suspension or revocation of tobacco sales license.⁵

³ For a study which found that a vigorous inspection program could increase retailer compliance substantially, see Rigotti, N.A., J.R. DiFranza, Y. Chang, T. Tisdale, B. Kemp, and D.E. Singer, "The Effect of Enforcing Tobacco-Sales Laws on Adolescents' Access to Tobacco and Smoking Behavior," *The New England Journal of Medicine*, vol. 337, no. 15, October 9, 1997, pp. 1044-1051.

⁴ According to an FDA analysis, restricting vending machines to adult-only facilities and imposing supervisory or locking-device requirements are not effective methods of reducing youth access (in part because of enforcement burden); it also notes evidence that vending machine use increases when over-the-counter purchases are restricted, which suggests that both initiatives would be needed in tandem to reduce underage purchases. See FDA (1995), p. 41325.

⁵ For a discussion of the teen sales reductions possible through strict licensing and monitoring requirements, see Bulow, J. and P. Klemperer, "Tobacco Policy Options," *Brookings Papers on Economic Activity: Microeconomics*, forthcoming 1998. Another study found that vendor non-compliance rates in one area were more than halved once vendor education programs were backed by citations for sales to minors. See Feighery, E., D.G. Altman, and G. Shaffer, "The Effects of Combining Education and Enforcement to Reduce Tobacco Sales to Minors," *Journal of the American Medical Association*, vol. 266, no. 22, December 11, 1991, pp. 3168-3171.

- Large penalties for teen purchase, possession, or use: extended suspension or loss of driver's license; large fines or community service requirements that impose substantial time costs; parental involvement in adjudication (which imposes added time costs).
- Substantial support for state and local implementation: initiatives with funding for a substantial fraction of the costs of strong state and local enforcement efforts; mechanisms for monitoring reductions achieved in each state or area; incentives for exceeding sales restriction targets and penalties for falling short.

A conservative estimate of the teen smoking reduction that could be achieved through an anti-smoking initiative with strong components in all four areas is 8 to 12 percent. Two kinds of studies have evaluated strong enforcement initiatives, including many studies of particular communities as well as one national evaluation. The studies of local programs review the experience of communities that implemented strong enforcement programs, often coupled with many of the other types of initiatives described below. For example, a 1991 study in the *Journal of the American Medical Association* reported a 69 percent decline in daily use by seventh and eighth graders in Woodridge, Illinois following legislation and enforcement of restrictions on cigarette sales to minors.⁶ Similarly, a 1992 study in *Tobacco Control* reported a 44 percent decline in smoking among junior high school students – and a reduction of about 30% in all teen smoking – in Leominster, Massachusetts as a result of strictly enforced sales restrictions.⁷

These very impressive results for local sales may not be generalizable to national programs to reduce teen smoking rates. In part, the impressive results reflect the fact that these selected communities were unusually motivated to reduce youth smoking, so that they had the political will, commitment, and leadership to adopt strong measures and enforce them effectively. These selected communities thus may not represent an unbiased sample in terms of capacity or opportunities to implement smoking restrictions effectively. Federal incentive programs for states and localities and demonstrations may increase motivation and capacity for enforcement nationwide. But even with such support, it is far from certain that reductions in smoking rates of 40% or more could be achieved nationwide. Even some of the community studies have shown considerably smaller reductions in teen smoking rates than in cigarette purchases. Larger smoking reductions tended to occur in cases where tobacco could not be readily purchased from neighboring areas that lacked strong enforcement mechanisms, and there is some evidence that restrictions on possession and use also played a role.⁸

⁶ Jason, L.A., P. Ji, M. Anes, and S. Birkhead, "Active Enforcement of Cigarette Control Laws in the Prevention of Cigarette Sales to Minors," *Journal of the American Medical Association*, vol. 266, no. 22, December 11, 1991, pp. 3159-3161.

⁷ DiFranza, J.R., R.R. Carlson, and R.E. Caisse, "Reducing Youth Access to Tobacco," *Tobacco Control*, 1992.

⁸ For example, a comparative study of several communities in Massachusetts found limited smoking reductions associated with strong enforcement of sales restrictions, and

Chaloupka and Pacula (1998) analyzed longitudinal national survey data on teen smoking, and are thus able to compare teen smoking rates across a much broader range of communities and states that differed substantially in the timing, nature, and magnitude of enforcement programs.⁹ The investigators found that adoption of strong enforcement programs led to significant reductions in smoking rates, but on average the reductions were considerably smaller than in most of the community studies. Based on all of these estimates, they concluded that strong nationwide enforcement of national sales restrictions similar to those contained in the FDA regulations would reduce teen smoking by about 18%. However, uniformly strong enforcement may be difficult to obtain throughout the country, and some of this estimated effect was the result of other types of anti-smoking measures, such as advertising restrictions and community education initiatives. Almost all of these studies suggest that major access restrictions coupled with effective enforcement mechanisms would lead to reductions in teen smoking rates of at least 8-12%.

3. Advertising and Promotion

Two broad categories of advertising initiatives have been studied: restrictions on advertising and promotional activities by tobacco companies, and anti-smoking advertising. Studies generally view pro- and anti-tobacco advertising as creating "stocks" of attitudes and knowledge about smoking; the stock increases as new, influential messages are received and declines in the absence of new advertising. The goal of advertising and promotion initiatives is to reduce teens' positive attitudes about smoking, and increase their negative attitudes.

Restrictions on Tobacco Company Advertising and Promotions. Tobacco promotion includes not only advertisement in print, on billboards, on the Internet, and in other media that are experienced by teens; it also includes a broad range of other promotional activities that appeal to teens, including sponsorship of sporting and entertainment events, merchandise giveaways, and point-of-sale promotions. Obviously, a necessary condition for restrictions on advertising and promotions to have an effect on teen behavior is Federal authority both to develop careful advertising regulations and to impose penalties for non-compliance on at least some of these types of advertising. But limited restrictions, limited monitoring mechanisms, and limited penalties or loose enforcement of these restrictions are unlikely to reduce teen smoking rates. For example, although the current television and radio advertising bans are "bright line" restrictions, limiting point-of-sale materials (what constitutes cigarette packaging versus promotions?) or Internet materials (is a cigarette company website "advertising"?) may be more

attributed part of this finding to the availability of tobacco outside the jurisdictions studied; see Rigotti, et al. (1997). A national program would reduce (but probably not eliminate) purchasing opportunities due to areas with low effective enforcement. In the Woodridge, Illinois, survey, fines were a component of the successful efforts to reduce underage smoking.

⁹ Chaloupka, F.J., and R.L. Pacula, "Limiting Youth Access to Tobacco: The Early Impact of the Synar Amendment on Youth Smoking," January 1998, University of Illinois at Chicago Working Paper.

difficult. If advertising and promotional restrictions were limited to messages most likely to affect teens, disputes may also arise about what magazines are read primarily by adults, and thus are exempt from the restrictions.

Despite these obstacles, a range of strong restrictions on advertising and promotions are possible. Many of the following *strong* measures have been implemented or considered, in the United States and other countries:

- Prohibitions of advertising in most or all media, in addition to television and radio.
- Strict regulation of advertising content that may appeal to teens.
- Enforced restrictions on giveaways and other promotional (logo) products.
- Prohibitions of any point-of-sale displays.
- Prohibitions of brand-name sponsorship of sporting, entertainment, and other public events that may appeal to teens.

The Surgeon General's 1994 report found that the relevant literature, taken together, offers "a compelling argument for the mediated relationship of cigarette advertising and adolescent smoking," suggesting that such strong restrictions may have important effects on teen smoking rates.¹⁰ However, compared to other types of non-price initiatives, it is more difficult to extract a firm quantitative estimate of the minimum likely effect because of limited direct experience with strong advertising and promotional restrictions in the United States. Three types of suggestive studies have been conducted: surveys on teen awareness of advertising and promotional messages; evaluations of the effects of advertising spending and the consequences of the television and radio advertising ban in the United States; and international comparisons of changes in smoking rates to assess the impact of enacting various types of strong advertising restrictions in other countries.

Numerous studies have clearly documented that tobacco advertising and promotional messages are reaching teens, and that teen smokers are particularly likely to be familiar with the messages. For example, Pierce and colleagues (1998) showed that most adolescents who do not smoke are familiar with tobacco advertising images and messages, and that some even possessed promotional items. In addition, adolescents more familiar and receptive to tobacco advertising and promotion were significantly more likely to become teen smokers.¹¹

¹⁰ Department of Health and Human Services, "Preventing Tobacco Use Among Young People: A Report of the Surgeon General," 1994, p. 188.

¹¹ Pierce, J.P., W.S. Choi, E.A. Gilpin, A.J. Farkas, and C.C. Berry, "Tobacco Industry Promotion of Cigarettes and Adolescent Smoking," *Journal of the American Medical Association*, vol. 279, no. 7, February 18, 1998, pp. 511-515.

Familiarity with and receptiveness to advertising and promotion suggest that restrictions on advertising and promotion might reduce teen smoking rates significantly.¹² Based on the U.S. experience with advertising and promotional restrictions to date, very strict prohibitions would probably be necessary to achieve substantial reductions. Most studies of the effects of the television and radio ban conclude that its effect on overall (and, probably, on teen) smoking rates was limited, and that its principal consequence was to reduce brand shifting among smokers. Thus, some economists have argued that this partial restriction on advertising may have weakened competition among cigarette companies, without significantly reducing smoking. There are at least two principal reasons for this absence of an effect on smoking rates, both of which illustrate the obstacles that strong restrictions would have to overcome. First, the continuation of advertising through other media (print, billboards) and of promotional materials and events has contributed to persistently high rates of teen familiarity with tobacco brands and messages. Second, the cessation of television and radio advertising also ended the "equal time" requirements for anti-smoking advertising under the Fairness Doctrine. Some studies have suggested that this accompanying reduction in anti-smoking advertising offset any effects of the ban on smoking rates, and many analysts have concluded that this was another reason why tobacco companies did not oppose the partial restriction on advertising more aggressively.

Experience in the United States with stronger advertising and promotional restrictions has been limited. Indirect evidence, based on studies examining the impact of overall advertising expenditures on cigarette consumption or prevalence of smoking, has been mixed, so that a conservative estimate of the effect of strong advertising restrictions might be modest.¹³ One

¹² For example, Pierce et al. (1998) concluded that, if all teens behaved like those who were less familiar with and receptive to advertising messages, reductions in teen smoking rates of as much as one-third might be achievable.

¹³ For example, one study found that advertising for low-tar cigarettes was associated with the increase in this market's size in the 1970's; see Roberts, M.J., and L. Samuelson, "An Empirical Analysis of Dynamic, Non-price Competition in an Oligopolistic Industry," *Rand Journal of Economics*, vol. 19, no. 2, Summer 1988, pp. 200-220. A review of U.S. and international studies also found a small but positive and significant effect of advertising on overall consumption; see Andrews, R.L. and G.R. Franke, "The Determinants of Cigarette Consumption: A Meta-Analysis," *Journal of Public Policy and Marketing*, vol. 10, no. 1, Spring 1991, pp. 81-100. Another study examining the period 1963-80, however, did not find that advertising expenditures in the U.S. affected consumption; see Baltagi, B.H., and D. Levin, "Estimating the Dynamic Demand for Cigarettes Using Panel Data: The Effects of Bootlegging, Taxation, and Advertising Reconsidered," *Review of Economics and Statistics*, vol. 67, no. 1, February 1986, pp. 148-155. A clear and concise review of many studies in this area can be found in Smee, C., "Effect of Tobacco Advertising on Tobacco Consumption: A Discussion Document Reviewing the Evidence," British Department of Health, October 1992. Taking all of this evidence into consideration, a CBO analysis of the advertising and promotional restrictions contained in the June 1997 Attorneys General settlement suggested that these restrictions might reduce expenditures by about 15%, and that this could cause a 1.5% fall in teen consumption; see

reason for the mixed results may be difficulties in measuring all tobacco advertising activities (e.g., a narrowly defined measure of advertising may miss point-of-sale displays – which might be counted in distribution costs – as well as sponsorship of community activities and events); another may be that advertising may decrease when smoking rates rise for other reasons.¹⁴ New laws, such as Florida's recent ban on tobacco billboard advertising, should provide opportunities to develop better evidence on the impact of stronger advertising restrictions in the United States.

Most of the existing evidence on the effects that stronger advertising and promotional restrictions have on smoking rates comes from the experiences of other countries. Some comparative studies of trends in aggregate cigarette consumption have suggested that, as a group, countries prohibiting tobacco advertising in most or all media experienced more rapid percentage falls in demand than countries which continued to permit promotion and advertising.¹⁵ Most notable are analyses that have attributed declines in teen and total smoking in Norway to comprehensive restrictions on all advertising, sponsorship, and indirect advertising. In 1975, Norway banned all advertising of tobacco products and prohibited the sale of tobacco to those under 16 (the government also required warnings on packages, an educational program, and later imposed an excise tax increase). Between 1975 and 1990, daily smoking rates for Norwegian boys aged 13-15 had dropped from 15% to 9%, and for girls from 17% to less than 10%. Another study found that Norway's 1975 laws were associated with a 9-16% decline in total tobacco consumption, and concluded that, "in view of the minor nature of the other provisions of the [1975] Act, the ban on advertising is likely to have accounted for the great majority of the effect." Even in the international context, though, little firm evidence exists on the effects of strong promotional bans in and of themselves; one reason is that important loopholes often arose in the specific bans that were implemented, so that in effect they may not be "strong."¹⁶

CBO, "The Proposed Tobacco Settlement: Issues from a Federal Perspective," April 1998.

¹⁴ In technical terms, advertising is an endogenous or choice variable of the tobacco companies. Their optimal choice of advertising level depends on the demand for cigarettes; because demand for cigarettes is also the outcome of interest, advertising and cigarette use are jointly determined, making it difficult to determine the true causal relationship that underlies the observed relationship.

¹⁵ Laugesen, M. and C. Meads, "Tobacco Advertising Restrictions, Price, Income and Tobacco Consumption in OECD Countries, 1960-1986," *British Journal of Addiction*, vol. 86, 1991, pp. 1343-1354; New Zealand Government Toxic Substances Board, "Health or Tobacco — An End to Tobacco Advertising and Promotion," May 1989, and "A Reply to Tobacco Industry Claims about Health or Tobacco," as cited in FDA, "Regulations Restricting the Sale and Distribution of Cigarettes and Smokeless Tobacco Products to Protect Children and Adolescents — Final Rule," *Federal Register*, vol. 61, no. 168, August 28, 1996, pp. 44492-3.

¹⁶ In Australia, for example, loopholes in regulations of sports sponsorship enabled the tobacco industry to continue sports advertising there; see FDA (1996), p. 44490. On Norway's experience, see FDA (1996), pp. 44490-1, and Smee (1992), p. 18. One study of the

These studies suggest that reducing the familiarity with and attraction to tobacco products, as a prerequisite to reducing smoking that may result from familiarity, would require substantially more widespread restrictions than have been implemented so far in the United States.¹⁷ It would also require a careful monitoring and enforcement program to prevent the development of important loopholes via other advertising media, sponsorships, and promotions that may be outside the scope of the initial initiative.¹⁸ As Section 5 below notes, implementing and continuing such a strong initiative is likely to be considerably easier when coordinated with strong restrictions on access to tobacco products as well as an anti-smoking campaign and other awareness activities. A final concern about strong restrictions on advertising is that, in contrast to their voluntary acceptance of limited restrictions on television and radio advertising, cigarette companies are expected to continue efforts to block their implementation through legal challenges on First Amendment grounds. Such challenges should ultimately not be successful,¹⁹ but they may substantially delay the implementation and thus the impact of even strong advertising restrictions for at least 3 to 5 years after enactment.

Anti-Smoking Advertising. Many studies have evaluated the effects of a broad range of anti-smoking advertising initiatives. While conveying information on the risks of smoking is an important component of such initiatives, the studies generally show that effective anti-smoking advertising must counter the attractive images and associations invoked in professional tobacco advertising, as well as reach teen audiences effectively. Thus, limited initiatives – those that include smoking facts only, presented in a way that is not compelling to teenagers; those that do

Scandinavian experience, though, attributed the more limited impact of Finland's anti-smoking initiatives to the fact that they banned cigarette advertising only in youth magazines, and did not eliminate other uses of tobacco brand-names or sponsorship of events; see Rimpela, M., L.E. Aaro, and A.H. Rimpela, "The Effects of Tobacco Sales Promotion on Initiation of Smoking," *Scandinavian Journal of Social Medicine*, vol. 49, 1994, pp. 1-23.

¹⁷ While the FDA issued comprehensive advertising restrictions in 1996, they have not been implemented due to court challenges by the tobacco industry.

¹⁸ For example, the FDA's 1996 regulations prohibit the establishment of corporations using the names of current cigarette brands, which otherwise could circumvent the promotional restrictions because events sponsored under corporate names would be permitted.

¹⁹ For its 1996 regulations to be found consistent with the First Amendment, the FDA has argued that it is not necessary "to establish by empirical evidence that advertising actually causes underage individuals to smoke, or that the restrictions on advertising will directly result in individuals that are under 18 ceasing to use cigarettes or smokeless tobacco. It is not necessary . . . for the agency to prove conclusively that the correlation in fact (empirically) exists, or that the steps undertaken will completely solve the problem." Rather, that FDA concluded that it had met the burden of showing "that the available evidence, expert opinion, surveys and studies provide sufficient support for the inference that advertising does play a material role in children's tobacco use." See FDA (1996), p. 44474.

not have a substantial enough budget to advertise professionally in media that do reach teens; or those that inadvertently reinforce the image of smoking as rebellious – will have no important effects on smoking rates.

Considerable evidence demonstrates that strong advertising campaigns – essentially, professionally implemented strategies with substantial budgets, similar to major national campaigns by private companies -- can significantly reduce smoking rates. Hamilton (1972), for example, found that anti-smoking ads aired under the Fairness Doctrine reduced total cigarette consumption 5.6 times more than contemporaneous pro-smoking advertisements raised it.²⁰ Much more recent studies, such as Hu (1995) and Goldman and Glantz (1998), concluded that high-quality, well-financed anti-smoking advertising reduced total cigarette consumption significantly.²¹

Fewer studies have focused specifically on teen smoking rates, but those that have generally reinforce the conclusion that strong advertising campaigns lead to significant reductions. Lewit, Coate, and Grossman (1981) concluded that Fairness Doctrine anti-smoking advertising lowered teen smoking by about 20 percent (three percentage points).²² More recently, Flynn, et. al. (1992) conducted a study of middle-school students to determine whether a program involving both anti-tobacco education and a media campaign was more effective than the education program by itself. Over a five year period, they found that students exposed to a school-and-media program were 34% less likely to report having smoked in the previous day and 35% less likely to have smoked in the past week than those in the education program alone.²³ Some of this large effect may be the result of important synergies, as the anti-smoking advertising campaign reinforced messages from the school program. In addition, such effects may be difficult to replicate in all communities, for the reasons described above. Moreover, some

²⁰ Hamilton, J.L., "The Demand for Cigarettes: Advertising, the Health Scare, and the Cigarette Advertising Ban," *The Review of Economics and Statistics*, vol. 54, no. 4, November 1972, pp. 401-410.

