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**Alaska Department of Revenue
Tax Division
FY 05 Cigarette and Other Tobacco Products Summary**

All data is updated monthly. Any changes from previous months data can be due to late filing, amended filings or departmental adjustments.
Report Date: 2/21/05

Cigarettes

<u>Category</u>	<u>Jul-04</u>	<u>Aug-04</u>	<u>Sep-04</u>	<u>Oct-04</u>	<u>Nov-04</u>	<u>Dec-04</u>	<u>Jan-05</u>	<u>Feb-05</u>	<u>Mar-05</u>	<u>Apr-05</u>	<u>May-05</u>	<u>Jun-05</u>	<u>Grand Total</u>
Total Cigarettes Purchased or Sold (See Note 1)	74,412,960	79,508,320	103,214,260	73,121,920	73,842,920	96,501,120							503,601,500
Less: Military Sales (See Note 1)	163,800	290,800	271,500	148,200	228,000	112,200							1,214,600
Less Indian Sales	234,200	463,400	284,000	463,400	329,400	322,800							2,095,200
Less Other Credits	34,200	0	200	6,400	7,080	24,266,720							24,314,600
Net Taxable Volume	72,980,760	78,754,120	105,660,460	72,503,920	73,278,440	71,799,400	0	0	0	0	0	0	475,977,100
Tax Rate Per Cigarette	\$0.05	\$0.05	\$0.05	\$0.05	\$0.05	\$0.05	\$0.05	\$0.05	\$0.05	\$0.05	\$0.05	\$0.05	\$0.05
Gross Cigarette Tax Liability	\$3,699,038	\$3,937,706	\$5,283,023	\$3,625,196	\$3,663,922	\$3,589,970	\$0	\$0	\$0	\$0	\$0	\$0	\$23,798,855
Less Cigarette Stamp Discount	17,588	23,396	11,225	17,417	8,803	17,484							85,913
Net Cigarette Tax Liability	\$3,681,451	\$3,914,310	\$5,271,798	\$3,607,780	\$3,655,119	\$3,572,486	\$0	\$0	\$0	\$0	\$0	\$0	\$23,702,942

Other Tobacco Products

Total Wholesale Value	\$ 791,774	\$1,071,991	\$906,962	\$763,931	\$570,256	\$656,319							\$4,961,232
Less Military Sales	5,433	6,686	7,547	7,943	688	2,600							\$30,897
Less Indian Sales	6,883	6,793	4,678	7,371	6,030	4,184							\$35,939
Less Other Credits	25,843	21,976	14,984	16,116	33,220	4,206							\$116,345
Taxable Wholesale Value	953,614	1,036,537	879,753	732,501	530,317	645,329	0	0	0	0	0	0	4,778,051
Tax Rate	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Other Tobacco Products Tax (OTP) Liability	\$715,210	\$777,402	\$659,815	\$549,376	\$397,738	\$483,997	\$0	\$0	\$0	\$0	\$0	\$0	\$3,583,538
Combined Cigarette and OTP Tax Liability	4,414,248	4,715,108	5,942,838	4,174,572	4,061,680	4,073,967	0	0	0	0	0	0	27,382,393
Less 0.4% Commission	(2,861)	(3,110)	(2,639)	(2,198)	(1,561)	(1,936)	0	0	0	0	0	0	(14,334)
Net Cigarette and OTP Tax	\$4,411,387	\$4,711,999	\$5,940,198	\$4,172,374	\$4,060,069	\$4,072,031	\$0	\$0	\$0	\$0	\$0	\$0	\$27,368,059

Note 1: Manufacturers direct military sales not included

General Discussion

Income from sources other than oil and state investments includes non-oil taxes, user fees and licenses. Many of these revenue sources are divided between unrestricted and restricted revenues; the amounts of each are reflected in Tables 4-2 through 4-7. Restricted revenue includes money deposited in funds other than the Unrestricted General Fund. For purposes of this forecast, restricted revenues also include receipts that the legislature customarily appropriates or sets aside for a particular purpose or program, such as sharing of fish tax revenue with municipalities.

Other Taxes

Alcoholic Beverages Tax

Alcoholic beverage taxes are collected primarily from wholesalers and distributors of alcoholic beverages sold in Alaska. The per-gallon tax rates on alcoholic beverages increased October 1, 2002, from \$0.35 to \$1.07 for beer, \$0.85 to \$2.50 for wine, and \$5.60 to \$12.80 for liquor. Qualifying small brewers continue to pay tax at the \$0.35 rate for beer. Also, starting October 1, 2002, 50% of the revenue is deposited in the Alcohol and Other Drug Abuse Treatment and Prevention Fund. Because the legislature "may use the annual estimated balance in the fund to make appropriations to the Department of Health and Social Services," this revenue is reflected as restricted in the Revenue Sources Book.

Charitable Gaming

Under Alaska law, municipalities and qualified nonprofit organizations may conduct certain charitable gaming activities. The purpose of these activities is to derive public benefit in the form of money for the charities and revenues for the state. The Department of Revenue collects permit and license fees, a 1% net proceeds fee, and a 3% pull-tab tax.

Corporate Income Tax

Corporations that do business in Alaska pay a corporate net income tax unless they are organized under a special IRS rule (Subchapter S) that generally applies only to small, closely held companies. Subchapter S corporations, in general, pay no state corporate income tax in Alaska. Other corporations that do business both inside and outside Alaska must apportion their income to determine how much income they earned here. Corporations other than oil and gas corporations apportion their U.S. income to Alaska by using a three-factor formula based on sales, property and payroll. Alaska taxable income is determined by applying the apportionment factor to the corporation's modified federal taxable income. Corporate tax rates are graduated from 1% to 9.4% in \$10,000 increments of Alaska taxable income. The maximum rate of 9.4% applies to income over \$90,000.

Electric Cooperative and Telephone Cooperative Taxes

The electric cooperative and telephone cooperative taxes date back to 1959, when the first Alaska legislature enacted the electric and telephone cooperative tax to promote cooperatives around the state. The electric cooperative tax is based on kilowatt hours furnished by qualified electric cooperatives recognized under Title 10 of Alaska statutes; the telephone cooperative tax is levied on gross revenue of qualified telephone cooperatives under Title 10. Revenue from co-ops located in municipalities is treated as restricted revenue in this forecast because it is shared 100% with the municipalities.

Estate Tax

This tax is levied on the transfer of an estate upon death. The Alaska estate tax is tied to the federal tax. The amount of the state tax equals the maximum state credit allowed on the estate's federal return. As a result of changes to the federal estate tax, the Alaska estate tax will be phased out by calendar year 2005. However, revenues will continue past FY 2006 because of the 15-month filing period. All revenue derived from estate taxes is deposited in the General Fund.

Fisheries Business Tax

The fisheries business tax is the oldest tax in Alaska, dating from 1913. The tax is levied on businesses that process or export fisheries resources from Alaska. Although the tax usually is levied on the act of processing, the tax is often referred to as a "raw fish tax" because it is generally based on the value paid to commercial fishers for the raw fishery resource. Tax rates vary from 1% to 5%, depending on whether a fishery resource is classified as "established" or "developing," and whether it was processed by an on-shore or floating processor. All revenue from the tax is deposited in the General Fund, but not all of it is considered unrestricted for the purposes of this forecast. Each year, the legislature appropriates half the revenue from the tax to qualified municipalities. Given that this sharing formula is in statute, and that the legislature customarily follows the statutory formula, this forecast considers the shared revenues to be restricted.

Fishery Resource Landing Tax

The fishery resource landing tax was enacted in 1993. The tax is levied on processed fishery resources first landed in Alaska, and is based on the unprocessed statewide average value of the resource. The tax is collected primarily from factory trawlers and floating processors that process fishery resources outside the state's 3-mile limit and bring their products into Alaska for shipment. The tax rates vary from 1% to 3%, based on whether the resource is classified as "established" or "developing." All revenue derived from the tax is deposited in the General Fund. However, by statute, 50% is available for sharing with municipalities along the same lines as the fisheries business tax and this forecast considers the shared revenues to be restricted.

Insurance Premium Tax

Insurance companies in Alaska do not pay corporate income tax or sales or other excise taxes. Instead, they pay an insurance premium tax. Almost 2% (1.82 percent) of the tax is deposited into the Workers Safety and Compensation Fund and is reflected as restricted in this forecast.

Mining License Tax

This is a tax on the net income of all mining property in the state, ranging from 0% to 7%, less exploration and other credits. Except for sand and gravel operations, new mining operations are exempt from the mining license tax for a period of 3½ years after production begins.

Motor Fuel Tax

The motor fuel tax dates from 1945 when a tax of 1 cent per gallon was imposed on all motor fuel. The tax is levied on motor fuel sold, transferred or used within Alaska. Motor fuel taxes are collected primarily from wholesalers and distributors licensed as qualified dealers. Current per gallon rates are 8 cents for highway use, 5 cents for marine fuel, 4.7 cents for aviation gasoline, 3.2 cents for jet fuel, and a variable rate of 8 cents to 2 cents for gasohol, depending on the season, location and EPA mandate. Various uses of fuel are exempt from tax, including fuel used for heating or in flights to or from a foreign country. All revenue derived from motor fuel taxes is deposited in the General Fund, but 60% of the taxes attributable to aviation fuel sales at municipal airports are shared with the respective municipalities, and hence considered restricted for purposes of this forecast.

Rental Vehicle Tax

This is a 10% tax on passenger vehicle rentals of 90 days or less, and a 3% tax on rentals of recreational vehicles for 90 days or less. The vehicle rental tax provisions became effective January 1, 2004.

Seafood Assessments and Taxes

The Department of Revenue administers several different programs that raise money through seafood assessments. The money raised is then set aside for the legislature to appropriate for the benefit of the seafood industry — either in marketing or in management/development of the industry. The four programs are the salmon marketing tax, seafood marketing assessment, salmon enhancement tax and dive fishery management assessment. On January 1, 2005, the seafood marketing assessment increased from 0.3% to 0.5% of the ex-vessel value of seafood products produced in Alaska and the salmon marketing tax was eliminated. The rates for many of these assessments are determined by a vote of the appropriate association within the seafood industry or by members of the Alaska Seafood Marketing Institute. Although all revenue received under these assessments is deposited in the General Fund, for purposes of this forecast it is treated as restricted revenue. With the exception of the salmon enhancement tax, all other seafood assessments are reflected under the Charges for Services section of this forecast.

Motor Vehicle Tire Fee

The tire fee has two components. The first component is a tax of \$2.50 on all new tires sold in Alaska for motor vehicles intended for highway use. This part became effective September 26, 2003. The second part of the law imposes an additional \$5 fee per tire on all new tires with heavy studs, and \$5 on the installation of studs on a previously un-studded tire. This component of the law became effective July 1, 2004.

Tobacco Tax

The tobacco tax is levied on cigarettes and tobacco products sold, imported or transferred into Alaska. Tobacco taxes are collected primarily from licensed wholesalers and distributors. The tax rate on cigarettes was increased from \$1 to \$1.60 per pack on January 1, 2005 and will increase to \$1.80 on July 1, 2006 and to \$2 on July 1, 2007. Tax revenue is split between the General Fund and the School Fund, as discussed below. Additionally, 8.9% of the General Fund cigarette tax revenue is deposited into a subfund of the General Fund, the Tobacco Use Education and Cessation Fund. The tax rate on other tobacco products — such as cigars and chewing tobacco — is 75% of the wholesale price and is deposited entirely in the General Fund.

The 76% of cigarette tax revenue that is deposited in the School Fund changed to 47.5% on January 1, 2005 and will change to 42.2% on July 1, 2006 and to 38% on July 1, 2007. That is, increases in revenue as a result of the statewide tax rate increase go to the General Fund. We expect that school fund revenue will decline because of lower consumption as a result of the statewide and Anchorage tax rate increases (Anchorage increased the local tax on cigarettes by \$1.00 per pack on October 1, 2004). In addition to tax revenue, all cigarette and tobacco products license fees are deposited in the School Fund. Revenue deposited in the School Fund is dedicated to the rehabilitation, construction, repair and insurance costs of school facilities statewide.

Table 4-2. Other Tax (except Federal & Investment)
Actual FY 2004 and Projected FY 2005-2006
\$ million

	Actual	Projected	
	FY 2004	FY 2005	FY 2006
Unrestricted			
Sales and Use Taxes			
Alcoholic Beverages ⁽¹⁾	16.4	17.1	17.1
Cigarette ⁽¹⁾	9.4	17.1	27.1
Other Tobacco Products ⁽¹⁾	6.6	6.7	7.1
Insurance Premium	43.7	48.6	51.1
Electric and Telephone Cooperative	0.2	0.2	0.2
Motor Fuel	41.2	39.2	39.2
Rental Vehicle ⁽¹⁾	2.7	7.4	7.4
Tire Fees ⁽¹⁾	<u>0.8</u>	<u>1.6</u>	<u>1.6</u>
Subtotal	121.0	137.9	150.8
Corporate Income	39.6	53.3	53.3
Fish			
Fisheries Business	14.9	13.0	11.7
Fishery Resource Landing	<u>2.5</u>	<u>2.6</u>	<u>2.4</u>
Subtotal	17.4	15.6	14.1
Other			
Mining	3.2	6.3	6.3
Estate	2.3	1.3	0.5
Charitable Gaming	<u>2.4</u>	<u>2.4</u>	<u>2.4</u>
Subtotal	7.9	10.0	9.2
Total Unrestricted	185.9	216.8	227.4
Restricted			
Sales and Use Taxes			
Alcoholic Beverages (Alcohol & Drug Treatment) ⁽¹⁾	16.4	17.1	17.1
Insurance Premium/Other (Workers Safety & Compensation) ⁽²⁾	6.2	7.1	7.2
Electric and Telephone Cooperative (Municipal Share)	3.8	3.8	3.8
Cigarette (School Fund) ⁽¹⁾	32.9	29.0	27.0
Cigarette (Tobacco Use Cessation) ⁽¹⁾	0.0	1.1	2.7
Motor Fuel - Aviation (Municipal Share)	<u>0.2</u>	<u>0.2</u>	<u>0.2</u>
Subtotal	59.5	58.3	58.0
Fish Taxes			
Fisheries Business (Municipal Share)	14.4	14.5	13.2
Fishery Resource Landing (Municipal Share)	4.4	4.3	4.2
Salmon Enhancement (Aquaculture Association Share)	<u>3.0</u>	<u>3.4</u>	<u>3.1</u>
Subtotal	21.8	22.2	20.5
Total Restricted	81.3	80.5	78.5
Grand Total	267.2	297.3	305.9

(1) For these tax types revenues are accrued through August 15, instead of July 31.

(2) In addition to the 1.82% from the Insurance Premium Tax, this also includes \$1.8 million in service fees from employers who are self-insured.

Fines and Forfeitures

This category includes civil and criminal fines and forfeitures, and money received by the state from the settlement of various civil lawsuits. The majority of the receipts under this category are from tobacco litigation and other settlements.

Tobacco Settlement

The tobacco settlement was signed by 46 states (including Alaska) in November 1998. The first payment from the settlement was made in FY 2000. In 2000 and 2001, the legislature authorized the sale of 80% of the future revenue stream from the tobacco settlement to a new public corporation, the Northern Tobacco Securitization Corporation, a subsidiary of the Alaska Housing Finance Corporation. The new corporation, in turn, sold bonds based on this revenue stream, and paid to the state the money raised by the bond sale, which the legislature appropriated for schools, the university and harbor projects. Starting FY 2002, the remaining 20% of the settlement revenue each year will be deposited into the Tobacco Use Education and Cessation Fund. This forecast shows the 80% that goes directly to the Northern Tobacco Securitization Corporation for payment of the bonds and the 20% that goes to the Tobacco Use Education and Cessation Fund as restricted revenue.

Table 4-4. Fines and Forfeitures
Actual FY 2004 and Projected FY 2005-2006
\$ million

	Actual	Projected	
	FY 2004	FY 2005	FY 2006
<u>Unrestricted</u>			
Fines and Forfeitures	<u>16.0</u>	<u>8.0</u>	<u>12.8</u>
Total Unrestricted	16.0	8.0	12.8
<u>Restricted</u>			
Tobacco Settlement (Northern Tobacco Securitization Corporation) ⁽¹⁾	17.1	17.7	16.9
Tobacco Settlement (Tobacco Use Education & Cessation Fund) ⁽¹⁾	4.3	4.4	4.2
Other	<u>1.5</u>	<u>1.5</u>	<u>1.5</u>
Total Restricted	22.9	23.6	22.6
Grand Total	38.9	31.6	35.4

(1) Revenue estimates assume all participants in the settlement pay the full amount to the state. The FY 2005 revenue estimate is the amount that PriceWaterhouseCoopers says Alaska will receive if all participating manufacturers pay in full. The FY 2006 estimate is from Kentucky's tobacco settlement model modified for Alaska.

State of Alaska
Compliant Tobacco Product Manufacturers'
Cigarette Brands Directory*

*0.09 ounces of "roll-your own" tobacco constitutes one individual "cigarette."

(Updated March 1, 2005)

The following cigarette manufacturers and their associated brands have been determined to be in compliance with Alaska law, AS 45.53.020. Please be advised that cigarettes (to include roll our own) manufactured by companies not listed below may not be sold in Alaska. Cigarettes that are not on this list found in Alaska are contraband and subject to seizure and destruction. Violations of AS 45.53.020 may also be punished by revocation of the license issued under AS 43.50.010, 43.50.035, or 43.50.320 of any licensee and imposition of civil and criminal penalties.

Only "brand families" are listed below. All variations, types, and sizes (e.g., "menthol," "light," "king," and "regular") are included within the "brand family" listed.

"Manufacturer Type:" provides that the company is both a participating manufacturer (PM) and signatory to the Tobacco Master Settlement Agreement and all amendments to that agreement or a non-participating manufacturer (NPM) in full compliance with Alaska Statute 45.43.

<u>Brand Family</u>	<u>Company</u>	<u>Manufacturer Type</u>	<u>Tobacco Type</u>
10/20's	Dhanraj Imports, Inc.	PM	cigarettes
10/20's	Dhanraj Imports, Inc.	PM	roll your own
117	RBJ Sales, Inc.	NPM	roll your own
1st Choice	R.J. Reynolds Tobacco Company	PM	cigarettes
1st Class	Premier Manufacturing Incorporated	PM	cigarettes
4 Aces	Top Tobacco, LP	PM	roll your own
A Touch of Clove	Sherman 1400 Broadway NYC LTD	PM	cigarettes
Ace	King Maker Marketing, Inc.	PM	cigarettes
All American Value	Philip Morris USA Inc.	PM	cigarettes
All Star	Liberty Brands, LLC	PM	cigarettes
Alpine	Phillip Morris USA Inc.	PM	cigarettes
Always Save	Liberty Brands, LLC	PM	cigarettes
Amazone Guarana	VCT/Tobacco Specialties	NPM	cigarettes
American Bison	Wind River Tobacco Company, LLC	PM	cigarettes

*Brown & Williamson U.S.A. Inc.'s (B&W) name has changed to R.J. Reynolds Tobacco Company. However, B&W remains on our list to remain compliant to the National Association of Attorneys General's "Participating Manufacturers and Brand Names under MSA" list.

State of Alaska
Compliant Tobacco Product Manufacturers'
Cigarette Brands Directory

<u>Brand Family</u>	<u>Company</u>	<u>MSA Participant</u>	<u>Tobacco Type</u>
American Bison	Wind River Tobacco Company, LLC	PM	roll your own
Andron	VCT/Tobacco Specialties	NPM	cigarettes
Arbo	VCT/Tobacco Specialties	NPM	roll your own
Ashford	Von Eicken Group - Joh. Wilh. Von Eicken GmbH	PM	cigarettes
Austin	R.J. Reynolds Tobacco Company	PM	cigarettes
3ali	Peter Stokkebye International A/S	PM	roll your own
3ambu	VCT/Tobacco Specialties	NPM	cigarettes
3ambu	VCT/Tobacco Specialties	NPM	roll your own
3arclay	Brown & Williamson U.S.A. Inc.*	PM	cigarettes
3argain Buy	R.J. Reynolds Tobacco Company	PM	cigarettes
3asic	Philip Morris USA Inc.	PM	cigarettes
3astos	VCT/Tobacco Specialties	N/A	cigarettes
3eacon	R.J. Reynolds Tobacco Company	PM	cigarettes
3elair	Brown & Williamson U.S.A. Inc.*	PM	cigarettes
3enson & Hedges	Philip Morris USA Inc.	PM	cigarettes
3est Buy	Philip Morris USA Inc.	PM	cigarettes
3est Choice	Liberty Brands, LLC	PM	cigarettes
3est Value	R.J. Reynolds Tobacco Company	PM	cigarettes
3lack & Gold	Sherman 1400 Broadway NYC LTD	PM	cigarettes
3lack Death	VCT/Tobacco Specialties	NPM	cigarettes
3lack Death	VCT/Tobacco Specialties	NPM	roll your own
3low Up Dark	VCT/Tobacco Specialties	NPM	roll your own

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3lunt Wrap	Compania Industrial de Tabacos Monte Paz S.A. (Monte Paz)	PM	cigarettes
3lunt Wrap	Compania Industrial de Tabacos Monte Paz S.A. (Monte Paz)	PM	roll your own
3onus Value	R.J. Reynolds Tobacco Company	PM	cigarettes
3rand Marketing	Liggett Group Inc.	PM	cigarettes
3rentwood	R.J. Reynolds Tobacco Company	PM	cigarettes
3ristol	Phillip Morris USA Inc.	PM	cigarettes
3ronco	General Tobacco	PM	cigarettes
3ronson	Phillip Morris USA Inc.	PM	cigarettes
3ucks	Phillip Morris USA Inc.	PM	cigarettes
3ugler	Brown & Williamson U.S.A. Inc.*	PM	roll your own
3ull Brand Dark	Von Eicken Group - Charles Fairmorn Handelsgesellschaft GmbH	PM	roll your own
3ull Brand Half Dark	Von Eicken Group - Charles Fairmorn Handelsgesellschaft GmbH	PM	roll your own
3ull Brand Light	Von Eicken Group - Charles Fairmorn Handelsgesellschaft GmbH	PM	roll your own
3ull Snit	VCT/Tobacco Specialties	NPM	roll your own
3aballero	VCT/Tobacco Specialties	NPM	cigarettes
3abin	Japan Tobacco International USA, Inc.	PM	cigarettes
3abo Gold	Liberty Brands, LLC	PM	cigarettes
3alume Full Flavor	Von Eicken Group - Joh. Wilh. Von Eicken GmbH	PM	cigarettes
3alume Lights	Von Eicken Group - Joh. Wilh. Von Eicken GmbH	PM	cigarettes
3ambridge	Phillip Morris USA Inc.	PM	cigarettes

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Camel	R.J. Reynolds Tobacco Company	PM	cigarettes
Camel Wides	R.J. Reynolds Tobacco Company	PM	cigarettes
Canadian Style Player's	Philip Morris USA Inc.	PM	cigarettes
Canoe	Wind River Tobacco Company, LLC	PM	roll your own
Canyon	Liggett Group Inc.	PM	cigarettes
Capri	Brown & Williamson U.S.A. Inc.*	PM	cigarettes
Carlton	Brown & Williamson U.S.A. Inc.*	PM	cigarettes
Carnival	Korea Tobacco & Ginseng Corp.	NPM	cigarettes
Cartier Vendome	Lane Limited	PM	cigarettes
Caster	Japan Tobacco International USA, Inc.	PM	cigarettes
Castle	Dhanraj Imports, Inc.	PM	cigarettes
Cavalier	R.J. Reynolds Tobacco Company	PM	cigarettes
Century	R.J. Reynolds Tobacco Company	PM	cigarettes
Champion	General Tobacco	PM	cigarettes
Charles Fairmorn Bright Virginia Shag	Von Eicken Group - Charles Fairmorn Handelsgesellschaft GmbH	PM	roll your own
Charles Fairmorn Dark Fired Shag	Von Eicken Group - Charles Fairmorn Handelsgesellschaft GmbH	PM	roll your own
Charles Fairmorn Straight Virginia	Von Eicken Group - Tabak-Haus Dingelstadt GmbH	PM	cigarettes
Charter	R.J. Reynolds Tobacco Company	PM	cigarettes
Checkers	King Maker Marketing, Inc.	PM	cigarettes
Checkers	King Maker Marketing, Inc.	PM	roll your own
Chesterfield	Philip Morris USA Inc.	PM	cigarettes

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Chills Americana	VCT/Tobacco Specialties	NPM	roll your own
Cigarettellos	Sherman 1400 Broadway NYC LTD	PM	cigarettes
Cigaronne	VCT/Tobacco Specialties	NPM	cigarettes
Cimarron	R.J. Reynolds Tobacco Company	PM	cigarettes
Circle Z	Liberty Brands, LLC	PM	cigarettes
Citation	R.J. Reynolds Tobacco Company	PM	cigarettes
Class A	Liggett Group Inc.	PM	cigarettes
Classic Canadian	Top Tobacco, LP	PM	roll your own
CN101	Top Tobacco, LP	PM	roll your own
Collector's Choice	Philip Morris USA Inc.	PM	cigarettes
Collorys	VCT/Tobacco Specialties	NPM	cigarettes
Commander	Philip Morris USA Inc.	PM	cigarettes
Connect	Dhanraj Imports, Inc.	PM	cigarettes
Conway Gold	Virginia Carolina Corporation, Inc.	PM	cigarettes
Coronas	Canary Islands Cigars Company	PM	cigarettes
Courier	R.J. Reynolds Tobacco Company	PM	cigarettes
CP101	Top Tobacco, LP	PM	roll your own
Craven "A"	Lane Limited	PM	cigarettes
Davenport	Caribbean - American Tobacco Corp.	PM	cigarettes
Dave's	Philip Morris USA Inc.	PM	cigarettes
Desert Sun	Prime Mover Manufacturing Corp	NPM	cigarettes
Dhyan (Bidis)	Dhanraj Imports, Inc.	PM	cigarettes