²¹ Goldman, L., and S. Glantz, "Evaluation of Anti-smoking Advertising Campaigns," *Journal of the American Medical Association*, vol. 279, no. 10, March 11, 1998, pp. 772-777; Hu, T., et. al., "Reducing Cigarette Consumption in California: Tobacco Taxes vs. an Anti-Smoking Media Campaign," *American Journal of Public Health*, vol. 85, no. 9, September 1995, pp. 1218-1222.

²² Lewit, E.M., D. Coate, and M. Grossman, "The Effects of Government Regulation on Teenage Smoking," *Journal of Law and Economics*, vol. 24, no. 3, December 1981, pp. 545-573.

²³ Flynn, B.S., et al., "Prevention of Cigarette Smoking Through Mass Media Intervention and School Programs," *American Journal of Public Health*, vol. 82, no. 6, June 1992, pp. 827-834; and Flynn, B.S., et al., "Mass Media and School Interventions for Cigarette Smoking Prevention: Effects Two Years After Completion," *American Journal of Public Health*, vol. 84, 1994, pp. 1148-1150.

effective advertising messages are already reaching teens, through a range of state public health and other programs today.

Combined Effect. Taken together, all of these studies suggest that a strong national anti-smoking advertising campaign would lead to significant reductions in teen smoking. Combined with strong limits on advertising and promotional activities that appeal to adolescents, a conservative estimate of the magnitude of the effect is at least a 2 to 8 percent reduction. This estimate is smaller – in some cases substantially smaller – than the effect implied by most of the studies reviewed. The conservative estimate accounts for a possibly reduced effect because of existing anti-smoking advertising today, as well as for the potential importance of synergies with other initiatives for tobacco advertising restrictions and anti-smoking campaigns to achieve much larger reductions.

4. Other Initiatives

Many other measures to reduce teen smoking have been proposed. Evidence from informal case studies, the mechanisms of how young people decide to smoke or stop smoking, studies of adolescent behavior, and other sources all suggest that many of these measures could lead to significant teen smoking reductions. But there is insufficient direct empirical evidence on their consequences to provide a specific, quantitative estimate of their likely effect.

School-Based Prevention/Education Programs. As the Surgeon General reported in 1994, school-based prevention programs can have large short-term effects on smoking rates. Less evidence exists on their long-term impact, but some studies suggest that continuing educational interventions are needed to sustain reduced smoking rates.²⁴ The magnitude of the reduction may also depend importantly in the quality of the educational materials, on how effectively the program is implemented by particular schools, and on the extent of parental and community support for the program. In conjunction with other community measures, including those outlined in the previous sections of this report, school-based prevention programs could have a substantial synergistic effect.

Community-Based Efforts. Some studies have indicated that the adolescent groups with the highest rates of tobacco use are the least likely to be reached through school programs. Thus,

²⁴ For example, a 1980 study found that a peer counseling program to resist pressures to smoke reduced smoking among junior high students by more than 50% in the first year, but the effects dissipated after the 10th grade; see McAlister, A., et al., "Pilot Study of Smoking, Alcohol, and Drug Abuse Prevention," *American Journal of Public Health*, vol. 70, no. 7, 1980, pp. 719-21. Botvin found short-term reductions of 40-80 percent from a similar study; see Botvin, G.J., "Substance Abuse Prevention Research: Recent Developments and Future Directions," *Journal of School Health*, vol. 56, no. 9: 1986, pp. 369-74. One study has estimated that programs with certain design features could actually reduce long-term smoking prevalence by 25%, not just delay its onset; see Rooney, B., "A Meta-analysis of Smoking-Prevention Programs after Adjustment for Study Design," dissertation, University of Minnesota, 1992.

educational initiatives involving other community organizations could both reinforce and complement school-based programs,²⁵ but quantitative evidence on the effects of community programs on teen smoking rates is limited. To the extent that these programs include strong enforcement programs, restrictions on tobacco advertising, and anti-smoking publicity campaigns, their effects are likely to be similar to the initiatives reviewed in previous sections. Community programs may also be an important factor in synergistic effects, as reviewed in the next section.

Teen Cessation Programs. Evidence on cessation programs for teens is mixed, again because well-funded programs that include compelling reasons for teens to participate appear to be essential for significant effects. Some studies show limited effects due to difficulties motivating and retaining teens, and little evidence exists on long-term relapse rates.²⁶ Moreover, the absence of clearer evidence on which cessation methods are safest and most effective in teens is another reason that effects are difficult to predict. Considerably less clinical research has evaluated alternative methods for teen smoking cessation than has evaluated pharmacologic, behavioral, and other cessation methods in adults. Strong cessation programs that compel teen participation – for example, as a penalty for tobacco possession or use – and that implement effective cessation strategies may have important effects on smoking rates, even though success rates for involuntary participants could be low. But existing evidence is not yet sufficient to provide an quantitative estimate of their minimum likely effects.

Regulation of Tobacco Product Content. Regulation of nicotine content might help reduce teen smoking. For example, if other restrictions on teen smoking reduce cigarette availability to teens, tobacco companies might still be able to retain teen smokers by increasing nicotine content, so that the same level of addiction could be achieved through a smaller number of cigarettes. Capping nicotine content of cigarettes would close this potential loophole. No studies have yet examined such effects.

²⁵ Glynn, T.J., D.M. Anderson, and L. Schwarz, "Tobacco-Use Reduction among High-Risk Youth: Recommendations of the National Cancer Institute Expert Advisory Panel," *Preventive Medicine*, vol. 20, no. 2, 1991, pp. 279-91. For a more detailed discussion of community-based approaches, see HHS (1994), pp. 233-9, which also notes that further evaluations of the teen smoking effects of promising community programs are needed.

²⁶ For example, a 1983 study found that 23% of teen smokers who started a cessation program had stopped three months later, but it did not provide for a longer follow-up period; see Perry, C.L., et al., "High School Smoking Prevention: the Relative Efficacy of Varied Treatments and Instructors," *Adolescence*, vol. 18, no. 71, 1983, pp. 561-6. Other unpublished studies cited in the Surgeon General's 1994 report on youth smoking found smaller or no effects of cessation programs, though in one case over half of the participants were required to participate as a punishment for violating school smoking policies, and this was identified as a factor that could have decreased the program's success rate. See HHS (1994), pp. 228-30.

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Stronger Warning Labels. The Surgeon General's 1994 report concluded that the current warning labels on tobacco receive little public attention, and reviewed some studies suggesting that stronger or more visible warnings may be more effective.²⁷ Studies have found that imagery in advertisements tends to draw attention away from the text of the warnings, suggesting that warnings might be more effective if advertisements likely to reach teens are restricted to using only text.²⁸ In addition, more noticeable warnings that reinforced anti-smoking advertising campaigns or school-based educational programs might influence teen smoking decisions. Because such warnings have not yet been developed and tested, it is not possible to estimate the quantitative effect of changes in warning labels.

Incentive Payments for Teen Smoking Reductions. Payments to states, localities, or schools might be used to provide incentives to reduce teen smoking. Because few substantial incentive programs have been implemented, it is not possible to quantify their effects on smoking rates. However, many studies of incentive payments for communities to achieve other specific policy objectives suggest that the payments must be tied directly to measurable performance measures to have a noticeable effect. Based on these studies of other policies, an unrestricted block grant program to "reduce teen smoking" would be expected to have smaller effects on teen smoking rates than a block grant program in which the amount of the grant depended on the magnitude of smoking reduction achieved, or one which was structured as a matching grant for measurable increases in state and local spending. Implementing such an incentive program also requires effective measurement of smoking rates at the state and possibly local level.

Demonstration Programs. Studies of most of the initiatives described in this analysis emphasize the importance of effective implementation and management for large effects to be achieved. Initiatives to evaluate alternative implementation approaches, or to demonstrate "best practices," might provide valuable guidance for communities seeking to implement non-price measures effectively. However, even effective demonstration programs would need to be coupled with continuing strong initiatives to achieve significant teen smoking reductions.

²⁷ One novel study used computer eye-tracking and found that 60% of adolescents do not even read the Surgeon General's warnings. Not surprisingly, it also found that only 19 percent of adolescents could recall the general theme of the warnings. See Fischer, P.M., et al., "Recall and Eye Tracking Study of Adolescents Viewing Tobacco Advertisements," *Journal of the American Medical Association*, vol. 261, no. 1, 1989, pp. 84-9. Another analysis found that creative warning formats are more likely to capture viewer attention; see Cohen, J. and T. Srull, "Information Processing Issues Involved in the Communication and Retrieval of Cigarette Warning Information — Report to the Federal Trade Commission," University of Florida Center for Consumer Research, November 1980.

²⁸ Richards, J.I., and R.D. Zakia, "Pictures: an Advertiser's Expressway Through FTC Regulation," *Georgia Law Review*, vol. 16, no. 1, 1981, pp. 77-134; Zerner, C., "Graphic Propositions: the Efficacy of Imagery and the Impotence of Warnings in Cigarette Advertising," *Tobacco Products Litigation Reporter*, vol.1, no. 10, 1986, pp. 4.71-4.85.

Other Initiatives. Many other initiatives to reduce teen smoking have been proposed. However, measures other than those reviewed here have been the subject of relatively little empirical analysis. Consequently, predicting their effects on smoking rates is speculative.

5. Synergies and Double-Counting

Many proposed initiatives to reduce teen smoking feature multiple components, including enforcement of restrictions on access and use, advertising restrictions, anti-smoking campaigns, and a range of other measures. Studies of previous broad initiatives to reduce teen smoking suggest that important interaction effects may exist, so that the joint effects of all the measures combined may differ from the effect that would be achieved by implementing each of these components separately.

These interactions among initiatives may be of two types: synergies (positive interactions), and double-counting or undercutting (negative interactions). Double-counting results from the fact that teens whose behavior might be changed by one type of restriction (for example, enforcement or advertising bans) might be the same teens affected by another type of restriction (for example, anti-smoking or educational campaigns). The conservative estimates reported here are intended in part to minimize such double-counting risks. Another type of negative interaction might arise from an initiative that is poorly enforced or implemented, thereby undercutting another, otherwise effective program. For example, limited or ineffective enforcement of sales restrictions might convey a message that reducing teen smoking is not really a high social priority, undercutting the stated message of a strong anti-smoking advertising campaign.

In contrast, a strong enforcement initiative coupled with a strong anti-smoking advertising campaign might have synergistic effects. If multiple strong initiatives reinforce a consistent message about teen smoking, a comprehensive package of strong steps may be much more effective than isolated measures. Thus, the collective effect of such measures could be larger than the sum of conservative estimates of the effect of each component. The very large effects of specific initiatives that have been demonstrated in many community studies²⁹ suggest that a properly-executed, comprehensive set of strong initiatives might lead to far greater reductions in teen smoking than the conservative estimates reported here.

²⁹ As discussed above, the impressive results that particular communities have seen have generally come from combinations of measures, and may also reflect the intangible effects of strong anti-smoking sentiment that led these communities to adopt strong programs. The Flynn (1992) study which found one-third reductions in youth smoking was designed to test whether a local anti-smoking campaign could reinforce a school-based education program and yield long-lasting results. The successes in Woodridge, Illinois – a 69% reduction in smoking among young adolescents – reflected the combined effects of strongly enforced access restrictions along with community support and publicity and education efforts. Similarly, successful international efforts like those in Norway have included a range of anti-smoking measures.

Prevention Enhancement Protocols System (PEPS)

**REDUCING TOBACCO USE AMONG YOUTH:
COMMUNITY-BASED APPROACHES**

A Guideline

1st in a Series

Substance Abuse and Mental Health Services Administration
Center for Substance Abuse Prevention
Division of State and Community Systems Development

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3

Analysis and Recommendations

At first glance, the questions “Does prevention work?” and “Is this intervention effective?” appear to be simple queries warranting simple responses.

Deeper reflection, however, reveals that thoughtful answers to these questions are possible only after a systematic and rigorous evaluation of both the research and practice evidence. These simple questions address nothing less than the heart of the scientific method, the soundness of research and practice methodologies, and the scope of existing evidence. To help prevention practitioners and community groups choose prevention approaches that are most likely to curb adolescent tobacco use in their community, this chapter evaluates six community-based prevention approaches:

1. Economic interventions
2. Counteradvertising
3. Retailer-directed interventions
4. Multicomponent school-linked community approaches
5. Tobacco-free environment policies
6. Restriction of advertising and promotion

Organization of This Chapter

The primary goal of this chapter is to provide prevention planners with an understanding of the effectiveness of these approaches and offer practical recommendations and suggestions. To that end, this chapter has two major sections: Analysis of Evidence and Recommendations for Practice.

Determining the effectiveness of prevention approaches requires a systematic evaluation of research and practice evidence.

Analysis of Evidence

The first major section, Analysis of Evidence, presents a systematic and rigorous examination of research studies and practice cases that provide evidence for the six prevention approaches. It includes conclusions drawn from the evidence, the strength of the evidence, lessons learned from the evidence, and suggestions for future research endeavors.

The evidence has been analyzed according to a systematic protocol by a Prevention Enhancement Protocols System Expert Panel of researchers and practitioners with expertise in tobacco use prevention (see Appendices A, B, and C).

Recommendations for Practice

The second major section of this chapter builds on the knowledge base presented in the Analysis of Evidence and expands it to include the professional expertise of the Prevention Enhancement Protocols System (PEPS) Expert Panel members. It consists of their suggestions, recommendations, observations, and interpretations. These recommendations are based on the evidence presented in the first section, additional evidence not reviewed there, and the panel members' research and practice experience and opinions. The purpose of the section is to facilitate transfer of practical information from the Expert Panel to those involved in substance abuse prevention on the State, regional, and local levels.

Defining Evidence and Prevention Approaches

The term *research evidence* refers to the body of knowledge gained from research on particular topics. The basis of this information is investigations whose designs range from experimental to quasi-experimental to nonexperimental. The term *practice evidence* describes information gained from prevention practice cases, generally compiled in the form of case studies, which often include process evaluation information on program implementation and procedures.

A *prevention approach* is defined as a group of prevention activities that broadly share common methods and strategies, assumptions (theories or hypotheses), and outcomes. Two of the six prevention approaches reviewed and presented in this chapter were sufficiently broad to have identifiable subsets, each with its own emphasis or focus. These subsets of prevention approaches are referred to as *clusters*.

Organization of the Evidence Into Approaches

During the evaluation phase of developing this guideline, the research and practice evidence was grouped into six prevention approaches:

Prevention Approach 1: Economic Interventions

Increases in taxes on tobacco products are economic interventions designed to prevent the initiation, delay the start, or decrease the level of tobacco consumption by adolescents. Economic interventions include increases in Federal and State tobacco taxes.

Prevention Approach 2: Counteradvertising

Adolescents develop tobacco-related attitudes, beliefs, and behaviors as the result of influences from advertising, media, peers, and other sociocultural sources. Counteradvertising interventions are designed to change adolescents' perceived norms regarding tobacco use. These interventions involve negative messages about using and positive messages about not using tobacco, information about tobacco industry manipulation, and refusal skills. Mass media campaigns are the most common examples of counteradvertising.

Prevention Approach 3: Retailer-Directed Interventions

A primary source from which adolescents obtain tobacco products is retail tobacco outlets, such as convenience and grocery stores, service stations, and pharmacies. Interventions directed at tobacco retailers are designed to reduce access to tobacco products by adolescents at retail outlets. Interventions within this approach were classified into three clusters.

The *first cluster* relates to merchant and community education about tobacco use by adolescents and about the laws prohibiting tobacco sales to minors. Interventions in this cluster typically involve educational programs designed to teach merchants, clerks, and the general public about tobacco use by adolescents, the local laws prohibiting tobacco sales to adolescents, and the responsibility of merchants to comply with the laws.

The *second cluster* involves the enactment of laws prohibiting tobacco sales to minors. These generally involve local or State laws prohibiting the sale of tobacco products to individuals under a specific age, with penalties for merchants and clerks who violate the laws. This cluster also includes laws requiring locking devices on cigarette vending machines.

The *third cluster* consists of interventions that involve the enforcement of laws prohibiting tobacco sales to minors combined with interventions in the first cluster. Interventions in this cluster often involve purchase attempts by adolescents in cooperation with enforcement officials, followed by publicity about the results of the purchase attempts and the legal consequences to merchants. Interventions may include strengthening existing tobacco sales laws or increasing penalties for violating them. They may also include efforts designed to remind merchants and clerks of the laws, such as providing copies of the laws and warning signs in stores.

Prevention Approach 4: Multicomponent School-Linked Community Approaches

Community interventions, especially comprehensive community-based prevention programs, typically have two or more components. These components may have different target audiences, goals, and approaches. Included here is a review of multicomponent community approaches that involve school-based interventions combined with at least one of three components: parent involvement, student activism, and the media. These components were also organized into three clusters.

The *first cluster* relates to multicomponent prevention efforts that utilize parental involvement as a component of school-based programs. These efforts include parent surveys, take-home quizzes for parents and students, letters to parents, self-help materials, parent training, community organizing regarding school policy and curricula, and media campaigns.

The *second cluster* involves student activism as a component of multicomponent prevention programs. In this context, student activism means student antitobacco activities such as writing letters to movie producers and magazine editors to protest tobacco advertising, to sports figures to ask them to avoid endorsing tobacco products, and to restaurant owners to advocate smoke-free restaurants. Student activism also includes antitobacco poster contests, skits, songs, art projects, and parade floats.

The *third cluster* focuses on the use of media-based prevention components within multicomponent prevention programs. In this context, the term *media* refers to mass media (e.g., television, radio, and print), small media (e.g., newsletters and local newspapers), and other written information (e.g., pamphlets, curricula, and articles).

Prevention Approach 5: Tobacco-Free Environment Policies

Adolescents are exposed to secondhand tobacco smoke in environments that allow tobacco use. Also, adolescent tobacco users may use tobacco in environments that do not prohibit tobacco use. A tobacco-free environment policy as a prevention approach is one that restricts tobacco use in public. Intervention activities include provision of technical assistance for developing a tobacco-free environment policy, and education about existing law and policies.

Prevention Approach 6: Restriction of Advertising and Promotion

Adolescents are exposed to a deluge of protobacco influence via popular culture, mass media, and tobacco industry marketing. In particular, tobacco sponsorship of sporting and cultural events provides opportunities to promote tobacco use and to link tobacco use with sports achievements. With this in mind, the prevention approach of advertising and promotion restriction includes interventions such as threatening to protest tobacco industry-sponsored events, developing policies that prohibit

tobacco sponsorship of events, finding alternative sponsorship for events, promoting tobacco-free events, and providing tobacco-free messages within sports education.

Analysis of Evidence

This section presents the results of the Expert Panel's analysis of the research and practice evidence for each of the six prevention approaches. Each prevention approach is reviewed and presented in a standardized format that allows the reader to systematically examine them and to understand their similarities, differences, and purposes. The elements of this standardized format are described in the following paragraphs.

Intended Measurable Outcomes

Each prevention approach is accompanied by a brief statement about the intended measurable outcome—the overall expected consequence and the results of all interventions within each approach. Because intended outcomes should be quantifiable, they are described as *intended measurable outcomes*.

Conceptual Framework

Each prevention approach includes a synopsis of the philosophical basis for the approach. This is the assumed reasons or hypotheses that explain why the interventions in a specific approach should have a given effect. This section may also include a brief statement about the context of the prevention approach.

Objectives of Studies Reviewed

This section includes a partial list of the objectives of the individual research studies and practice cases that were reviewed for a prevention approach. The objectives are the specific changes expected as the result of the interventions being reviewed.

Activities of Studies Reviewed

This section includes a partial list of activities that were employed to meet the interventions' objectives. These include individual components of the interventions.

Basis of Evaluation of Evidence

This section provides a brief abstract of each research study and practice case, including the study design, where appropriate; the overall intent of the study or practice program; and selected findings or results that are most relevant to the prevention approach in question. Although the PEPS Expert Panel carefully examined the design of research studies and the process evaluation information of the practice cases, the abstracts do not include this information. Thus, these summaries are not critical analyses of study design, threats to internal validity, or program implementation. Studies that had severe deficiencies were excluded from the pool from which the recommendations were derived. The summaries of studies presented simply provide

a snapshot of the research or practice evidence. When known, the time lines or chronologies of the intervention and study are included in the abstract.

Level of Evidence

Each of the prevention approaches or clusters is followed by a shaded box titled Level of Evidence. These provide two important pieces of information. First, they describe conclusions that can be drawn from an analysis of the research and/or practice evidence for each approach (or cluster). Second, they indicate the strength of the level of evidence supporting the conclusions. The criteria for assigning the levels of evidence are as follows:

1. Strong Level of Evidence

- a. Consistent, positive results of strong or medium effect from a series of studies including:
 - At least three well-executed studies of experimental or quasi-experimental design
 - OR
 - Two well-executed research studies of experimental or quasi-experimental design
 - AND
 - Consistent results from at least three case studies
- b. The use of at least two different methodologies
- c. Unambiguous time ordering of intervention and results
- d. A plausible conceptual model ruling out or controlling for alternative causal paths or explanations

2. Medium Level of Evidence

- a. Consistent, positive results from a series of studies, including:
 - At least two well-executed studies with experimental or quasi-experimental designs
 - OR
 - At least one well-executed study and three prevention case studies showing statistically significant or qualitatively clear effects
- b. The use of at least two different methodologies
- c. Unambiguous time ordering of intervention and results when so measured
- d. A plausible conceptual model, whether or not competing explanations have been ruled out

3. Suggestive but Insufficient Evidence

This category is used to describe research and/or practice evidence that is based on a plausible conceptual model or on previous research and is being demonstrated in rigorous evaluation studies or appropriate intervention programs in process. One of two conditions typically causes evidence to be described as suggestive but insufficient:

- a. In the first condition, the evidence, although limited, appears to support a conclusion, but additional research is needed to fully support the conclusion. This condition often applies to areas in which there has been little study, such as those that are impractical to research or new areas of study.
- b. A second condition involves equivocal results. In this condition, a specific conclusion is supported in some studies but is not supported in others.

The first three categories for level of evidence provide a means to present research and practice evidence for which there are varying degrees of confirmation of positive effect.

4. Substantial Evidence of Ineffectiveness

This fourth category describes research and practice evidence that demonstrate a prevention approach is not effective. The criterion for inclusion in this category is the absence of a statistically significant effect or a statistically significant negative effect in a majority of well-executed studies, including at least two quantitative studies with sample sizes sufficient to test for the significance of the effect.

Lessons Learned From Evidence Reviewed

This section describes lessons learned and conclusions reached from the research and practice evidence reviewed for an approach. The basis of these is the research and practice evidence reviewed and summarized for an approach.

Recommendations for Future Research

Each prevention approach includes recommendations and suggestions from the Expert Panel for future research endeavors.

Information Not Included

Although this guideline reviews and evaluates many multicomponent prevention programs that include a school component, it does not examine the effectiveness of programs that are exclusively school based. Two notable federally produced documents thoroughly review school-based prevention programs for the prevention of

youth tobacco use. These are *Preventing Tobacco Use Among Young People: A Report of the Surgeon General* (Surgeon General of the United States 1994) and *Growing Up Tobacco Free: Preventing Nicotine Addiction in Children and Youths* (Institute of Medicine 1994).

Similarly, this document does not provide an exhaustive review of all types of practice programs currently in use. All research and practice evidence had to meet rigorous qualitative criteria to be included in the guideline. While more than 80 prevention programs were reviewed, many did not satisfy the criteria. For example, many practice programs did not sufficiently document process evaluation activities.

Multiple Use of Research Studies

Many tobacco prevention programs for adolescents have multiple components. As a result, a single study of a multicomponent intervention may provide evidence regarding more than one prevention approach. For example, a program that includes media-based counteradvertising components and merchant education activities may provide evidence regarding two prevention approaches: counteradvertising and retailer-directed interventions. Accordingly, some studies are used as evidence in more than one prevention approach.

Prevention Approach 1: *Economic Interventions*

Intended Measurable Outcome

To prevent the initiation, delay the onset, or decrease the level of adolescent tobacco consumption by increasing the sales tax on tobacco products

Conceptual Framework

Sensitivity to tobacco price fluctuations tends to be high among adolescents. Therefore, increasing the price of tobacco products should reduce adolescent tobacco purchases and thus reduce the initiation, delay the start, or decrease the level of tobacco consumption by adolescents. Substantial tobacco tax increases result in higher retail tobacco costs.

Objectives of Studies Reviewed

- To assess the elasticity of adolescent demand for cigarettes based on differing decreases or increases in the Federal excise tax
- To compare changes in tobacco consumption in States where there were tax increases to those in States where there were no tax increases
- To identify the likely effects of increases in cigarette excise taxes on the number of adolescent smokers

Activities of Studies Reviewed

- Increase in Federal taxes
- Increase in State taxes
- Legislative changes
- Media campaigns

Basis of Evaluation of Evidence

The following analysis of the effectiveness of economic interventions to prevent the initiation, delay the start, or decrease the level of tobacco consumption by adolescents is based on four econometric studies (Glantz 1993; Peterson et al. 1992; U.S. General Accounting Office 1989; Warner 1986).

Glantz (1993) conducted a quasi-experimental time series study to examine the effect of the California law, based on Proposition 99, that required a 25-cent tax increase on cigarettes and allocated 20 percent of the resulting revenues to a Health Education Account for a statewide tobacco education effort. The study was designed to evaluate whether the California law had an effect on tobacco consumption, tobacco pricing, and tobacco industry revenues.

Findings:

1. Enactment of Proposition 99 resulted in a tripling of the rate at which cigarette consumption had been falling.
2. Although tobacco price increases caused a drop in tobacco consumption nationwide, tobacco consumption declined faster in California than elsewhere in the United States.
3. Tobacco industry advertising in California increased by 50 percent.

The purpose of a study by Peterson et al. (1992) was to evaluate the effects of State cigarette tax increases on cigarette sales in the 50 States for the years 1955 to 1988. In this historical cohort design study, they compared changes in cigarette consumption in States during years in which there were State cigarette tax increases with consumption changes during years when there were no tax increases. They also assessed changes in cigarette consumption as a function of the size of State tax increases and compared the effects of State tax increases on cigarette consumption during three time periods: 1955 through 1964 (prior to the Surgeon General's first report on smoking), 1965 through 1978 (when per capita cigarette consumption peaked), and 1979 through 1988 (a period of declining consumption).

Findings:

1. Cigarette sales decreased by an average of three packs per capita following a tax increase.

2. Cigarette sales increased by 0.6 packs per capita with no tax increase.
3. For each 1-cent increase in cigarette taxes, cigarette sales fell by 0.75 packs per capita.

Based on findings from previously conducted research, an analysis of the economic literature on adolescent smoking by the U.S. General Accounting Office (GAO) (1989) was designed to estimate the impact of increasing the Federal cigarette excise taxes on the number of teenage smokers. The study was also designed to determine the extent and consequences of teenage smoking. The analysis was based on (1) the 1989 Surgeon General's Report; (2) the 1982 and 1985 National Household Surveys on Drug Abuse; (3) the 1987 High School Seniors Survey; (4) numerous economic studies of smoking, especially those that estimate the price responsiveness of teenagers' smoking behavior; (5) interviews with the authors of these studies; (6) interviews with officials of the National Center for Health Statistics; (7) interviews with officials of the Office of Smoking and Health at the Centers for Disease Control and Prevention; (8) information about cigarette prices published by the Tobacco Institute; and (9) a recent GAO report on Federal cigarette excise taxes.

Findings:

1. The investigators estimated that if excise taxes were raised about 20 cents per pack, the likely result would be more than 500,000 fewer smokers and 125,000 fewer premature deaths.

The goal of an econometric analysis by Warner (1986) was to determine whether changes in the Federal cigarette excise tax would affect the number of adolescents and adults who smoke cigarettes. In particular, this study estimated the potential effect of an increase or a decrease in the Federal cigarette excise tax as measured by the numbers of adolescents and adults who would be encouraged to start smoking, continue smoking, not start smoking, or stop smoking.

Findings:

1. An 8-cent tax decrease would induce 1.9 million Americans to smoke who would not do so if the tax were to remain at 16 cents—including more than 460,000 adolescents who would begin or continue smoking.
2. An 8-cent tax increase would encourage 1.8 million Americans, including more than 400,000 adolescents, to quit or not begin smoking.
3. A 16-cent tax increase would encourage nearly 3.5 million Americans, including more than 800,000 teenagers and nearly 2 million young adults aged 20 to 35 years, to quit or not begin smoking.

Level of Evidence

The research evidence reviewed indicates that laws can be established or modified to increase Federal or State taxes on tobacco products:

There is **strong evidence** that instituting tobacco tax increases is an effective approach to reduce the prevalence of adolescent tobacco use, especially when the tax is sufficiently high and is linked to the consumer price index.

Lessons Learned From Evidence Reviewed

- Tobacco tax increases are effective in reducing the prevalence of tobacco use by adolescents. Efforts to increase State taxes on tobacco products have included the mobilization of community groups, other groups, and legislators. Depending on the State, taxes can be increased through the initiative or the legislative process.
- Although tobacco tax increases will decrease the prevalence of adolescent tobacco use, other prevention activities must be utilized to sustain such decreases. Tobacco tax increases are most effective within a comprehensive, multicomponent prevention program.
- The benefits of increases in tobacco taxes, such as reduction in adolescent cigarette use, will shrink as inflation erodes the real value of the tax increase—unless the excise tax is indexed so that the nominal tax rate (expressed in cents per pack) rises in step with prices. Indexing tobacco taxes to the consumer price index or to the wholesale price of cigarettes would make permanent the public health gains of higher taxes.

Suggestions for Future Research

- When tax increases are implemented, an effort should be made to study the potential effect on youth consumption, including the establishment of baseline evaluations to accurately assess changes after implementation.
- In addition to tobacco tax increases, it would be valuable to research and develop alternative economic approaches to tobacco growing and tobacco production.

Prevention Approach 2: *Counteradvertising*

Intended Measurable Outcome

To change perceived norms among children and adolescents regarding tobacco use

Conceptual Framework

Research and experience demonstrate that adolescents develop attitudes, beliefs, and behaviors regarding tobacco use from peers, family members, television, and other cultural sources. Adolescents often have the perception that tobacco use among their peers is common and acceptable. They are also exposed to messages through advertising that links tobacco use with peer acceptability, success, and fun. Media messages promoting negative images about tobacco use, revealing the actual prevalence of tobacco use among youth, and providing information about the unacceptability of tobacco use should help to change perceived norms among adolescents about tobacco use.

Objectives of Studies Reviewed

- To increase the exposure of children and adolescents to negative messages about tobacco use or positive messages about not using tobacco
- To increase adolescents' ability to identify hidden messages in tobacco advertising and their awareness of marketing manipulation
- To change adolescents' attitudes and beliefs about tobacco use and determine the frequency and types of media messages that will be most effective in changing perceived norms
- To increase adolescents' awareness of norms regarding smoking
- To improve adolescents' tobacco refusal skills and help them develop smoking cessation skills

Activities of Studies Reviewed

- Radio and television campaigns
- Multilevel mass and small media campaigns, including billboards, posters, magazines, radio, and television
- A mass media campaign linked with youth education programs
- Prime time airing of media campaigns
- A Statewide multimedia tobacco education media campaign

Basis of Evaluation of Evidence

The analysis of the effectiveness of counteradvertising in changing perceived norms among children and adolescents regarding tobacco use is based on five research studies (Bauman et al. 1991; Flynn et al. 1992, 1994; McKenna and Williams 1993; Popham et al. 1994; Murray et al. 1994).

A study by Bauman et al. (1991) had a quasi-experimental design using cross-sectional measurements. The study's goal was to evaluate the impact of three mass-media antismoking campaigns directed at adolescents 11 to 17 months after the broadcasts ended. The first campaign involved eight 30-second radio messages that focused on

seven expected consequences of smoking related to whether young people become regular smokers. The second campaign featured a 60-second radio message that invited youth 12 to 15 years old to enter a sweepstakes. Once entered, they received brochures asking them to talk to their friends about not smoking, encourage them to pledge not to smoke, and have them enter the sweepstakes, with financial incentives for recruiting friends. The third campaign comprised a television broadcast of the sweepstakes offer and only three of the radio messages. The study was designed to assess whether the campaigns by themselves influenced subjective expected utility for smoking, smoking intention, friends' approval of smoking, friends' encouragement of not smoking, and beginning smoking.

Findings:

1. Radio and television messages reached 81 percent of the target audience an average of 4.5 times during each of the three 4-week intervention periods.
2. The media campaign had a modest effect on the expected consequences of smoking and friends' approval of smoking.
3. The radio-only campaign was as effective as television.
4. The peer involvement component was not effective.
5. The campaigns did not reduce the number of new smokers.

A study by Flynn et al. (1992) had a quasi-experimental design, with a survey follow-up. The purpose of the study was to determine whether a mass media campaign plus a school-based cigarette use prevention intervention was more effective in reducing smoking than school-based interventions alone. Another study by Flynn et al. (1994) was a 2-year follow-up.

Findings:

1. The intervention group showed a consistent trend toward less smoking, with significant differences in the final 2 years.
2. The intervention group reported significantly more negative attitudes toward tobacco use than did the control group in years two through five.
3. The effects of the intervention persisted 2 years after its completion.

In a formative evaluation, McKenna and Williams (1993) developed and tested a mass media campaign message designed to increase awareness among adolescents about the marketing tactics of the tobacco industry and to strengthen antitobacco attitudes among adolescents. This study utilized focus group discussions to plan campaigns and to test finished counteradvertising approaches and campaign materials. Although research on youth was used to prepare the messages, adolescents were not consulted during the preparation of these television spots.

Findings:

1. Few (26 percent) adolescents understood that the proposed television spot illustrated tobacco industry marketing tactics.
2. Thirty-eight percent of adolescents thought the television spot promoted smoking, few (10 percent) understood the references to the tobacco industry, and older adolescents (ages 13–15) more often than younger adolescents (ages 10–12) were able to identify the message correctly. Because the adolescents were unable to understand the campaign messages, the message was not aired.

Popham et al. (1994) evaluated the effectiveness of a 1990–1991 Tobacco Education Media Campaign conducted by the California Department of Health Services. The 15-month media campaign produced more than 50 television spots, 50 radio spots, 20 outdoor advertisements, and 40 newspaper advertisements. These were placed through numerous television stations, 69 radio stations, 775 outdoor venues, and 130 newspapers. The media campaign was targeted at school-age youth and adult smokers. The campaign was designed so that youths' exposure would be approximately one-third greater than that of adults. The themes employed included the adverse health and interpersonal consequences of tobacco use, society's increasing disapproval of smoking, and the profit motivation of the tobacco industry. In this time series, nonexperimental evaluation, precampaign baseline measurements were compared with quarterly postcampaign measurements regarding awareness of the campaign, tobacco use, smokers' intention to quit, nonsmokers' intention to start smoking, and attitudes toward smoking. The following results are limited to data derived from evaluation of 29,264 students in grades 4 through 12.

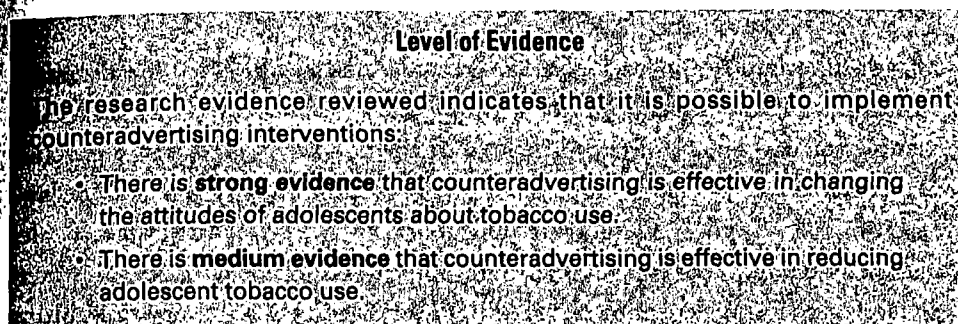
Findings:

1. Among students exposed to the media campaign, there was an increase in awareness of the media campaign, a decrease in the percentage of students who were smokers, an increase in the proportion of smokers with an intention to quit, and an increase in health-enhancing attitudes.
2. At the final measurement, students who had been exposed to the media campaign demonstrated stronger health-enhancing attitudes than did their unexposed counterparts.