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Dimitrino Botschafter	Von Eicken Group - Tabak-Haus Dingelstadt GmbH	PM	cigarettes
Djarum	P.T. Djarum	PM	cigarettes
Dorai	R.J. Reynolds Tobacco Company	PM	cigarettes
Dreams	Kretek International-Flandria Tobacco	PM	cigarettes
Drum	Top Tobacco, LP	PM	roll your own
du Maurier	Imperial Tobacco Limited/ITL (USA) Limited	PM	cigarettes
Ducados	VCT/Tobacco Specialties	NPM	cigarettes
Dunhill	Lane Limited	PM	cigarettes
Dunhill International	Lane Limited	PM	cigarettes
Duo Blend	VCT/Tobacco Specialties	NPM	cigarettes
Eagle	Vector Tobacco Inc.	PM	cigarettes
Eclipse	R.J. Reynolds Tobacco Company	PM	cigarettes
Emerald	Cutting Edge Enterprises, Inc.	PM	cigarettes
English Ovals	Philip Morris USA Inc.	PM	cigarettes
Epic	Liggett Group Inc.	PM	cigarettes
ESSE	Korea Tobacco & Ginseng Corp.	NPM	cigarettes
Eve	Liggett Group Inc.	PM	cigarettes
Exact	Smokin Joes	NPM	cigarettes
Exact	Smokin Joes	NPM	roll your own
Exact American Blend	Smokin Joes	NPM	cigarettes
Exact Canadian Blend	Smokin Joes	NPM	cigarettes
Export 'A'	Japan Tobacco International USA, Inc.	PM	cigarettes

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State of Alaska
Compliant Tobacco Product Manufacturers'
Cigarette Brands Directory

<u>Brand Family</u>	<u>Company</u>	<u>MSA Participant</u>	<u>Tobacco Type</u>
Export 'A' Select	Japan Tobacco International USA, Inc.	PM	roll your own
Extra Value	R.J. Reynolds Tobacco Company	PM	cigarettes
Fantasia Lights	Sherman 1400 Broadway NYC LTD	PM	cigarettes
Farmers Gold	M & R Holdings, Inc.	NPM	roll your own
Fine Cut Cherry	Von Eicken Group - Charles Fairmorn Handelsgesellschaft GmbH	PM	roll your own
Fine Cut Chocolate	Von Eicken Group - Charles Fairmorn Handelsgesellschaft GmbH	PM	roll your own
Fine Cut Menthol	Von Eicken Group - Charles Fairmorn Handelsgesellschaft GmbH	PM	roll your own
Fine Cut No. 1 - 5	Von Eicken Group - Charles Fairmorn Handelsgesellschaft GmbH	PM	roll your own
Fine Cut Vanilla	Von Eicken Group - Charles Fairmorn Handelsgesellschaft GmbH	PM	roll your own
Focus	R.J. Reynolds Tobacco Company	PM	cigarettes
Freemont	Caribbean - American Tobacco Corp.	PM	cigarettes
Freeway	Virginia Carolina Corporation, Inc.	PM	cigarettes
Gambler	Top Tobacco, LP	PM	roll your own
Gauloises	Societe National d'Exploitation Industrielle des Tabacs et Allumettes (S.N.T.A)	PM	cigarettes
Gauloises	Societe National d'Exploitation Industrielle des Tabacs et Allumettes (SEITA)	PM	roll your own
Genco	Philip Morris USA Inc.	PM	cigarettes
Generals	Philip Morris USA Inc.	PM	cigarettes
Gitanes	Societe National d'Exploitation Industrielle des Tabacs et Allumettes (SEITA)	PM	cigarettes

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State of Alaska
Compliant Tobacco Product Manufacturers'
Cigarette Brands Directory

<u>Brand Family</u>	<u>Company</u>	<u>MSA Participant</u>	<u>Tobacco Type</u>
Glory	Smokin Joes	NPM	cigarettes
Go To Hell	VCT/Tobacco Specialties	NPM	cigarettes
Gold & Black	VCT/Tobacco Specialties	NPM	cigarettes
Gold Coast	R.J. Reynolds Tobacco Company	PM	cigarettes
Gold Crest	King Maker Marketing, Inc.	PM	cigarettes
Gold Crest	King Maker Marketing, Inc.	PM	roll your own
Golden Eagle	International Tobacco Group (Las Vegas) Inc.	PM	cigarettes
Golden Virginia	Lane Limited	PM	roll your own
GPR	Brown & Williamson U.S.A. Inc.*	PM	cigarettes
Grand Prix	Liggett Group Inc.	PM	cigarettes
Gsmoke	Star Scientific, Inc.	NPM	cigarettes
GT One	General Tobacco	PM	cigarettes
Gudang Garam	P.T. Gudang Garam Tbk.	NPM	cigarettes
H & R Tobacco	Opportunities Unlimited dba H & R Tobacco	NPM	roll your own
Harper	Liberty Brands, LLC	PM	cigarettes
Harvest Cherry	Von Eicken Group - Tabak-Haus Dingelstadt GmbH	PM	roll your own
Harvest Menthol	Von Eicken Group - Tabak-Haus Dingelstadt GmbH	PM	roll your own
Harvest Peach	Von Eicken Group - Tabak-Haus Dingelstadt GmbH	PM	roll your own
Harvest Vanilla	Von Eicken Group - Tabak-Haus Dingelstadt GmbH	PM	roll your own
Havana Ovals	Sherman 1400 Broadway NYC LTD	PM	cigarettes
HB	VCT/Tobacco Specialties	NPM	cigarettes
Highway	R.J. Reynolds Tobacco Company	PM	cigarettes

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State of Alaska
Compliant Tobacco Product Manufacturers'
Cigarette Brands Directory

<u>Brand Family</u>	<u>Company</u>	<u>MSA Participant</u>	<u>Tobacco Type</u>
Hint of Mint	Sherman 1400 Broadway NYC LTD	PM	cigarettes
Hi-Val	King Maker Marketing, Inc.	PM	cigarettes
Hi-Val	King Maker Marketing, Inc.	PM	roll your own
House Blend 4	Peter Stokkebye International A/S	PM	roll your own
House of Windsor	House of Windsor	NPM	roll your own
Iceberg	RBJ Sales, Inc.	NPM	roll your own
Jacks	R.J. Reynolds Tobacco Company	PM	cigarettes
Jade	Liggett Group Inc.	PM	cigarettes
Jan Willem	Von Eicken Group - Tabak-Haus Dingelstadt GmbH	PM	roll your own
Jester	Lane Limited	PM	roll your own
Jezebel	VCT/Tobacco Specialties	NPM	cigarettes
Jim Porter	Compania Industrial de Tabacos Monte Paz S.A. (Monte Paz)	PM	cigarettes
Jockey Club	VCT/Tobacco Specialties	NPM	cigarettes
John Players Special	VCT/Tobacco Specialties	NPM	cigarettes
Kamel Red	R.J. Reynolds Tobacco Company	PM	cigarettes
Kent	Lorillard Tobacco Company	PM	cigarettes
Kent Golden	Lorillard Tobacco Company	PM	cigarettes
Kent III	Lorillard Tobacco Company	PM	cigarettes
Kim	VCT/Tobacco Specialties	NPM	cigarettes
Kingsport	Liggett Group Inc.	PM	cigarettes
Kite	Brown & Williamson U.S.A. Inc.*	PM	roll your own
Knights	Liberty Brands, LLC	PM	cigarettes

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State of Alaska
Compliant Tobacco Product Manufacturers'
Cigarette Brands Directory

<u>Brand Family</u>	<u>Company</u>	<u>MSA Participant</u>	<u>Tobacco Type</u>
Cool	Brown & Williamson U.S.A. Inc.*	PM	cigarettes
5M	Philip Morris USA Inc.	PM	cigarettes
ark	Philip Morris USA Inc.	PM	cigarettes
Seawood	Liberty Brands, LLC	PM	cigarettes
Legend	R.J. Reynolds Tobacco Company	PM	cigarettes
Lewiston	Smokin' Joe's	NPM	cigarettes
Liberty	Liberty Brands, LLC	PM	cigarettes
Liberty Gold	Liberty Brands, LLC	PM	cigarettes
Liberty Select	Liberty Brands, LLC	PM	cigarettes
Liggett Select	Liggett Group Inc.	PM	cigarettes
Liquid Zoo	Kretek International-Alternative Brands, Inc.	PM	cigarettes
Long	Peter Stokkebye International A/S	PM	roll your own
Lookout	Kretek International-Huepink & Bloemen Tabak	PM	roll your own
Lucky Strike	Brown & Williamson U.S.A. Inc.*	PM	cigarettes
Lush Hard	Kretek International-Montepaz Industrial Tobacco Company	PM	cigarettes
Main Street	Star Scientific, Inc.	NPM	cigarettes
Major	VCT/Tobacco Specialties	NPM	cigarettes
Makro	Cutting Edge Enterprises, Inc.	PM	cigarettes
Malibu	Commonwealth Brands, Inc.	PM	cigarettes
Manitou Full Flavor	Von Eicken Group - Tabak-Haus Dingelstadt GmbH	PM	cigarettes
Manitou Golden Virginia	Von Eicken Group - Tabak-Haus Dingelstadt GmbH	PM	roll your own
Manitou Mild Blend	Von Eicken Group - Tabak-Haus Dingelstadt GmbH	PM	cigarettes

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State of Alaska
Compliant Tobacco Product Manufacturers'
Cigarette Brands Directory

<u>Brand Family</u>	<u>Company</u>	<u>MSA Participant</u>	<u>Tobacco Type</u>
Manitou Original Virginia	Von Eicken Group - Tabak-Haus Dingelstadt GmbH	PM	roll your own
Marker	R.J. Reynolds Tobacco Company	PM	cigarettes
Market	Smokin Joes	NPM	cigarettes
Marks	Dhanraj Imports, Inc.	PM	cigarettes
Marlboro	Philip Morris USA Inc.	PM	cigarettes
Master Roll	Peter Stokkebye International A/S	PM	roll your own
Matinee	Imperial Tobacco Limited/ITL (USA) Limited	PM	cigarettes
Maverick	Lorillard Tobacco Company	PM	cigarettes
Max	Lorillard Tobacco Company	PM	cigarettes
Maxxon	Liberty Brands, LLC	PM	cigarettes
McClintock	Peter Stokkebye International A/S	PM	roll your own
MCD	Sherman 1400 Broadway NYC LTD	PM	cigarettes
Melbourne	Prime Mover Manufacturing Corp	NPM	cigarettes
Memphis	VCT/Tobacco Specialties	NPM	cigarettes
Meridian	Vector Tobacco Inc.	PM	cigarettes
Merit	Philip Morris USA Inc.	PM	cigarettes
Midnight Special	Lane Limited	PM	roll your own
Wild Seven	Japan Tobacco International USA, Inc.	PM	cigarettes
Wilde Sorte	VCT/Tobacco Specialties	NPM	cigarettes
Willport	Pacific Stanford Manufacturing Corporation	PM	roll your own
Wisty	Brown & Williamson U.S.A. Inc.*	PM	cigarettes
Monarch	R.J. Reynolds Tobacco Company	PM	cigarettes

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State of Alaska
Compliant Tobacco Product Manufacturers'
Cigarette Brands Directory

<u>Brand Family</u>	<u>Company</u>	<u>MSA Participant</u>	<u>Tobacco Type</u>
Wontclair	Commonwealth Brands, Inc.	PM	cigarettes
Wore 100	R.J. Reynolds Tobacco Company	PM	cigarettes
Wore 120	R.J. Reynolds Tobacco Company	PM	cigarettes
Wuratti Ambassador	VCT/Tobacco Specialties	NPM	cigarettes
Mustang	R.J. Reynolds Tobacco Company	PM	cigarettes
Wynheer	Von Eicken Group - Joh. Wilh. Von Eicken GmbH	PM	roll your own
Nat Sherman Classic	Sherman 1400 Broadway NYC LTD	PM	cigarettes
Native Sun	Single Stick, Inc.	NPM	roll your own
Natural	Smokin Joes	NPM	cigarettes
Natural American Spirit	Santa Fe Natural Tobacco Company, Inc.	PM	cigarettes
Natural American Spirit	Santa Fe Natural Tobacco Company, Inc.	PM	roll your own
Natural Blend	Commonwealth Brands, Inc.	PM	cigarettes
Naturals	Sherman 1400 Broadway NYC LTD	PM	cigarettes
New York Cut	Sherman 1400 Broadway NYC LTD	PM	cigarettes
Newport	Lorillard Tobacco Company	PM	cigarettes
Newport Stripes	Lorillard Tobacco Company	PM	cigarettes
Nine Select	M & R Holdings, Inc.	NPM	roll your own
No. 1	RBJ Sales, Inc.	NPM	roll your own
No. 2	RBJ Sales, Inc.	NPM	roll your own
North	Pacific Stanford Manufacturing Corporation	PM	roll your own
Now	P. J. Reynolds Tobacco Company	PM	cigarettes
Old Gold	Lorillard Tobacco Company	PM	cigarettes

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Cigarette Brands Directory

<u>Brand Family</u>	<u>Company</u>	<u>MSA Participant</u>	<u>Tobacco Type</u>
Old Hillside	PBJ Sales, Inc.	NPM	roll your own
OM Bidis	Kretek International/M/S Arav Tobacco	PM	cigarettes
Omni	Vector Tobacco Inc.	PM	cigarettes
Oriental #1	Lane Limited	PM	roll your own
Our Advertiser	Top Tobacco, LP	PM	roll your own
Palace	Canary Islands Cigars Company	PM	cigarettes
Pall Mall	Brown & Williamson U.S.A. Inc.*	PM	cigarettes
Parliament	Phillip Morris USA Inc.	PM	cigarettes
Passion	VCT/Tobacco Specialties	NPM	cigarettes
Phantoms	Sherman 1400 Broadway NYC LTD	PM	cigarettes
Pilot	R.J. Reynolds Tobacco Company	PM	cigarettes
Pirat American Blend	Von Eicken Group - Charles Fairmorn Handelsgesellschaft GmbH	PM	roll your own
Pirat Halfware	Von Eicken Group - Charles Fairmorn Handelsgesellschaft GmbH	PM	roll your own
Players	Phillip Morris USA Inc.	PM	cigarettes
Premium	Smokin Joes	NPM	cigarettes
Premium	RBJ Sales, Inc.	NPM	roll your own
Premium Buy	Phillip Morris USA Inc.	PM	cigarettes
Pride	M & R Holdings, Inc.	NPM	roll your own
Prince	House of Prince A/S	PM	cigarettes
Private Stock	Brown & Williamson U.S.A. Inc.*	PM	cigarettes
PS 90 RYO	Peter Stokkebye international A/S	PM	roll your own

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State of Alaska
Compliant Tobacco Product Manufacturers'
Cigarette Brands Directory

<u>Brand Family</u>	<u>Company</u>	<u>MSA Participant</u>	<u>Tobacco Type</u>
75 95 RYO	Peter Stokkebye International A/S	PM	roll your own
Pure	Smokin Joes	NPM	cigarettes
Pure & Natural	RBJ Sales, Inc.	NPM	roll your own
Pyramid	Liggett Group Inc.	PM	cigarettes
Quality	Liggett Group Inc.	PM	cigarettes
Quality Smoke	R.J. Reynolds Tobacco Company	PM	cigarettes
Quest	Vector Tobacco Inc.	PM	cigarettes
Raleigh	Brown & Williamson U.S.A. Inc.*	PM	cigarettes
Rave	Lignum-2, Inc.	PM	cigarettes
Rave 85	Lignum-2, Inc.	PM	cigarettes
Record	Canary Islands Cigars Company	PM	cigarettes
Reemstma	VCT/Tobacco Specialties	NPM	cigarettes
Republicana	VCT/Tobacco Specialties	NPM	cigarettes
Reval	VCT/Tobacco Specialties	NPM	cigarettes
Rivermont	RBJ Sales, Inc.	NPM	roll your own
Riviera	Commonwealth Brands, Inc.	PM	cigarettes
Roger	Carolina Tobacco Company	NPM	cigarettes
Roll Rich	Lane Limited	PM	roll your own
Rook	Dhanraj Imports, Inc.	PM	cigarettes
Rook	Dhanraj Imports, Inc.	PM	roll your own
Ropers	Liberty Brands, LLC	PM	cigarettes
Rosebud	Von Eicken Group - Joh. Wilh. Von Eicken GmbH	PM	cigarettes

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State of Alaska
Compliant Tobacco Product Manufacturers'
Cigarette Brands Directory

<u>Brand Family</u>	<u>Company</u>	<u>MSA Participant</u>	<u>Tobacco Type</u>
Roth-handle	VCT/Tobacco Specialties	NPM	cigarettes
Rothman	Philip Morris USA Inc.	PM	cigarettes
RYO Fine Cut	Lane Limited	PM	roll your own
Salem	R.J. Reynolds Tobacco Company	PM	cigarettes
Sampoerna	Lignum-2, Inc.	PM	cigarettes
Samson (blue)	Lane Limited	PM	roll your own
Samson (brown)	Lane Limited	PM	roll your own
Saratoga	Philip Morris USA Inc.	PM	cigarettes
Satin	Lorillard Tobacco Company	PM	cigarettes
Scotch Buy	R.J. Reynolds Tobacco Company	PM	cigarettes
Sebring	R.J. Reynolds Tobacco Company	PM	cigarettes
Seven Stars	Japan Tobacco International USA, Inc.	PM	cigarettes
Shield	Premier Manufacturing Incorporated	PM	cigarettes
Signature	R.J. Reynolds Tobacco Company	PM	cigarettes
Silk Cut	VCT/Tobacco Specialties	NPM	cigarettes
Silver	General Tobacco	PM	cigarettes
Sincerely Yours	Liggett Group Inc.	PM	cigarettes
Single Stick	Single Stick, Inc.	NPM	cigarettes
Single Stick	Single Stick, Inc.	NPM	roll your own
Slim Price	R.J. Reynolds Tobacco Company	PM	cigarettes
Smoke 1	R.J. Reynolds Tobacco Company	PM	cigarettes
Smoker Friendly	King Maker Marketing, Inc.	PM	cigarettes

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State of Alaska
Compliant Tobacco Product Manufacturers'
Cigarette Brands Directory

<u>Brand Family</u>	<u>Company</u>	<u>MSA Participant</u>	<u>Tobacco Type</u>
Smokin Joes	Smokin Joes	NPM	cigarettes
Smokin Joes American	Smokin Joes	NPM	roll your own
Smokin Joes Canadian	Smokin Joes	NPM	roll your own
Smokin Joes Natural	Smokin Joes	NPM	roll your own
Soex	Soex India Pvt. Ltd.	NPM	cigarettes
Sonic	Liberty Brands, LLC	PM	cigarettes
Sonoma	Commonwealth Brands, Inc.	PM	cigarettes
Sport	Star Scientific, Inc.	NPM	cigarettes
Springwater	Von Eicken Group - Joh. Wilh. Von Eicken GmbH	PM	cigarettes
St. Moritz	Lane Limited	PM	cigarettes
State Express 555	Brown & Williamson U.S.A. Inc.*	PM	cigarettes
Stockton	R.J. Reynolds Tobacco Company	PM	cigarettes
Sundance	R.J. Reynolds Tobacco Company	PM	cigarettes
Sweet Afton	VCT/Tobacco Specialties	NPM	cigarettes
Taj Mahal Bidis	Kretek International-KMZEE Impex	PM	cigarettes
Tareyton	Brown & Williamson U.S.A. Inc.*	PM	cigarettes
Tekel 2000	VCT/Tobacco Specialties	NPM	roll your own
Tempo	R.J. Reynolds Tobacco Company	PM	cigarettes
Teton	Wind River Tobacco Company, LLC	PM	roll your own
Texas	VCT/Tobacco Specialties	NPM	cigarettes
Texas	VCT/Tobacco Specialties	NPM	roll your own
The Brave	Bekenton, S.A.	PM	cigarettes

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Cigarette Brands Directory

<u>Brand Family</u>	<u>Comp. ny</u>	<u>MSA Participant</u>	<u>Tobacco Type</u>
Top	Top Tobacco, LP	PM	roll your own
Tourney	Liggett Group Inc.	PM	cigarettes
Tourney Slim	Liggett Group Inc.	PM	cigarettes
Tri-Brand	R.J. Reynolds Tobacco Company	PM	cigarettes
Triumph	Lorillard Tobacco Company	PM	cigarettes
True	Lorillard Tobacco Company	PM	cigarettes
Turkish Special	VCT/Tobacco Specialties	NPM	cigarettes
Turkish Special	VCT/Tobacco Specialties	NPM	roll your own
Ultra Buy	Premier Manufacturing Incorporated	PM	cigarettes
Jnify	Prime Mover Manufacturing Corp	NPM	cigarettes
JS1	VCT/Tobacco Specialties	NPM	cigarettes
JSA	Vector Tobacco Inc.	PM	cigarettes
JSA Gold	Commonwealth Brands, Inc.	PM	cigarettes
value Sense	R.J. Reynolds Tobacco Company	PM	cigarettes
value & Quality	R.J. Reynolds Tobacco Company	PM	cigarettes
value Pride	R.J. Reynolds Tobacco Company	PM	cigarettes
vantage	R.J. Reynolds Tobacco Company	PM	cigarettes
Vegas	Star Scientific, Inc.	NPM	cigarettes
Viceroy	Brown & Williamson U.S.A. Inc.*	PM	cigarettes
Virginia Circles	Sherman 1400 Broadway NYC LTD	PM	cigarettes
Virginia Slims	Philip Morris USA Inc.	PM	cigarettes
Visions	Single Stick, Inc.	NPM	roll your own

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Cigarette Brands Directory

<u>Brand Family</u>	<u>Company</u>	<u>MSA Participant</u>	<u>Tobacco Type</u>
VL	Canary Islands Cigars Company	PM	cigarettes
Wave	Japan Tobacco International USA, Inc.	PM	cigarettes
White Rhino Classic Bids	Kretek International-Shree International	PM	cigarettes
Wild Geese	Von Eicken Group - Joh. Wilh. Von Eicken GmbH	PM	cigarettes
Wildfire	Top Tobacco, LP	PM	roll your own
Winston	R.J. Reynolds Tobacco Company	PM	cigarettes
Wolf Bros	House of Windsor	NPM	roll your own
Worth	R.J. Reynolds Tobacco Company	PM	cigarettes
Yours	Liggett Group Inc.	PM	cigarettes
Zanzibar	Dhanraj Imports, Inc.	PM	cigarettes
Zen	M & R Holdings, Inc.	NPM	roll your own
Zig Zag Classic American Blend	North Atlantic Operating Company, Inc.	NPM	roll your own
Zig Zag Classic American Blend	North Atlantic Operating Company, Inc.	NPM	roll your own
Zig Zag Gold Standard	North Atlantic Operating Company, Inc.	NPM	roll your own
Zig Zag Gold Standard	North Atlantic Operating Company, Inc.	NPM	roll your own

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PUBLIC NOTICE

Regarding Cigarette Tax Stamps and Cigarette Shipping Restrictions from the Alaska Department of Revenue

Cigarette Tax Stamps

Effective July 1, 2004, a person may not acquire, hold, own, import, possess, sell, distribute or consume cigarettes unless the package of cigarettes is affixed with a tax stamp issued by the Alaska Department of Revenue showing that the Alaska cigarette tax has been paid. This includes mail order and Internet purchases of cigarettes for personal consumption. In other words, **if the cigarette package is not properly stamped, don't buy it or sell it.**

Individuals may personally carry into the state of Alaska up to 5 packs of unstamped cigarettes each month for their own consumption. **This exemption, however, does not apply to cigarettes received through the mail.**

Unstamped cigarettes found in Alaska are contraband and may be seized by the State.

Cigarette Shipping Restrictions

Generally, it is illegal to ship or receive cigarettes through the mail unless the person shipping the cigarettes holds a **current** cigarette license issued by the Department of Revenue **and** the person receiving the cigarettes holds a **current** tobacco endorsement issued by the Alaska Department of Community and Economic Development **or** the person receiving the cigarettes provides the shipping company an affidavit stating they are **19 years of age or older** and are receiving the cigarettes for **personal consumption**. In the above cases, the cigarettes must be stamped showing that the cigarette tax has been paid. However, the following entities may receive stamped or unstamped cigarettes through the mail from any source:

- 1) A person who holds a **current** cigarette license issued by the Alaska Department of Revenue.
- 2) An operator of a customs bonded warehouse under 19 USC 1311 or 19 USC 1555.
- 3) An instrumentality of the federal government.
- 4) An Indian tribal organization authorized to possess untaxed cigarettes.

Please note: Only the Metlakatla and Klawock Indian Communities are Indian tribal organizations authorized to possess untaxed, unstamped cigarettes. **Individual members of these communities may not purchase cigarettes through the mail unless they provide the affidavit described above and purchase cigarettes from an entity licensed by the Department of Revenue.**

When shipping cigarettes, the package containing the cigarettes must be clearly marked with the word "cigarettes".

Penalties, fines and imprisonment may result from failure to comply with Alaska tax laws.

If you have questions regarding this Notice or Alaska's Cigarette and Tobacco Products Tax laws, contact the Alaska Department of Revenue, Tax Division at (907) 269-6620.