In a 5-year study, Murray et al. (1994) used a time series cross-sectional survey to examine the effects of a prevention approach that included mass media messages on adolescent beliefs and behaviors. They assessed the amount of student exposure to mass-media messages on tobacco use prevention and determined whether beliefs, attitudes, and behaviors related to tobacco use changed as a result of this exposure.

Findings:

1. Students exposed to mass media campaigns reported dramatically increased exposure to antismoking messages in the mass media.
2. This exposure had little effect on smoking-related beliefs or behaviors.



Lessons Learned From Evidence Reviewed

- Counteradvertising, in the form of multicomponent media-based prevention efforts, can increase young people's awareness of media campaigns, decrease their smoking, and decrease their intention to start. Such efforts have also demonstrated an ability to increase negative attitudes toward smoking, increase understanding of the consequences of smoking, and decrease rates of peers' approval of smoking.
- Multicomponent prevention efforts that include media campaigns are more effective than single-component media campaign prevention programs. Media campaigns have been shown to support and promote other components and vice versa. Effective media campaigns involve linkages with other intervention activities.
- To be effective, media messages should be age appropriate and designed with the target audience's developmental stage in mind. In particular, messages should not be too subtle or too sophisticated.

Suggestions for Future Research

- Counteradvertising as an approach to preventing adolescents' tobacco use is in the early stages of development. Additional research should be conducted with regard to motivational mechanisms. In other words, what are the elements of a media message that motivate people? What components are the most powerful? What is the appropriate execution of messages?

Prevention Approach 3: *Retailer-Directed Interventions*

Intended Measurable Outcome

To reduce access to tobacco products by minors

Clusters

Within the prevention approach of tobacco retailer-directed interventions, research and practice can be divided into three subgroups, each with its own emphasis. Consequently, tobacco retailer-directed interventions are presented here in three clusters: merchant and community education about adolescent tobacco use and the laws prohibiting tobacco sales to minors, the enactment of laws prohibiting tobacco sales to minors, and enforcement of laws prohibiting tobacco sales to minors plus merchant and community education about minors' tobacco use and the laws prohibiting tobacco sales to adolescents.

Note: In many of the studies in this section, investigators examined local ordinances prohibiting tobacco sales to minors. These studies predated the Synar regulation, which mandates that all States have laws prohibiting tobacco sales to persons 18 years and younger or risk losing substance abuse prevention and treatment block grant funding. The Synar Regulation was made final in February 1996 and is still in the implementation process.

CLUSTER 1: Merchant and Community Education About Adolescent Tobacco Use and the Laws Prohibiting Tobacco Sales to Minors

Conceptual Framework

Research demonstrates that adolescents obtain tobacco products through direct purchase from retailers, such as convenience and grocery stores, service stations, and pharmacies as well as through friends and family members, and shoplifting. Therefore, educating merchants, clerks, and the community about youth tobacco use and the laws prohibiting tobacco sales to minors should reduce tobacco sales to minors.

Objectives of Studies Reviewed

- To determine whether merchant education combined with grassroots community education reduces the sale of tobacco products to minors
- To determine whether positive reinforcement to clerks and merchants for not selling tobacco to minors and asking for proof of age reduces tobacco sales to minors

Activities of Studies Reviewed

- Educating clerks and merchants about the youth tobacco use problem, existing laws prohibiting tobacco sales to minors, and their responsibility for complying with these laws
- Providing information and education to the general public, community groups, and mass media about existing laws prohibiting tobacco sales to minors and about their use of tobacco
- Enlisting community support for activities related to education and interventions regarding tobacco use by youth
- Developing and publicizing the results of surveys of purchase attempts by adolescents
- Providing retail stores with warning signs regarding the laws prohibiting tobacco sales to minors

Basis of Evaluation of Evidence

The analysis of the effectiveness of Cluster 1 under Prevention Approach 3, Merchant and Community Education About Adolescent Tobacco Use and the Laws Prohibiting Tobacco Sales to Minors, is based on five research studies (Altman et al. 1989, 1991; Biglan et al. 1994a; Keay et al. 1993; Skretny et al. 1990; Wildey et al. 1995) and one prevention practice case (Tobacco-Free Youth Project).

A study by Altman et al. (1989) had a nonexperimental design with baseline, intervention, and posttest stages. It was designed to determine whether a voluntary education program for merchants, combined with a media campaign and a grassroots community organization, would be effective in reducing the sale of cigarettes to minors in a wide range of stores and communities. Six months after baseline evaluation, an intervention was implemented that involved community and merchant education, as well as contact with chief executive officers of outlet chains and franchises. The investigators later completed a 1-year follow-up study (Altman et al. 1991).

Findings:

1. After the intervention, cigarette sales to minors decreased significantly, from 74 percent at baseline to 39 percent at 6 months and 59 percent at 1 year.
2. At 6 months, vending machine sales to minors remained at 100 percent.
3. Postings of warning signs increased from 3 percent at baseline to 23 percent at 6 months and 25 percent at 1 year.
4. Stores receiving educational kits began posting warning signs more often.
5. The rate at which adolescents were asked for proof of age increased from 24 percent at baseline to 48 percent at 6 months and 34 percent at 1-year follow-up.

A study by Biglan et al. (1994a) was a time-series design involving several communities. This study was conducted to determine whether a community intervention designed to mobilize social and tangible reinforcement for merchants who refused to sell tobacco to minors would reduce tobacco use among adolescents. The intervention consisted of mobilization of community support, merchant education, consequences to merchants for selling tobacco to minors, publicity about merchants' refusal to sell, and feedback to merchants about the extent of their sales to adolescents.

Findings:

1. The proportion of stores willing to sell tobacco to minors after the intervention decreased from baseline as follows:
 - From 57 to 27 percent in Florence
 - From 62 to 17 percent in Reedsport
 - From 65 to 37 percent in the greater Sherwood area
 - From 63 to 22 percent in Hood River

In a quasi-experimental study, Keay et al. (1993) evaluated whether a combination of retail merchant education, mass media efforts, and community education would affect cigarette sales to minors. The study was also designed to evaluate, at 1 month after the intervention, whether these efforts would affect merchant behavior, such as asking apparent minors their age, requesting proof of age, asking whether cigarettes were for minors' own use, discouraging cigarette use, or encouraging cigarette use.

Findings:

1. In the outlets studied, sales to minors decreased from 70 percent to 32 percent.
2. In control outlets, sales to minors decreased from 65 to 59 percent.
3. Study outlets demonstrated significant improvement regarding asking for proof of age and discouraging cigarette use.

In an experimental study, Wildey et al. (1995) examined the effects of a retailer-directed education intervention to reduce tobacco sales to minors in six low-income, ethnically diverse communities. The study involved a control group and an intervention group of retailers that received three quarterly educational visits from project staff over a 1-year period. During these visits, agency staff delivered educational materials for managers, salesclerks, and customers. At the same time, the program employed community education and media strategies to encourage retailer compliance and to promote community awareness, including release of baseline adolescent purchase attempt results to media. Purchase attempts were also made immediately following the intervention and 6 months postintervention.

Findings:

1. At baseline, purchase attempts were successful in 68 percent of the retail stores.
2. Posttest purchase attempts were successful in 32 percent of the intervention stores and 59 percent of the control outlets.
3. At 6 months following the conclusion of the intervention, compliance rates for the intervention group were found to be stable, with the control group showing a slight but insignificant decline.

The purpose of a quasi-experimental study by Skretny et al. (1990) was to evaluate the effect of a merchant education and awareness intervention on compliance with the State law that prohibits tobacco sales to minors and requires posting of warning signs. The intervention involved a letter to store managers requesting them to comply with the State law regarding sales and signs and to post warning signs about tobacco sales to minors. The letter was accompanied by a tip sheet for educating store employees about the illegality of tobacco sales to minors. Adolescent purchase attempts were made 2 weeks after the intervention.

Findings:

Two weeks after the merchant education intervention:

1. Tobacco sales to minors did not significantly differ between stores receiving the mailing and others.
2. There was a statistically significant difference in the posting of warning signs between study stores (40 percent) and control stores (0 percent).

The Tobacco-Free Youth Project of the COMMIT to a Healthier Raleigh Project was designed to increase public awareness concerning cigarette sales to minors and merchants' voluntary compliance with the State law prohibiting tobacco sales to minors. The project involved cigarette purchase attempts by adolescents, media coverage of the results of the purchase attempts, and a community-wide education campaign designed to inform the public and merchants about the law and to facilitate merchant compliance with the law. After the campaign, the project evaluated the effect through adolescents' purchase attempts made on July 13, 1991, with a press conference publicizing results on July 31. In September, the merchant education program began. Purchase attempts were again made in April (vending machines only) and June (over-the-counter and vending machines).

Findings:

1. Purchase attempt rates dropped from a baseline rate of 64 percent to 32 percent after the intervention. Based on evidence derived from the baseline evaluation, the Raleigh City Council voted to ban cigarette vending machines from establishments without Alcoholic Beverage Control permits.

Level of Evidence

The research and practice evidence reviewed indicates that interventions can be designed to provide merchant and community education about adolescent tobacco use and the laws prohibiting tobacco sales to minors:

There is **medium evidence** that combined merchant and community education results in a short-term decrease in over-the-counter tobacco sales to minors.

CLUSTER 2: *Enacting Laws Prohibiting Tobacco Sales to Minors*

Conceptual Framework

Research demonstrates that adolescents obtain tobacco products through direct purchase from retailers, such as convenience and grocery stores, service stations, and pharmacies as well as through friends and family members, and shoplifting. Therefore, enacting laws prohibiting tobacco sales to minors should reduce tobacco sales to them.

Objectives of Studies Reviewed

- To determine whether enactment of laws restricting tobacco sales to minors or an increase in penalties to merchants for violating these laws would result in changed attitudes and behaviors on the part of merchants regarding sales to adolescents
- To determine whether a comprehensive ordinance restricting tobacco sales to minors would have an effect on sales to minors
- To determine whether an ordinance that mandates locking devices on cigarette machines would decrease sales from cigarette machines to minors

Activities of Studies Reviewed

- Enacting local ordinances restricting the sale of tobacco to minors
- Placing cigarette vending machines in locations inaccessible to minors
- Requiring locking devices on cigarette vending machines that require merchant or clerk assistance to permit operation
- Requiring merchant licenses for vending machines or for over-the-counter sales of tobacco products
- Requiring merchants to ask customers who appear to be underage for proof of age during tobacco purchase attempts
- Requiring warning signs in stores that remind merchants, clerks, and customers about laws restricting tobacco sales to minors
- Enacting penalties, such as license suspension or revocation or civil penalties, for violating laws restricting tobacco sales to minors

Basis of Evaluation of Evidence

The analysis of the effectiveness of Cluster 2 under Prevention Approach 3, Tobacco Retailer-Directed Interventions, Enacting Laws Prohibiting Tobacco Sales to Minors, is based on four research studies (Forster et al. 1992a, 1992b; Hinds 1992; Jason et al. 1991).

A study by Forster et al. (1992a) had a nonexperimental design with baseline, intervention, and posttest phases. The purpose of the study was to determine whether locking devices on cigarette vending machines would decrease the ability of adolescents to use them. Cigarette purchases were attempted at three points: shortly before the enactment of a law requiring locking devices, 3 months after baseline, and 1 year after baseline.

Findings:

1. Three months after the enactment of the law, 34 percent of the businesses had machines without locking devices.
2. One year after the enactment of the law, 30 percent of the businesses had vending machines without locking devices.
3. The percentage of purchases by adolescents decreased from 86 percent before the law to 30 percent at 3 months and 48 percent 1 year after implementation.
4. One year after enactment, businesses that had installed locking devices were selling fewer cigarettes to minors than were businesses with unlocked machines.
5. One year after enactment, businesses that had switched to over-the-counter were selling the fewest cigarettes to minors.

Another study by Forster et al. (1992b) had a cross-sectional multiple evaluation design. It was conducted to establish baseline data on adolescents' ability to purchase cigarettes over the counter at convenience and grocery stores, gas stations, pharmacies, and bars as well as from cigarette vending machines in these establishments. In addition, this study was designed to assess the short-term effect of a Minnesota law that increased the penalty for cigarette sales to minors from a petty misdemeanor to a gross misdemeanor. The baseline purchase attempts were made about 1 month before the enactment of the law, with a policy change evaluation about 1 month after enactment.

Findings:

1. At baseline, purchase attempts were successful at 53 percent of over-the-counter sites and were 79 percent successful at vending machines.
2. Purchase attempts were most successful at gas stations, grocery stores, and convenience stores.

3. Vending machine purchase attempts were successful at 99 percent of gas stations and 88 percent of restaurants.
4. After enactment of the law, over-the-counter purchase attempts by adolescents were 38 percent successful.
5. The enactment of the law did not result in measurable changes in vending machine purchases.

Hinds (1992) conducted a nonexperimental study with baseline, intervention, and posttest measures to determine whether a city ordinance prohibiting tobacco sales to minors had resulted in decreased access to and use of tobacco by 10th grade students. In particular, the survey assessed whether the city ordinance prohibiting tobacco sales to minors had affected regular tobacco use, the type of tobacco used, the source for obtaining tobacco, and the rate of being asked for proof of age by merchants and clerks. The baseline survey was conducted 3 months before and the post-ordinance evaluation about 10 months after enactment of the law.

Findings:

1. There was an overall reduction in subjects' tobacco use, but this finding was statistically significant only for girls.
2. There was a tendency toward less use of stores and more use of vending machines, friends, and theft to obtain tobacco, but this was statistically significant only for use of friends.
3. For tobacco-using subjects, there was an increase in being asked for proof of age when attempting to purchase tobacco.

A study by Jason et al. (1991) had a nonexperimental design with baseline, intervention, and posttest measurements. The purpose of the study was to determine the effect on tobacco sales to adolescents and on the incidence of their tobacco use after multiple interventions of enactment of a local ordinance, with media attention and the threat of vendor license revocation and police visits to each store; quarterly compliance checks by the police; letters from the police to cigarette vendors; and letters from the police to students' parents. Assessments were conducted in August and November 1988 and February 1989. The law was implemented in May 1989. Post-ordinance evaluations were conducted in June, August, and November 1989 and in January, April, July, and December 1990.

Findings:

Following the enactment of the ordinance:

1. Sales of cigarettes to minors dramatically declined.
2. The number of stores complying with the ordinance increased dramatically.
3. Experimental and regular use of cigarettes by minors decreased.

Level of Evidence

The research evidence reviewed indicates that laws can be written and established that increase the penalties for selling tobacco to minors:

- There is **medium evidence** that laws increasing penalties for tobacco sales to minors have a short-term effect in reducing over-the-counter tobacco sales to minors.
- There is **substantial evidence of the ineffectiveness** of enacting ordinances requiring locking devices on cigarette machines to reduce access by minors to cigarettes. Ordinances requiring locking devices are ineffective because merchants frequently leave the machines unlocked. The devices are perceived as an additional burden and are a low priority for law enforcement.

CLUSTER 3: Enforcing Laws Prohibiting Tobacco Sales to Minors Plus Merchant and Community Education About Adolescent Tobacco Use and the Laws Prohibiting Tobacco Sales to Adolescents

Conceptual Framework

Research demonstrates that adolescents obtain tobacco products through direct purchase from retailers, such as convenience and grocery stores, service stations, and pharmacies as well as through friends and family members, and shoplifting. Therefore, enforcing laws prohibiting tobacco sales to minors, in addition to educating merchants, clerks, and the community about these laws and about adolescents' tobacco use, should reduce tobacco sales to minors.

Objectives of Studies Reviewed

- To determine whether the combination of enforcement of laws prohibiting tobacco sales to merchants plus merchant and community education regarding adolescents' tobacco use and the laws prohibiting tobacco sales to them will decrease long-term sales of tobacco to minors
- To determine whether the addition of enforcement of existing ordinances to merchant and community education will result in a greater decrease in tobacco sales to minors

Activities of Studies Reviewed

- Seeking and securing community partnership, support, and sponsorship of prevention activities from local businesses, community organizations, local and mass media, local law enforcement, the judicial system, district attorneys, and other government agencies

- Establishing the rate of tobacco sales to minors through the use of purchase attempts by adolescents
- Visiting retail merchants to educate them about the laws prohibiting tobacco sales to minors and the consequences of noncompliance
- Combining youth with law enforcement personnel to deliver merchant education about adolescent tobacco use and the laws prohibiting tobacco sales to adolescents
- Providing merchants with educational materials about adolescents' tobacco use, fact sheets, tips for refusing sales to minors, copies of the State and local laws prohibiting tobacco sales to minors, and store warning signs about these laws
- Publicizing adolescent purchase attempts conducted by law enforcement officials that result in penalties to merchants
- Providing reinforcement to merchants for not selling tobacco to adolescents, including financial rewards, consumer product incentives, public recognition in local newspapers, and positive publicity through mass media
- Media activities such as press conferences, advertisement of activities, and coverage of activities

Basis of Evaluation of Evidence

The analysis of Cluster 3 under Prevention Approach 3, Tobacco Retailer-Directed Interventions, Enforcement of Laws Prohibiting Tobacco Sales to Minors Plus Merchant and Community Education About Adolescent Tobacco Use and the Laws Prohibiting Tobacco Sales to Adolescents, is based on two research studies (Feighery et al. 1991; Jason et al. 1991) and five prevention practice cases (Project SCAN; The Dover Youth Access to Tobacco Reduction Program; the Pajaro Valley Prevention and Student Assistance program; the Stop Tobacco Access for Minors Project (STAMP); and the Stop Teenage Addiction to Tobacco project).

A study by Feighery et al. (1991) involved a nonexperimental design with a baseline and two posttest assessments. The goal of the study was to determine whether a comprehensive educational intervention directed at merchants, law enforcement agencies, and the community, in combination with well-publicized enforcement operations by the police department, would reduce tobacco sales to minors. The pretest measurement of the sales rate was conducted between June and August 1988, the comprehensive education intervention began in September 1988, and the first posttest measurement was conducted in December 1988. A law enforcement intervention began in November 1989, and the final posttest assessment was conducted in May 1990.

Findings:

1. Comprehensive community education, in combination with police enforcement, significantly reduced over-the-counter tobacco sales to minors.
2. These efforts did not decrease sales to minors from vending machines.
3. The comprehensive community education effort alone had a limited effect on the reduction of tobacco sales to adolescents.
4. Judges often suspended the sentences of merchants.