Authority: AS 43.05.290, AS 43.50.105, AS 43.50.520, AS 43.50.580, AS 43.50.610

**United States Department of Health and Human Services
Substance Abuse and Mental Health Services**

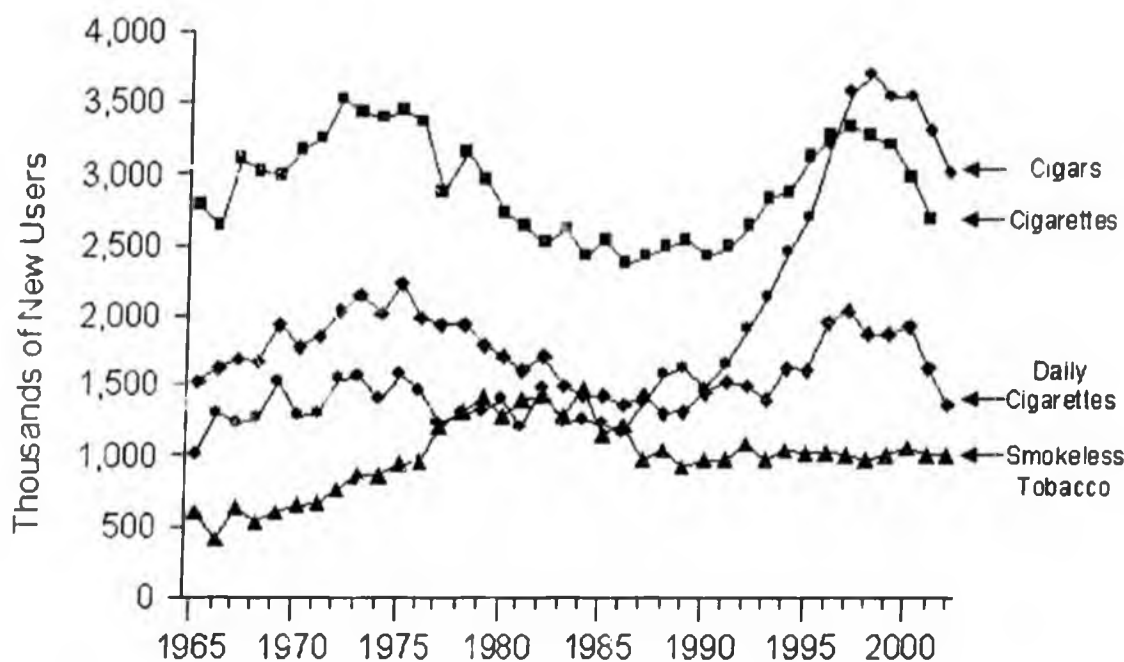
1. 2003 National Survey on Drug Use and Health

- a. Statistical Information Pertaining To:**
 - i. Number of New Users of Tobacco: 1965-2002**
 - ii. Tobacco Use Among Persons Aged 12 or Older**
 - iii. Cigarette Use by Age Group and Gender**
 - iv. Cigarette Use by Race/Ethnicity**
 - v. Cigarette Use by Geographic Areas**
 - vi. Frequency of Cigarette Use**
 - vii. Association with Illicit Drug and Alcohol Use**
 - viii. Youth Access to Cigarettes**
 - ix. Nicotine Dependence by Age**

Tobacco

- The number of Americans who smoke cigarettes for the first time each year has remained above 2.5 million in nearly every year since 1965. In 2001, the most recent year for which cigarette incidence estimates are made, an estimated 2.7 million Americans used cigarettes for the first time. This translates to an average of more than 7,000 new smokers each day. About three quarters (76 percent) of these initiates were under age 18, and about half (51 percent) were males.
- Following a period of increase from 1990 to 1997, cigarette initiation decreased from 3.3 million in 1997 to 2.7 million in 2001 (**Figure 5.4**). The number of new daily smokers decreased from 2.0 million in 1997 to 1.4 million in 2002. Among youths under age 18, the number of new daily smokers decreased from 1.1 million per year between 1997 and 2000 to 734,000 in 2002. This corresponds to a decrease from about 3,000 to about 2,000 new youth daily smokers each day.

Figure 5.4 Annual Numbers of New Users of Tobacco: 1965–2002



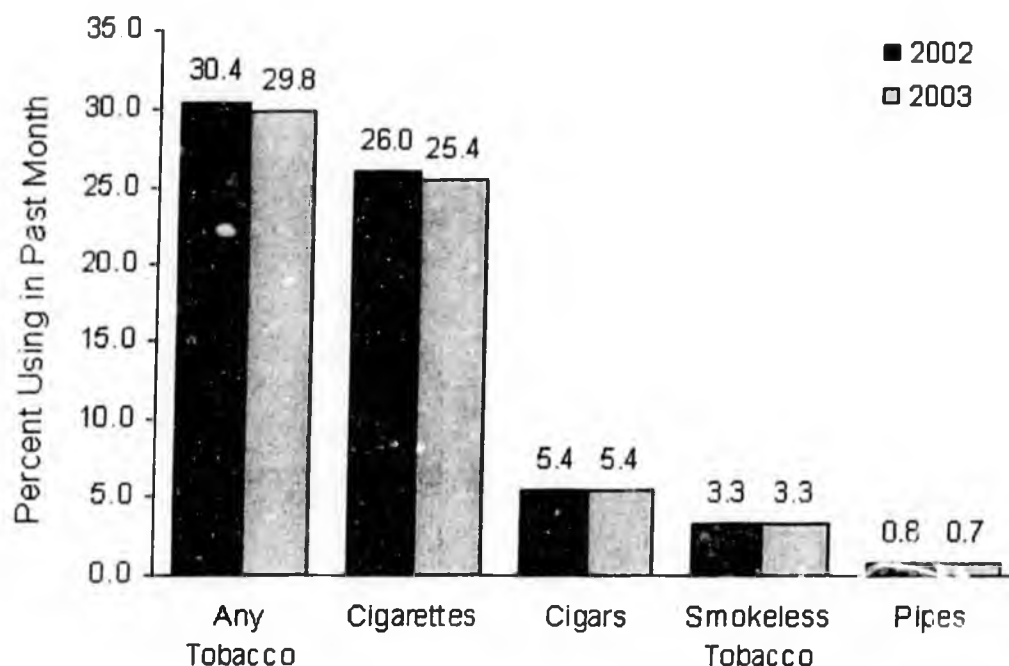
- Initiation of cigar smoking more than doubled between 1990 and 1998, reaching a peak of 3.7 million new users in 1998. Between 2000 and 2002, cigar initiates declined from 3.6 million to 3.0 million. Since 1990, youths under 18 have constituted an increasingly greater proportion of the number of new cigar smokers, from 23 percent in 1990 to 46 percent in 2002. During that period, the proportion of cigar initiates that was female also increased, from 24 to 45 percent.

4. Tobacco Use

The National Survey on Drug Use and Health (NSDUH) includes a series of questions about the use of tobacco products, including cigarettes, chewing tobacco, snuff, cigars, and pipe tobacco. For analytic purposes, data for chewing tobacco and snuff are combined as "smokeless tobacco." Cigarette use is defined as smoking "part or all of a cigarette." Questions to determine nicotine dependence among current cigarette smokers also are included in the NSDUH. Nicotine dependence is based on criteria from the Nicotine Dependence Syndrome Scale (NDSS) or the Fagerstrom Test of Nicotine Dependence (FTND) (see [Appendix B, Section B.4.2](#), of this report).

- An estimated 70.8 million Americans reported current (past month) use of a tobacco product in 2003. This is 29.8 percent of the population aged 12 or older, similar to the rate in 2002 (30.4 percent) ([Figure 4.1](#)).

Figure 4.1 Past Month Tobacco Use among Persons Aged 12 or Older: 2002 and 2003



Note: Statistically significant differences (at 0.05 level) between 2002 and 2003 are denoted by "+".

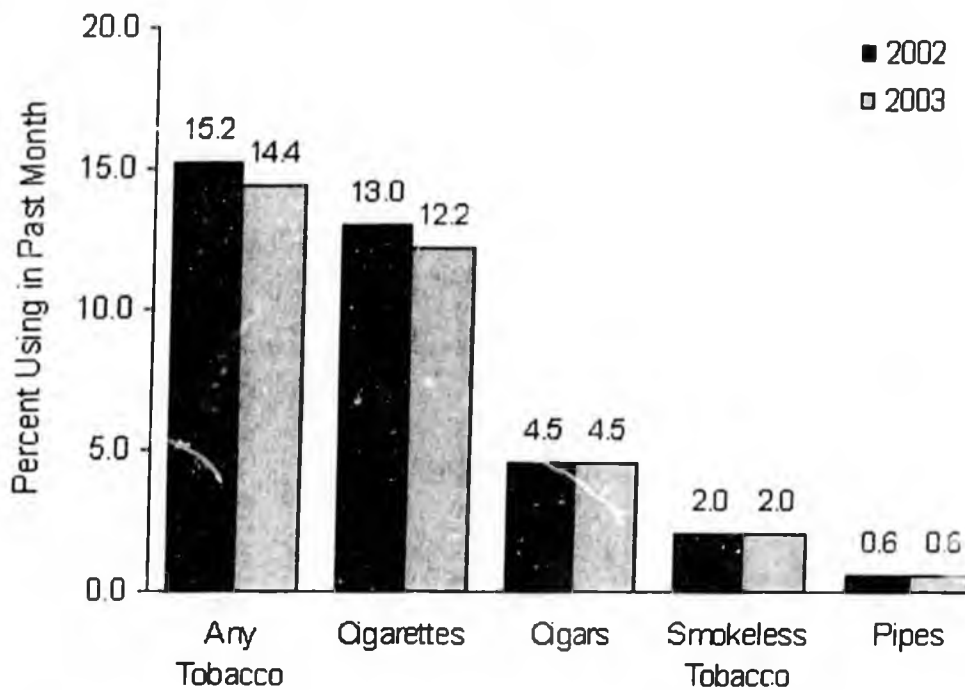
- Among that same population, 60.4 million (25.4 percent of the total population aged 12 or older) smoked cigarettes in the past month, 12.8 million (5.4 percent) smoked cigars,

7.7 million (3.3 percent) used smokeless tobacco, and 1.6 million (0.7 percent) smoked tobacco in pipes. These rates remained unchanged from 2002.

Age

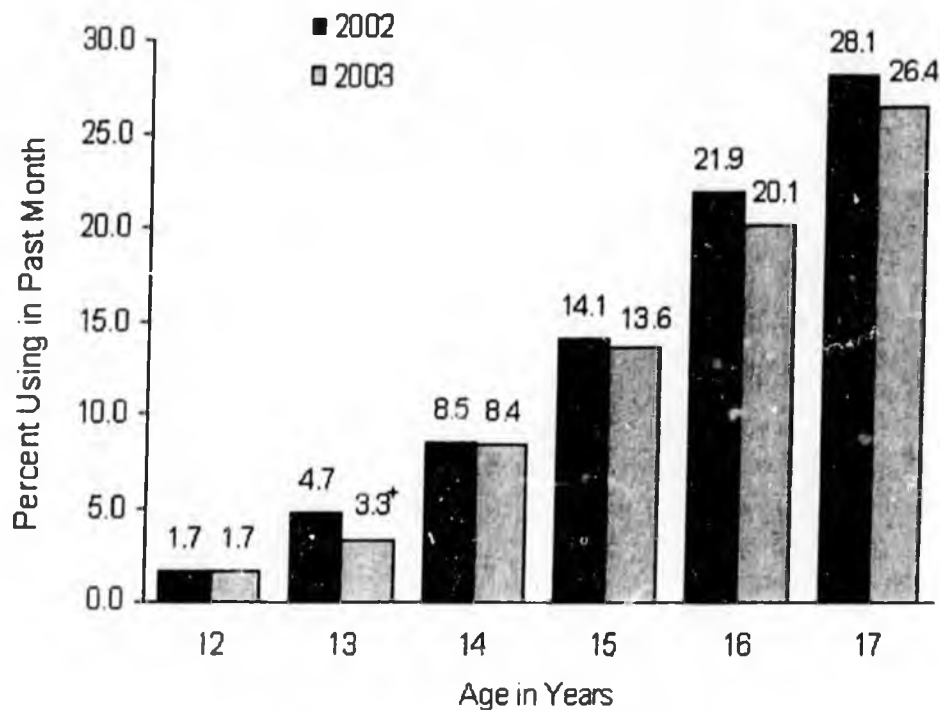
- Young adults aged 18 to 25 reported the highest rate of current use of any tobacco products (44.8 percent). Past month rates of use for this age group were 40.2 percent for cigarettes, 11.4 percent for cigars, 4.7 percent for smokeless tobacco, and 0.9 percent for pipes. These rates were unchanged from 2002 (45.3 percent for any tobacco product, 40.8 percent for cigarettes, 11.0 percent for cigars, 4.8 percent for smokeless tobacco, and 1.1 percent for pipes).
- An estimated 3.6 million youths aged 12 to 17 (14.4 percent) reported past month use of a tobacco product in 2003 (**Figure 4.2**). There were no statistically significant changes in past month rates of the different tobacco products among this age group between 2002 and 2003. However, there were significant declines in past year (from 20.3 to 19.0 percent) and lifetime (from 33.3 to 31.0 percent) cigarette use between 2002 and 2003. In addition, the rate of past month cigarette use decreased among 13 year olds (from 4.7 percent in 2002 to 3.3 percent in 2003) (**Figure 4.3**).

Figure 4.2 Past Month Tobacco Use among Youths Aged 12 to 17: 2002 and 2003



Note: Statistically significant differences (at 0.05 level) between 2002 and 2003 are denoted by *.

Figure 4.3 Past Month Cigarette Use among Youths Aged 12 to 17, by Age: 2002 and 2003



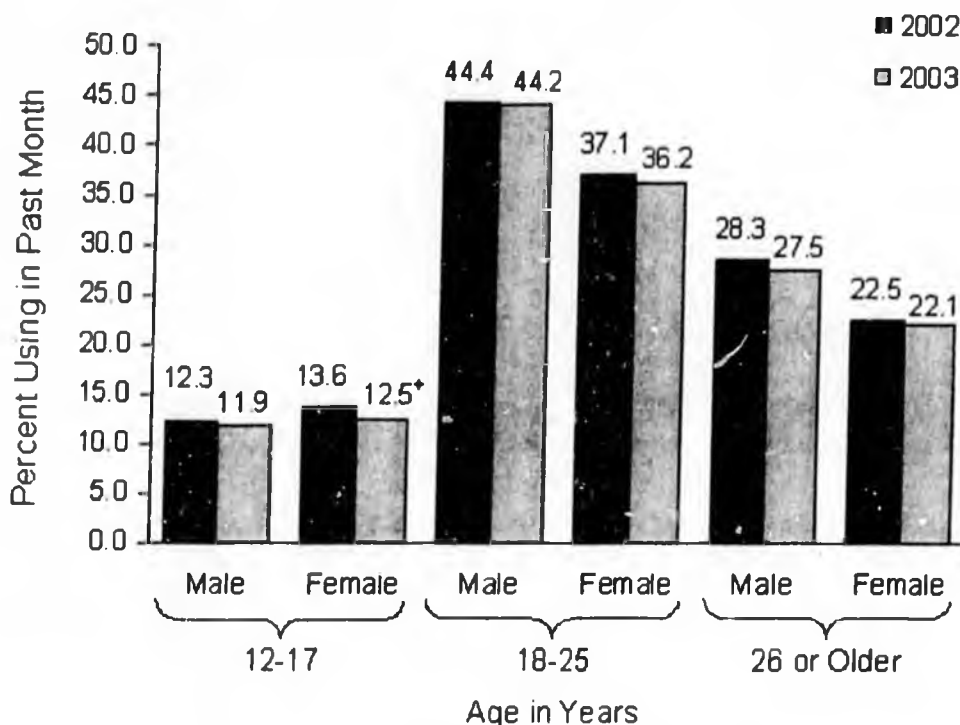
Note: Statistically significant differences (at 0.05 level) between 2002 and 2003 are denoted by "*".

- In 2003, current cigarette smoking rates increased steadily with age up to age 20, from 1.7 percent at age 12 to 26.4 percent at age 17. The rate peaked at age 20 (44.1 percent). After age 22, rates generally declined with age: 30.9 percent for 30 to 34 year olds; 31.1 percent for 40 to 44 year olds; 25.0 percent for 50 to 54 year olds; 16.5 percent for 60 to 64 year olds; and 10.0 percent for persons aged 65 or older.
- Smokeless tobacco use was most prevalent among young adults aged 18 to 25. Past month use was reported by 4.7 percent of young adults in 2003, which was similar to the 2002 rate (4.8 percent). Rates also did not change between 2002 and 2003 for youths aged 12 to 17 (2.0 percent in both years) or among persons aged 26 or older (3.2 percent in both years).
- Current cigar use among the three age groups also was unchanged between 2002 and 2003. The rate was 4.5 percent in both years among youths aged 12 to 17; 11.4 percent in 2003 and 11.0 percent in 2002 among young adults aged 18 to 25; and 4.5 percent in 2003 and 4.6 percent in 2002 among adults aged 26 or older.

Gender

- Males were more likely than females to report past month use of a tobacco product. In 2003, 35.9 percent of males aged 12 or older were current users of any tobacco product, a significantly higher proportion than among females (24.0 percent).
- A higher proportion of males than females aged 12 or older smoked cigarettes in 2003 (28.1 vs. 23.0 percent). Among youths aged 12 to 17, however, girls (12.5 percent) were as likely as boys (11.9 percent) to smoke (**Figure 4.4**). There was no change in cigarette use among boys aged 12 to 17 between 2002 and 2003. However, among girls, cigarette use decreased from 13.6 percent in 2002 to 12.5 percent in 2003.

Figure 4.4 Past Month Cigarette Use, by Age Group and Gender: 2002 and 2003



Note: Statistically significant differences (at 0.05 level) between 2002 and 2003 are denoted by * + *.

- Males were much more likely than their female counterparts to report current use of smokeless tobacco (6.2 percent of males aged 12 or older vs. 0.5 percent of females). This pattern remained consistent across age groups (12 to 17, 18 to 25, and 26 or older).

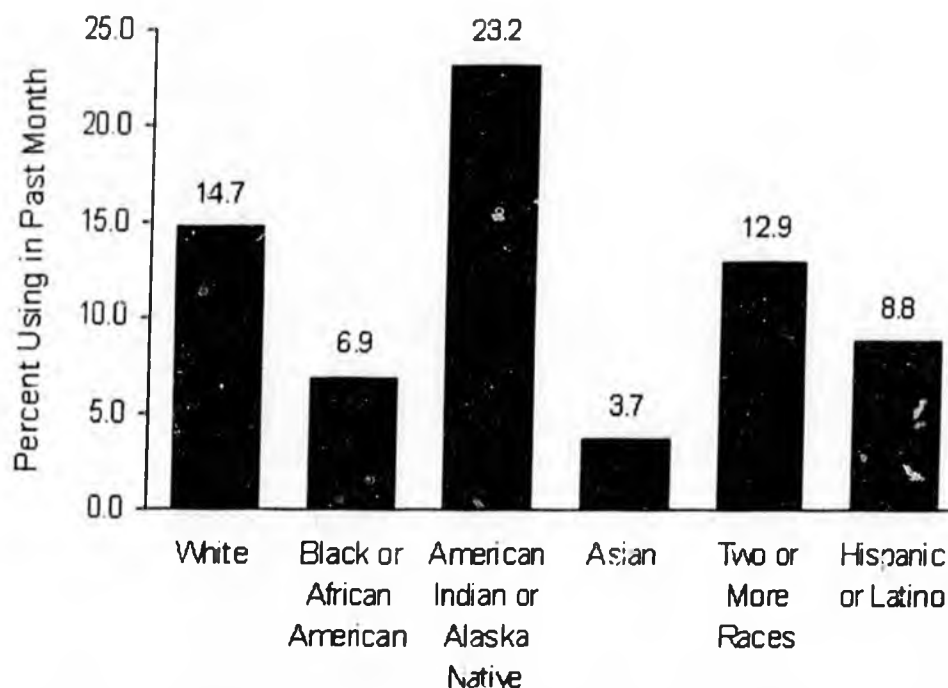
Pregnant Women

- Based on combined data from 2002 and 2003, an estimated 18.0 percent of pregnant women aged 15 to 44 smoked cigarettes in the past month. Among nonpregnant women of the same age group, 30.7 percent smoked cigarettes in the past month.

Race/Ethnicity

- American Indians or Alaska Natives were more likely than any other racial/ethnic group to report the use of tobacco products in 2003. Among persons aged 12 or older, 41.8 percent of American Indians or Alaska Natives reported using at least one tobacco product in the past month. The lowest current tobacco use rate among racial/ethnic groups in 2003 was observed for Asians (13.8 percent), which was a decrease from the 2002 rate (18.6 percent).
- Among youths in different racial/ethnic groups, the highest rate of past month cigarette use in 2003 was among American Indians or Alaska Natives (23.2 percent), while the lowest was among Asians (3.7 percent) (Figure 4.5).

Figure 4.5 Past Month Cigarette Use among Youths Aged 12 to 17, by Race/Ethnicity: 2003



Education

- As in 2002, the prevalence of cigarette smoking decreased with increasing levels of education. Among adults aged 18 or older in 2003, college graduates were the least likely to report smoking cigarettes (14.0 percent) compared with 35.3 percent of adults who lacked a high school diploma.

College Students

- Young adults aged 18 to 22 enrolled full time in college in 2003 were less likely to report current cigarette use than their peers not enrolled full time (i.e., part-time college students and persons not enrolled in college). Past month cigarette use was reported by 31.4 percent of full-time college students compared with 45.3 percent of their peers who were not enrolled full time.

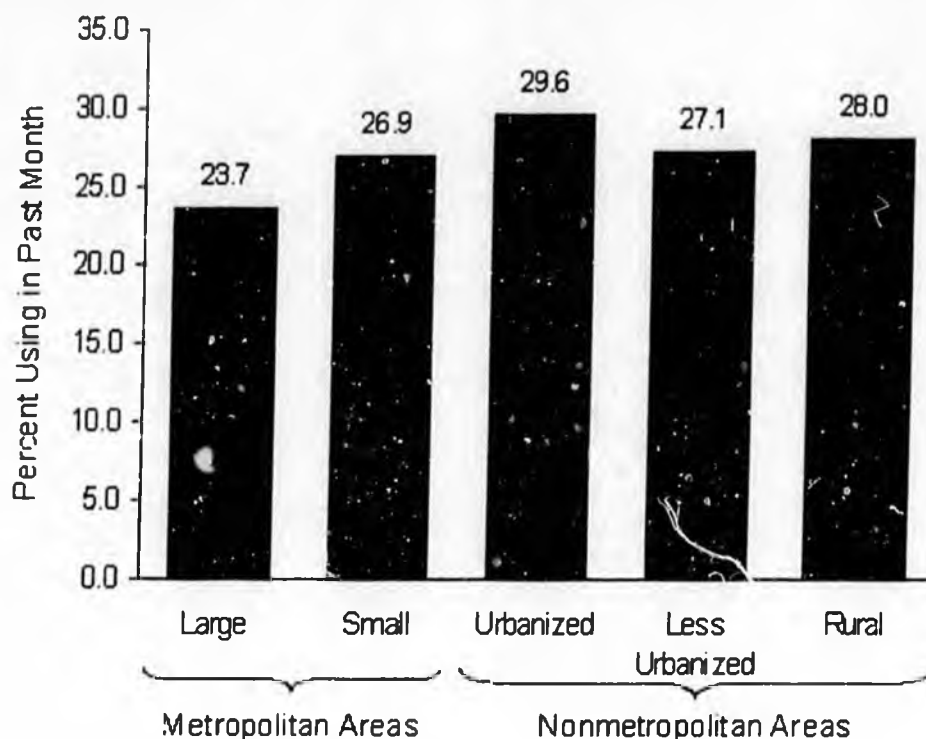
Employment

- Among unemployed adults aged 18 or older, rates of current cigarette smoking declined from 49.8 percent in 2002 to 42.7 percent in 2003. Current smoking rates among full-time and part-time workers in 2003 were 29.5 and 25.2 percent, respectively.

Geographic Area

- Cigarette use rates among persons aged 12 or older in 2003 varied by region of the country. Past month cigarette use ranged from a low of 19.3 percent for persons living in the Pacific Division to 29.5 percent of persons living in the East South Central part of the country. This same pattern was noted in 2002.
- Rates of current cigarette use among persons aged 12 or older were higher in less densely populated areas. In large metropolitan areas, 23.7 percent smoked in the past month compared with 26.9 percent in small metropolitan areas and 28.3 percent in nonmetropolitan areas (**Figure 4.6**). The highest rate of smoking occurred in urbanized nonmetropolitan areas (29.6 percent). However, this rate was not statistically different from rates in less urbanized nonmetropolitan areas (27.1 percent) and completely rural nonmetropolitan areas (28.0 percent).

Figure 4.6 Past Month Cigarette Use among Persons Aged 12 or Older



- Rates of current cigarette use declined between 2002 and 2003 in large metropolitan areas overall, from 25.1 to 23.7 percent. The decline was evident among adults aged 18 or older (from 26.7 to 25.3 percent) and for youths aged 12 to 17 (from 11.5 to 10.2 percent).

Frequency of Cigarette Use

- Of the 60.4 million past month cigarette smokers, 62.9 percent (38.0 million) reported smoking every day in the past 30 days. Among youths aged 12 to 17 who smoked in the past month, 29.7 percent (900,000) were daily smokers.
- Past month cigarette smokers in 2003 smoked an average of 13 cigarettes per day on the days they smoked. The average number of cigarettes smoked per day increased with age from 2 per day among 12 year olds to 6 per day among 17 year olds; 12 per day among 30 to 34 year olds; and 15 per day among 40 to 44 year olds, peaking at 19 per day among smokers aged 55 to 59. Smokers aged 60 to 64 averaged 14 per day, and smokers aged 65 or older averaged 15 per day.

Association with Illicit Drug and Alcohol Use

- Current cigarette smokers were more likely to use other tobacco products, alcohol, and illicit drugs than were current nonsmokers. Comparing current smokers and nonsmokers, rates of binge alcohol use were 43.4 versus 15.5 percent, rates of heavy alcohol use were 16.5 versus 3.5 percent, and rates of current (past month) illicit drug use were 19.8 versus 4.2 percent. Rates of use of smokeless tobacco and cigars also were higher among current smokers compared with current nonsmokers (4.9 vs. 2.7 percent for smokeless tobacco; 12.2 vs. 3.1 percent for cigars).

Usual Brand of Cigarettes Smoked

- Among past month cigarette smokers aged 12 or older, the most commonly smoked brands were Marlboro (41.3 percent), Newport (10.8 percent), and Camel (7.0 percent). These brands also were the most commonly reported in 2002.
- Notable racial/ethnic differences existed with regard to brand of cigarettes smoked most often in the past month. In 2003, 43.8 percent of white smokers and 58.5 percent of Hispanic smokers reported smoking Marlboro cigarettes. Among black smokers, 7.2 percent smoked Marlboro cigarettes, while 46.0 percent smoked Newport cigarettes.
- The same three brands accounted for most of the youth cigarette smoking in 2003. Among current smokers 12 to 17 years of age, 49.2 percent reported Marlboro, 23.4 percent reported Newport, and 9.7 percent reported Camel. No other individual cigarette brand was reported by more than 3.0 percent of youths. These three brands were also most commonly reported by youths in 2002.

Youth Access to Cigarettes

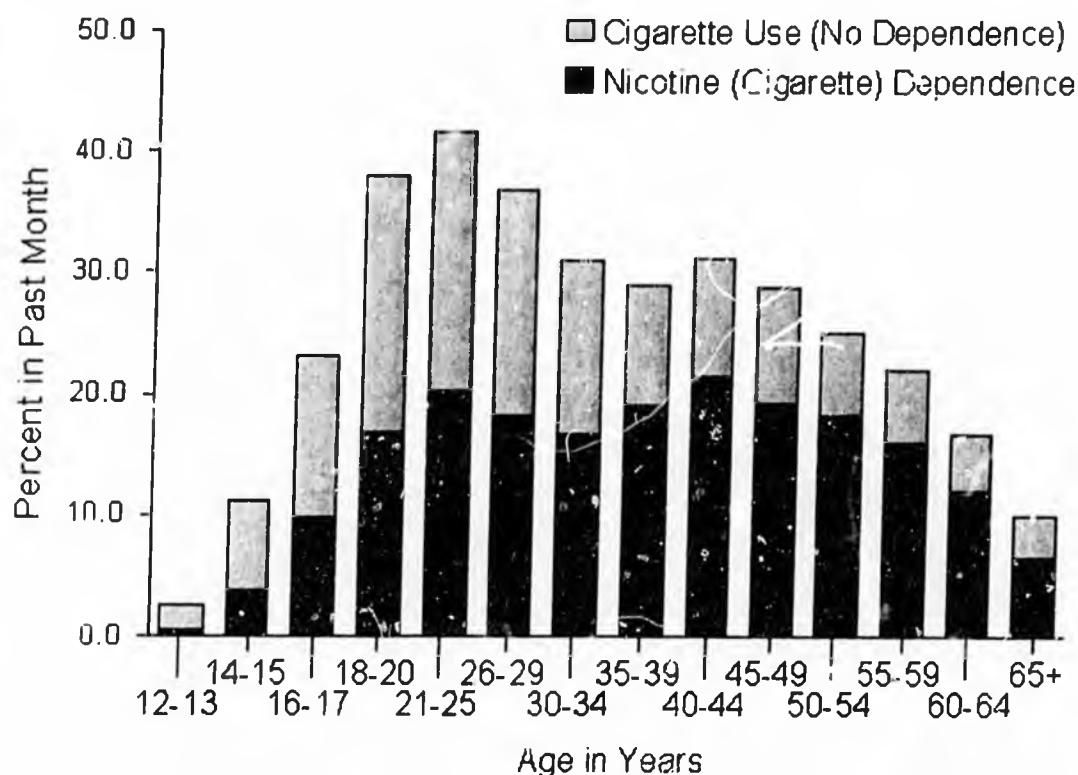
- Youths who had smoked in the past 30 days were asked to report all the different sources from which they had obtained cigarettes in the past 30 days. Among youth smokers aged 12 to 17 in 2003, 77.0 percent reported that they or someone else purchased the cigarettes. The most commonly reported way that youth smokers obtained cigarettes was having a friend or relative buy the cigarettes (63.3 percent).
- More than half of youth smokers aged 12 to 17 (53.3 percent) reported that they personally bought cigarettes at least once in the past month. More than one fourth of youth smokers (29.0 percent) reported buying cigarettes at a store where a clerk hands out the cigarettes, and 28.3 percent reported buying cigarettes in a small store, convenience store, or gas station. These percentages were all slightly lower than the corresponding estimates for 2002, but none of these differences was statistically significant. However, a significantly lower percentage of youth smokers in 2003 bought cigarettes in a drugstore (7.6 percent) compared with youth smokers in 2002 (9.8 percent).

- Among youth smokers aged 12 or 13, 32.3 percent reported that they personally bought cigarettes in the past month. However, only 7.3 percent of smokers aged 12 or 13 reported buying cigarettes at a store where a clerk hands out the cigarettes. Approximately one fourth (24.1 percent) of smokers aged 12 or 13 reported buying cigarettes from a friend, relative, or someone at school.

Nicotine Dependence

- An estimated 35.7 million Americans aged 12 or older in 2003 were classified as nicotine dependent in the past month because of their cigarette use (15.0 percent of the total population). These estimates are similar to the estimates for 2002.
- Among the 60.4 million past month cigarette smokers aged 12 or older in 2003, 59.0 percent were nicotine dependent. The proportion of current cigarette smokers who were dependent increased with age. Among youths aged 12 to 17 who were current smokers, 38.4 percent were dependent. The dependence rate was 46.9 percent among smokers aged 18 to 25, 51.5 percent among smokers aged 26 to 34, 67.0 percent among smokers aged 35 to 49, and 70.1 percent among smokers aged 50 or older (Figure 4.7).

Figure 4.7 Past Month Cigarette Use and Nicotine Dependence, by Age: 2003



- Of the 35.7 million nicotine-dependent smokers in 2003, 1.2 million were youths aged 12 to 17 (4.7 percent of youths), 6.0 million were young adults aged 18 to 25 (18.9 percent of young adults), and 28.5 million were aged 26 or older (15.8 percent of older adults).
- Nicotine dependence among adult smokers was more likely among those who first used cigarettes at a young age than among those who first used at later ages. In 2003, current smokers aged 18 or older who had first smoked at age 14 or younger had a nicotine dependence rate of 66.9 percent compared with a dependence rate of 51.1 percent among current smokers who had smoked their first cigarette at age 18 or older.

**United States Department of Health and Human Services
Surgeon General's Office
General Information**

1. Tobacco Products Fact Sheet
2. Tobacco Taxation Fact Sheet
3. Minors' Access to Tobacco Fact Sheet
4. *Reducing Tobacco Use- A Report of the Surgeon General*
Executive Summary
Chapter 6 Economic Approaches: Taxation of Tobacco Products



Tobacco Products Fact Sheet

- More than 4,000 chemical compounds have been identified in tobacco smoke. Of these, at least 43 are known to cause cancer.¹

- Current tobacco product regulation requires cigarette manufacturers to disclose levels of tar and nicotine. Smokers receive very little information regarding chemical constituents in tobacco smoke, however, and the use of terms such as "light" and "ultra light" on packaging and in advertising may be misleading.¹

- Cigarettes with low tar and nicotine contents are not substantially less hazardous than higher-yield brands. Consumers may be misled by the implied promise of reduced toxicity and by the marketing of such brands.¹

- Vents are used in cigarette filters to lower tar and nicotine yields in smoke, but they may be difficult to see. To examine the vents in some brands, the smoker would have to take off the filter wrapping, hold the filter up to a bright light, and look through a magnifying glass.²

- The potential health benefit of low tar cigarettes has been challenged. Smokers who switch to lower-tar and -nicotine cigarettes frequently change their smoking habits. They may block the vents in the filter portion of a cigarette, puff more frequently, inhale more deeply, or smoke more cigarettes per day, thus negating any risk reduction from low-tar and -nicotine cigarettes.³

- Early data showed a lower cancer risk from low-tar cigarettes; however, more recent data suggest otherwise. Lower-yield cigarettes may be somewhat better than very high-yield cigarettes; but, when comparing full-flavor cigarettes and current light cigarettes, there is no evidence to suggest a lower cancer risk from the low-tar cigarettes.¹

CIGARETTE ADDITIVES

- Federal law (the Comprehensive Smoking Education Act of 1984 and the Comprehensive Smokeless Tobacco Health Education Act of 1985) requires cigarette and smokeless tobacco manufacturers to submit a list of ingredients added to tobacco to the Secretary of Health and Human Services.¹

- Hundreds of ingredients are used in the manufacture of tobacco products. Additives make cigarettes more acceptable to the consumer — they make cigarettes milder and easier to inhale, improve taste, and prolong burning and shelf life.¹

- In 1994 six major cigarette manufacturers reported 599 ingredients that were added to the tobacco of manufactured cigarettes. Although, these ingredients are regarded as safe when ingested in foods, some may form carcinogens when heated or burned.¹

- Knowledge about the impact of additives in tobacco products is negligible and will remain so as long as brand-specific information on the identity and quantity of additives is unavailable.¹

SMOKELESS ADDITIVES

- In 1994 ten manufacturers of smokeless tobacco products released a list of additives used in their products. The additives list contained 562 ingredients approved for foods by the FDA.¹

- The list of additives to smokeless tobacco includes sodium carbonate and ammonium carbonate, which increase the level of "free" nicotine in moist snuff by raising the pH level. Unprotonated (free) nicotine is the chemical form of nicotine that is most readily absorbed through the mouth into the bloodstream. Therefore, increases in pH can increase the snuff user's nicotine absorption rate. Studies with nicotine and other addictive drugs suggest that the absorption rate of drugs into the body is an important determinant of their addiction potential.¹

- Moist snuff products with low nicotine content and pH levels have a smaller proportion of free nicotine. In contrast, moist snuff products with high nicotine content and pH levels have a higher proportion of free nicotine.¹

- The epidemiology of moist snuff use among teenagers and young adults indicates that most novices start with brands having low levels of free nicotine and then "graduate" to brands with higher levels.¹

- Sweeteners and flavorings, such as cherry juice concentrate, apple juice, chocolate liqueur, or honey are used in various smokeless tobacco products. As with manufactured cigarettes, these additives increase palatability and may increase the use of smokeless tobacco, at least among novices.¹

REFERENCES

1. U.S. Department of Health and Human Services. Reducing Tobacco Use: A Report of the Surgeon General. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2000.

2. Centers for Disease Control and Prevention. Filter ventilation levels in selected U.S. cigarettes, 1997. *MMWR* 1997; 46:1043-47.

3. Centers for Disease Control and Prevention. Determination of nicotine, pH, and moisture content of six U.S. commercial moist snuff products — Florida, January-February 1999. *MMWR* 1999; 48:398-401.



Tobacco Taxation Fact Sheet

- Substantial scientific evidence shows that higher cigarette prices result in lower overall cigarette consumption. Most studies indicate that a 10% increase in price will reduce overall cigarette consumption by 3% to 5%.
- Youth, minorities, and low-income smokers are two to three times more likely to quit or smoke less than other smokers in response to price increases.
- Increases in cigarette excise taxes are an effective policy tool in deterring smoking initiation among youth, prompting smoking cessation among adults, and reducing the average cigarette consumption among continuing smokers.
- Despite the proven effects of increasing both the price of cigarettes and tobacco excise taxes, the average price and excise tax on cigarettes in the United States is well below those of most other industrialized nations.
- Higher cigarette prices will not simply reduce average cigarette consumption but also will reduce overall smoking prevalence. Higher prices will result in more smokers deciding to quit and fewer young people opting to begin smoking.
- Studies of smokeless tobacco products suggest that increasing their prices would reduce the prevalence of smokeless tobacco use as well.
- Taxes on smokeless tobacco products are much lower than taxes on cigarettes, particularly at the federal level. Research suggests that increases in cigarette excise taxes, while reducing cigarette smoking, may have contributed to greater use of smokeless tobacco products. Some public health advocates and others have therefore called for the equalization of taxes on tobacco.
- Healthy People 2010 calls for state and federal taxes to increase to an average of \$2.00 for both cigarettes and smokeless tobacco products by the year 2010.
- The importance of tobacco to the U.S. economy has been overstated. Judicious policies combined with higher tobacco taxes and stronger prevention policies can help foster economic diversification in tobacco-producing areas.

Global Cigarette Prices and Taxes in U.S. Dollars, 1999

Country	Tax as % of Price	Tax	Price
UK	86%	5.64	6.56
Denmark	82%	4.47	5.47
Portugal	80%	1.88	2.37
Finland	76%	3.82	5.02
France	76%	3.03	4.01
Canada ¹	75%	3.35	4.48
Belgium	75%	2.65	3.55
Italy	75%	1.94	2.60
Austria	74%	2.33	3.15
Greece	73%	1.75	2.41
Spain	73%	1.19	1.63
Netherlands	72%	2.37	3.29
Germany	71%	2.58	3.65
Sweden	70%	3.70	5.27
Ireland	60%	3.26	5.44
Canada ²	55%	1.41	2.55
US ³	41%	1.92	4.65
US ⁴	11%	0.34	3.04

1 (Highest - New Foundland)
2 (Lowest - Ontario)
3 (Highest - Alaska)
4 (Lowest - Kentucky)

Source: From Smokeless Tobacco Association web site at <http://www.sta.org>



Minors' Access to Tobacco Fact Sheet

- It is illegal in all states to sell cigarettes to persons under age 18. Progress has been made in the past several years in reducing the percentage of retailers willing to sell tobacco to minors.¹
- In 1991 an estimated 225 million packs of cigarettes were sold illegally to minors, and in 1997 daily smokers aged 12 to 17 years smoked approximately 924 million packs of cigarettes.¹
- An estimated 20% to 70% of teenagers who smoke report purchasing their own tobacco; the proportion varies by age, social class, amount smoked, and factors related to availability.¹
- The CDC's 1999 Youth Risk Behavior Surveillance (YRBS) survey found that among grade 9-12 students who smoked, 23.5% purchased their tobacco products from a store or gas station. However, there is growing evidence that many of the cigarettes these students obtain from other students were originally illegally sold to minors.²
- According to the 1999 YRBS survey, about two-thirds of students (69.6%) who purchased or tried to purchase cigarettes during the past month in a store or gas station were not asked to show proof of age. African American male students (19.8%) were significantly less likely to be asked to show proof of age than white (36.6%) and Hispanic (53.5%) male students.²
- The 1999 Monitoring the Future Survey found that about 72% of 8th-grade students and 88% of 10th-grade students believe they can get cigarettes "fairly easily" or "very easily" if they wanted to purchase them.¹
- Since 1996, the accessibility of cigarettes among 8th-grade students has been falling, which may be an indicator that federal and state government tobacco prevention efforts are starting to have an effect.¹
- More than two-thirds of states restrict cigarette vending machines, but many of these restrictions are weak. Only two states (Idaho and Vermont) have total bans on vending machines.¹
- Results from nine published studies found illegal vending machine sales to minors ranged from 82% to 100% between 1989 and 1992.¹
- More than 290 local jurisdictions, including New York City, successfully adopted and enforced outright bans on cigarette vending machines or restricted them to locations such as taverns and adult clubs where minors often are denied entry.¹
- Almost two-thirds of the states and many local jurisdictions require retailers to display signs that state the minimum age for purchase of tobacco products. Some regulations specify the size, wording, and location of these signs.¹
- All states have a specific restriction on the distribution of free tobacco samples to minors, and a few states or local jurisdictions prohibit free distribution altogether because of the difficulty of controlling who receives free samples.¹
- Several studies have found that single or loose cigarettes are sold in some locations. Such sales often are prohibited by state or local law, given single cigarettes do not display the required state tax stamp or federal health warning.¹
- Other regulations specify a minimum age for salespersons. These regulations recognize the difficulty young salespersons may have in refusing to sell cigarettes to their peers.¹
- Many state or local laws specify penalties only for the salesperson. However, applying penalties to business owners, who generally set hiring, training, supervising, and selling policies, is considered essential to preventing the sale of tobacco to minors.¹
- License suspensions or revocations imposed as penalties for repeated violation of youth access laws would communicate clear message that illegal tobacco sales to minors should never be accepted or tolerated. Revenues from fines could be used for enforcement and retailer education programs.¹
- Numerous studies have shown that comprehensive merchant education and training programs help reduce illegal sales to minors.¹

- Growing number of states and local jurisdictions are imposing sanctions against minors who purchase, attempt to purchase, or possess tobacco products. Although these laws are a potential deterrent, some tobacco control advocates believe such laws deflect responsibility from retailers to underage youth.¹
- In 1992 the Synar Amendment (Public Law 102-321), was passed to curb the illegal sale of tobacco products to minors. An amended Synar Regulation, was issued by the Substance Abuse and Mental Health Services Administration in January 1996, and requires each state receiving federal grant money to conduct annual random, unannounced inspections of retail tobacco outlets to assess the extent of sales to minors. In 1999, seven states and the District of Columbia failed to attain their Synar Amendment targets. Failure to comply with the law puts states at risk of forfeiting federal block grant funds for substance abuse prevention and treatment services.¹
- In 1996, the Food and Drug Administration issued a regulation prohibiting the sale of tobacco products to persons under the age of 18 years and requiring that all persons under the age of 27 years show a photograph identification to purchase cigarettes or smokeless tobacco. The regulation also banned cigarette vending machines and self-service displays, except in certain venues for adults only (e.g., bars and nightclubs).
- On March 21, 2000, the United States Supreme Court ruled that the FDA lacked jurisdiction to regulate tobacco products and to enforce rules to reduce the access and appeal of tobacco products for children and adolescents. The loss of the FDA's education and enforcement program eliminates vital federal support for state tobacco control programs.¹
- The 2010 national health objectives call for reducing the percentage of retailers willing to sell tobacco products to minors to 5% or less through enforcement of existing laws. To date, no state has met this objective.²

REFERENCES

1. U.S. Department of Health and Human Services. Reducing Tobacco Use: A Report of the Surgeon General. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 2000.
2. Centers for Disease Control and Prevention. Youth Risk Behavior Surveillance—United States, 1999. *MMWR* 2000;49:SS-7.
3. The University of Michigan. Cigarette Smoking Among American Adults Continues Gradual Decline (press release). December 17, 1999.
4. U.S. Department of Health and Human Services. Healthy People 2010 (conference edition in two volumes). Washington, DC: January 2000.



Reducing Tobacco Use

A Report of the Surgeon General—2000

AT A GLANCE

Tobacco use, particularly smoking, remains the number one cause of preventable disease and death in the United States. This report of the Surgeon General on smoking and health is the first to offer a composite review of the various methods used to reduce and prevent tobacco use. The topic is a new one in this series of reports, although previous reports have looked at aspects of such strategies. This report evaluates each of five major approaches to

reducing tobacco use: educational, clinical, regulatory, economic, and comprehensive. Further, the report attempts to place the approaches in the larger context of tobacco control, providing a vision for the future of tobacco use prevention and control based on these available tools. The report is clear in its overriding conclusion: *Although our knowledge about tobacco control remains imperfect, we know more than enough to act now.*

“If the recommendations in this report were fully implemented, the Healthy People 2010 objectives related to tobacco use could be met, including cutting in half the rates of tobacco use among young people and adults. It is clear that the major barrier to more rapid reductions in tobacco use is the effort of the tobacco industry to promote the use of tobacco products. Our lack of greater progress in tobacco control is more the result of failure to implement proven strategies than it is the lack of knowledge about what to do. As a result, each year, more than 1 million young people continue to become regular smokers and more than 400,000 adults die from tobacco-related diseases. Tobacco use will remain the leading cause of preventable illness and death in this Nation and a growing number of other countries until tobacco prevention and control efforts are commensurate with the harm caused by tobacco use.”

—David Satcher, MD, PhD, Surgeon General



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and Health Promotion
Office on Smoking and Health



Issues in Reducing Tobacco Use

Two themes have permeated the history of tobacco use in the United States. First, and most obviously, tobacco is an extraordinary economic fuel, and its powerful economic impact comes into direct conflict with its vast social costs. Second, antitobacco activity has a continuous history characterized by waxing and waning and by a changing mix of motivations and strategies. These two themes are inextricably linked, and their interaction provides a backdrop for current efforts to reduce tobacco use.

Such efforts take place in a complicated context. Chronic diseases have largely replaced infectious processes as the leading causes of death during the 20th century (Rothenberg and Koplan 1990). But this replacement has occurred during a period of remarkable gains in life expectancy. Mortality is now less than half of what it was in 1900. The single most important risk associated with the leading chronic diseases is cigarette smoking; the evidence for that statement fills volumes of Surgeon General's reports on smoking and health, and these volumes are merely summaries of a massive literature. Since the first of these reports in 1964, the prevalence of smoking has declined by nearly half, and it is clear that the declining use of tobacco has contributed to the observed decline in mortality. But the decline has been a slower decline than would be warranted by awareness of the well-publicized public health threat that smoking poses. The forces that have tried to accelerate the decline may be thought of collectively as "interventions," although the term, in a more narrow sense, is often reserved for circumscribed, planned, and measurable activities. Many of the maneuvers described in this report do not meet the narrower definition, but all share the common characteristic of being directed toward a reduction in tobacco use.

The result is a considerable challenge for evaluation. In an environment in which multiple interventions are in play, the ability to attribute an individual positive outcome (e.g., smoking cessation, prevention of smoking uptake) to one of them is virtually impossible. Although the epidemiologic methods exist to evaluate attribution in the aggregate, data are rarely available to make such judgments. The challenge of evaluating these separate efforts and strategies results from their disparate nature and the type of metric that may be appropriate to their evaluation.

Management of nicotine addiction (Chapter 4), for example, is usually studied by using standard epidemiologic study design—often a prospective comparison of a study group and a control group—and the effect is measured by some form of the relative or attributable risk statistic. Educational strategies (Chapter 3), like other behavioral studies, may use similar statistics but usually invoke a different set of confounding factors to be considered; sorting out the relative influence of such factors often requires complex multivariate procedures. Regulatory efforts (Chapter 5) are frequently evaluated after the effect (with a pre- and post-type of study design) or are evaluated according to ecological correlations with changes in epidemiologic trends. Economic measures (Chapter 6) depend for their evaluation on econometric information—that is, on administrative data sets and survey results that are subjected to correlation and trend analysis. Finally, comprehensive program strategies are often evaluated using surveillance data systems, trend analyses, and case studies.

In each instance, some form of evaluation is possible, but the ability to connect the intervention to the outcome differs greatly among these efforts, as does the ability to estimate impact. Theoretically, it might be possible to associate each effort with some presumed number of persons who start smoking or some number who quit, but to do so would usually require numerous assertions and assumptions. Without a common metric, the various types of efforts to reduce tobacco use are difficult to compare quantitatively, and perhaps a more qualitative approach should be used. One approach would be to consider the potential span of impact (the proportion of the population, or population sectors) that the particular effort can exercise in the context of a qualitative estimate of its potential impact. For example, clinical methods to manage nicotine addiction may now be thought to have relatively high impact, but a relative small span. Economic measures can be judged to have both high impact and large span. Each of the interventions has its appropriate place and context: they line up side by side and not in relative order. Their use is predicated on the particular context in which they are to operate. Because they all face the same counterinfluence of the industry's tobacco promotion, a reasonable case can be made that the large-scale strategies (economic and regulatory) have the greatest direct impact on that barrier. But the

context necessary for those large-scale efforts to work depends on public attitudes and social norms that must be influenced by other means.

In the 1990s, it became increasingly apparent that a public health success in reducing tobacco use requires activity on all fronts. A comprehensive approach—one that optimizes synergy from a mix of strategies—has emerged as the guiding principle for future efforts to reduce tobacco use. Such an approach makes moot the issue of a hierarchy of interventions, since a comprehensive approach presupposes an interdependence of the available strategies. A coordinated, cohesive infrastructure makes intuitive sense, since it permits a modular approach to the interventions themselves, but has been challenged on analytic grounds. In such a framework, attribution of success to particular program elements is difficult, and there is no experimental evidence (nor is there likely to be) that an approach that is comprehensive is superior to one that is not. Nonetheless, the 20th century's difficult experience with tobacco control (as described in Chapter 2) and the previous decade's success in changing social norms

and generating assets (as discussed in Chapter 7) lend empirical credibility to the comprehensive approach.

Finally, a separate theme—not a major focus of the current report because two other recent, important publications have emphasized this issue—is the elimination of health disparities related to tobacco use, which poses a great challenge to this nation. The 1998 Surgeon General's report, *Tobacco Use Among U.S. Racial/Ethnic Minority Groups* (USDHHS 1998), was the first to address the diverse tobacco control needs of the four major U.S. racial/ethnic minority groups—African Americans, American Indians and Alaska Natives, Asian Americans and Pacific Islanders, and Hispanics. *Healthy People 2010* has two overarching goals: increase quality and years of healthy life and eliminate health disparities among different segments of the U.S. population. Evidence reviewed in these two publications highlights the significant disparities in health that exist in the United States. These publications also highlight the critical need for a greater focus on this issue, both in research and in public health action.