A report by Jason et al. (1991) describes two studies with nonexperimental designs having baseline and posttest evaluations. The purpose of the studies was to determine whether a local ordinance prohibiting cigarette sales to minors had reduced the rate of cigarette sales to minors. The study also evaluated whether a local ordinance prohibiting cigarette sales to minors reduced the incidence of smoking among minors. The intervention included letters to merchants from a police officer; enactment of a local ordinance, with appropriate media coverage, vendor licensing, and visits by police to each store; quarterly purchase attempts by adolescents with police enforcement for violations; and letters from the police to students' parents. Assessments were made in August and November 1988 and February 1989. The law was implemented in May 1989. Post-implementation evaluations were conducted in June, August, and November 1989 and January, April, July, and December 1990.

Findings:

1. Cigarette sales to minors declined dramatically after enactment of the ordinance (baseline rates of 70, 60, and 79 percent; postintervention rates of 35, 36, 0, 4, and 3 percent).
2. The experimental and regular use of cigarettes by minors decreased after enactment of the ordinance.

Project SCAN (Stop Children's Addiction to Nicotine) was designed to increase public awareness of the problem of adolescents' tobacco use, increase merchant education about the tobacco access law to promote voluntary compliance, and encourage local police to enforce the tobacco access law. Two case examples describe how this project was implemented in two New York communities.

Findings:

1. Many individuals, businesses, organizations, and government agencies provided support to and sponsorship of the activities.
2. The police delivered educational information to merchants and participated in purchase attempts by adolescents.
3. Most retailers received an information packet and displayed warning signs.
4. Prevention publicity prompted police enforcement and legislative initiatives.

5. It was difficult to convince police officials to enforce tobacco access laws.
6. Judges dismissed merchant sentences imposed for violating the law.

The **Dover Youth Access to Tobacco Reduction Program** was developed to prevent or reduce adolescent tobacco use. Attempts by adolescents to purchase tobacco were made through the program, and merchants were invited to attend a tobacco education seminar on adolescent tobacco use and laws restricting tobacco sales to adolescents. Officials also issued warnings to merchants who violated the laws during purchase attempts by adolescents. These merchants were revisited 1 year later and were issued a court summons if they continued to sell tobacco to adolescents.

Findings:

1. The successful adolescent tobacco sales rates were 73 percent before program implementation and 24 percent after the implementation.
2. After implementation of the intervention, 60 percent of attempted purchases from vending machines by minors were successful.
3. After implementation, 16.6 percent of over-the-counter purchase attempts by minors were successful.

The **Pajaro Valley Prevention and Student Assistance** program was designed to create a comprehensive tobacco control program to address use of tobacco products by youth and the role of adults in supplying tobacco products to minors. Purchase attempts by adolescents were made in December 1990, the results of which enabled the passage of a vending machine ordinance in March 1991. Merchant education visits by trained youth and police were conducted in August 1991. In August 1993, program staff conducted follow-up merchant education visits. The program works in partnership with numerous community elements.

Findings:

1. Before enactment, 62 percent of over-the-counter purchase attempts and 100 percent of vending machine purchase attempts were successful.
2. Using these survey results, the county coalition introduced and passed vending machine ordinances throughout the county.
3. Three years after the program, most merchants were in compliance with the requirement to display warning signs.
4. Youth participation was constructive.
5. It was difficult to obtain youth participation on Saturday mornings.
6. The police did not perceive youth access laws as a priority and were less responsive than had been anticipated.

The **Stop Tobacco Access for Minors Project (STAMP)** was created to reduce adolescent tobacco sales by making access to tobacco by adolescents more difficult by

promoting public awareness of the extent of tobacco use, providing merchant education and incentives not to sell tobacco to minors, advocating and implementing tobacco access laws, and collaborating with law enforcement agencies to enforce them.

Findings:

1. Purchase attempts by adolescents demonstrated an average reduction of 40 percent in over-the-counter adolescent tobacco sales in targeted cities; in some, a 75-percent reduction.
2. STAMP has helped to enact and implement cigarette vending machine ordinances in 11 jurisdictions and more than 25 comprehensive ordinances against over-the-counter sales, vending machine sales, and free samples for adolescents as well as self-service promotional sales and displays.

The Stop Teenage Addiction to Tobacco project was designed to document the extent of youth access to tobacco, educate the community about the problem of youth access to tobacco, and advocate increased enforcement of California's youth access laws. It was also intended to advocate the passage of regulations to further reduce tobacco sales to adolescents in San Jose.

Findings:

1. As a result of publicizing purchase attempts by adolescents, merchant education, and city council lobbying, an ordinance was enacted that banned cigarette vending machines from all businesses except those serving liquor and required the latter to place the machines at least 25 feet from the entrance.
2. After enactment, publicity regarding high rates of attempted purchases from vending machines by minors led to the removal of all known illegal vending machines in San Jose.
3. Youth involvement generated media interest and public support.
4. Youth testimony helped to pass the vending machine ordinance.

Level of Evidence

The research and practice evidence reviewed indicates that it is possible to implement prevention programs that combine merchant and community education with law enforcement components:

There is medium evidence that combined merchant and community education with enforcement of the law will reduce over-the-counter tobacco sales to minors. Because most localities have only recently enhanced their education and enforcement efforts, there is insufficient evidence that this effect will be sustained over a long period of time or that this approach will reduce tobacco use among youth.

Lessons Learned From Evidence Reviewed

- Merchant education is a valuable component of community-based prevention strategies. Although merchant education as an independent component of prevention may not yield robust results, it appears to enhance the effect of other prevention components. Similarly, merchant education in the context of a multicomponent community-based prevention program helps to increase promotion of community involvement. It can help merchants to understand their role in community prevention efforts and to perceive themselves as community partners. Merchant education helps other community partners to understand the roles and responsibilities of merchants in a community partnership and diminishes the likelihood of viewing cigarette merchants as adversaries.
- A continuum of effect results from increasing the intensity of interventions; that is, the passing of a law prohibiting tobacco sales to minors without any other intervention will have the least effect. The intervention effect is optimized when there are several components, namely: enacting laws prohibiting tobacco sales to minors, enforcing these laws through publicized purchase attempts with police sponsorship or cooperation, educating merchants and the community about adolescents' tobacco use and the laws prohibiting tobacco sales to minors, seeking comprehensive community support of these prevention efforts, and educating judges and cooperating with them to impose consequences on violators of the tobacco access laws.
- Adolescents can take an active role with adults in education and prevention efforts. They can be effective as partners in educating members of the legislature, local judges, and local organizations and agencies. In particular, adolescents can work as partners with law enforcement officials during merchant education efforts.
- A decrease in sales of tobacco to youth within a given community is not necessarily indicative of decreased availability or accessibility, because they may be able to obtain tobacco in nearby communities. Such effects should be taken into consideration when evaluating community-based tobacco control research.

Suggestions for Future Research

- Merchant and community education components of prevention programs vary in effectiveness. Therefore, it is recommended that researchers explore areas related to education components, such as the ways in which educational sessions are conducted, what types of materials are most effective, and who can provide the education most effectively.
- Research and experience demonstrate that interventions differ in effects as well as durability of effects. Research is needed to examine individual prevention

components, especially those commonly used in multicomponent prevention programs.

- There is a need to examine the cost-effectiveness of specific interventions and multicomponent prevention programs.
- Research should be directed at evaluating the extent to which reducing accessibility and sales of tobacco to youth reduces their consumption of tobacco products.

Prevention Approach 4: *Multicomponent School-Linked Community Approaches*

Intended Measurable Outcome

To mobilize community systems through the schools to discourage adolescent tobacco use

Clusters

Within the prevention approach of multicomponent school-linked community approaches, research and practice can be divided into three subgroups, each with its own focus. Consequently, multicomponent school-linked community approaches are presented in three clusters: parental involvement, student antitobacco activism, and media interventions.

CLUSTER 1: *Parental Involvement*

Conceptual Framework

Research demonstrates that multicomponent programs are more effective than single-component interventions for the prevention of tobacco use by adolescents. Therefore, adding prevention components based on parental involvement to other prevention efforts, such as school-based programs, should reduce adolescents' use of tobacco.

Objectives of Studies Reviewed

- To expose parents to antitobacco messages through multiple channels
- To increase parental knowledge of tobacco problems and antitobacco attitudes and beliefs
- To increase parental awareness of, receptivity to, and participation in smoking prevention programs
- To encourage parents to discuss tobacco-related issues and problems with their children

- To help families develop rules regarding tobacco use within the home
- To determine whether adding a parent component would increase the effectiveness of school-based programs
- To enlist parents in the process of informing and influencing educators and school administrators about adolescent tobacco problems
- To design and determine the acceptability of a culturally appropriate tobacco cessation and prevention intervention
- To assist parents in fostering their children's refusal skills and to change the family norm to nonuse of tobacco

Activities of Studies Reviewed

- Parent surveys
- Take-home quizzes for parents and students
- Letters to parents
- Smoking cessation services and self-help materials
- Television segments on prevention and cessation
- Pamphlets for parents that contain information about tobacco problems
- Educational materials for parents with tips on how to encourage their kids not to smoke
- Parent training
- Community organizing regarding school policy and curricula
- Community organizing to promote community change regarding adolescents' use of alcohol, tobacco, and illicit drugs
- Media campaigns
- The "Unpuffables Program" intervention

Basis of Evaluation of Evidence

The analysis of Cluster 1 under Prevention Approach 4, Multicomponent School-Linked Community Approaches, Parental Involvement, is based on seven research studies (Biglan et al. 1994b; Flay et al. 1987; Pentz et al. 1989a, 1989b; Perry et al. 1990, 1987; Stevens et al. 1993; Werch et al. 1991) and one practice case (the Multicultural Area Health Education Center).

Biglan et al. (1994b) employed a quasi-experimental design in a year-long study of activities to prevent adolescent tobacco use aimed at adolescents and parents. Parents of middle school students were invited to participate in developing and implementing activities at school to influence parents to talk to their children about not using tobacco. Students were sent home with a quiz about tobacco to complete with their parents. The parents received a letter signed by prominent citizens regarding the quiz, along with answers and information. The students were rewarded for completion of the quiz.

Findings:

In comparison with parents in control communities:

1. Significantly more parents in intervention communities talked to their children about not using tobacco.
2. More parents in intervention communities stated that they had explicitly told their children that they did not want them to use tobacco. However, the intervention did not significantly affect how adolescents perceived parental communication, nor did it affect their intention to smoke.

A quasi-experimental study by Flay et al. (1987) was designed to evaluate the effectiveness of a school-based smoking prevention intervention for 7th grade students. Investigators examined the effects of schoolwide implementation, coordination with television programming, and encouragement of parental participation on students. This last component included television program segments that provided parents with a booklet of basic information and homework as well as encouragement by teachers to view the segments and to work with their children regarding social factors that influence children to smoke. The study included student assessments at baseline and at 2 months, 1 year, and 2 years after the intervention.

Findings:

1. Parent-child interaction during the prevention program correlated negatively with increases in intervention subjects' current and cumulative lifetime cigarette use at the first posttest assessment, but was not significant at the second and third assessments.
2. At the 1-year follow-up, parental involvement correlated negatively with the degree of adolescents' perception of peer approval of their smoking and with the number of friends they thought would approve of their smoking.
3. At the 2-year follow-up, there was a significant positive correlation between the number of parent-child activities and adolescents' intention to refuse offers of cigarettes from a group of friends and from a best friend.

Pentz et al. (1989a, 1989b) conducted a quasi-experimental study to evaluate the effectiveness of a school- and community-based program intended to counteract social pressure to use cigarettes, alcohol, and/or marijuana. The intervention included a parent organization program for training parents in parent-child communication and prevention practice support skills as well as organizing to change school policies about institutionalizing drug prevention curricula and restricting drug use in and around schools.

Findings:

1. At the time of the 2-year follow-up, on the basis of the school of origin, smoking by students in intervention schools had increased by 9.1, 9.1, and 6.8 percent for monthly, weekly, and daily periods of measurement, respectively. Student smoking rates in control schools had increased by 15.4, 13.8, and 9.8 for monthly, weekly, and daily periods, respectively. Thus, the overall rate of increase in smoking prevalence for control schools was approximately 1.5 times the rate of increase for intervention schools.

A report by Perry et al. (1990) describes two pilot evaluations. One study had a quasi-experimental design, and the other employed a nonexperimental design. These studies were designed to evaluate the effectiveness of the Unpuffables Program, a school-initiated, family-based, 4-week smoking prevention activity targeting pre-adolescent students and their parents. Program materials consisted of four packets designed as a family game, using a detective motif, with students receiving rewards for completion. The packets were given to the students, who were instructed to take them home and participate in the program activities with their parents. Telephone survey questionnaires were administered shortly after completion of the 4-week activity.

Findings:

Positive findings of the two studies were:

1. Increased parental awareness of the intervention program
2. Adolescents bringing the program home to parents
3. Parent-child participation in the prevention activities
4. Adolescents' initiation of conversations with their parents about smoking
5. Adolescents' encouragement of others to quit smoking

An article by Perry et al. (1987) described several investigations, including a survey component of a larger study with a quasi-experimental design. The purpose of this study was to evaluate whether a smoking prevention and cessation intervention targeted at high school students would have an effect on the beliefs and behaviors of the students' parents. The school-based curriculum intervention was a component of the Keep It Clean II program, a community intervention trial aimed at changing cardiovascular risk behaviors. A telephone survey of parents was conducted during the third year of the intervention.

Findings:

1. More parents in the intervention group (49 percent) than in the control group (35 percent) reported having discussions with their teenagers about smoking in the prior week.

2. More parents in the intervention group (72 percent) than in the control group (42 percent) were aware of the smoking prevention programs in the schools.
3. The intervention (which had no formal parental component) had a minor impact on parental attitude but heightened parental awareness of the program and its content.

A study by Stevens et al. (1993) had a quasi-experimental design and was intended to determine whether a comprehensive school-based substance abuse prevention curriculum, alone or in combination with a parenting course and a community task force, would reduce or prevent smokeless tobacco use by rural preadolescent and young adolescent 4th through 6th grade students. The parent communication course consisted of 10 sessions designed to help parents develop the personal and social skills needed to communicate with their children, especially about risky or unacceptable behavior. Student baseline questionnaires were administered in the spring of 1987, and the intervention began in the autumn of 1987. Posttest surveys were conducted in 1988, 1989, and 1990.

Findings:

1. After 3 years, there were no significant differences in rates of initiation of smokeless tobacco use among the control group, the curriculum intervention group, and the community intervention group of students.
2. More than 10 percent of boys who had been abstainers or initiators at baseline reported regular use of smokeless tobacco at the 3-year follow-up, with no significant difference between the two intervention groups.
3. The comprehensive curriculum, alone or in combination with the parent course and the community task force, did not significantly affect initial or regular use of smokeless tobacco.

Using an experimental design, Werch et al. (1991) conducted a study to determine whether a home-based social skills training program for adolescents and their parents would have an effect on adolescents' beliefs, knowledge, and intention to use drugs; on parents' beliefs and knowledge about drugs; and on the extent of parent-child communication about avoiding and resisting drugs. Fourth, fifth, and sixth grade students received four weekly take-home prevention training lessons designed to be completed with a parent. Survey questionnaires were administered to all students and parents 2 weeks before and 2 weeks after the intervention.

Findings:

1. Students in the intervention group perceived less use of alcohol, tobacco, and marijuana by peers than did students in the control group.
2. Students in the intervention group reported less susceptibility to peer pressure to experiment with cigarettes than did students in the control group.

3. Mothers in the intervention group reported more recent and more frequent communication with their children about how to refuse or avoid drugs than did mothers in the control group.
4. Mothers and fathers in the intervention group reported having more discussions about ways to resist peer pressure to use drugs than did mothers and fathers in the control group.
5. Fathers in the intervention group reported having more motivation to help their children avoid drug use than did fathers in the control group.

The Multicultural Area Health Education Center (MAHEC) project was designed to provide tobacco education and use cessation in the Latino community of East Los Angeles and the San Gabriel Valley in California. The program includes parental education about adolescents' tobacco use. The program is targeted to parents who are not reached by school-based, student-directed smoking education programs and involves classes conducted at local schools, churches, recreation centers, and health clinics.

Specific activities:

1. A tobacco cessation and prevention program with culturally sensitive staff and intervention materials designed for a Latino population
2. An adult smoking education program targeting parents who are not reached by school-based, student-directed smoking education programs to provide information about preventing adolescent use of tobacco
3. Education and prevention component targets parenting groups at schools, clinics, and church groups in the area

Level of Evidence

The research and practice evidence reviewed indicates that it is possible to implement multicomponent prevention programs that combine parental involvement components with other prevention efforts, such as school-based programs:

- There is **medium evidence** that multicomponent school-linked programs with a parental component promote improved parental knowledge about adolescent tobacco use, the development of negative attitudes by parents toward tobacco use, and the mobilization of parents to speak with their children regarding not using tobacco.
- There is **medium evidence** that these programs change students' perceptions regarding tobacco use.

CLUSTER 2: Student Antitobacco Activism

Conceptual Framework

Research demonstrates that multicomponent programs are more effective than single-component interventions for the prevention of tobacco use among adolescents. Therefore, adding prevention components based on student participation to other prevention efforts, such as school-based prevention programs, should reduce adolescent tobacco use. Student antitobacco activism is defined as participation in planned antitobacco student activities that are designed to raise awareness, educate, or prompt social change.

Objectives of Studies Reviewed

- To increase students' knowledge about problems associated with tobacco use
- To promote antitobacco education and to change attitudes of peers
- To teach students positive ways to encourage parents and others to quit smoking
- To create an antitobacco environment
- To teach youth how they can be influenced by tobacco industry advertising campaigns
- To determine predictors of youth participation in antitobacco programs and of tobacco use
- To prompt students to play a prominent role in developing and delivering interesting communications and activities designed for adolescents

Activities of Studies Reviewed

- Writing letters to:
 - Members of a favorite baseball team, asking them not to use or endorse tobacco products
 - A restaurant manager or owner, advocating smoke-free restaurants
 - Film producers and magazine editors, protesting tobacco advertising
- Holding a poster contest
- Creating antitobacco art projects
- Making floats with an antitobacco theme and participating in community parades and festivals
- Writing and singing antitobacco songs
- Revising school policy regarding tobacco use
- Planning and attending a culturally specific youth health day
- Designing and painting an antitobacco mural at a junior high school
- Participating in the production of antitobacco animated videos, debates regarding tobacco issues, and the development of a smoking education curriculum

Basis of Evaluation of Evidence

The analysis of Cluster 2 under Prevention Approach 4, Multicomponent School-Linked Community Approaches, Student Antitobacco Activism, is based on three research studies (Biglan et al. 1994b; Edwards et al. 1992; Elder et al. 1993) and one practice case (Health Is Wealth).