Findings

Each of the approaches described in this report shows evidence of effectiveness. In some instances, the synergism that might be expected through interaction among these various efforts has been documented, and the implications for future tobacco control and prevention activities are noted.

Historical Review (Chapter 2)

The forces that have shaped the movement to reduce tobacco use over the past 100 years are complex and intertwined. In the early years (1880–1920), antitobacco activity—some of it quite successful—was motivated by moral and hygienic principles. After important medical and epidemiologic observations of the midcentury linked smoking to lung cancer and other diseases, and after the subsequent appearance of the 1964 report of the advisory committee to the Surgeon General on smoking and health (U.S. Department of Health, Education, and Welfare 1964), the movement to reduce tobacco use was fueled by knowledge of the health risks that tobacco use poses and by

reaction against the continued promotion of tobacco in the face of such known risks. Despite overwhelming evidence of adverse health consequences of smoking, the stubborn norm of smoking in the United States has receded slowly, in part because of such continued promotion that works synergistically with tobacco addiction. Although strategies have varied, health advocates have focused in recent years on the prevention of harm to nonsmokers and on the concept of smoking as a pediatric disease, with the consequent need for protecting young persons from forces influencing them to smoke.

Educational Strategies (Chapter 3)

The design of educational programs for tobacco use prevention and the methods used to evaluate them have become increasingly refined over the past two decades. Early studies tended to be confined to the school context, to have short duration, and to be of low intensity. Studies tended to focus on a single modality and to ignore the larger context in which prevention

takes place. The reported size, scope, and duration of program effects have become larger in recent reports. In particular, several large programs have attempted a multifaceted approach that incorporates other than school-based modalities. Improvements in evaluation designs have increased confidence in the validity of these reports. The pattern of consistency across this group of large studies also provides assurance that these effects can be achieved in a variety of circumstances when programs include the critical multiple elements that have been defined by this research literature.

To summarize the major findings, school-based social influences programs have significant and substantial short-term impacts on smoking behavior. Those programs with more frequent educational contacts during the critical years for smoking adoption are more likely to be effective, as are programs that address a broad range of educational needs. These effects have been demonstrated in a range of implementation models and student populations. The smoking prevention effects of strong school programs can be extended through the end of high school or longer when combined with relatively intensive efforts directed through other powerful channels, such as strategies that vigorously engage the influences of parents, the mass media, and other community resources. These conclusions have been codified in national guidelines for school programs to prevent tobacco use.

Thus, an extensive body of research findings document the most effective educational programs for preventing tobacco use. This research has produced a wide array of curricula, protocols, and recommendations that have been codified into national guidelines for schools. Implementing guidelines could postpone or prevent smoking onset in 20 to 40 percent of U.S. adolescents. Unfortunately, existing data suggest that evidence-based curricula and national guidelines have not been widely adopted. By one set of criteria, less than 5 percent of schools nationwide are implementing the major components of CDC's *Guidelines for School Health Programs to Prevent Tobacco Use and Addiction* (CDC 1994). Almost two-thirds of schools (62.8 percent) had smoke-free building policies in 1994, but significantly fewer (36.5 percent) reported such policies that included the entire school environment.

Schools, however, should not bear the sole responsibility for implementing educational strategies to prevent tobacco use. Research findings, as noted, indicate that school-based programs are more effective when combined with mass media programs and with community-based efforts involving parents and other community resources. In addition, CDC's school health guidelines and numerous *Healthy People 2010* objectives

recognize the critical role of implementing tobacco-free policies involving faculty, staff, and students and relating to all school facilities, property, vehicles, and events. Although significant progress is still required, the current evaluation base provides clear direction for the amalgamation of school-based programs with other modalities for reducing tobacco use.

Management of Nicotine Addiction (Chapter 4)

The management of nicotine addiction is a complex field that continues to broaden its understanding of the determinants of smoking cessation. Current literature suggests that several modalities are effective in helping smokers quit. Although the overall effect of such intervention is modest if measured by each attempt to quit, the process of overcoming addiction is a cyclic one, and many who wish to quit are eventually able to do so. The available approaches to management of addiction differ in their results.

Self-Help Manuals and Minimal Clinical Interventions

Although self-help manuals have had only modest and inconsistent success at helping smokers quit, manuals can be easily distributed to the vast population of smokers who try to quit on their own each year. Adjuvant behavioral interventions, particularly proactive telephone counseling, may significantly increase the effect of self-help materials. Process measures are not routinely incorporated into self-help investigations, but the available process data suggest that persons who not only have a self-help manual but also perform the exercises recommended in the manual are more likely to quit smoking than are persons who try to quit smoking without them.

Substantial evidence suggests that minimal clinical interventions (e.g., a health care provider's repeated advice to quit) foster smoking cessation and that the more multifactorial or intensive interventions produce the best outcomes. These findings highlight the importance of cessation assistance from clinicians, who have access to more than 70 percent of smokers each year. Moreover, minimal clinical interventions have been found to be effective in increasing smokers' motivation to quit and are cost-effective (see "Cost-Effectiveness" in Chapter 4). However, research has not fully clarified the specific elements of minimal interventions that are most important to clinical success or the specific changes they produce in smokers that lead to abstinence.

Intensive Clinical Interventions

Intensive programs—more formally, systematic services to help people quit smoking—serve an important function in the nation's efforts to reduce smoking, despite the resources the programs demand and the relatively small population of smokers who use them. Such programs may be particularly useful in treating those smokers who find it most difficult to quit. Because intensive smoking cessation programs differ in structure and content, evaluation is often hampered by variation in methodology and by a lack of research addressing specific treatment techniques. Because few studies have chosen to isolate single treatments, assessment of the effectiveness of specific approaches is difficult. Nonetheless, skills training, rapid smoking, and both intratreatment and extratreatment social support have all been associated with successful smoking cessation. When such treatments are shown to be effective, they are usually part of a multifactorial intervention. Little clear evidence has implicated particular psychological, behavioral, or cognitive mechanisms as the agents of change. The specific impact of intensive interventions may be masked by the efficacy of several multicomponent programs, some of which have achieved cessation proportions of 30 to 50 percent. Thus, in their positive effect on smoking cessation and long-term abstinence rates, intensive interventions seem little different from other forms of counseling or psychotherapy. With intensive interventions, as with counseling, it is difficult to attribute the efficacy to specific characteristics of the interventions or to specific change mechanisms.

Pharmacologic Interventions

Abundant evidence confirms that nicotine gum and the nicotine patch are effective aids to smoking cessation. The efficacy of nicotine gum may depend on the amount of behavioral counseling with which it is paired. The 4-mg dose (rather than the 2-mg dose) may be the better pharmacologic treatment for heavy smokers or for those highly dependent on nicotine. The nicotine patch appears to exert an effect independent of behavioral support, but absolute abstinence rates increase as more counseling is added to patch therapy. Nicotine inhalers and nicotine nasal spray are effective aids for smoking cessation, although their mechanisms of action are not entirely clear. All nicotine replacement therapies produce side effects, but these are rarely so severe that patients must discontinue use. Nicotine nasal spray appears to have greater potential for inappropriate use than other nicotine replacement therapies.

Nicotine replacement therapies, especially the gum and the patch, have been shown to delay but not prevent weight gain following smoking cessation. All nicotine replacement therapies are thought to work in part by reducing withdrawal severity. The available evidence suggests that they do ameliorate some elements of withdrawal, but the relationship between withdrawal suppression and clinical outcome is inconsistent.

Bupropion is the first nonnicotine pharmacotherapy for smoking cessation to be studied in large-scale clinical trials. Results suggest that bupropion is an effective aid to smoking cessation. In addition, bupropion has been demonstrated to be safe when used jointly with nicotine replacement therapy. In the only direct comparison with a nicotine replacement product, bupropion achieved quit rates about double those achieved with the nicotine patch. Bupropion appears to delay but not prevent postcessation weight gain. The available literature contains inconsistent evidence regarding bupropion-mediated withdrawal relief. Bupropion does not appear to work by reducing postcessation symptoms of depression, but its mechanism of action in smoking cessation remains unknown.

Evidence has suggested that clonidine is capable of improving smoking cessation rates. Clonidine is hypothesized to work by alleviating withdrawal symptoms. Although clonidine may reduce craving for cigarettes after cessation, it does not consistently ameliorate other withdrawal symptoms, and its effects with weight gain are unknown. Unpleasant side effects are common with clonidine use.

Antidepressants and anxiolytics are potentially useful agents for smoking cessation. At present only nortriptylene appears to have consistent empirical evidence of smoking cessation efficacy. However, tricyclic antidepressants produce a number of side effects, including sedation and various anticholinergic effects, such as dry mouth.

In summary, research on methods to treat nicotine addiction has documented the efficacy of a wide array of strategies. The broad implementation of these effective treatment methods could produce a more rapid and probably larger short-term impact on tobacco-related health statistics than any other component of a comprehensive tobacco control effort. It has been estimated that smoking cessation is more cost-effective than other commonly provided clinical preventive services, including Pap tests, mammography, colon cancer screening, treatment of mild to moderate hypertension, and treatment of high levels of serum cholesterol.

Contemporaneously with the appearance of this report, research advances in managing nicotine addiction have been summarized in evidence-based clinical practice guidelines by the Centers for Disease Control and Prevention (CDC). That document confirms that less intensive interventions, such as brief physician advice to quit smoking, could produce cessation rates of 5 to 10 percent per year. More intensive interventions, combining behavioral counseling and pharmacologic treatment of nicotine addiction, can produce 20 to 25 percent quit rates at one year. Thus, the universal provision of even less intensive interventions to smokers at all clinical encounters could each year help millions of U.S. smokers quit (Fiore et al. 2000).

Progress has been made in recent years in disseminating clinical practice guidelines on smoking cessation. *Healthy People 2010* Objective 27-8 calls for universal insurance coverage of evidence-based treatment for nicotine dependency by both public and private payers. Similarly, CDC's *Best Practices for Comprehensive Tobacco Control Programs* advises states that tobacco-use treatment initiatives should include

- Establishing population-based counseling and treatment programs, such as cessation help lines.
- Making the system changes recommended by the CDC-sponsored cessation guidelines.
- Covering treatment for tobacco use under both public and private insurance.
- Eliminating cost barriers to treatment for underserved populations, particularly the uninsured (CDC 1999, p. 24).

Regulatory Efforts (Chapter 5)

Advertising and Promotion

Attempts to regulate advertising and promotion of tobacco products were initiated in the United States almost immediately after the appearance of the 1964 report to the Surgeon General on the health consequences of smoking (USDHEW 1964). Underlying these attempts is the hypothesis that advertising and promotion recruit new smokers and retain current ones, thereby perpetuating a great risk to public health. The tobacco industry asserts that the purpose of marketing is to maintain brand loyalty. Considerable evidence has accumulated showing that advertising and promotion are perhaps the main motivators for adopting and maintaining tobacco use. Attempts to

regulate tobacco marketing continue to take place in a markedly adversarial and litigious atmosphere.

The initial regulatory action, promulgated in 1965, provided for a general health warning on cigarette packages but effectively preempted any further federal, state, or local requirements for health messages. In 1969, a successful court action invoked the Fairness Doctrine (not previously applied to advertising) to require broadcast media to air antitobacco advertising to counter the paid tobacco advertising then running on television and radio. Indirect evidence suggests that such counteradvertising had considerable impact on the public's perception of smoking. Not surprisingly, the tobacco industry supported new legislation (adopted in 1971) prohibiting the advertising of tobacco products on broadcast media, because such legislation also removed the no-cost broadcasting of antitobacco advertising. A decade later, a Federal Trade Commission (FTC) staff report asserted that the dominant themes of remaining (nonbroadcast) cigarette advertising associated smoking with "youthful vigor, good health, good looks and personal, social and professional acceptance and success" (Myers et al. 1981, p. 2-13). A nonpublic version of the report detailed some of the alleged marketing strategy employed by the industry; the industry denied the allegation that the source material for the report represented industry policy. Nonetheless, some of these concerns led to the enactment of the Comprehensive Smoking Education Act of 1984 (Public Law 98-474), which required a set of four rotating warnings on cigarette packages. The law did not, however, adopt other FTC recommendations that product packages should bear information about associated risks of addiction and miscarriage, as well as information on toxic components of cigarettes. In fact, many FTC-recommended requirements for packaging information that have been enacted in other industrialized nations have not been enacted in the United States.

The role of advertising is perhaps best epitomized by R.J. Reynolds Tobacco Company's Camel brand campaign (initiated in 1988) using the cartoon character "Joe Camel." Considerable research has demonstrated the appeal of this character to young people and the influence that the advertising campaign has had on minors' understanding of tobacco use and on their decision to smoke. In 1997, the FTC brought a complaint asserting that by inducing minors to smoke, R.J. Reynolds' advertising practices violated the Federal Trade Commission Act (Public Law 96-252). The tobacco company subsequently agreed to cease using the Joe Camel campaign. Although the FTC's act grants no private right of enforcement, a private

lawsuit in California resulted in a settlement whereby the tobacco company agreed to cease its Joe Camel campaign; notably, the Supreme Court of California rejected R.J. Reynolds' argument that the Comprehensive Smoking Education Act of 1984 preempted the suit's attempt to further regulate tobacco advertising.

Product Regulation

Current tobacco product regulation requires that cigarette advertising disclose levels of "tar" (an all-purpose term for particulate-phase constituents of tobacco smoke, many of which are carcinogenic or otherwise toxic) and nicotine (the psychoactive drug in tobacco products that causes addiction) in the smoke of manufactured cigarettes and that warning labels appear on packages and on some (but not all) advertising for manufactured cigarettes and smokeless tobacco. The current federal laws preempt, in part, states and localities from imposing other labeling regulations on cigarettes and smokeless tobacco. Federal law (the Comprehensive Smokeless Tobacco Health Education Act of 1986 and the Comprehensive Smoking Education Act of 1984) requires cigarette and smokeless tobacco product manufacturers to submit a list of additives to the Secretary of Health and Human Services; attorneys for the manufacturers released such lists in 1994 to the general public. Smokeless tobacco manufacturers are required to report the total nicotine content of their products, but these data may not be released to the public. Tobacco products are explicitly protected from regulation in various federal consumer safety laws. No federal public health laws or regulations apply to cigars, pipe tobaccos, or fine-cut cigarette tobaccos (for "roll-your-own" cigarettes).

Although much effort has been devoted to considering the need for regulating nicotine delivery, tar content, and the use of additives, until recently no regulation had directly broached the issue of whether tobacco should be subject to federal regulation as an addictive product. Responding in part to several petitions filed by the Coalition on Smoking OR Health in 1988 and 1992, the FDA began serious consideration of the need for product regulation. Motivated by the notion that the cigarette is a nicotine delivery system, by allegations of product manipulation of nicotine levels, and by the concept that smoking is a pediatric disease and that young people are especially susceptible to cigarette advertising and promotion, in August 1995 the FDA issued in the *Federal Register* (1) a proposed rule of regulations restricting the sale and distribution of cigarettes and smokeless tobacco products to protect children and adolescents and (2) an analysis of the FDA's

jurisdiction over cigarettes and smokeless tobacco. The final regulations published by the FDA on August 28, 1996, differed only slightly from the proposed regulation. The announcement prompted immediate legal action on the part of the tobacco industry, advertising interests, and the convenience store industry, which challenged the FDA's jurisdiction over tobacco products. In April 1997, a federal district court upheld the FDA's jurisdiction over tobacco products, but held that it lacked authority under the statutory provision relied on to regulate tobacco product advertising.

Although many of the FDA's regulations on tobacco sales and distribution were incorporated, to some extent, in the June 20, 1997, proposed settlement of lawsuits between 41 state attorneys general and the tobacco industry, the settlement presupposed congressional legislation that would uphold the FDA's asserted jurisdiction. After considerable congressional negotiation, no such legislation emerged. In August 1998, a three-judge panel of the United States Court of Appeals for the Fourth Circuit held that the FDA lacked jurisdiction to regulate tobacco products. In November 1998, the full court of appeals rejected the government's request for rehearing by the entire court. On March 21, 2000, in a 5 to 4 decision, the United States Supreme Court affirmed the decision of the United States Court of Appeals for the Fourth Circuit and held that the FDA lacks jurisdiction under the Federal Food, Drug, and Cosmetic Act to regulate tobacco products as customarily marketed. As a result of this decision, the FDA's August 1996 assertion of jurisdiction over cigarettes and smokeless tobacco and regulations restricting the sale and distribution of cigarettes and smokeless tobacco to protect children and adolescents (principally codified at 21 Code of Federal Regulations Part 86.) are invalid.

Clean Indoor Air Regulation

Unlike the regulation of tobacco products per se and of their advertising and promotion, regulation of exposure to ETS has encountered less resistance. This course is probably the result of (1) long-standing grassroots efforts to diminish exposure to ambient tobacco smoke and (2) consistent epidemiologic evidence of adverse health effects of ETS. Since 1971, a series of rules, regulations, and laws have created smoke-free environments in an increasing number of settings: government offices, public places, eating establishments, worksites, military establishments, and domestic airline flights. As of December 31, 1999, smoking was restricted in public places in 45 states and the District of Columbia. Currently, some 820 local

ordinances, encompassing a variety of enforcement mechanisms, are in place.

The effectiveness of clean indoor air restrictions is under intensive study. Most studies have concluded that even among smokers, support for smoking restrictions and smoke-free environments is high. Research has also verified that the institution of smoke-free workplaces effectively reduces nonsmokers' exposure to ETS. Although smoke-free environments have not reduced smoking prevalence in most studies, such environments have been shown to decrease daily tobacco consumption among smokers and to increase smoking cessation.

Minors' Access to Tobacco

There is widespread approval for restricting the access of minors to tobacco products. Recent research, however, has demonstrated that a substantial proportion of teenagers who smoke purchase their own tobacco, and the proportion varies with age, social class, amount smoked, and factors related to local availability. In addition, research has shown that most minors can easily purchase tobacco from a variety of retail outlets. It has been suggested that a reduction in commercial availability may result in a reduced prevalence of tobacco use among minors.

Several approaches have been taken to limiting minors' access to tobacco. All states prohibit sale or distribution of tobacco to minors. More than two-thirds of states regulate the means of sale through restrictions on minors' use of vending machines, but many of these restrictions are weak, and only two states have total bans on vending machines. Restrictions on vending machines are a subclass of the larger category of regulation of self-service cigarette sales; in general, such regulation requires that cigarettes be obtained from a salesperson and not be directly accessible to customers. Such policies can reduce shoplifting as well, an important source of cigarettes for some minors.

Regulations directed at the seller include the specification of a minimum age for sale (18, in all but two states and Puerto Rico), a minimum age for the seller, and the prominent in-store announcement of such policy. Providing merchant education and training is an important component of comprehensive minors' access programs. Penalties for sales to minors vary considerably; in general, civil penalties have been found to be more effective than criminal ones. Requiring licensure of tobacco retailers has been found to provide a funding source for compliance checks and to serve as an incentive to obey the law when revocation of the license is a provision of the law. Applying

penalties to business owners, instead of to clerks only, is considered essential to preventing sales to minors. Tobacco retail outlets and the tobacco industry have vigorously opposed this policy. An increasing number of states and local jurisdictions are imposing sanctions against minors who purchase, possess, or use tobacco products. Sanctions against both buyers and sellers are enforced by a variety of agencies and mechanisms. Because regulations in general may be more effective if generated and enforced at the local level, considerable energy is devoted to the issue of opposing or repealing preemption of local authority by states. Public health analyses have resulted in strong recommendations that state laws not preempt local action to curb minors' access to tobacco.

Litigation Approaches

Private litigation shifts enforcement of public health remedies from the enterprise or the government to the private individual—typically, victims or their surrogates. In the tort system, the coalescence of instances in which injurers are forced to compensate the injured can create a force that generates preventive effects. Though relatively inefficient as a system for compensating specific classes of injuries, the tort system is justified by its generation of preventive actions and by its flexibility. Tobacco represents an atypical pattern of litigation and product modification, because private law remedies have not yet succeeded in institutionalizing recovery for tobacco injuries or have not yet generated significant preventive effects. In the case of tobacco, regulation has been the predominant control, and such regulation has been distinctive in relying primarily on notification requirements rather than safety requirements.

Private litigation against tobacco has occurred in several distinct waves. The first wave was launched in 1954 and typically used one or both of two legal theories: negligence and implied warranty. Courts proved unreceptive to both these arguments, and this approach had receded by the mid-1970s. In many of these and subsequent cases, legal devices and exhaustion of plaintiff resources figured prominently in the defendants' strategy. A second wave began in 1983 and ended in 1992. In these cases, the legal theory shifted from warranty to strict liability. The tobacco industry based its defense on smokers' awareness of risks and so-called freedom of choice. For example, plaintiffs argued that the addictive nature of nicotine limited free choice; defense counsel rebutted by pointing to the large number of former smokers who successfully quit. Taking freedom-of-choice defense even

further, counsel argued that the claimant's lifestyle was overly risky by choice or was in some way immoral. The case that symbolized the second-wave litigation was that filed by Rose Cipollone, a dying smoker, in 1983. The Supreme Court accepted the tobacco industry's defense that federal law requiring warning labels on product packages had preempted claims under state law that imposed liability for failure to warn. The United States Supreme Court left open several other approaches, but the likelihood of recovery seemed small, and counsel for the Cipollone estate withdrew.

In the third wave, begun soon after the Cipollone decision and still ongoing, diverse legal arguments have been invoked. This third wave of litigation differs from its predecessors by enlarging the field of plaintiffs, focusing on a range of legal issues, using the class action device, and making greater attempts to use private law for public policy purposes. These new claims have been based on theories of intentional misrepresentation, concealment, and failure to disclose, and such arguments have been joined to a new emphasis on addiction. For example, in one case that ended as a mistrial, plaintiffs were barred from presenting evidence that the tobacco companies may have manipulated nicotine levels. The class action device has figured prominently in these new cases, which have included claims of smokers as well as claims of those who asserted that they have been injured by ETS. Arguably the most notable series of third-wave claims brought against tobacco companies is the proposed 1997 settlement of suits brought by 41 state attorneys general attempting to recover the states' Medicaid expenditures for treating tobacco-related illnesses. In the absence of congressional legislation needed to give that settlement the force of law, four states made independent settlements with the tobacco industry. Notably, each state obtained a concession guaranteeing that it would benefit from any more favorable agreement that another state might later obtain from the tobacco industry. Subsequently, a multistate Master Settlement Agreement was negotiated in November 1998 covering the remaining 46 states, the District of Columbia, and five commonwealths and territories. Another notable recent development is the filing of large claims by other third-party payers, such as large health care plans.

Perhaps in partial response, the level of litigation initiated by the tobacco industry itself has increased in recent years and has included a number of well-publicized cases, including a threatened suit against the media to prevent airing of a program that accused a tobacco company of manipulating nicotine levels. The company was successful in making the network withdraw the program, even though similar

information was later made public in other contexts. Although the industry continues aggressive legal pursuit of its interests on a number of fronts, litigation against the industry has had undoubted impact on tobacco regulation and is likely to continue to play a key role in efforts to reduce tobacco use.

Overview and Implications

Tobacco products are far less regulated in the United States than they are in many other developed countries. This level of regulation applies to the manufactured tobacco product; to the advertising, promotion, and sales of these products; and to the protection of nonsmokers from the involuntary exposure to ETS from the use of these products. As with all other consumer products, adult users of tobacco should be fully informed of the products' ingredients and additives and of any known toxicity when used as intended. Additionally, as with other consumer products, the manufactured tobacco product should be no more harmful than necessary given available technology. The sale, distribution, and promotion of tobacco products need to be sufficiently regulated to protect underage youth from influences to take up smoking. Finally, involuntary exposure to ETS remains a common public health hazard that is entirely preventable by appropriate regulatory policies.

Such are the basic, reasonable regulatory issues related to tobacco products. Yet these issues remain unresolved as the new millennium begins. When consumers purchase a tobacco product, they receive little information regarding the ingredients, additives, or chemical composition in the product. Although public knowledge about the potential toxicity of most of these constituents is negligible, findings in this report conclude that the warning labels on cigarette packages in this country are weaker and less conspicuous than in other countries. Further, the popularity of "low tar and nicotine" brands of cigarettes has shown that consumers may be misled by another, carefully crafted kind of information—that is, by the implied promise of reduced toxicity underlying the marketing of these products.

Current regulation of the advertising and promotion of tobacco products in this country is considerably less restrictive than in several other countries, notably Canada and New Zealand. The review of current case law in this report supports the contention that greater restrictions of tobacco product advertising and promotion could be legally justified. In fact, the report concludes that regulation of the sale and promotion of tobacco products is needed to protect young people from smoking initiation.

ETS contains more than 4,000 chemicals; of these, at least 43 are known carcinogens (Environmental Protection Agency 1992). Exposure to ETS has serious health effects (USDHHS 2000b). Despite this documented risk, research has demonstrated that more than 88 percent of nonsmokers in this country aged 4 years and older had detectable levels of serum cotinine, a marker for exposure to ETS (Pirkle et al. 1996). The research reviewed in this report indicates that smoking bans are the most effective method for reducing ETS exposure. Four *Healthy People 2010* objectives address this issue and seek optimal protection of nonsmokers through policies, regulations, and laws requiring smoke-free environments in all schools, worksites, and public places.

Despite the widespread support among the general public, policymakers, and the tobacco industry for restricting the access of minors to tobacco products, a high proportion of underage youth smokers across this country continue to be able to purchase their own tobacco. National efforts by the Substance Abuse and Mental Health Services Administration to increase the enforcement of state laws to comply with the Synar Amendment and by the FDA to implement the access restrictions defined in their 1996 rule have reduced the percentage of retailers in many states who sell to minors. Unfortunately, nine states failed to attain their Synar Amendment targets in 1999. Additionally, the March 2000 Supreme Court ruling that the FDA lacks jurisdiction to regulate tobacco products has suspended all enforcement of the agency's 1996 regulations. Although several states have increased emphasis on this issue as part of their state-funded program efforts, the loss of the FDA's program removes a major infrastructure in support of these state efforts. The current regulatory environment poses considerable challenges for the interweaving of regulation into a comprehensive, multicomponent approach to tobacco use control and prevention.

Economic Approaches (Chapter 6)

The argument for using economic policy for reducing tobacco use requires considerable technical and analytic understanding of economic theory and data. Because experiments and controlled trials—in the usual sense—are not available to the economist, judgment and forecasting depend on the results of complex analysis of administrative and survey data. Such analyses have led to a number of conclusions regarding the importance of the tobacco industry in the U.S. economy and regarding the role of policies that might

affect the supply of tobacco, affect the demand for tobacco, and use different forms of taxation as a possible mechanism for reducing tobacco use.

Supply

The tobacco support program has successfully limited the supply of tobacco and raised the price of tobacco and tobacco products. However, the principal beneficiaries of this program are not only the farmers whose income is supported but also the owners of the tobacco allotments. If policies were initiated to ameliorate some short-run effects, the tobacco support program could be removed without imposing substantial losses for many tobacco farmers. Eliminating the tobacco support program would lead to a small reduction in the prices of cigarette and other tobacco products, which would lead to slight increases in the use of these products. However, because the support program has created a strong political constituency that has successfully impeded stronger legislation to reduce tobacco use, removing the support program could make it easier to enact stronger policies that would more than offset the impact that the resulting small reductions in price would have on demand.

Throughout the 1980s and 1990s, competition within the tobacco industry appeared to have decreased as a result of the favorable deregulatory business climate and an apparent increase in collusive behavior. This reduction in competition, coupled with the addictive nature of cigarette smoking, has magnified the impact that higher cigarette taxes and stronger smoking reduction policies would have on demand.

The recent expansion of U.S. trade in tobacco and tobacco products through multinational agreements, together with the U.S. threat of retaliatory trade sanctions were other countries to impede this expansion, is nearly certain to have increased the use of tobacco products worldwide. Such an increase would result in a consequent global rise in morbidity and mortality related to cigarette smoking and other tobacco use. These international trade policy efforts conflict with current domestic policies (and the support of comparable international efforts) that aim to reduce the use of tobacco products because of their harmful effects on health.

Industry Importance

Although employment in the tobacco industry is substantial, the industry greatly overstates the importance of tobacco to the U.S. economy. Indeed, most regions would likely benefit—for example, through

redistribution of spending and changes in types of job—from the elimination of revenues derived from tobacco products. Moreover, as the economies of tobacco-growing regions have become more diversified, the economic importance of tobacco in these areas has fallen. Higher tobacco taxes and stronger prevention policies could be joined to other efforts to further ease the transition from tobacco in major tobacco-producing regions. Finally, trading lives for jobs is an ill-considered strategy, particularly with the availability of stronger policies for reducing tobacco use.

Demand

Increases in the price of cigarettes will lead to reductions in both smoking prevalence and cigarette consumption among smokers; relatively large reductions are likely to occur among adolescents and young adults. Limited research indicates that increases in smokeless tobacco prices will similarly reduce the use of these products. More research is needed to clarify the impact of cigarette and other tobacco prices on the use of these products in specific sociodemographic groups, particularly adolescents and young adults. Additional research also is needed to address the potential substitution among cigarettes and other tobacco products as their relative prices change.

Taxation

After the effects of inflation are accounted for, federal and average state excise taxes on cigarettes are well below their past levels. Similarly, average cigarette excise taxes in the United States are well below those imposed in most other industrialized countries. Moreover, U.S. taxes on smokeless tobacco products are well below cigarette taxes. Studies of the economic costs of smoking report a wide range of estimates for the optimal tax on cigarettes. However, when recent estimates of the costs of ETS (including the long-term costs of fetal and perinatal exposure to ETS) are considered, and when the premature death of smokers is not considered an economic benefit, a tax that would generate sufficient revenues to cover the external costs of smoking is almost certainly well above current cigarette taxes. The health benefits of higher cigarette taxes are substantial. By reducing smoking, particularly among youth and young adults, past tax increases have significantly reduced smoking-related morbidity and mortality. Further increases in taxes, indexed to account for the effects of inflation, would lead to substantial long-run improvements in health.

The revenue potential of higher cigarette and other tobacco taxes—obviously not in itself a goal—is considerable; significant increases in these taxes would lead to sizable increases in revenues for many years. However, because of the greater price responsiveness of adolescents and young adults and the addictive nature of tobacco use, the long-run increase in revenues is likely to be less than the short-run gain. Nevertheless, current federal and most state tobacco taxes are well below their long-run revenue-maximizing levels.

In short, the research reviewed in this report supports the position that raising tobacco prices is good public health policy. Further, raising tobacco excise taxes is widely regarded as one of the most effective tobacco prevention and control strategies. Research indicates that increasing the price of tobacco products would decrease the prevalence of tobacco use, particularly among minors and young adults. As noted, however, this report finds that both the average price of cigarettes and the average cigarette excise tax in this country are well below those in most other industrialized countries and that the taxes on smokeless tobacco products are well below those on cigarettes. Making optimal use of economic strategies in a comprehensive program poses special problems because of the complexity of government and private controls over tobacco economics and the need for a concerted, multilevel, political approach.

Comprehensive Programs (Chapter 7)

Community-based interventions were originally developed as research projects that tested the efficacy of a communitywide approach to risk reduction. A number of national and international efforts to control cardiovascular disease (in the United States, notably the Minnesota, Stanford, and Pawtucket studies) used controlled designs. The results from these and other studies were largely disappointing, particularly regarding prevention and control of tobacco use. Other large-scale research efforts, such as the Community Intervention Trial (COMMIT) for Smoking Cessation, also failed to meet their primary goals for smoking reduction and cessation. Similarly, the results to date from numerous worksite-based cessation projects suggest either no impact or a small net effect (summarized in Chapter 4).

As these studies were under way in the 1970s and 1980s, health promotion—an organized approach to changing social, economic, and regulatory environments—emerged as a more effective mechanism for population behavior change than traditional health education. Although the aforementioned

community-based research projects used a health promotion perspective, they lacked the reach and penetration required for effective social change. In any event, the results made clear the distinction between a specific program (even one using multiple modalities) and a comprehensive multimes-age, multichannel approach that used some or all of the modalities described in Chapters 3 through 6.

On a broader scale, other social initiatives can also serve some of these same purposes through means that are not directly related to changing population behavior. For example, direct advocacy—the presentation of information to decision makers to encourage their support for nonsmoking policies—has been pursued vigorously by health advocates since the organization of grassroots movements for nonsmokers' rights in the early 1970s. Much of the clean air legislation now in place may be attributed in part to such direct advocacy. An interesting observation that supports the logic behind comprehensive programs is that initial shortcomings in direct advocacy activity may have been related to a failure of coordination among grassroots groups and professional organizations. In recent years, in part as the result of electronic networking and mediating by the Advocacy Institute, a more unified approach to reducing tobacco use has been achieved among the participating organizations.

Media advocacy—the use of mass media to advance public policy initiatives—has also been effective in placing smoking issues in the public eye and maintaining a continued impetus for reducing tobacco use. Case analysis of several instances of such activity—advocacy opposing the promotion of the "X" cigarette, the marketing of "Dakota" cigarettes, the Philip Morris-sponsored Bill of Rights tour, and the attempted marketing of "Uptown" cigarettes—highlights several successes but also indicates that such activities do not always achieve their immediate aims. Nonetheless, considerable experience has been gained in seizing such opportunities.

Countermarketing activities can promote smoking cessation and decrease the likelihood of initiation. Countermarketing campaigns also can have a powerful influence on public support for tobacco control activities and provide an educational climate that can enhance the efficacy of school- and community-based efforts. For youth, the CDC has estimated that the average 14-year-old has been exposed to more than \$20 billion in imagery advertising and promotions since age 6, creating a "friendly familiarity" for tobacco products. The recent increase in movie depictions of tobacco use further enhances the image of tobacco use as glamorous, socially acceptable, and normal. In light

of the ubiquitous and sustained protobacco messages, countermarketing campaigns need to be of comparable intensity and duration to alter the general social and environmental atmosphere supporting tobacco use.

Perhaps the most important aspect of comprehensive programs has been the emergence of statewide tobacco control efforts as a laboratory for their development and evaluation. The number of states with such programs grew slowly in the early and mid-1990s, but in recent years there has been a surge in funding for such efforts fueled by the state settlements with the tobacco industry. Although the data on the impact of these programs on per capita consumption, adult prevalence, and youth prevalence are generally favorable, the uniform data systems needed to conduct more controlled evaluations of these efforts are still emerging. Nevertheless, the Institute of Medicine (2000) has concluded that these "multifaceted state tobacco control programs are effective in reducing tobacco use" (p. 4). The challenge for the new millennium will be to ensure that these ever-increasing comprehensive statewide tobacco control programs are as efficient and effective as possible.

The review of statewide tobacco control programs indicates that reducing the broad cultural acceptability of tobacco use necessitates changing many facets of the social environment. In addition, this report stresses—as does the *Best Practices* document—that these individual components must work together to produce the synergistic effects of a comprehensive program. However, both of these findings highlight the complexity involved in evaluating these types of programs.

Within the current statewide tobacco control programs, each of these various modalities discussed in this report is represented with varying degrees of intensity. As noted above, some of the recommendations for actions within these modalities could most effectively be done at the national rather than the state level. Thus, the overall efficacy of these emerging statewide programs will depend in some ways on public health advances at the national level. Again, this synergy between the statewide and national efforts adds greater complexity to the evaluation issue.

Finally, this report concludes that the span of impact of these educational, clinical, regulatory, economic, and social approaches indicates the importance of their sustained and long-term implementation. Program evaluation and research efforts are needed to improve our understanding of how these various elements work. Although knowledge about the efficacy of comprehensive programs is imperfect, evidence points to early optimism for their continuance. With the expansion of tobacco control surveillance and evaluation systems and increases in the number and

diversity of statewide tobacco control programs, critical questions can be answered about how to make these efforts more efficient and effective.

A Vision for the Future—Reducing Tobacco Use in the New Millennium (Chapter 8)

In its assessment of the trajectory of tobacco control activities in the coming years, the report focuses on six future challenges: the scientific base, the changing tobacco industry, the need for comprehensive approaches, identifying and eliminating disparities, improving dissemination of interventions, and influencing tobacco use in developing nations.

Continuing to Build the Scientific Base

Beginning with the 1964 Surgeon General's report, *Smoking and Health*, tobacco control policy in this nation has been built on a foundation of scientific knowledge. Each of the subsequent 24 reports of the Surgeon General on tobacco use has documented a vast and growing body of scientific literature. The substantial research reviewed in this report focuses on a key segment of the literature—what has been tried in the decades-old effort to reduce tobacco use. In turn, this focus clarifies which efforts work best. Certainly more research is needed so that these efforts can be more efficient and effective; the key conclusion from this report, however, is that we know more than enough to take actions now to decrease the future health burden of tobacco-related disease and death in this country.

In the process of applying our current state of knowledge about preventing and controlling tobacco use, accountability and evaluation of the public health effort will be critical. However, because of the wide array of educational, clinical, regulatory, economic, and social influences that have and will need to be brought to bear on the tobacco use problem, the direct impact of a specific maneuver on a specific outcome becomes less meaningful as the combined effects become more substantial. Investigators tend to work on small, manageable aspects of the tobacco use problem, but the synergistic influence of multiple factors over time will likely extend far beyond the outcomes predicted from these smaller research undertakings. For example, as this report demonstrates, the most efficacious educational programs are those that take place in a larger community context, one that engenders and supports an environment of nonsmoking. Similarly, although clinical interventions to manage tobacco addiction

clearly have some specific power to help smokers quit, primarily through pharmacologic means, the social environment remains a major determinant of whether these new former smokers maintain their abstinence from nicotine addiction. Regulatory efforts, on the other hand, raise a host of social and economic issues and can produce broad societal changes—issues and changes, however, that are difficult to isolate, document, and evaluate. Economic strategies also have a great potential, but being fundamentally political in nature, they require public consensus and changes in social norms before they can be attempted. Finally, the public health advocacy involved in social program modalities is virtually impossible to assess in a prospective or controlled research design.

The research and evaluation tools of public health must expand to meet these complex issues. Comprehensive, multifactorial approaches to tobacco control appear to offer the most promise. However, the penalty for comprehensive approaches is a loss of statistical power to attribute outcomes to specific activities. Within each of the modalities, appropriate evaluation methodologies are being used. However, many of these methodologies involve retrospective case study, time trend, econometric, and surveillance approaches to evaluate the "natural experiment" as it evolves in the changing social environment. Thus, the traditional biomedical and epidemiologic research methods that have worked so well in defining the health consequences of tobacco use are not well suited to evaluate the potentially most efficacious methods to reduce tobacco use.

The Changing Tobacco Industry

This report documents that this country's efforts to prevent the onset or continuance of tobacco use have faced the pervasive, countervailing influences of tobacco promotion by the tobacco industry. Despite the overwhelming and continually growing body of evidence of adverse health consequences of tobacco use, the norm of social acceptance of tobacco use in this nation has receded more slowly than might be expected, in part because of such continued promotion.

Litigation and legal settlements have produced notable changes in the tobacco industry's public positions on health risks, nicotine addiction, and advertising and promotion limits. Additionally, individual manufacturing companies have become more directly involved in efforts to limit the access of underage persons to tobacco products and to prevent young people from initiating tobacco use. In this rapidly changing social and legal environment, it is difficult to project

the nature and scope of future changes by the industry or their impact on the national effort to reduce tobacco use. Nevertheless, any analysis of changes in patterns of tobacco use must consider the influence of these industry changes.

One of the major arenas of potential change will be in the tobacco product itself. The manufactured cigarette that is widely marketed in the developed world was noted to be changing dramatically when this issue was first considered by the Surgeon General in 1981, *The Changing Cigarette* (USDHHS 1981). Recent public statements by the tobacco industry suggest that the pace of changes in the manufactured cigarette could be accelerating in the future. The public health implications of changes in manufactured cigarettes and other tobacco-containing products will require careful and significant attention from both public health researchers and policymakers.

The litigation environment has demonstrated the importance of tobacco industry documents in analyzing the industry's influence. Legal and public health analyses are just beginning to sift through the millions of pages of documents made public as part of the various legal actions undertaken over the last decade. As this process continues, public health researchers may develop better methods to define and evaluate the industry's past activities that may have contributed to the character, pace, or direction of changes in tobacco use patterns in this country or around the world.

The Need for Comprehensive Approaches

The evidence of effectiveness summarized in this report emphasizes that public health success in reducing tobacco use requires activity using multiple modalities. A comprehensive approach—one that optimizes synergy from applying a mix of educational, clinical, regulatory, economic, and social strategies—has emerged as the guiding principle for future efforts to reduce tobacco use. The public health goals of such comprehensive programs are to reduce disease, disability, and death related to tobacco use through prevention and cessation, as well as through protection of the nonsmoker from ETS.

The emerging body of data on statewide tobacco control efforts is coming from programs broadly focused on prevention, cessation, and protection of the nonsmoker from ETS (Chapter 7). Preventing initiation among young people is a primary goal of any tobacco control effort. However, young people will perceive contradictory or inconsistent messages in our prevention efforts if programs do not also address the

smoking behavior of millions of parents and other adult role models and the public health risks of ETS.

CDC recently released *Best Practices for Comprehensive Tobacco Control Programs* (CDC 1999), which recommends that states establish tobacco control programs that are comprehensive, sustainable, and accountable. This document draws on "best practices" determined by evidence-based conclusions from research and evaluation of such comprehensive programs at the state level. In the review of evidence from these states, it was evident that reducing the broad cultural acceptability of tobacco use necessitates changing many facets of the social environment. Nine specific elements of a comprehensive program are defined in the guidance document. Although, the importance of each of the elements is highlighted, the document stresses that these individual components must work together to produce the synergistic effects of a comprehensive program.

Best Practices thus provides effective guidance for state-level efforts; a comprehensive national tobacco control effort, however, requires strategies that go beyond this guidance to states. Moreover, a comprehensive national effort should involve the application of a mix of educational, clinical, regulatory, economic, and social strategies. In each of these modalities, some of the program and policy changes that are needed can be addressed most effectively at the national level.

Identifying and Eliminating Disparities

The elimination of health disparities related to tobacco use poses a great national challenge. Although this issue was not a major aspect of the current report, two other recent USDHHS publications have taken this focus. The 1998 Surgeon General's report *Tobacco Use Among U.S. Racial/Ethnic Minority Groups* was the first to address the diverse tobacco control needs of the four major U.S. racial/ethnic minority groups—African Americans, American Indians and Alaska Natives, Asian Americans and Pacific Islanders, and Hispanics (USDHHS 1998). Similarly, *Healthy People 2010*, released in January 2000, has two overarching goals: increase quality and years of healthy life and eliminate health disparities among different segments of the U.S. population (USDHHS 2000a). Both publications not only highlight the significant disparities in health that exist in the United States but also stress the critical need for a greater focus on this issue, both in research and in public health action.

Cultural, ethnic, religious, and social differences are clearly important in understanding patterns of tobacco use, but little research has been completed

on the relative effectiveness of interventions for prevention and treatment in some of the population groups or communities. Reaching the national goal of eliminating health disparities related to tobacco use will necessitate improved collection and use of standardized data to correctly identify disparities in both health outcomes and efficacy of prevention programs among various population groups. Broader historical, societal, and community characteristics can have a significant influence on the manner in which prevention and control strategies that work overall for the population as a whole may impact diverse groups. Many of these broader variables do not lend themselves to traditional measurement methods nor are they easily assessed at the individual level through using traditional epidemiologic methods.

Improving the Dissemination of State-of-the-Art Interventions

One of the greatest challenges in tobacco control and public health in general continues to be overcoming the difficulty in getting advances in prevention and treatment strategies effectively disseminated, adopted, and implemented in their appropriate delivery systems. Simply stated, our recent lack of progress in tobacco control is attributable more to the failure to implement proven strategies than it is to a lack of knowledge about what to do. The result is that each year in this nation, more than 1 million young people continue to become regular smokers, and more than 400,000 adults continue to die prematurely from tobacco-related diseases.

Within each of the modalities reviewed in this report, some specific research advances in tobacco prevention and control strategies have not been fully implemented. Studies are urgently needed to identify the social, institutional, and political barriers to the more rapid dissemination of these research advances. Understanding these barriers and determining how they could be overcome would benefit not only tobacco control but public health efforts more broadly.

Tobacco Use in Developing Nations

Analyses by the World Health Organization (WHO) have concluded that by 2030, current smoking patterns will produce about 500 million premature deaths from tobacco-related disease among people alive today (WHO 1999). WHO further estimates that by 2030, tobacco is expected to be the single greatest cause of death worldwide, accounting for an estimated 10 million deaths per year. Although the impact of tobacco-related disease and death has been

until recently a problem primarily for the developed countries of this world, WHO now estimates that by 2020, 7 of every 10 tobacco-related deaths will be in the developing world.

This report addresses research on strategies to reduce tobacco use within our nation's social, legal, and cultural environments. Nevertheless, findings from this report may have broad utility in the planning of tobacco control efforts around the world. As Chapter 2 documents, the public health response in this country to the scientific findings about the health consequences of tobacco products has taken more than four decades to emerge. In many parts of the developing world, the problems of tobacco use are similar to those in this country in the 1950s and 1960s. Hence, a key public health question for this millennium may be the following: can the time interval be significantly shortened between when the health risks of tobacco for a developing country are recognized and when a comprehensive national response is begun?

WHO, the World Bank, and the United Nations Foundation, with technical assistance from the CDC, have undertaken major new initiatives to address this problem. The WHO Tobacco Free Initiative is developing an international tobacco control infrastructure, which includes a global tobacco surveillance system, intervention tool kits, and regional technical assistance workshops. The World Bank has published *Curbing the Epidemic: Governments and the Economics of Tobacco Control* (Jha and Chaloupka 1999). This document provides an economic analysis that supports a multipronged approach to tobacco control, involving raising excise taxes, promoting policy changes related to the sales and promotion of tobacco products as well as to restrictions on smoking in public places, and widening access to smoking cessation therapies. The scientific findings in this report are consistent with the programmatic recommendations of both the WHO Tobacco Free Initiative and the World Bank document.

A momentous undertaking of WHO and member states, including the United States, is the development and negotiation of the Framework Convention on Tobacco Control. If brought to its intended ratification in the next few years, this agreement would provide a framework within which countries could develop more specific bilateral and multilateral protocols for cooperation on containing the spread of the tobacco epidemic. The framework would enable countries to start from a common understanding of the issues, priorities, and strategies necessary to harmonize tobacco control efforts among themselves so that some countries do not benefit at the expense of others. This is the spirit of the other activities of U.S. governmental

and nongovernmental agencies in their effort to collaborate with WHO and with other countries in their development of surveillance, cessation, prevention, mass media, regulatory, economic, and social approaches to global tobacco control.

In the near future, emphasis must be placed on the development of surveillance systems so that countries can know the extent, distribution, and trends of the tobacco consumption problems in their populations. These systems will also track—for international comparison and monitoring of progress—the emergence of new forms of tobacco promotion, as well as new legislation, regulations, and programs for countering tobacco use. In the longer term, the gaps must be filled in each country's defenses against the incursions of tobacco use on their young people and other

vulnerable populations. In particular, there will be a continuing need to ensure that the rapidly expanding knowledge about the efficacy of various tobacco control modalities be made available to the developing world.

The challenge to the world is to prevent tobacco use, particularly smoking, from ever becoming the leading cause of preventable illness and death in the world. Dr. Gro Harlem Brundtland, the current director-general of WHO, clearly defined this challenge when she stated, "If we do not act decisively, a hundred years from now our grandchildren and their children will look back and seriously question how people claiming to be committed to public health and social justice allowed the tobacco epidemic to unfold unchecked" (Asma et al., in press).

Tobacco Control in the New Millennium

Tobacco use will remain the leading cause of preventable illness and death in this nation and a growing number of other countries until tobacco prevention and control efforts are commensurate with the harm caused by tobacco use. This report provides the composite review of the major methods—educational,

clinical, regulatory, economic, and social—that can guide the development of this expanded national effort. This report is, therefore, a prologue to the development of a coherent, long-term tobacco policy for this nation.

References

- Asma S, Yang G, Samet J, Giovino G, Bettcher DW, Lopez A, Yach D. Tobacco. In: *Oxford Textbook of Public Health*, in press.
- Centers for Disease Control and Prevention. Guidelines for school health programs to prevent tobacco use and addiction. *Morbidity and Mortality Weekly Report* 1994;43(RR-2):1-18.
- Centers for Disease Control and Prevention. *Best Practices for Comprehensive Tobacco Control Programs—August 1999*. Atlanta: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 1999.
- Environmental Protection Agency. *Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders*. Washington: Environmental Protection Agency, Office of Research and Development, Office of Air and Radiation, 1992. Publication No. EPA/600/6-90/006F.
- Fiore M, Bailey W, Bennett G, Bennett H, Cohen S, Dorfman SF, Fox B, Goldstein M, Gritz E, Hasselblad V, Heishman S, Heyman R, Husten C, Jaén CR, Jorenby D, Kamerow D, Kottke T, Lando H, Mecklenburg R, Melvin C, Morgan G, Mullen PD, Murray E, Nett L, Orleans CT, Robinson L, Stitzer M, Tommasello A, Villejo L, Wewers ME, Baker T. *Treating Tobacco Use and Dependence*. Clinical Practice Guideline. Rockville (MD): US Department of Health and Human Services, Public Health Service, 2000.
- Institute of Medicine. *State Programs Can Reduce Tobacco Use*. A Report of the National Cancer Policy Board. Washington: National Research Council, 2000.
- Jha P, Chaloupka FJ. *Curbing the Epidemic: Governments and the Economics of Tobacco Control*. Washington: World Bank, 1999.
- Lynch BS, Bonnie RJ, editors. *Growing Up Tobacco Free: Preventing Nicotine Addiction in Children and Youths*. Washington: National Academy Press, 1994.
- Myers ML, Iscoe C, Jennings C, Lenox W, Minsky E, Sacks A. *Staff Report on the Cigarette Advertising Investigation*. Washington: Federal Trade Commission, 1981.
- Pirkle JL, Flegal KM, Bernert JT, Brody DJ, Etzel RA, Maurer KR. Exposure of the US population to environmental tobacco smoke: the Third National Health and Nutrition Examination Survey, 1988 to 1991. *Journal of the American Medical Association* 1996;275(16):1233-40.
- Rothenberg RB, Koplan JP. Chronic disease in the 1990s. *Annual Review of Public Health* 1990;11:267-96.
- US Department of Health, Education, and Welfare. *Smoking and Health: Report of the Advisory Committee to the Surgeon General of the Public Health Service*. Washington: US Department of Health, Education, and Welfare, Public Health Service. PHS Publication No. 1103, 1964.
- US Department of Health and Human Services. *The Health Consequences of Smoking: The Changing Cigarette. A Report of the Surgeon General*. Rockville (MD): US Department of Health and Human Services, Public Health Service, Office on Smoking and Health, 1981.
- US Department of Health and Human Services. *Healthy People 2000: National Health Promotion and Disease Prevention Objectives*. Washington: US Department of Health and Human Services, Public Health Service, 1991. DHHS Publication No. (PHS) 91-50212.
- US Department of Health and Human Services. *Tobacco Use Among U.S. Racial/Ethnic Minority Groups—African Americans, American Indians and Alaska Natives, Asian Americans and Pacific Islanders, and Hispanics: A Report of the Surgeon General*. Atlanta: US Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 1998.
- US Department of Health and Human Services. *Healthy People 2010* (Conference edition, in two volumes). Washington: US Department of Health and Human Services, 2000a.