A year-long study by Biglan et al. (1994b) was conducted to evaluate written media campaigns targeting adolescents and parents with messages intended to prevent adolescent tobacco use, using a quasi-experimental design. Adolescents were invited to participate in antitobacco art projects and contests, develop antitobacco posters, write and sing antitobacco songs, participate in antitobacco community events, help revise school tobacco policies, and advocate for smoke-free restaurants.

Findings:

1. Parents and adolescents in the intervention community reported significantly more exposure to antitobacco messages than did parents and adolescents in comparison communities.
2. More intervention parents than control parents reported that not smoking was the most important thing a person could do to remain healthy.
3. Adolescents exposed to the messages had a significantly lower rate of agreement with positive smoking messages than did control students.
4. Adolescents exposed to the antitobacco messages had a significantly higher rate of agreement that tobacco use is a serious societal problem than did control students.

In a cross-sectional evaluation, Edwards et al. (1992) studied 7th grade students who voluntarily participated in an antitobacco activism contest that was a component of a larger research study, Project SHOUT (Students Helping Others Understand Tobacco). The activism components included writing letters to baseball team players and restaurant owners and postcards to magazine editors and a poster contest.

Findings:

1. Student participation in activism correlated positively with high socioeconomic status and living in a suburban or rural location.
2. The highest rate of ever having used tobacco was for white boys with poor grades and friends and parents who used tobacco.
3. This activism program targets low-risk students who may be experimenting but are not smoking regularly.

Elder et al. (1993) conducted an experimental study to evaluate whether a school-based psychosocial tobacco use prevention intervention with booster interventions

would reduce tobacco use among 7th and 8th grade students. The curriculum included student participation in antitobacco community action projects, such as writing letters to tobacco companies, magazine editors, and film producers. This 3-year program included four assessments—baseline measurement at the beginning of the 7th grade and posttest evaluations on completion of grades 7 and 8.

Findings:

1. As measured at the end of the 3-year study period, the prevalence of tobacco use in the previous month was 23 percent for the control group and 14 percent for the intervention group.
2. The prevalence of smoking in the previous month was 20 percent for the control group and 13 percent for the intervention group.
3. The prevalence of smokeless tobacco use in the previous month was 5 percent for the control group and 3 percent for the intervention group.

The Health Is Wealth prevention project of Asian Health Services in Oakland, California, was designed to provide comprehensive tobacco education, use prevention, and use cessation services in the diverse Asian and Pacific Islander communities in Alameda County, California.

Specific activities:

1. Four hundred Asian and Pacific Islander youth participated in various community activities.
2. Youth participated in the development of a smoking education curriculum.
3. Youth planned for and attended an Asian Youth Health Day, and four youth worked with a muralist to design and paint an antitobacco mural at a high school.

Level of Evidence

The research and practice evidence reviewed indicates that it is possible to implement prevention programs that involve student activism:

- There is **medium evidence** that students can be mobilized to participate in antitobacco activism within schools and the community.
- There is **medium evidence** that prevention efforts that include antitobacco activism are effective in improving adolescents' knowledge about tobacco and promoting negative attitudes regarding tobacco use.
- There is **suggestive but insufficient evidence** that tobacco prevention efforts that include youth participation in antitobacco activism are effective in preventing adolescents' tobacco use, because few studies have assessed this outcome.

CLUSTER 3: *Media Interventions*

Conceptual Framework

Research demonstrates that multicomponent programs are more effective than single-component interventions for the prevention of tobacco use among adolescents. Therefore, adding media-based prevention components to other prevention efforts, such as school-based prevention programs, should reduce tobacco use by adolescents.

Objectives of Studies Reviewed

- To disseminate information about the hazards of tobacco use and the use of marketing techniques by the tobacco industry
- To counteract the influence of tobacco industry media campaigns
- To provide public recognition of antitobacco program implementors and participating students
- To assess the effects of a modular approach with written media campaigns directed toward adolescents and their parents
- To increase negative parental attitudes regarding tobacco use by adolescents
- To provide adolescents with knowledge and skills to resist peer, family, and media influence to use tobacco
- To determine the ability of media-based intervention to enhance the effects of a school-based prevention program

Activities of Studies Reviewed

- Mass media events and programs, such as press conferences
- Television-based 5-minute smoking prevention segments coordinated with classroom curricula
- Curricula and other written information for students, teachers, and parents
- Mass media antitobacco advertisements and public service announcements
- News clips, commercials, talk shows, and articles

Basis of Evaluation of Evidence

The analysis of Cluster 3 under Prevention Approach 4, Multicomponent School-Linked Community Approaches, The Media, is based on four research studies (Biglan et al. 1994b; Flay et al. 1987; Flynn et al. 1992, 1994; Pentz et al. 1989a, 1989b).

A year-long study by Biglan et al. (1994b) utilized a quasi-experimental design. Targeted toward adolescents and parents, it was conducted to evaluate written media campaigns with messages intended to prevent tobacco use by adolescents. Middle and high school students were invited to participate in a written media campaign to influence young people not to use tobacco. Parents of middle school students were

invited to participate in developing and executing written media messages to influence parents to talk to their children about not using tobacco.

Findings:

1. Significantly more parents in intervention than in control communities talked to their children about not using tobacco.
2. More parents in intervention than in control communities stated that they had explicitly told their children they did not want them to use tobacco.
3. The intervention had no significant effect on the adolescents' talking with their parents about smoking or on adolescents' intention to smoke.

A study by Flay et al. (1987) had a quasi-experimental design and was developed to determine the effectiveness of a school-based smoking prevention intervention for 7th grade students by examining the effects of its school-wide implementation, its coordination with television programming, and encouragement of parental participation on students' participation and on their tobacco use. A television station provided schools with prevention curricula for teachers and peer leaders. They provided homework booklets for students and parents. The television station aired 5-minute smoking prevention segments each weekday evening during the same week that the classroom curriculum was implemented. The study included student assessments at baseline and at 2 months, 1 year, and 2 years after the intervention.

Findings:

1. Significantly more students in the intervention group than in the control group had watched at least one television prevention segment.
2. Seventy-seven percent of the students who viewed the segments had persuaded others to view them and/or to participate in other program-related activities.
3. A significant association was found between the number of segments viewed by an intervention student and lifetime cigarette use: the more segments viewed, the lower the increase in lifetime cigarette use.

Flynn et al. (1992) conducted a study to determine whether a combination of mass media and school-based cigarette use prevention efforts was more effective in reducing smoking among adolescents than school-based prevention efforts alone. A 1994 study by Flynn et al. was a 2-year follow-up. Both studies used quasi-experimental designs.

Findings:

1. There was a consistent trend toward less smoking in the intervention group, with significant differences in the final 2 years.
2. The impact of the interventions on the targeted mediating variables was similar for each measure.

3. In years 2 through 5, the intervention group reported significantly more negative attitudes toward tobacco use.

Pentz et al. (1989a, 1989b) sought to measure the effectiveness of a school- and community-based program intended to counteract social influences to use cigarettes, alcohol, and marijuana. The study had a quasi-experimental design. The intervention comprised 39 mass-media events and programs as well as news clips, commercials, talk shows, press conferences, and articles. Consultants provided assistance in the development of scripts and program content as well as holding a prevention overview meeting with the nine major television station managers in the Kansas City area.

Findings:

At the time of the 2-year follow-up, on the basis of the school of origin, student smoking in intervention schools had increased 9.1, 9.1, and 6.8 percent for monthly, weekly, and daily periods, respectively. Student smoking rates in control schools had increased 15.4, 13.8, and 9.8 percent for monthly, weekly, and daily measurement periods, respectively. Thus, the overall rate of increase in smoking prevalence for control schools was approximately 1.5 times the rate of increase among intervention schools.

Level of Evidence
The research evidence reviewed indicates that it is possible to develop adolescent tobacco use prevention programs utilizing media components in combination with other prevention efforts (e.g., school-based programs).
There is medium evidence that exposure to media-based antitobacco interventions, in concert with school-based tobacco education, can change students' knowledge, attitudes, and beliefs about tobacco use and marketing.
There is medium evidence suggesting that multicomponent prevention programs that include media-based interventions are effective in preventing tobacco use by adolescents.

Lessons Learned From Evidence Reviewed

- Programs designed to enhance the effectiveness of school-based curricula result in increased family and student attention to antitobacco messages. However, there is limited evidence that these programs reduce tobacco use among youth.
- The effects of a fully implemented school- and community-based intervention (including parental involvement) to reduce tobacco use by adolescents as

part of a broader substance abuse prevention strategy may be limited by the community's view of tobacco use as a minor issue in relation to other forms of substance abuse and the likelihood that addressing adolescent tobacco use will not be considered a priority by the community.

- The effectiveness of multicomponent prevention programs may be multiplicative, that is, the net effect of a program may be greater than the sum of the effects of all its components. The ways in which prevention program components interact with each other and their effects on each other are largely unknown. As a result, it may not be feasible to assess the contribution of each component.
- Students who voluntarily participate in school-based antitobacco activism projects may already be at low risk for using tobacco.

Suggestions for Future Research

- There is a need to evaluate the effectiveness of multicomponent media and school-based programs in communities with sizeable ethnic and cultural populations.
- Further research is needed to determine the value of a modular approach to conducting media campaigns in community interventions.
- Community antitobacco activism may have an important role in promoting antitobacco attitudes and in counteracting messages from the tobacco industry. Further, antitobacco activism may help to support other elements of a multicomponent prevention program. However, the value of antitobacco activism as an approach requires further study.
- Many prevention practitioners support peer activism as an integral component of a comprehensive prevention strategy. Several States have a Teen Institute for substance abuse prevention, and numerous community activities involve youth as antitobacco activists. Additional information is needed about the tobacco use of adolescents who volunteer to participate in antitobacco activism.
- The ability of parents to influence the substance use choices of their children is strongly suggested by practice evidence and, to a lesser degree, by research. However, there are barriers to the successful implementation of these influences, including parental substance use and addiction, tobacco industry messages, and the selection of user-friendly mediums for the intended messages. Additional research should focus on techniques for engaging parents in the antitobacco crusade, including smoking cessation opportunities for parents who smoke.
- Research suggests that in situations involving a required class assignment for which there are contingencies for completion, studies using parental self-reporting indicate that parents talk to their children about not using tobacco.

However, under these circumstances, children's self-reports provide less evidence that their parents talk to them about not smoking. In other words, in these situations, parents perceive that they talk to their children about not using tobacco, but their children do not necessarily share that perception. Additional research is required to determine whether school-based interventions with parent-child components are effective, and if so, how best to implement them.

Prevention Approach 5: *Tobacco-Free Environment Policies*

Intended Measurable Outcome

To create environments that do not expose youth to the use and possession of tobacco

Conceptual Framework

Research demonstrates that tobacco use and exposure to secondhand tobacco smoke are threats to health. Therefore, policies restricting the use of tobacco in environments such as schools should reduce adolescents' exposure to tobacco and places where they can use tobacco and thus reduce the health risks associated with tobacco use and secondhand smoke. The Goals 2000: Pro-Children Act of 1994 (P.L. 103-227) established a nonsmoking policy at sites housing such children's services as health care, day care, education, or library services. The studies evaluated in this section preceded the enactment of this Federal law. Nevertheless, the following studies provide useful information regarding the development and implementation of policies that restrict tobacco use.

Objectives of Studies Reviewed

- To develop and implement policies restricting or prohibiting tobacco use by adolescents and adults in recreational, school, and workplace settings
- To evaluate the effectiveness of policies restricting tobacco use on rates of adolescent smoking
- To provide information and services that will assist individuals in developing and complying with policies restricting tobacco use

Activities of Studies Reviewed

- Reviewing existing laws and compliance with laws restricting tobacco use in certain settings
- Reviewing the effects of school antismoking policies on adolescent smoking
- Providing technical assistance and guidance designed to develop and implement tobacco-free policies and environments

- Providing education and information regarding existing laws restricting tobacco use in certain settings

Basis of Evaluation of Evidence

The analysis of the effectiveness of tobacco-free environment policies is based on two research studies (Nelson et al. 1993; Pentz et al. 1989c) and one practice case (the Colorado Tobacco-Free Schools and Communities Project).

A study by Nelson et al. (1993) was a cross-sectional national survey of more than 2,000 directors of licensed child day care centers and was designed to determine the prevalence of employee smoking restriction policies, the rate of compliance with State and local employee smoking regulations and State clean-indoor-air laws, and the extent of exposure to environmental tobacco smoke in these settings.

Findings:

1. Forty States regulate smoking in child day care centers.
2. More than 99 percent of the centers had an employee smoking policy that complied with applicable State or local laws.
3. Seventy-two percent of the centers had a written employee smoking restriction policy.
4. Fifty-five percent of the centers had an employee policy prohibiting smoking indoors and outdoors.
5. Twenty-six percent of the centers had an employee policy restricting indoor smoking only.

A cross-sectional study by Pentz et al. (1989c) was conducted to evaluate the effects of antismoking school policies on adolescent smoking through separate surveys for students and school staff. The student survey concerned the amount and prevalence of cigarette smoking, related attitudes and behaviors, and demographic characteristics of more than 4,800 students in 23 California schools. Surveys of school clerks and of science and health education teachers and principals concerned staff and student smoking policies.

Findings:

1. Schools with all four policy components (comprehensiveness, prevention, cessation, and punishment) had a lower smoking prevalence and a lower mean amount of smoking per individual than did schools with fewer components.
2. A high emphasis on prevention and a low emphasis on cessation were associated with a lower amount of smoking in the past week and in the past 24 hours.
3. A high emphasis on prevention correlated with a lower weekly smoking prevalence and a decrease in past-year smoking violations.

4. Neither the provision for punishment nor its severity for smoking had an effect on reported smoking rates.

The Colorado Tobacco-Free Schools and Communities Project was established in 1988 to help Colorado school districts establish policies to prohibit the use of any tobacco products in school, on school grounds, and at school-sponsored activities by students, staff, or visitors. These efforts included workshops, organizations, and written information.

Specific activities:

1. A large assortment of materials were developed to help schools develop no-tobacco policies.
2. By 1993, 48 percent of the State's school districts had a comprehensive no-tobacco policy, compared with 5 percent before the project.
3. In 1992, only 9 percent of the school districts had designated smoking areas for teachers and staff, compared with 64 percent in 1988.
4. In 1994, State legislation was passed requiring all public kindergarten through 12, Head Start, and nursery schools to be tobacco free.

Level of Evidence

The research and practice evidence reviewed indicates that it is possible to implement policies restricting tobacco use in schools and child day care centers.

There is medium evidence that it is possible to persuade organizations to develop policies restricting tobacco use, possession, and exposure for adolescents and adults. Because changes in policy regarding smoking are relatively recent, however, there is insufficient evidence to determine the effect of these changes on adolescents' tobacco use.

Lessons Learned From Evidence Reviewed

- Smoking regulations can be established through a variety of mechanisms, including State and local laws and policies at businesses, schools, and child care centers. A comprehensive policy can decrease prevalence, especially when the emphasis is on prevention and cessation.
- Harsh penalties for the possession of tobacco products by minors, such as suspension from school, may be ineffective interventions for enhancing the enforcement of antismoking regulations or for preventing or decreasing adolescent tobacco use. Programs that do not emphasize punitive penalties, especially those that provide prevention or cessation services such as tobacco education courses, tobacco cessation programs, or diversion alternatives, may be most effective.

Suggestions for Future Research

- Policy changes are part of many multicomponent tobacco prevention efforts. As a result, it can be difficult to determine what effect nonsmoking policies have on the prevalence of adolescent tobacco use. Therefore, research is recommended to examine the effect of policies regulating tobacco use on the prevalence of adolescent tobacco use.
- Furthermore, researchers should study the effects of the severity of penalties on adolescent smoking, as well as the effects of alternative penalties and approaches such as diversion.
- Researchers should determine the extent of compliance with existing smoking policies in all environments.

Prevention Approach 6: *Restriction of Advertising and Promotion*

Intended Measurable Outcome

To decrease exposure of children to tobacco promotion and pro-tobacco influences

Conceptual Framework

Research demonstrates that tobacco company sales promotions are reaching adolescents and that may put them at greater risk for smoking. Therefore, the reduction of youth exposure to particular types of marketing or to the quantity of marketing should reduce adolescent smoking.

Objectives of Studies Reviewed

To eliminate tobacco industry sponsorship of sporting and cultural events and to provide alternative sponsorship

Activities of Studies Reviewed

Providing media advocacy and the threat of adverse publicity through protesting of events sponsored by the tobacco industry:

- Assisting event promoters with obtaining alternative funding
- Developing policies to ban tobacco industry sponsorship of sporting and cultural events
- Promoting tobacco-free events
- Developing tobacco-free messages for sports education curricula
- Advertising tobacco-free events
- Disseminating tobacco-free messages through promotional materials

Basis of Evaluation of Evidence

The analysis of the effectiveness of advertising and promotion restriction interventions is based on four prevention practice cases (the Coalition for a Tobacco-Free Monterey County [Monterey Blues Festival], the Ski Tobacco-Free Project, the Tobacco-Free Soccer League Initiative, and the Coalition Against Uptown Cigarettes).

The Coalition for a Tobacco-Free Monterey County announced through a press conference that it would protest the then-named Benson and Hedges Monterey Blues Festival because the festival received tobacco industry funds. The announcement was intended to influence the festival's Board of Directors to seek alternative sponsorship. Completely eliminating tobacco sponsorship from this event took approximately 1 year.

Findings:

1. Adverse publicity through the press conference and the threat of protesting the festival led to negotiations that resulted in the festival producer's agreement that tobacco sponsorship would no longer be accepted if the protest were canceled.
2. The festival now has a written policy prohibiting acceptance of money from the tobacco industry.
3. Alternative funding has been sought.

The Ski Tobacco-Free Project (STFP), an activity of the Kirkwood Ski Education Foundation, was designed to counter tobacco industry promotion of skiing events by linking strong antitobacco messages with athletic excellence and to provide alternative sponsorship for ski events, collaborate with the U.S. Ski Association and the Kirkwood Ski Resort's marketing department in the development of an antitobacco campaign, implement an educational program for youth and their parents, and work with statewide media campaigns in the promotion of the project in newspapers and sports-related magazines. STFP has been funded since 1992. When the funding period ends, Kirkwood will sustain the program activities.

Findings:

1. STFP influenced the Kirkwood Ski Resort to develop a tougher tobacco control policy.
2. The Kirkwood Ski Resort sought out and now receives support from ski equipment manufacturers as an alternative to tobacco industry sponsorship of ski events.
3. All amateur skiers in Northern California have been exposed to tobacco-free messages through the sponsorship of local ski events.
4. The U.S. Ski Association has implemented a policy at the national level that bans tobacco industry sponsorship of any Association events.

The Tobacco-Free Soccer League Initiative was designed to help youth soccer leagues enact no-smoking policies, to educate youth soccer players about the harmful effects of tobacco, and to provide cessation referrals to coaches, parents, players, and other adult leaders. The initiative was funded in 1992. (No information was available on the length of the funding period.)

Findings:

1. Three California youth soccer leagues with more than 5,000 players have enacted no-smoking policies.
2. The tobacco-free soccer message has reached more than 4,000 people who attend the leagues' annual soccer shows.
3. The project has received numerous requests from other leagues for technical assistance in establishing no-smoking policies.

The Coalition Against Uptown Cigarettes was a group of approximately 125 individuals representing 40 organizations, led by prominent Philadelphia African Americans, organized to protest the introduction of the Uptown brand of cigarettes. R.J. Reynolds had planned to test market the mentholated cigarette in Philadelphia among African Americans. In a 30-day campaign, the coalition focused on media relations and community mobilization with the goal of getting African American smokers to refuse to participate in the planned 6-month market test. After R.J. Reynolds decided not to promote the new cigarette, the coalition became a permanent entity, the Uptown Coalition for Tobacco Control and Public Health.

Findings:

1. R.J. Reynolds decided not to test market Uptown cigarettes in Philadelphia.
2. R.J. Reynolds decided not to produce Uptown cigarettes at all.
3. The ad hoc Coalition Against Uptown Cigarettes was transformed into a permanent organization.

Level of Evidence

The practice evidence reviewed indicates that it is possible to implement efforts designed to eliminate tobacco sponsorship of events, to block tobacco product promotion, and to provide nontobacco industry sponsorship of events.

- There is **strong evidence** that such efforts can establish policies that ban tobacco industry sponsorship of social and cultural events and influence product promotion practices.
- There is **medium evidence** that policies banning tobacco industry promotion of activities such as music festivals and sporting events will reduce adolescents' exposure to tobacco industry messages.

Lessons Learned From Evidence Reviewed

- Alternative funding is an essential component for interventions that are designed to prohibit tobacco industry sponsorship of an event. In particular, practitioners and community groups can develop lists of potential alternative sponsors for event promoters and help promoters seek alternative sponsorship. For example, local businesses that are not currently involved in sponsoring the event can be approached.

The establishment of working relationships with local businesses can lead them to view sponsorship of events as part of their civic responsibility and as part of a community partnership process. In addition, current sponsors may be willing to increase their level of sponsorship to cover the loss of tobacco industry sponsorship. They may also recommend other potential sponsors, perhaps some of their business partners.

Suggestions for Future Research

Although advertising restriction interventions are promising approaches for eliminating sponsorship of events by the tobacco industry, research is needed to answer questions such as the following:

- What conditions and program elements made the interventions successful? Was there a specific combination of elements that made the events successful? Did these interventions result in a decrease in adolescents' tobacco use?
- At tobacco-free events, what specific marketing approaches are successful in linking athletic excellence and tobacco-free sports? What are the possible unintended results of such advertising?
- Who are the key decisionmakers at organizations who should be approached to promote policy changes? Should they be frontline workers, public relations staff, or members of boards of directors?
- What specific content of policies is vital to their implementation?
- What are effective methods of finding alternatives to tobacco funding?
- What are the effects of tobacco-related paraphernalia and tobacco advertising billboards?
- What is the effect of tobacco advertising in magazines that are read by adolescents? How will these effects be influenced by the FDA final rule?



Recommendations for Practice

This section presents the Expert Panel's recommendations, suggestions, and observations regarding the prevention approaches evaluated in the preceding section. Recommendations are given for each of the six prevention approaches as well as for general activities that apply to more than one prevention approach.

Types of Recommendations

The recommendations that follow vary considerably in nature and intent. Some are practical suggestions for the optimal implementation of a particular intervention, whereas others suggest techniques and precautions to avoid problems. A few are practical observations as to what to expect during certain prevention activities. Still others interpret research findings or illustrate the practical context of prevention efforts. Some recommendations reflect expert opinions of the panel members, such as the assumptions and hypotheses behind certain prevention activities. Many represent "best practices" among prevention experts.

Some recommendations relate to the design and implementation of prevention interventions, a comprehensive discussion of which is presented in Chapter 4.

Basis of Recommendations

These recommendations are based on the research and practice evidence reviewed in the Analysis of Evidence section as well as other evidence not described there and the professional experience and opinions of the Expert Panel members. This section is illustrative of information transfer from prevention research and practice experts to prevention decisionmakers who need practical information, such as State and local prevention authorities, prevention practitioners and researchers, and members of community prevention organizations. Many of the recommendations are derived from the experience of Expert Panel members during their involvement in research or practice activities not described in this chapter and have not been evaluated in research studies.

Recommendations for Prevention Approach 1: Economic Interventions

The Expert Panels' recommendations regarding economic interventions focus on allocation of revenues, policy, and media efforts.

- Laws creating tobacco tax increases can include an allocation of resulting revenues for community health education, tobacco use prevention and cessation programs for all ages, and tobacco-related prevention and disease research.
- Experience suggests that there will be strong lobbying from the tobacco industry to decrease the amount of suggested tobacco taxes. As a result, some prevention groups have lobbied for, and others may lobby for, the highest tax possible.
- Experience also suggests that there will be aggressive advertising by the tobacco industry against tobacco tax increases. An aggressive mass media campaign should therefore be an integral component of prevention efforts, with sustained and intense media interaction, providing the media with such information as the names of community prevention partners and announcements of

newsworthy activities. Results of purchase attempts by adolescents locally and regionally can be provided for media coverage. In addition, the media can be given information about tobacco industry efforts, strengthened through the use of scientific data or quotes from authoritative organizations such as the American Cancer Society.

Recommendations for Prevention Approach 2: Counteradvertising

The Expert Panels' recommendations regarding counteradvertising focus on youth participation, media messages, and sustained efforts:

- Adolescents can help adults understand the beliefs, attitudes, perspectives, and opinions of young people. They can be motivated to participate in efforts to prevent tobacco use by adolescents. Therefore, youth can have a valuable role in the planning and development of counteradvertising programs.
- Providing too much information at one time can weaken a mass media campaign. Media campaigns should have simple and focused messages that can be understood by the target audience.
- Adolescents can play an important role in the formative evaluation of potential prevention approaches. Media approaches, especially counteradvertising, should be evaluated by adolescents prior to implementation, such as through focus groups and surveys. Indeed, one study noted that the goals and aims of one media-based prevention effort were not understood by the youths at whom it was directed.
- When possible, mass media campaigns should include television, radio, billboards, and print media. Radio, however, may be the most cost-effective approach.
- The studies by Glantz (1993) and Popham et al. (1994), of the effect of a 1990–1991 tobacco education media campaign conducted by the California Department of Health Services suggest that a statewide multimedia antismoking campaign has a role in decreasing cigarette use. Proposition 99 included a 25-cent cigarette tax increase and a media campaign involving paid advertising to promote media messages; a full range of communication approaches, including public and community relations; and mass media messages targeting the general public and cultural groups such as African Americans, Hispanics, Vietnamese, Koreans, Japanese, and Chinese. The enactment of Proposition 99 resulted in a tripling of the rate at which cigarette consumption had been falling. Students demonstrated an increase in awareness of the media campaign, a decrease in the percentage who were smokers, an increase in the proportion of smokers intending to quit, and an increase in health-enhancing attitudes. Campaign-exposed students demonstrated stronger health-enhancing attitudes than did their nonexposed counterparts. Since the media

campaign was suspended as a result of efforts by the tobacco industry, such studies demonstrate the need to continue to counter tobacco industry influence.

- Because tobacco use norms are changing rapidly and new generations of adolescents will view tobacco use differently, media approaches should constantly be modified and tailored to encourage antitobacco attitudes and nontobacco use as the norm among new generations of youth.

Recommendations for Prevention Approach 3: Retailer-Directed Interventions

The Expert Panels' recommendations regarding retailer-directed interventions emphasize community readiness for change and improving the effectiveness of prevention efforts:

- It is important to document the magnitude of the problem of youth access to tobacco in one's community. Providing profiles and descriptions of the local community increases awareness of adolescent tobacco use problems. Also, such documentation can stimulate community interest in taking action.
- Communities differ in their readiness for prevention efforts, especially those that involve community organizing. Some communities seem primed for establishing comprehensive prevention efforts, whereas others do not recognize tobacco use by adolescents as a major concern. Thus, analysis of community readiness must precede attempts to engage reluctant communities in prevention efforts.

Those who assess community readiness should also assess the readiness of organizations that apply as lead agencies for prevention projects. In some communities, lead agencies, such as hospitals, schools, and substance abuse agencies, may be reluctant to engage in controversial activities such as compliance checks, even when their contract mandates them. Community readiness for prevention efforts can be increased by first obtaining the support of community leaders for education efforts. Obtaining local community support helps to set the stage for more aggressive action, if necessary.

- Adolescents' access to tobacco is not limited to direct purchase at stores, but includes purchase, receipt, or theft from adults and peers, theft from stores, and receipt of free samples in cigarette giveaways. Therefore, researchers and practitioners should consider means of access other than stores.
- Research and experience suggest that prevention issues and messages should be appropriate for the community. Local and small media therefore should be primary components of all prevention efforts. These can include local print, radio, and television media, when available, as well as newsletters of agencies and organizations.

- Research and experience also demonstrate that adolescents have nearly unrestricted access to tobacco vending machines, despite laws prohibiting tobacco sales to minors. Similarly, research and experience demonstrate that locking devices on tobacco vending machines are ineffective in practice because compliance with the operating procedure is low. Although the FDA final rule includes restrictions on vending machines, communities can apply for waivers to develop even more restrictive laws.
- Prevention efforts should be part of a sustained process, not discrete and isolated events. In addition, it is important to show that the prevention process is effective. Therefore, interventions such as purchase attempts by adolescents, should be regularly scheduled and their results heavily publicized. Interventions should be continually assessed and improved. The community partnership should be continually strengthened with new members, and community education should be ongoing.
- One aspect of an effective approach for enforcing laws prohibiting tobacco sales to minors is the enactment and enforcement of licensure of retail tobacco outlets. In this way, only stores with tobacco licenses can sell tobacco. Furthermore, violation of the tobacco access laws can result in suspension or revocation of the tobacco license. This creates an incentive for the merchant to comply with the law. Some States use their alcohol licensing law as the model for their tobacco licensing law. However, the wording of the alcohol licensing law should be carefully examined. The law may contain language that hampers enforcement (e.g., "knowingly sell") or ban the use of minors for compliance checks.
- Even where there is a comprehensive prevention program, violators of the tobacco access laws are often not disciplined, fined, or sentenced. Judges report that they are reluctant to impose the legal consequences because they view the crimes as minor and do not want the merchants to have criminal records. This is especially true in small cities. Therefore, because the judicial system is an important link in a comprehensive prevention program, judges should be approached and included as members of community partnerships. This can be particularly important when law enforcement partners are active. The police may become reluctant to pursue further efforts if they see that judges are throwing the cases out of court.
- Prevention programs should include incentives to clerks and merchants for not selling tobacco to adolescents, asking for proof of age, and obeying other aspects of the law. Such incentives might include local media publicity and rewards, such as free dinners or products donated by local restaurants and merchants.

Recommendations for Prevention Approach 4: Multicomponent School-Linked Community Approaches

The Expert Panels' recommendations regarding multicomponent school-linked community approaches focus on improving the impact of mass media interventions:

- The impact of mass media interventions on adolescents is more likely when the interventions:
 - Are linked with other program channels, such as schools, parent groups, and newsletters
 - Share common objectives with school programs
 - Are of sufficient duration
 - Use multiple channels
 - Are presented where and when adolescents report their highest use of media
 - Use a variety of message styles
 - Appeal to age- and gender-specific motives that have been determined through formative research
 - Use messages portraying perceived social support with age- and gender-relevant models providing appropriate behavioral skills, alternatives, and reinforcement
 - Include media-based antitobacco information that can reach students within schools and communities. Programs that use media approaches should be prepared to measure the extent to which the target audience is exposed to the message.
- Visual rather than written intervention materials may be more appropriate and effective for groups with low literacy rates, especially adult Asian and Pacific Islander immigrants, refugees, and certain high-risk youth.

Recommendations for Prevention Approach 5: Tobacco-Free Environment Policies

The Expert Panels' recommendations regarding tobacco-free environmental policies focus on the target of policies and community support:

- Policies restricting smoking that are selectively applied may be ineffective and may send a mixed message. For instance, a school-based policy that enforces the legal ban on tobacco use by students, but allows the legal use by teachers and staff, sends the message that tobacco use among adults is acceptable. Therefore, a smoking policy should be designed for all groups across the board. For instance, one policy should be enforced for students, teachers, staff, and visitors at all school-related functions, not merely on school grounds.
- When a nonsmoking policy is established without local support, compliance and enforcement may be problematic. Therefore, efforts to establish a non-

smoking policy should utilize a grassroots approach involving the community and youth in its planning, development, and implementation. Nearly all States are funded through either the National Cancer Institute's ASSIST (American Stop Smoking Intervention Study) program or the Centers for Disease Control and Prevention's IMPACT (Initiatives to Mobilize for the Prevention and Control of Tobacco Use) program to establish and implement such grassroots approaches.

- Prior to taking steps to establish tobacco-free environmental policies, it is recommended to research and identify policies that already exist, such as the Goals 2000: Pro-Children Act of 1994 (P.L. 103-227), which established a nonsmoking policy at sites housing such children's services as health care, day care, education, or library services.

Recommendations for Prevention Approach 6: Restriction of Advertising and Promotion

The Expert Panels' recommendations regarding advertising and promotion restriction interventions focus on community partnerships and integration of messages:

- It is recommended that practitioners and even community groups not attempt to conduct these types of interventions in isolation. Rather, they should work in close partnership with community leaders, grassroots organizations, and members of the community. Aggressive attempts should be made to obtain acceptance of the interventions by community members and policymakers. Perhaps the most serious mistake is appearing to dictate how things will be done in the community. Cooperation on all levels is necessary.
- An important lesson learned from multicomponent prevention programs is that the components of such a program should be complementary elements with the same overall goal and philosophy. When no-tobacco or antitobacco messages are incorporated into event activities, they should be integrated with existing activities, messages, and promotions. They should not be merely add-on messages but should support other activities.
- The adaptation of these promising interventions to other social settings depends on a number of variables, such as the readiness of the community for such activities, the geographic area, and social and cultural support for prevention of tobacco use by adolescents.

Community-Based Approaches: General Recommendations

Most of the panel's recommendations regarding prevention intervention research and practice are specific for a prevention approach. Several recommendations, however, are applicable to most community-based interventions designed to prevent tobacco use by adolescents.

Use Integrated Multicomponent Interventions. Community-wide antitobacco campaigns can promote antitobacco attitudes and behaviors among adolescents and their parents and can significantly reduce the rate of tobacco use by adolescents, especially if multiple prevention components are used. Indeed, research demonstrates that multicomponent community interventions are more effective than single interventions. On the practice side, it is recommended that practitioners utilize multicomponent interventions that involve the community and its organizations and agencies, its schools, and the media. Moreover, the elements of a multicomponent intervention should be integrated and should support and enhance each other. The scientific method emphasizes the importance of identifying intervention components that produce significant positive effects. On the research side, therefore, it is recommended that researchers investigate the effectiveness of individual intervention components.

Link Programs With Existing Activities. Communication should be established with programs and activities that are currently active with youth, especially high-risk youth. It is also important to identify individuals and organizations that are involved in adolescent health risk reduction, especially those related to substance use, as well as substance abuse prevention programs for adults. Similarly, linkages should be established with community social, cultural, and religious agencies and institutions, especially those that provide social services to the target audience or its family members.

Communication and collaboration with such community partners has several benefits: prevention activities become part of an existing network rather than existing in isolation, the likelihood of local acceptance and support of the prevention efforts is increased, the likelihood of duplication of effort and services is decreased, and community partners can often identify potential problems and recommend strategies for avoiding or solving them.

Involve Adolescents. Although they may not have as clear an understanding as adults of the causes and effects of different variables, adolescents have a distinctive understanding of the beliefs, attitudes, perspectives, and opinions of their peers. For this reason, adolescents can be particularly valuable in the design, planning, and implementation of intervention programs and research through vehicles such as focus groups, task forces, surveys, and interviews. Adolescents have valuable roles in many areas of intervention, such as merchant education, community education, peer education, curriculum development, and tobacco-free events. As a bonus, adolescent involvement in community-based and school-based prevention efforts is a tobacco-free alternative activity for them.

Adolescent involvement can be encouraged and supported by creating an open and supportive climate. Tobacco use intervention planners should collaborate with organizations and individuals that specialize in working with youth. Such specialized experience and knowledge should be incorporated into prevention intervention

activities. In addition, these organizations have access to a wide range of youth, from accomplished youth leaders to youth considered to be at high risk for substance abuse.

Seek Sustained, Comprehensive Community Support. Both researchers and practitioners should make vigorous efforts to obtain support from the community. These efforts should not be limited to the early phases of an intervention, but should evolve into an ongoing process. Attempts should be made both to retain existing support and to continually seek new support. The support should be comprehensive and come from all vital community localities, such as prominent individuals, community leaders, representatives of the community's ethnic groups, community businesses, merchants, community organizations, students, student organizations, government agencies, and social associations. Support should be sought from government agencies, such as the mayor's office or its equivalent, social service agencies, the police, the judicial system, and the school system. Emphasis should be placed on an aggressive, ongoing partnership of community members.

Use Existing Materials. There exists a wealth of effective printed and audiovisual educational prevention materials regarding adolescents' substance use, much of it in the public domain. When such materials are available and appropriate for the target audience, using them can save time and money. Similarly, modifying existing prevention materials to more effectively meet the needs of a target audience is much less expensive than developing them from scratch. Existing educational materials that are appropriate for one audience may need to be revised to ensure their cultural sensitivity and appropriateness for another. Some programs expand or modify elements of an existing multielement educational program. When such materials include specific identifiers of the community, setting, and sponsors, the sense of partnership and ownership can be enhanced.