Surgeon General's Report

US Department of Health and Human Services. *9th Report on Carcinogens*. Research Triangle Park (NC): US Department of Health and Human Services, Public Health Service, National Toxicology Program, 2000b.

World Health Organization. *The World Health Report 1999: Making a Difference*. Geneva: World Health Organization, 1999.

cigarette taxes on youth marijuana use. The growing evidence suggests that cigarettes and marijuana are not substitutes for one another, implying that higher cigarette prices will not lead to increased marijuana use, with several studies implying the opposite—that higher cigarette prices will reduce both cigarette and marijuana smoking. Much more research is needed, however, to firmly establish these relationships.

Discussion

A few general conclusions can be drawn from these studies of the effects of cigarette prices on smoking. First, increases in cigarette prices lead to significant reductions in cigarette smoking; most studies, using a wide variety of data and methods with various strengths and weaknesses, predict that a 10-percent increase in price will reduce overall cigarette consumption by 3–5 percent. Second, the effects of increases in

cigarette prices are not limited to reductions in average cigarette consumption among smokers but include significant reductions in smoking prevalence. These effects on smoking prevalence constitute both an increase in smoking cessation among smokers and a reduction in smoking initiation among potential young smokers. Third, although evidence concerning the effects of prices on adolescent smoking is mixed, the majority of the evidence from recent studies indicates that adolescents and young adults are significantly more responsive than adults to changes in cigarette prices. Most recent studies found that adolescents and young adults were two to three times more sensitive than adults to price. Ongoing research, particularly that based on longitudinal data, will help clarify this issue. Finally, the limited number of studies of smokeless tobacco use suggest that increases in smokeless tobacco prices would reduce the prevalence of smokeless tobacco use.

Taxation of Tobacco Products

As the preceding section indicates, numerous studies of the demand for cigarettes confirm a fundamental principle of economics: increased tobacco prices will reduce tobacco use. In general, several factors will determine the retail prices of cigarettes and other tobacco products. For example, factors that reduce the supply of tobacco will raise the prices of tobacco products. As described previously, these factors include tobacco price support programs, market power and collusive behavior among firms in the markets for tobacco products, and restrictions on trade in tobacco and tobacco products. The most important policy-related determinants of prices, however, are taxes on tobacco products.

In the United States, tobacco is taxed in various ways by the federal, state, and local governments. The most important of these are the excise, or per unit, taxes imposed on cigarettes and the general sales tax (an *ad valorem* tax) applied to cigarettes and other tobacco products in most states. *Ad valorem* taxes are a fixed percentage of the price and thereby increase or decrease as price changes. Excise taxes, on the other hand, do not change over time with prices.

Tobacco taxes have relatively low administrative costs and can generate substantial revenues. In recent years, increased taxation of tobacco products has been used as a strategy to reduce tobacco consumption and thereby to improve public health. For example, the health benefits of tax-induced reductions in smoking were often cited by supporters of the federal cigarette excise tax proposed as part of the Clinton administration's proposed Health Security Act of 1993, which included an increase of 75 cents per pack. (The act did not pass.) Similarly, anticipated large reductions in youth smoking were, in part, the rationale for tax increases of up to \$2.00 per pack proposed as part of most proposals for national tobacco legislation and the average \$2.00 state and federal tax set as a goal for 2010 by the Healthy People 2010 initiative. The health benefits of higher taxes were also the focus of the large voter-initiated tax increases in Arizona, California, Massachusetts, Michigan, and Oregon, as well as the large legislated tax increases in Alaska, Maine, and elsewhere.

Finally, several relatively easy options exist for limiting cigarette smuggling (Joossens and van der Merwe 1997; Joossens et al., in press). These include prominent tax-paid markings on all tobacco products and sizable increases in the penalties for cigarette smuggling. The ACIR (1985), for example, concluded that the Trafficking in Contraband Cigarettes Act (Public Law 95-575), which prohibited the transportation, receipt, shipment, possession, distribution, or purchase of large quantities of cigarettes that did not bear the tax indicia of the state in which the cigarettes are found, led to a significant reduction in interstate cigarette smuggling resulting from interstate price differentials.

Discussion

If one applies Cook and Moore's (1993) discussion of alcohol taxes to cigarette taxes, a provocative question arises when one compares previous cigarette excise taxes with current ones: why is the current tax rate deemed appropriate when it is just over one-half the level that was deemed appropriate in 1951? Unless it is in the public interest to tax cigarettes at a much lower rate now than then (an odd notion, given that in 1951 much less evidence was available on the health hazards of smoking), a case can be made for restoring taxes to their earlier levels. Similar arguments can be made at the state level, particularly in those states where taxes have not changed or have been increased modestly and infrequently over time.

Other, comparative standards for appropriate taxes could be used. For example, as shown in Table 6.12, state excise taxes on cigarettes differ substantially; these differences reflect several factors, including the importance of tobacco for the local economy. At another level of comparison, large differences between cigarette taxes in Canada and the United States gave rise to a significant black market trade, which in turn resulted in reductions in Canadian taxes. At the global level, cigarette and other tobacco taxes in the United States are among the lowest in industrialized countries around the world. Such comparisons suggest that relatively high taxes may be appropriate in some areas and low taxes appropriate in others. On the other hand, one could argue that the taxes on all tobacco products should be equivalent. This last issue is discussed in greater detail in the next section, "Fairness Standard and Optimal Cigarette Taxes."

Taxes on smokeless tobacco products are much lower than taxes on cigarettes, particularly at the federal level. The limited research suggests that increases in cigarette excise taxes may have reduced cigarette smoking but also may have contributed to an increased

use of smokeless tobacco products (Ohsfeldt and Boyle 1994; Ohsfeldt et al. 1997, 1999). Some public health advocates and others have therefore called for the equalization of taxes on tobacco (CSH 1994; U.S. House of Representatives 1994).

Fairness Standard and Optimal Cigarette Taxes

Fair tax policy is an issue that is often debated but difficult to apply when "optimal" taxes of potentially hazardous substances are discussed (Cook and Moore 1993). For taxes on cigarettes and other tobacco products, part of the debate revolves around the perceived health benefits and reductions in social costs associated with higher taxes.

In their analysis of economic interventions to reduce alcohol abuse, Cook and Moore (1993) noted that several criteria can be included to judge fairness by those on both sides of the debate. These criteria include a horizontal equity criterion, which suggests that equals should be treated equally; a vertical equity criterion, which suggests that those with the greatest ability to pay should be taxed more heavily; and a benefit criterion, which suggests that those who receive the greatest benefit from government activities should be taxed more heavily. If the basic notion is accepted that people who are otherwise similar should be taxed differently because one uses more tobacco products than the other (a notion that violates the horizontal equity criterion), then other questions about fairness arise. These include questions concerning the alleged regressivity of the taxes and the external costs of smoking and other tobacco use (Cook and Moore 1993).

Equity, Incidence, and Distribution of the Tobacco Tax Burden

As has been discussed previously, increases in cigarette excise taxes are passed on to consumers through higher cigarette prices. Primarily because of the less than perfectly competitive nature of the cigarette industry, prices have increased by more than recent increases in cigarette taxes. Because consumers will pay at least the full amount of a tax increase in higher cigarette prices, some questions of fairness revolve around the distributional effects of the tax hike. To understand these effects, it is useful to look at the relationship between tobacco use and income (or expenditures). (As Cook and Moore [1993] note, income or expenditures are not the only scale on which fairness can be judged, but they are the most commonly used.)

A 1990 report by the Congressional Budget Office (CBO), which used data from the 1984-1985 Consumer Expenditure Survey, made several observations. For example, expenditures on tobacco products increased with income except for people in the highest income quintile. As a percentage of posttax income, however, spending on tobacco was highest in the lowest income quintile (4.0 percent of posttax income) and fell almost proportionately with increased income. Also, if expenditures on tobacco are considered as a percentage of expenditures on all goods and services, however, the share of tobacco expenditures fell gradually over the first four income quintiles (from 1.6 to 1.1 percent) and dropped sharply only in the top quintile (to 0.7 percent). Thus, the CBO notes, if annual family expenditures are more reflective of lifetime income than annual family income, then expenditures on tobacco are only slightly regressive over income classes. Finally, the CBO noted that younger families spent a higher percentage of income on tobacco products and that their share of spending on tobacco products as a percentage of total expenditures was higher as well.

To examine the distributional impact of cigarette excise tax increases on consumers, the CBO simulated what the effects on expenditures would be were the 1990 federal excise tax on cigarettes (16 cents per pack) doubled. At first glance, the simulated increase appeared to fall most heavily on the lowest income categories, thereby implying that cigarette taxes are regressive. However, when income tax brackets and transfer payments (discussed in the next section, "Estimates of the Costs of Smoking") were indexed to account for the price increases associated with excise tax hikes, lowering individual income taxes and raising transfer payments, the apparent regressivity of the tax was reduced. When looking at the tax increase relative to expenditures rather than income, the CBO concluded that cigarette taxes were approximately proportional rather than regressive. Finally, the CBO noted that the largest share of the simulated tax increase was paid for by families in the third and fourth income quintiles and that the smallest share was paid by families in the lowest income (first and second) quintiles.

All of the CBO estimates were based on measures of current income. Lyon and Schwab (1995) used an alternative approach that used measures of permanent or lifetime income to examine the distributional effects of cigarette and other "sin" taxes. This approach could account for the intertemporal nature of cigarette consumption decisions. The investigators concluded that cigarette excise taxes are as regressive as was implied by studies based on current income.

Although cigarette taxes fall most heavily on lower income groups, two recent studies suggest that increases in cigarette taxes may reduce the perceived regressivity of these taxes. A study using data from the British General Household Survey concluded that people in the lowest income groups were the most responsive to price increases (Townsend et al. 1994). Similar findings have been obtained in the United States using data from 13 of the National Health Interview Surveys conducted from 1976 through 1993 (CDC 1998). The price elasticity of cigarette demand by those at or below the median income was estimated to be approximately 70 percent higher than that for persons above the median. Another study found that less educated persons were more responsive than more educated persons to cigarette price changes (Chaloupka 1991). Given the high correlation between income and education, the three studies implied that increased cigarette taxes would reduce observed differences in smoking among socioeconomic groups (i.e., that smoking prevalence is higher in the lower socioeconomic groups) and would thereby counter the perception that cigarette taxes are regressive. Recent research from developing countries supports the hypothesis that lower income populations are relatively more sensitive to price (Jha and Chaloupka 1999; see Chaloupka et al., in press, for a thorough review). Indeed, while cigarette taxes may fall more heavily on lower income groups, an increase in the cigarette tax, because of the greater price sensitivity of lower income smokers, may actually be progressive. Moreover, given the estimates from these studies, the health benefits resulting from reductions in smoking stimulated by increased cigarette taxes would be disproportionately larger in the lowest income populations.

Finally, as the CBO report pointed out, although the potential regressivity of cigarette taxes is of some concern, the U.S. tax system is a mix of many different taxes. Increased progressivity of other taxes and transfer programs could be used to compensate low income families for the tax increase. The CBO considered three alternative changes—a 5-percent increase in food stamp payments, a 10-percent increase in the earned income tax credit, and a combination of the two—to offset the potential regressivity of an increase in the cigarette excise tax. In each case, the CBO concluded that these changes would spend about 15 percent of the net revenues resulting from the tax increase. A similar idea was implicit in the proposed Health Security Act of 1993, which proposed a federal tax increase of 75 cents per pack to partially finance the provision of health insurance and the expansion of benefits to the uninsured and underinsured, most of whom are

in lower socioeconomic groups. Likewise, several recent proposals for national tobacco legislation contain provisions that would offset the potential regressivity of large increases in cigarette taxes.

Estimates of the Costs of Smoking

An alternative approach to the question of fairness deals with the notion that smokers and other tobacco users impose costs on nonusers. One of these costs is the health consequences for nonsmokers of exposure to ETS. A second is the financial external effect caused by collectively financed programs (e.g., Medicaid and Medicare) where payments in and out are not tied to changes in costs and life expectancy caused by smoking. Thus it can be argued that it would be fair for smokers and other tobacco users to pay for the consequences of their use. Cigarette and other tobacco taxes are one relatively efficient approach for attaining this result. However, to set taxes at a level sufficient to cover the cost of cigarette smoking and other tobacco use requires an estimate of these costs.

All studies of the economic costs of tobacco use have focused on the costs of cigarette smoking. The Office of Technology Assessment (U.S. House of Representatives 1994) has noted that although measuring these costs is an inexact science, three general components are included:

- The direct costs of providing health care services to those persons with smoking-related diseases. Such costs include expenditures for preventing, detecting, diagnosing, and treating smoking-related diseases and medical conditions.
- The indirect morbidity costs associated with lost earnings from work because of smoking-related illness.
- The indirect mortality costs related to the loss of future earnings from premature death from smoking-related causes.

Researchers have tried to estimate the economic costs of cigarette smoking by using data from the United States (Rice et al. 1986; Manning et al. 1989, 1991; Hodgson 1992; CDC 1994; U.S. House of Representatives 1994; Miller et al. 1998, 1999) and elsewhere (see Lightwood et al., in press, for a comprehensive review). In addition, as part of the research resulting from Proposition 99, several recent studies have estimated these costs for California (California Department of Health Services 1992; Rice and Max 1992; Max and Rice 1995).

Most of the estimates of the economic costs of smoking have been prevalence based. That is, they are based on the estimated prevalence of smoking-related illnesses in a given year and on the costs associated with those illnesses. Because of the long lags between smoking initiation and the onset of most smoking-related illnesses, these estimates reflect historical trends in smoking and thus cannot be used to predict the impact of changes in smoking prevention policies except over long periods. However, this approach has been widely used because of its relatively simple methodology and the availability of reliable data (Rice et al. 1986).

Several of the recent estimates of the costs of smoking have been incidence based (Oster et al. 1984; Manning et al. 1989, 1991; Hay 1991; Hodgson 1992). That is, these studies attempt to estimate the average additional costs of smoking over the smoker's lifetime. Cost estimates would differ by the person's age, sex, and level of smoking (i.e., a heavy smoker would have higher lifetime costs than a relatively light smoker with the same characteristics). These estimates of the costs of smoking can be useful for policymakers, who can estimate the change in the costs of smoking associated with a change in smoking behavior resulting from a change in policies to reduce smoking. However, these estimates are sensitive to assumptions about future costs and about issues such as technological change and its diffusion (Hodgson 1988).

Many of the studies of the economic costs of smoking have included notably different direct costs in their computations. For example, most include the costs of hospital and nursing home care, physicians' fees, and medications used to treat smoking-related illnesses. One such study estimated that these costs in 1993 were \$50 billion and that 43.3 percent of them were paid through public sources (CDC 1994). However, some studies of direct costs have been limited to the costs associated with lung cancer only, whereas others examined a more comprehensive list of smoking-related illnesses, including cardiovascular disease and chronic obstructive pulmonary disease.

Other more recent studies have sought a broader measure of the direct costs of smoking by comparing the differences between total health care spending by smokers and nonsmokers. The most sophisticated of these recent studies control for other risk factors likely to be correlated with smoking in an effort to isolate the impact of smoking on medical expenditures (Miller et al. 1998, 1999). These recent studies estimated smoking-attributable medical care costs of between \$53 billion and \$73 billion for 1993, or between 6.5 percent and 11.8 percent of all U.S. health care expenditures.

It is likely, however, that these studies have underestimated the direct costs of smoking for a variety of reasons (Warner et al. 1999). For example, they ignore other significant economic costs, including the costs of transportation associated with obtaining medical care and the costs of nonmedical care associated with accommodating a person with a smoking-related chronic illness. These estimates also generally fail to account for other medical care costs related to cigarette smoking, such as burn care from injuries in smoking-related fires and perinatal care for low-birth-weight infants of mothers who smoke. Few studies have attempted to include the direct costs for nonsmokers of diseases related to exposure to ETS, and none of these studies has tried to estimate the intangible costs of smoking-related illnesses (i.e., the pain and suffering associated with the illness and the grief experienced by family and friends).

A human capital approach is generally used to estimate the indirect morbidity and mortality costs associated with cigarette smoking. This approach views an individual as producing a stream of output or earnings computed at market value or as the imputed value of housekeeping services. Thus, the value of a person is reflected by his or her earnings, and the lifetime value for that person is equal to the discounted stream of future earnings (Max and Rice 1995). This approach places a relatively high value on morbidity and mortality among young adults, men, and the more educated because of the relatively higher earnings that would be lost by these smokers (Markandya and Pearce 1989); moreover, lost earnings may not be an accurate reflection of the value people place on their health or on their lives. Furthermore, the human capital approach is in contrast to the "willingness-to-pay" approach, which tries to estimate the value a person assigns to reducing his or her risk of premature death.

A more controversial component in the computation of the lifetime costs of smoking concerns the treatment of transfer payments. These transfer payments include the reduction in income taxes and insurance premiums paid by smokers because of reduced earnings associated with smoking-related illnesses, the value of Social Security and private pensions foregone because of smoking-related premature deaths, higher health care costs associated with smoking-related illnesses and paid by public and private insurance plans, and increased sick pay and disability benefits paid during smoking-related illnesses. Particularly objectionable to many people is the idea that foregone Social Security and private pension benefits from smokers who die prematurely from smoking-related illnesses should be considered "benefits" to nonsmokers. As

Harris (U.S. House of Representatives 1994) and others have noted, premature deaths are not considered a benefit when policymakers determine what levels of funded research are appropriate for reducing premature deaths from other risk exposures (CSH 1994; Warner et al. 1995, 1999). Nevertheless, several recent estimates of the costs of smoking have considered these foregone benefits in their computations of the economic costs of cigarette smoking (Manning et al. 1989, 1991; Shoven et al. 1989). These studies aim to provide a complete accounting of the costs of smoking to answer the question of whether payments by those who have ever smoked into collectively financed systems such as Medicare and Social Security equal receipts by those who have ever smoked.

Theoretically Optimal Cigarette Taxes

As was just discussed, several estimates of the optimal or fair tax on cigarettes are based on the various studies of the costs of smoking. In the context of the preceding discussion, an optimal tax is one that equates the total revenues from these taxes to the net external costs of cigarette smoking. These estimates have ranged from those implying that current taxes more than cover the external costs of smoking (Manning et al. 1989) to those that have suggested that current taxes are far too low. For example, one such study that included the costs of the long-term intellectual and physical consequences resulting from smoking-related low birth weight among infants born to mothers who smoke indicated that \$4.80 was an appropriate tax on a pack of cigarettes (Hay 1991).

Another study (Pigou 1962) advanced a similar notion in providing a theoretical justification for taxes on goods with market prices not fully reflecting the social costs associated with their production and consumption. From that perspective, these taxes could be viewed as improving economic efficiency by raising a smoker's marginal cost of smoking to a level nearer the social marginal cost. For some goods, taxes could generate revenues that exceed total external costs because the taxes would be based on marginal rather than average external costs (Cook and Moore 1993).

Estimates of optimal taxes on cigarettes imply that smokers are fully informed about the risks associated with cigarette smoking (Cordes et al. 1990). If smokers underestimate these risks, then even higher taxes could be appropriate to discourage people from smoking. This issue may be particularly relevant for an addictive product such as cigarettes if, when people take up smoking, they do not fully understand the addictive properties of consumption and the implications of

addiction for future choices. Gruber and Koszegi (2000), for example, concluded that if the "externalities" are taken into account, they suggest sizable additional taxes of one dollar or more per pack of cigarettes.

Among the most widely cited recent estimates of the optimal tax are the studies of the economic costs of cigarette smoking by Manning and colleagues (1989, 1991). These incidence-based estimates used data from the RAND Corporation's Health Insurance Experiment and the 1983 National Health Interview Survey. To calculate the optimal tax on cigarettes, the analyses estimated both the lifetime external costs associated with cigarette smoking and the perceived "savings" that result from smokers' dying earlier and not realizing their pension and Social Security benefits.

Using their midrange estimates, Manning and colleagues (1989, 1991) concluded that for a new smoker, the total external cost of smoking was 43 cents per pack of cigarettes in 1986. This estimate comprised 1 cent in extra costs for sick leave, 2 cents in costs for smoking-related fires, 5 cents in added costs for group life insurance, 9 cents in lost tax revenues (to finance retirement and health benefits), and 26 cents in spending on additional medical care. These costs would be offset, however, by an estimated 27 cents per pack in external savings resulting from smoking-related premature deaths. Converting these figures to 1995 dollars (based on the medical service price index and the gross national product deflator), the CRS estimated a net external cost of 33 cents per pack for cigarettes, which is approximately two-thirds of the average federal, state, and local taxes on cigarettes of 50 cents per pack in late 1993 (Gravelle and Zimmerman 1994). The CRS thus concluded that smokers were more than paying their way.

Critics of the studies of Manning and colleagues (1989, 1991) contend that many of the assumptions made in obtaining the estimates are inappropriate. If the analyses had not included the effects of unrealized pension and Social Security benefits of smokers who die prematurely, the resulting external costs of smoking would have amounted to approximately 89 cents per pack in 1995 dollars.

Moreover, the studies of Manning and colleagues (1989, 1991) made a debatable distinction between internal costs (those borne by the smoker) and external costs (those that smokers impose on nonsmokers). For example, the lost productivity costs described in those analyses were treated as internal costs, whereas only the higher, collectively financed, group premiums for health, life, and other insurance that nonsmokers paid to cover smoking-related costs not reflected in the premiums paid by smokers were considered external costs.

More controversial, however, was these analyses' assumption that the cost of ETS was an internal cost. This assumption was based on the argument that the family is the economic unit involved in making smoking and other decisions and that the health consequences of ETS are largely confined to the nonsmoking spouses of smokers. As Manning and colleagues (1991) note, when this assumption is modified to treat the consequences of passive smoking as external costs, the estimated external costs of smoking rise significantly. For example, under the assumptions of Gravelle and Zimmerman (1994) concerning prices, the estimates of Manning and colleagues (1991) imply that including the relatively conservative estimate of 2,400 lung cancer deaths from ETS would add approximately 31 cents per pack (in 1995 dollars) to the external costs of smoking. Similarly, updating the researchers' estimates of the costs of neonatal care for smoking-related low birth weight would add more than 4 cents per pack. Doing the same for deaths from smoking-related fires would add 20 cents per pack and for smoking-related fetal deaths would add 31 cents per pack.

These estimates probably understate the true costs of ETS. After reviewing the literature on the links between ETS and heart disease, Glantz and Parmley (1995) concluded that 30,000–60,000 persons die prematurely from heart disease related to ETS. Including these numbers in estimates by using the same assumptions used in the CRS report would add at least another 70 cents to the estimate of the optimal tax. Moreover, the CRS report ignored the 150,000–300,000 cases of ETS-linked lower respiratory tract infections in children up to 18 months old and the ETS-linked worsening of asthma in 200,000 to 1 million children (Environmental Protection Agency [EPA] 1992). Including these costs would lead to an even larger optimal tax. Finally, the estimates excluded the long-term developmental consequences suffered by infants with smoking-related low birth weight (Hay 1991); were these costs included, the optimal cigarette tax would be nearly \$5 per pack.

Using the human capital approach, Manning and colleagues (1989, 1991) estimated that the life of a nonsmoker who died prematurely from ETS exposure was worth \$1.66 million. In a recent cost-benefit evaluation of the proposed Smoke-Free Environment Act of 1993 (introduced in the 103rd Congress but not passed), the EPA (Mudarri 1994) used the willingness-to-pay approach and obtained a \$4.8 million baseline estimate of the value of a life. The EPA also used this approach to include the effects of ETS on heart disease and children's health when calculating the value of benefits from reduced ETS exposure.

By using the willingness-to-pay approach and making some relatively conservative assumptions, the EPA estimated that the total benefits from the reduced ETS exposure that would result from a ban on smoking in all worksites was \$39–71 billion per year. This estimate assumed that the ban would reduce the number of current smokers by 3–6 percent, the number of future smokers by 5–10 percent, and consumption among continuing smokers by 10–15 percent; the resulting total long-run reduction in consumption would be 14–22 percent. The combined effect of these reductions in smoking and of the creation of designated smoking areas was predicted to reduce out-of-home exposures to ETS by 90 percent and in-home exposures by a midrange estimate of 6 percent. Estimates from the 1992 EPA report on ETS and lung cancer suggested that 73 percent of exposures to ETS occur outside the home and that 27 percent occur in the home. The total reduction in ETS exposure was thus predicted to be 66 percent; if it were applied to estimated total ETS costs of \$58.7–106.9 billion, this reduction would yield the EPA's estimated cost benefits of \$39–71 billion. Given current cigarette sales of about 24 billion packs per year, this estimate implied that the per pack external costs of ETS were between \$2.45 and \$4.45. This estimate is likely to be low, because the short-term and long-term costs of fetal and perinatal exposure to ETS were not included in the EPA's computations.