Educate Merchants, Law Enforcement Officials, and Judges. For community education components in youth access interventions, prevention efforts should include retail merchants, policy- and decisionmakers, the police, and the judicial system. Retail merchant education should include written materials for retail store owners and clerks and the regional executives of retail store chains. Ideally, these materials should be delivered in person by teams of representatives from the police department, adolescents, and others in the community. Prevention practitioners should aggressively pursue partnerships with the police and judges. Police in some areas are reluctant to enforce adolescent tobacco sales laws and may need persuasion. Similarly, judges are often reluctant to impose consequences on merchants for violating tobacco sales laws. With perseverance and by providing targeted information and education, however, the police and judges can become ardent supporters of prevention efforts.

Gather Data at All Stages. Prevention interventions and community efforts can easily be structured to generate data that are of value to researchers, prevention practitioners, State and local government officials, and the general public. Data collection is easiest and most productive when it is incorporated in the intervention design, not added as an afterthought.

Experience has shown that support from the community, government, and the media is made possible or enhanced when efforts are made to document the extent of the problem before an intervention is undertaken. For example, a city council may not be compelled to ban tobacco sales on city property and at city functions until it is proven that a problem exists. Conducting a baseline survey and providing this information to the community through forums, to the city council through presentations, and to the media through press conferences may increase the likelihood of support for such a ban.

Periodic surveys should be conducted to evaluate the effectiveness of the intervention. Ideally, such data collection should follow changes in the intervention. The collection of data can be an important aspect of continued community prevention activities. For example, surveys based on purchase attempts by adolescents in convenience stores can identify vendors that are complying with local laws. When such vendors are identified, they can be rewarded in several ways, such as publishing a brief article about them in a local paper, giving them gift certificates from other local merchants, or presenting them with awards at community events.

When limited funding for quantitative and qualitative analyses is a problem, it can be useful to enlist the help of staff at universities who may be able to recommend graduate researchers for assistance. However, since analyses conducted through a university will be time intensive, ample time should be allotted for these processes during the planning stages.

Traditionally, program evaluation involves the use of surveys and questionnaires that assume a certain level of literacy. They also often assume a certain level of English comprehension. Program evaluation techniques should therefore be developed that are appropriate for populations who speak little or no English and for those who have a low literacy level.

Prepare for Opposition. It is a fact of life that special interest groups are opposed to many tobacco prevention interventions. These groups, such as members of the tobacco industry, employ impressive legal, political, and media tactics. Community leaders should learn about oppositional strategies and then inform their staff and volunteers. Pro-smoking, mass media efforts by the tobacco industry are often tailored to regional conditions and interests. Therefore, communities should also consider their regional characteristics in developing counter strategies.

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The Tobacco-Free Soccer League Initiative Project of the Health Education Council: Sacramento, California.

The Tobacco-Free Youth Project of the COMMIT to a Healthier Raleigh Project: Raleigh, North Carolina.

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To curb teenage smoking, nurture children in their earliest years

T. BERRY BRAZELTON

The Senate began debate this week on bipartisan tobacco legislation, and both Republicans and Democrats agree that the number one goal of this bill is to reduce teenage smoking. Rightfully, so. After all, millions of young lives hang in the balance.

There has already been much discussion about restricting tobacco advertising and increasing the price of cigarettes to curb teen smoking. But before the debate is over Congress should consider the underlying realities that make children vulnerable to the lure of tobacco - and invest some of the resources in the essential early-childhood development and care that can really help us save children from the dangers of smoking.

This investment in child development is a smart public health strategy based on sound science.

Recent research reminds us of the crucial importance of the first three years of life. It is during these early years that the vast majority of brain growth and devel-

opment occurs. And by shaping the structure of a baby's brain, those early experiences begin to shape the baby's self image, capacity for altruism, and motivation for learning.

Television and news magazines have carried pictures of the brains of two young children growing up with very different experiences. These pictures are road maps to our nation's future. One picture is of a healthy brain, showing how appropriate early nurturing "wires the circuits" for success. The other picture is of a far less healthy brain, showing the missed connections and lost opportunities resulting from lack of needed early stimulation.

In many ways, this "wiring" of the brain creates the solid foundation on which a child's ability to learn, solve problems, and eventually succeed is carefully constructed. If we wait until adolescence to help our children develop the sense of self that needed to resist the draw of smoking, we will be sorry.

If we want the best for our children, if we want their earliest years to lay the groundwork for a bright and smoke-free future, we must ensure that they receive the nurturing and stimulation they need from the start.

Young children's experiences with early learning help shape the way they feel, think, learn, and behave for the rest of their lives. High-quality child care can help our youngest children enter school ready to learn and develop the life skills they will need to steer clear of unhealthy habits such as smoking, drinking, and drug use.

Every day in America, millions of low-income families face the daunting task of paying for quality child care on limited budgets. This is today's reality for families who have no choice but to work, a reality that leaves far too many children at risk. Low-income parents need support to ensure that their children are safe and well cared for during these formative years. Unfortunately, far too few of them receive the help they need and deserve.

The research is conclusive - early investments have a lifelong impact. And the payoff is healthier children. But research alone will not reduce teen smoking or build healthy futures. This requires action. Congress should remember the research and help us to move this knowledge from paper to practice. Here's how.

Congress should pass strong and bipartisan tobacco legislation that recognizes the important connection be-

tween early learning and reducing teen smoking. And should invest tobacco tax money in expanding and improving the quality of child care. Setting aside a portion of the more than \$500 billion generated by this legislation would make an enormous difference for millions of children.

The Commerce Committee wisely included child care and after-school activities among the priority investments in its investment of tobacco revenue. The president did the same in his budget proposal. The full Senate should now pass the Kerry-Bond amendment to make that reality.

If we want our children to be smart enough to say no to tobacco, then Congress needs to be smart enough to say yes to making child care and after-school programs part of our national strategy for keeping kids healthy and tobacco-free. As a prescription for preventing teen smoking, these programs are just what the doctor ordered.

Dr. T. Berry Brazelton is professor emeritus of pediatrics at Harvard Medical School.

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A20

Wednesday, May 20, 1

EDITORIALS

First, teen smoking . . .

McCain's bill does too much antismoking good to be stopped over some breaks for Big Tobacco.

It's showdown time between an industry that hooks thousands of teen smokers every day and politicians trying to shake their addiction to tobacco-industry money. This week the Senate may pass a public-health breakthrough that could spare millions of Americans from smoking themselves to death.

The Senate's patient leader on tobacco issues, Arizona Republican John McCain, has a plan that would cut smoking by raising the price and by penalizing tobacco companies if they fail to reduce smoking at the entry point: teenagers. His plan's deterrents to smoking are stronger than those in the deal the industry cut with state attorneys general last year. The McCain bill also does more to preserve federal authority to regulate tobacco.

Mr. McCain's chances improved when he toughened some provisions in exchange for President Clinton's support. They agreed that tobacco companies could be penalized up to \$4 billion a year for failing to cut teen smoking sufficiently. And they raised the annual cap on industry liability for damages from \$6.5 billion to \$8 billion.

Perhaps you think the smarmy makers of this lethal product, long-time masters of the stonewall and the bald-faced lie, don't deserve any such leniency. Public-health leaders such

as Dr. C. Everett Koop and David Kessler don't want Congress to grant the industry any immunity.

The heart says, *Amen*. But the head says, *Maybe not*. The McCain plan's potential to do good is so great that antitobacco activists and lawmakers ought to be willing — if it becomes necessary to clinch the deal — to grant some legal protection to this disreputable industry.

For now, though, a Senate vote for zero protection might give its negotiators a stronger hand if and when they sit down to bargain with the Gingrich Gang. The House is where top Republicans are looking to go easy on tobacco companies.

The biggest dispute between the House and the Senate might be how much to raise cigarette taxes. Price is the most important deterrent to teen smoking (and the tax revenues could help fund vital children's programs). Since Republicans want to preen as tax-cutters in their fall campaign to hold the House, many don't have the slightest interest in raising the price of a cigarette pack by the \$1.10 Mr. McCain seeks — let alone the \$1.50 or more that public-health forces are pushing.

But the bigger the price hike, the fewer young people will start a habit that kills. It's time to put public safety above bumper-sticker politics. That means passing the McCain bill — or something stronger.

. . . then, help children

Use new tobacco taxes to boost child-care programs.

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leniency. Public-health leaders such

... then, help children

Use new tobacco taxes to boost child-care programs.

In an average week in America, 13 million children under age 6 are dropped off at a day-care setting. An additional 5 million under age 13 come home from school to an empty house.

Some of those day-care situations are mediocre at best, unsafe at worst. And many of those latchkey children get into unhealthy habits in that unsupervised time.

This worrisome situation will be compounded as limits on welfare eligibility begin to kick in, and millions of parents are nudged into entry-level jobs that leave scant money for good child care.

Congress and President Clinton, who pushed through welfare reform with inadequate attention to the day-care issue, have a new chance to remedy that. They can dedicate a sizable portion of the proceeds from any tobacco settlement to child care, after-school programs and early childhood education.

A tobacco settlement bill spearheaded by Sen. John McCain (R., Ariz.) aims to reduce smoking, particularly among the young — in part through higher tobacco taxes.

Since the tobacco industry for years recruited children to its poisonous products, children should benefit from a significant portion of any new cigarette taxes or other set-

tlement proceeds.

The McCain legislation suggests child care and after-school programs as a possible use for the tobacco proceeds that Congress would ship to the states. But it doesn't specifically earmark any money for child care. President Clinton, who announced a \$20 billion child-care plan in January, was also vague about where to get the money.

Now, two senators — John Kerry (D., Mass.) and Kit Bond (R., Mo.) — have proposed an amendment that would guarantee \$6 billion over five years in new cigarette tax money to child care and after-school programs.

Under the amendment, the money would be targeted at families earning less than 85 percent of a state's median income.

Mr. McCain supports the amendment, and it deserves broader bipartisan support in the Senate.

Better early child care is a ticket to better health and greater school success for many children. A U.S. Department of Health and Human Services study indicates that good after-school programs for teens can discourage the use of tobacco, drugs and alcohol.

Using tobacco settlement proceeds for such programs meshes with the goal of cutting the health toll of smoking and could produce benefits that go far beyond that.

■ To comment briefly on these editorials, call 215-854-5050. The Editorial Board will respond to as many calls as possible.

SYRACUSE HERALD-JOURNAL

"Ignoring party politics and pursuing an independent course, we shall not hesitate to discuss public questions and to support such men and measures as seem best calculated to advance the best interests of the people." ARTHUR JENNINS, Founder, in first issue of Herald, Jan. 13, 1877.

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DEDICATE CHILD-CARE FUNDS

Let tobacco bill do some good

The McCain Tobacco Bill hit the floor of the Senate this week. The time is ripe for passage of a law to lessen the hold that cigarette companies have over young people, to rein in big tobacco lies and to allow governments and individuals to get some recompense for the health and lives ruined by smoking.

But the compromise bill, put forward by Sen. John McCain, R-Ariz., is not perfect. More work is required. The highest amount that could be recovered from tobacco companies annually would be \$8.5 billion. There should be no ceiling — just as there has been no ceiling on the enormous profits made by the tobacco companies for decades. The proposed tax increase of \$1.10 is not nearly enough. Surveys have shown that in order to effect the number of young people who take up smoking, that increase must be at least \$1.50 per pack.

Sen. Ted Kennedy, D-Mass., made that argument on Monday: "According to the University of Illinois' Professor Frank Chaloupka, the nation's leading authority on the impact of higher cigarette prices on teen-age smoking, an increase of \$1.50 a pack would reduce youth smoking by nearly 50 percent." Kennedy estimated that a \$1.10 tax increase would affect only 30 percent of teen smokers.

But whether the tax is \$1.10 or \$1.50 per pack, the next important question is where will that money go. There are good reasons why \$20 billion of it, over the next five years should go into child care. The Child Care and Development Block Grant program, put in place during the Bush administration, does not have enough of a budget to fulfill the needs of working families — it wouldn't even if the \$20 billion is allotted. But it would be a start.

And the way to do it is to pass the amendment proposed by Sens. John Kerry, D-Mass., and Kit Bond, R-Mo. A vote is due on Thursday. We encourage our senators to support the amendment. And, we encourage anyone who

cares about quality child care to get on the telephone and remind Sen. Alfonse D'Amato and Sen. Daniel Patrick Moynihan of the importance of the amendment. A temporary toll-free line has been set up by the Children's Defense Fund. It can be reached at 1-888-387-8263.

The money dedicated by the Kerry-Bond amendment would go to state-based programs both for high-quality day care and for after-school programs. It has been proven that many youngsters who take up smoking do it in the hours they are left to their own devices after school and before their parents get home. About 3,000 a day light up for the first time and of those 1,000 will die of tobacco-related illnesses. (It is also the time that 13-year-olds are most likely to try alcohol or other illegal drugs.)

If the tobacco tax money is passed as part of the McCain bill, more than \$1.3 billion of it would come to New York state over the next five years. It could help shorten the lists on which thousands of New York state children are waiting for good child care. Competent and loving care in the first years of life is a proven factor in healthy brain development. And it is those children with the best sense of themselves who can resist the pressure to try cigarettes or drugs.

Marian Wright Edelman, president of the Children's Defense Fund, is right when she says that this is the ideal time to improve care for children. She notes that children have been targeted by cigarette companies for years and now does so better.

"It would be the height of hypocrisy when we are in a time of economic boom for (Congress) not to put their actions and money behind their words," she said. "At this time of economic prosperity, if we can't take care of our children when we are rich, when we are going to be richer, when we are going to be richer for!"

Best crime prevention is to invest in kids

By Ruben Ortega

5-15-98

From across Utah and across the nation, law enforcement leaders are coming forward to call for some major new steps in America's fight against crime. But what we're asking for may not be what you'd expect.

My view

Those of us on the front lines understand that, as important as our work is, we'll never be able to just arrest and imprison our way out of the crime problem.

America's most powerful and underused weapons against crime are the public investments that help families and communities provide good child care and after-school programs that teach at-risk kids the values and skills to be good citizens instead of criminals.

The evidence now proves that boosting public investment in child care and after-school programs could dramatically cut crime.

The after-school hours are prime time for juvenile crime. FBI data show violent juvenile crime triples in the hour after the school bell rings, and nearly half occurs between 2 p.m. and 8 p.m. Being unsupervised in the afternoon also doubles the risk that kids will smoke cigarettes, drink alcohol or use drugs.

Yet every day, more than 5 million latchkey kids spend their afternoons without adult supervision.

Communities need after-school programs to give all kids safe, positive alternatives to unsavory street corners and teach them important skills and values like respect, responsibility and hard work. After-school programs have cut neighbor-

hood crime by as much as 40 percent to 75 percent in some cities.

And we shouldn't wait until kids start school. Studies have shown that denying at-risk toddlers quality child care may multiply by as much as five to 10 times the risk that they will become criminals later.

Today, millions of parents who must work earn less than the cost of quality child care. They are forced to leave their children in poor quality baby-sitting that actually damages child development, including kids' ability to get along with others and succeed in school, and ultimately puts your family's safety at risk.

Head Start, America's principal child development program for our most at-risk kids, is so starved for funds it can serve less than half of eligible preschoolers, can serve them only part of their parents' workday, only part of the year and reaches scarcely any kids under 3.

No wonder a recent poll showed police chiefs ranked increasing investments like child care and after-school programs our "most effective" anti-crime weapons by a four-to-one margin over trying more juveniles as adults or even hiring more police. Nine out of 10 chiefs said, "America could sharply reduce crime if government invested more" in child care and after-school programs.

Last month, through a new organization called Fight Crime: Invest in Kids, more than 200 police chiefs, sheriffs, prosecutors and crime victims called on legislators to support these investments. Days later, the Major Cities Chiefs, police chiefs from America's 49 largest cities, unanimously endorsed the same call for action.

Investments in quality child care and af-

ter-school programs are also proved to save billions of tax dollars down the road. A leading economist estimates that the cost, including crime and welfare costs, of failing to provide at least two years of quality child care to low-income children is approximately \$100,000 per child. That's hundreds of billions of tax dollars we could save by supporting child care.

When we as a nation make Head Start and Early Head Start available to every eligible child, help struggling families pay for good child care and provide communities with the funds to give every school-age child positive alternatives to the street in the after-school hours, we will win a stunning victory against crime.

Government cannot meet its most fundamental responsibilities — protecting public health and the public safety — without making sure every community can provide its kids the quality child care and after-school programs proved to help their children grow up right.

That's why Congress should allocate at least half of new federal tobacco tax revenues to support child care and after-school programs. This two-fronted attack boosting tobacco prices to keep kids from smoking and investing those funds in programs that build better young citizens would be among the most powerful steps Congress has ever taken to fight crime and increase public safety and public health.

Indeed, crime may be America's most fundamental public health issue. It's time for us to pay now for prevention, instead of waiting to spend far more later — in money and lives — on preventable crime. Ruben Ortega is chief of the Salt Lake City Police Department.

May 18, 1998

Dear Senator:

As doctors, public health officials, business leaders, and child development experts, we are on the front lines -- working to help children grow and develop into productive citizens. We know all too well the dangers of tobacco and have seen all too frequently its tight grip on the futures of our young people. Congress has a chance to turn this tide and to reduce teen smoking in America. [Scientific studies and real world experience clearly demonstrate that early childhood development and after-school programs are among the most powerful anti-smoking weapons available.]

Research shows that brain development in the first three years of life is important for laying the foundation for adequate development -- which results in self confidence, smart decision-making, and the ability to later resist destructive habits such as smoking. If we want our children to grow up healthy and tobacco free, we must ensure that they receive the stimulation and nurturing they need early. If we wait until adolescence to help them develop the will and skills to say no to smoking -- we will have done too little and we may have been too late.

After-school programs make a world of difference. We know that the 5 million children left home alone after school are more vulnerable to negative peer pressure from the tobacco industry. After-school programs help keep young people off the streets and engaged in constructive activities that enhance rather than jeopardize their futures. In addition, many of these after-school programs incorporate anti-smoking curriculum designed to teach their participants about the dangers of tobacco and equip them with the skills to make important life and death decisions.

Research has shown that 13 year olds left home alone are significantly more likely to smoke cigarettes, drink alcohol, and experiment with drugs. In stark contrast, children who participate in productive after-school activities are far less likely to smoke, drink alcohol, or use drugs.

It takes many strategies to be effective. We urge Congress to craft a comprehensive program for reducing teen smoking -- and to ensure that such an effort includes an essential investment in early childhood development and after-school programs. **You can support a down payment on this investment by voting for the Kerry-Bond amendment to S.1415.**

Sincerely,

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