Viscusi (1995), however, reached a much different conclusion in analyzing the social costs of smoking. This investigator updated much of the analysis by Manning and colleagues (1989, 1991), used a willingness-to-pay approach, and included the same ETS risks used in the EPA's analysis (Mudarra 1994). Viscusi, however, argued that the EPA approach overestimated the risks of ETS by failing to account for the change in the tar content of cigarettes and the changes in cigarette consumption per smoker. Noting that the average tar content of cigarettes declined from 46.1 mg per cigarette in 1944 to 12 mg per cigarette in 1994, Viscusi asserted that the health risks associated with cigarette smoking, as well as the risks from exposure to ETS, are linearly related to the tar content of cigarettes. Although presenting no evidence for either assertion, he contended that estimates of the health risks based on consumption of higher-tar cigarettes and exposure to ETS from higher-tar cigarettes need to be adjusted to reflect the decline in tar content. When not adjusting for tar, Viscusi obtained an estimate for the per pack external costs of cigarette smoking well above the average tax on a pack of cigarettes; when adjusting for tar, he concluded that current cigarette taxes exceed the external costs of smoking.

A clear consensus is lacking regarding the optimal tax on cigarettes. Optimal tax calculations from prevalence-based estimates that include the direct and indirect costs of smoking-related morbidity and mortality are likely to be inappropriate, because the calculations include lost productivity and other costs that should arguably be considered internal costs. Similarly, optimal tax calculations from the recent incidence-based estimates probably underestimate the optimal tax, because these calculations exclude many of the external costs of smoking. Nevertheless, because of the growing evidence of the substantial health consequences of exposure to ETS (including fetal and perinatal exposure), a tax that would generate sufficient revenues to cover all external costs from smoking is likely well above the current average of federal, state, and local taxes on cigarettes.

Cigarette Taxes and Health

As the review of studies on cigarette demand demonstrated, increases in cigarette prices lead to substantial reductions in cigarette smoking by deterring smoking initiation among youth, prompting smoking cessation among adults, and reducing the average cigarette consumption among continuing smokers. Because of the substantial health consequences of cigarette smoking and the health benefits of smoking cessation, these reductions in cigarette smoking would lead to significant improvements in health by reducing smoking-related morbidity and mortality. Thus, increases in cigarette excise taxes, which would result in increases in cigarette prices, would be an effective policy tool in improving health.

Several recent studies have provided some estimates of the health benefits resulting from cigarette tax increases. For example, Warner (1986) used published estimates of price elasticity (Lewit et al. 1981; Lewit and Coate 1982) to estimate the impact of higher cigarette excise taxes on smoking and health. The study predicted that a sustained, real 15 percent tax-induced increase in cigarette prices in 1984 (which would have been equivalent to restoring the federal tax to its real value in 1951—a nominal tax of 32 cents per pack) would deter 800,000 young people from smoking and encourage about 2.7 million adults to quit. Using the conservative assumption that one of every four lifelong smokers dies prematurely of a smoking-related illness, the researchers estimated that this tax increase would reduce premature deaths among persons 12 years and older by 860,000.

The GAO (1989) used the same estimates of price elasticity to predict the health benefits from a sustained,

real tax increase of 21 cents per pack in 1989 (which they estimated would raise the price by 15 percent). Using the one-in-four assumptions made by Warner (1986), the analysis estimated that this tax increase would reduce the number of youth who smoke by 500,000 and would subsequently reduce premature deaths from cigarette smoking among youth by 125,000.

Harris (1987) used various estimates of the price elasticity of demand in an analysis of the health implications of the 1983 tax hike and corresponding price increase. The analysis concluded that this tax increase deterred 600,000 young people from smoking. After reviewing the epidemiologic literature, Harris estimated that an additional 54,000 young people and a total of 100,000 people would survive to at least 65 years of age as a result of the tax increase.

Two recent studies directly examined the health benefits of increases in cigarette excise taxes (Moore 1995; Evans and Ringel 1999). Using annual state-level death rates from smoking-related diseases (including heart disease, lung cancer, cardiovascular disease, mouth and throat cancer, and asthma), the study directly estimated, through appropriate econometric methods, the impact of higher taxes on health. The resulting estimates implied that a 10-percent increase in cigarette excise taxes would save approximately 5,200 lives annually. Similarly, Evans and Ringel (1999), using data from the 1989-1992 Natality Detail files, concluded that higher cigarette taxes would significantly improve birth outcomes.

The CSH (1994) analyzed the health benefits of higher cigarette excise taxes by using relatively conservative estimates of the price elasticity of demand and of deaths related to cigarette smoking. The study estimated that, based on 1992 taxes and cigarette smoking data, an increase of 75 cents per pack in the federal cigarette excise would reduce premature deaths by 900,000. The study further estimated that a \$2.00 increase would save an additional 1 million lives.

Similarly, Chaloupka (1998) provided estimates of the effects of alternative cigarette tax and price increases contained in various national tobacco settlement proposals based on Chaloupka and Grossman's (1996) econometric analysis of youth smoking. For example, he estimated that a \$1.50 increase in cigarette taxes and prices, phased in over a relatively short period of time and then adjusted for inflation, could reduce overall cigarette consumption by approximately 30 percent, while cutting the prevalence of youth smoking nearly in half. Given the CDC's recent estimate that 16,620,878 youth in the 1995 cohort of 0- through 17-year-olds would eventually become smokers and

that 32 percent of regular smokers eventually die from a smoking-related disease, Chaloupka (1998) estimated that this tax would prevent approximately 2.5 million premature deaths in this cohort.

The substantial econometric literature clearly indicates that increases in cigarette prices will reduce both smoking prevalence and average cigarette consumption. Because of the well-documented health consequences of smoking, tax-induced increases in cigarette prices would generate substantial improvements in health. Thus, higher taxes on cigarettes and other tobacco products appear appropriate from a public health perspective. In addition, at a gathering convened by the CDC to evaluate the criteria for defining an optimal cigarette tax, economists raised two further reasons for higher cigarette taxes (Warner et al. 1995). First, to the extent that adolescents and young adults do not fully understand the addictive nature of cigarette smoking, the argument could be made that higher cigarette taxes can reduce smoking by youth before it is too late for them to quit easily. Second, to the extent that youth behave more myopically than adults (in particular, more than the adults that they will later be), young people are more likely to take on a habit with long-term health consequences. Thus, by discouraging smoking, the higher tax can help correct youth's myopic behavior.

Although higher cigarette taxes are likely to produce substantial improvements in health, several factors could mitigate the impact of these taxes. First, as the limited research on the demand for smokeless tobacco products suggests (Ohsfeldt and Boyle 1994; Ohsfeldt et al. 1997, 1999), increases in cigarette taxes not matched by similar increases in smokeless tobacco taxes may induce people to substitute other tobacco products with similar health consequences. For example, the large increases in Canada's cigarette excise taxes and the consequent increases in the differential between cigarette taxes and taxes on roll-your-own tobacco led to a sharp rise in the use of the latter (Department of Finance, Canada 1993). This substitution could easily be avoided by increasing all tobacco taxes simultaneously. Canada's experience also raises the issue of equalized taxes between nations, because relatively large tobacco tax hikes resulted in a border-crossing black market in cigarettes and other tobacco products as well as in other efforts to avoid taxes. Alternatively, as Evans and Farrelly (1998) found, the higher taxes may lead smokers to change the kinds of cigarettes they smoke (i.e., they may switch to higher-tar and higher-nicotine cigarettes), thereby reducing the health benefits of higher cigarette taxes. The results of the study by Evans and Farrelly suggest that

taxes based on the tar, nicotine, and carbon monoxide content of cigarettes (first suggested by Harris 1980) may be the most appropriate means to address the public health consequences of smoking.

Of course, cigarettes and other tobacco products are not the only goods that can be taxed on the basis of these arguments. Heavy consumption of alcoholic beverages, for example, also leads to health problems, unintentional injuries, property damage, and other consequences. Cook and Moore (1993) provide a detailed discussion of the rationale for higher alcoholic beverage excise taxes. A number of studies of the "optimal" tax on alcoholic beverages have concluded that current taxes are well below the level that would cover the social costs of alcohol abuse (Manning et al. 1989, 1991; Saffer and Chaloupka 1994).

Tobacco Taxation and Revenues

An alternative rationale for tobacco taxes is that they are a relatively simple way to generate revenues. Even some prominent proponents of the free market philosophy have supported tobacco taxes to generate revenues. "Sugar, rum, and tobacco," wrote Adam Smith in his 1776 economic treatise, *An Inquiry Into the Nature and Causes of the Wealth of Nations*, "are commodities which are no where necessities of life, which are become objects of almost universal consumption, and which are therefore extremely proper subjects of taxation" (1976, Book V, p. 474).

As described earlier in this chapter (in "Rationales for Tobacco Taxation"), various levels of government have long used cigarette and other tobacco taxes to raise revenues. Such policy is supported by economic theory. An economically efficient way to raise revenues while minimizing the welfare losses associated with the price distortions resulting from taxes is to impose relatively higher taxes on goods with more inelastic demand (one for which the percentage reduction in demand is smaller than the percentage increase in price) (Ramsey 1927). As described earlier in this chapter (in "Effect of Price on Demand for Tobacco Products"), the numerous studies of cigarette demand and the limited studies of the demand for other tobacco products have implied that overall demand, at least in the short run, is inelastic. Thus, large increases in tobacco taxes can generate substantial increases in revenues, particularly in the short run.

Since 1960, the dollar amount of federal revenues generated by tobacco taxes has increased significantly, from \$1.9 billion to nearly \$5.9 billion in 1997. Over this same period, state revenues from tobacco have also increased significantly in nominal terms, from slightly

less than \$1 billion to more than \$7.5 billion. As new sources of tax revenues have been identified, however, tobacco revenues have constituted a smaller proportion of total revenues. Tobacco taxes accounted for 3.36 percent of all federal revenues in 1950, but they were only 0.44 percent of revenues in 1989 (CBO 1990). Similarly, total federal tobacco tax revenues as a share of the gross national product fell from 0.55 percent in 1950 to 0.08 percent in 1989.

Merriman (1994) considered whether cigarette excise taxes are set to maximize the revenues from these taxes. More specifically, Merriman tested the idea that elected officials, in an effort to maximize their own utility, may increase taxes on some goods to the point where revenues from these taxes begin to decline (Buchanan and Lee 1982). Using published estimates of cigarette demand (Becker et al. 1994), the study found that cigarette excise taxes in every state were well below the revenue-maximizing level of these taxes, at least as of 1985. Furthermore, these estimates of the marginal revenue effects of higher taxes were lower-bound estimates, because they held constant other states' taxes (a consideration that allowed for increases in the casual and organized smuggling of cigarettes in response to a tax hike in a given state). Coordinated state tax increases, as a result, would generate even higher revenues.

Grossman (1993) considered this issue of maximizing the federal excise tax on cigarettes. Using published estimates of cigarette demand (Chaloupka 1991; Becker et al. 1994), Grossman predicted that in the long run, a real federal tax rate of \$1.26 would maximize federal tax revenues at \$16 billion and would generate even larger immediate increases in revenues. Likewise, Becker and Grossman (1994) suggested that the long-run revenue-maximizing value of the federal cigarette excise tax is 95 cents per pack in 1994 dollars. This tax would generate approximately \$12 billion in total revenues and would raise considerably more than in the short run. These estimates were consistent with the prediction that a sustained real increase of 75 cents in the federal tax on cigarettes would in the long run lead to a net increase in cigarette tax revenues of just over \$16 billion (Gravelle and Zimmerman 1994).

Other studies, however, have predicted that higher federal taxes would generate much greater revenues (Harris 1994; Womach 1994a). For example, Harris has predicted that raising the federal tax to \$2.00 per pack would have generated nearly \$20 billion in additional revenues annually, on average, from 1995 through 1999, whereas Chaloupka (1998) estimates that a \$1.50 increase would, in the short run, raise \$22.5 billion annually.

The differences among the predicted revenue effects of higher cigarette taxes may be attributed to different assumptions used to obtain these estimates as well as to differences in the period for which the predictions are made. For example, two studies (Grossman 1993; Becker and Grossman 1994) have assumed a linear demand function for cigarettes. One of the implications of this function is that the price elasticity of demand rises as price rises. Thus, when the effects of a large increase in the cigarette excise tax are predicted, cigarette demand is assumed to become more responsive to price. This assumption implies that there is an inverted U-shaped relationship between cigarette taxes and revenues: increasing cigarette taxes from relatively low levels will initially lead to increased revenues; beyond some point, further increases in taxes will lead to even larger reductions in demand, thereby causing revenues to fall. The same basic argument is implicit in the well-known Laffer curve, which relates income tax rates to income tax revenues.

The assumption of a linear demand function for cigarettes is in contrast to the assumption made by some other analysts that the price elasticity of demand is constant over the range of prices under consideration. Because almost all of the studies described in this section found that the demand for cigarettes is inelastic, the assumption of a constant elasticity implies that even very large increases in taxes will always generate large increases in revenues.

The differences in revenues predicted by these two assumptions, although only minor when analyses predict the impact of relatively small cigarette tax increases, grow with the size of the tax increase. Because either assumption could be questioned, the revenue effects of a tax increase will likely fall somewhere between the predictions obtained from the two (Grossman et al. 1993). The limited evidence from the behavioral economics literature suggests, however, that the effects of large increases in cigarette prices will lead to larger reductions in cigarette demand than predicted by the assumption of a linear demand function (Bickel et al. 1991).

A second key factor leading to the differences discussed here is the distinction between the short-run and long-run effects of the tax hikes. Economic theory implies that the demand for most consumer goods will be more responsive to price in the long run than in the short run. For cigarettes and other tobacco products, additional factors increase the likelihood that the long-run effects of an increase in price on cigarette demand will exceed the short-run effects—that is, price elasticity will increase in a manner similar to the increase for other, nonaddictive goods and services. Increased

cigarette taxes will thus lead to smaller increases in revenues in the long run than in the short run.

That adolescents and young adults are more responsive to prices than older adults are and the fact that cigarette smoking is an addictive behavior are of particular importance when predicting the short-run and long-run revenue effects of higher cigarette taxes. Age difference in price elasticity implies that sustained real tax increases will lead to greater reductions in smoking prevalence and consumption as the number of adolescents and young adults who have not yet decided to smoke replaces the number of older adults who already smoke. The assumption of addiction implies that price has a cumulative effect on consumption: the price increase immediately reduces current consumption by discouraging young people from experimenting or continuing to experiment with smoking, as well as by encouraging current smokers to smoke less; future consumption is then reduced by the continuously fewer current smokers who also continue to smoke less in the face of a sustained real increase in price. The cumulative effect of price on consumption thus exceeds the immediate effect. This sequence ultimately leads to reduced revenues.

In summary, federal and most state excise taxes on cigarettes are undoubtedly well below their revenue-maximizing levels. Thus, relatively large increases in these taxes would lead to substantial gains in revenues, particularly in the short run. Moreover, because of the relatively inelastic demand for cigarettes, increases in cigarette taxes are an economically efficient means of generating substantial revenues while imposing relatively small welfare losses. But if there is little argument that large increases in cigarette taxes would generate substantial increases in tax revenues in the short run, there are some questions on the revenue-maximizing values of these taxes and the long-run stability of revenues generated by large increases in cigarette taxes.

Part of the difficulty in estimating the effects of large taxes on cigarettes is that there is little experience in the United States with relatively large increases. Similarly, it is unlikely that the long-run effects of the more recent large tax increases have been fully played out. The short-term experience in Canada is of limited use in addressing these issues. Cigarette taxes in Canada increased more than 500 percent between 1982 and 1992, which increased real cigarette prices by 170 percent, and total smoking fell by 38 percent (Swearing and Martial 1994). Because of the effects of other, contemporaneous activities to reduce tobacco use, the impact of the large price increases on smoking were consistent with the estimates from the studies of U.S. cigarette demand

described in this chapter. Moreover, total federal and provincial revenues generated by Canadian cigarette taxes were 240 percent higher in 1992 than in 1981 even with the concomitant considerable black market in

cigarettes. This experience suggests that large increases in cigarette taxes in the United States would generate sizable tax revenues for many years.

Conclusions

1. The price of tobacco has an important influence on the demand for tobacco products, particularly among young people.
2. Substantial increases in the excise taxes on cigarettes would have a considerable impact on the prevalence of smoking and, in the long term, reduce the adverse health effects caused by tobacco.
3. Policies that influence the supply of tobacco, particularly those that regulate international commerce, can have important effects on tobacco use.
4. Although employment in the tobacco sector is substantial, the importance of tobacco to the U.S. economy has been overstated. Judicious policies can be joined to higher tobacco taxes and stronger prevention policies to ease economic diversification in tobacco-producing areas.

Other Fact Sheets

1. National Center for Chronic Diseases and Prevention and Health Promotion
 - a. Smokeless Tobacco

2. National Cancer Institute
 - a. Smokeless Tobacco and Cancer



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Smokeless Tobacco

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Fact sheet

July 2004

The two main types of smokeless tobacco in the United States are chewing tobacco and snuff.^{1,2} Chewing tobacco comes in the form of loose leaf, plug, or twist.^{1,2} Snuff is finely ground tobacco that can be dry, moist, or in sachets (tea bag-like pouches).² Although some forms of snuff can be used by sniffing or inhaling into the nose,² most smokeless tobacco users place the product in their cheek or between their gum and cheek.³ Users then suck on the tobacco and spit out the tobacco juices, which is why smokeless tobacco is often referred to as spit or spitting tobacco.³ Smokeless tobacco is a significant health risk and is not a safe substitute for smoking cigarettes.⁴

Health Effects

- Smokeless tobacco contains 28 cancer-causing agents (carcinogens).² It is a known cause of human cancer,⁵ as it increases the risk of developing cancer of the oral cavity.^{4,5} Oral health problems strongly associated with smokeless tobacco use are leukoplakia (a lesion of the soft tissue that consists of a white patch or plaque that cannot be scraped off) and recession of the gums.³
- Smokeless tobacco use can lead to nicotine addiction and dependence.⁴
- Adolescents who use smokeless tobacco are more likely to become cigarette smokers.³

High-Risk Populations and Current Estimates

- Smokeless tobacco use in the United States is higher among young white males; American Indians/Alaska Natives; people living in southern and north central states; and people who are employed in blue collar occupations, service/laborer jobs, or who are unemployed.⁵
- Nationally, an estimated 3.5% of adults are current smokeless tobacco users.⁷ Smokeless tobacco use is much higher among men (6.7%) than women (0.5%).⁷
- In the United States, 9.3% of American Indian/Alaska Natives, 4.4% of whites, 1.8% of African Americans, 0.6% of Hispanics, and 0.2% of Asian-American adults are current smokeless tobacco users.⁷

- An estimated 6.7% of high school students are current smokeless tobacco users.⁸ Smokeless tobacco is more common among males (11.0%) than female high school students (2.2%).⁸ Estimates by race/ethnicity are 7.6% for white, 4.7% for Hispanic, and 3% for African American high school students.⁸
- An estimated 3.7% of middle school students are current smokeless tobacco users.⁹ Smokeless tobacco is more common among male (5.6%) than female (1.8%) middle school students.⁹ Estimates by race/ethnicity are 4.0% for white, 3.6% for Asian, 2.9% for African American, and 2.9% for Hispanic middle school students.⁹

Other Information

- During 2001, the five largest tobacco manufacturers spent \$236.7 million on smokeless tobacco advertising and promotion.¹
- The two leading smokeless tobacco brands for users aged 12 years or older are Skoal (29.5%) and Copenhagen (18.6%).¹⁰

References

1. Federal Trade Commission. *Smokeless Tobacco Report for the Years 2000 and 2001*. Washington, DC: Federal Trade Commission; 2003. Available at <http://www.ftc.gov/os/2003/08/2k2k1smokeless.pdf>. (PDF - 625K) Accessed: July 2004.
2. National Cancer Institute. *Smokeless Tobacco or Health: An International Perspective*. Bethesda, MD: U.S. Department of Health and Human Services, National Institutes of Health, National Cancer Institute; 1992. Available at <http://cancercontrol.cancer.gov/tcrb/monographs/2/index.html>. Accessed: July 2004.
3. U.S. Department of Health and Human Services. *Preventing Tobacco Use Among Young People: A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 1994. Available at http://www.cdc.gov/tobacco/sgr/sgr_1994/index.htm. Accessed: July 2004.
4. U.S. Department of Health and Human Services. *The Health Consequences of Using Smokeless Tobacco: A Report of the Advisory Committee to the Surgeon General, 1986*. Bethesda, MD: U.S. Department of Health and Human Services, Public Health Service. NIH Pub. No. 86-2874. Available at <http://profiles.nlm.nih.gov/NN/S/B/F/C/>. Accessed: July 2004.
5. National Toxicology Program. *10th Report on Carcinogens*. Research Triangle Park, NC: U.S. Department of Health and Human Services, Public Health Service, National Toxicology Program; 2002. Available at: <http://ehp.niehs.nih.gov/roc/>. Accessed: July 2004.
6. U.S. Department of Health and Human Services. *Reducing the Health Consequences of Smoking—25 Years of Progress: A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service, CDC; 1989.

DHHS Pub. No. (CDC) 89-8411. Available at http://www.cdc.gov/tobacco/sqr/sqr_1989/index.htm. Accessed: July 2004.

7. Substance Abuse and Mental Health Services Administration. *Results from the 2002 National Survey on Drug Use and Health. Detailed Tables*. Rockville, MD: Substance Abuse and Mental Health Services Administration, Office of Applied Studies; 2003. Available at <http://www.oas.samhsa.gov/nhsda/2k2nsduh/Sect2peTabs35to39.pdf> (PDF-112K). Accessed: July 2004.
8. CDC. Youth Risk Behavior Surveillance — United States, 2003. *CDC Surveillance Summaries* 2004;53(SS-2):1-96. Available at <http://www.cdc.gov/mmwr/PDF/ss/ss5302.pdf> (PDF-1.2MB). Accessed: July 2004.
9. CDC. Tobacco Use Among Middle and High School Students — United States, 2002. *Morbidity and Mortality Weekly Report* 2003;52(15):1096-1098. Available at <http://www.cdc.gov/mmwr/PDF/wk/mm5245.pdf> (PDF-275K). Accessed: July 2004.
10. Substance Abuse and Mental Health Services Administration. *The National Survey on Drug Use and Health: 2002 Detailed Tables, Tobacco Brands*. Rockville, MD: Substance Abuse and Mental Health Services Administration, Office of Applied Studies, 2003. Available at <http://www.oas.samhsa.gov/nhsda/2k2nsduh/Sect7peTabs40to49.pdf> (PDF-115K) Accessed: July 2004.

Note: The next update of this fact sheet is scheduled for July 2005. More recent information may be available at the CDC's Office on Smoking and Health Web site: <http://www.cdc.gov/tobacco>.

For Further Information

Office on Smoking and Health
National Center for Chronic Disease Prevention and Health Promotion
Centers for Disease Control and Prevention
Mailstop K-50
4770 Buford Hwy., N.E.
Atlanta, GA 30341-3717
770-488-5705
<http://www.cdc.gov/tobacco>

Media Inquiries: Contact the Office on Smoking and Health's press line at 770-488-5493.

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Date reviewed: 05/30/2003

Smokeless Tobacco and Cancer: Questions and Answers

Key Points

- Snuff is a finely ground or shredded tobacco that is either sniffed through the nose or placed between the cheek and gum. Chewing tobacco is used by putting a wad of tobacco inside the cheek (see [Question 1](#)).
- Chewing tobacco and snuff contain 28 cancer-causing agents (see [Question 2](#)).
- Smokeless tobacco users have an increased risk of developing cancer of the oral cavity (see [Question 3](#)).
- Several national organizations offer information about the health risks of smokeless tobacco and how to quit (see [Question 8](#)).

1. What is smokeless tobacco?

There are two types of smokeless tobacco—snuff and chewing tobacco. **Snuff**, a finely ground or shredded tobacco, is packaged in dry, moist, or in sachets (tea bag-like pouches). Typically, the user places a pinch or dip between the cheek and gum. **Chewing tobacco** is available in loose leaf, plug (plug-firm and plug-moist), or twist forms, with the user putting a wad of tobacco inside the cheek. Smokeless tobacco is sometimes called “spit” or “spitting” tobacco because people spit out the tobacco juices and saliva that build up in the mouth.

2. What harmful chemicals are found in smokeless tobacco?

- Chewing tobacco and snuff contain 28 carcinogens (cancer-causing agents). The most harmful carcinogens in smokeless tobacco are the tobacco-specific nitrosamines (TSNAs). They are formed during the growing, curing, fermenting, and aging of tobacco. TSNAs have been detected in some smokeless tobacco products at levels many times higher than levels of other types of nitrosamines that are allowed in foods, such as bacon and beer.

- Other cancer-causing substances in smokeless tobacco include *N*-nitrosamino acids, volatile *N*-nitrosamines, benzo(a)pyrene, volatile aldehydes, formaldehyde, acetaldehyde, crotonaldehyde, hydrazine, arsenic, nickel, cadmium, benzopyrene, and polonium-210.
- All tobacco, including smokeless tobacco, contains nicotine, which is addictive. The amount of nicotine absorbed from smokeless tobacco is 3 to 4 times the amount delivered by a cigarette. Nicotine is absorbed more slowly from smokeless tobacco than from cigarettes, but more nicotine per dose is absorbed from smokeless tobacco than from cigarettes. Also, the nicotine stays in the bloodstream for a longer time.

3. What cancers are caused by or associated with smokeless tobacco use?

- Smokeless tobacco users increase their risk for cancer of the oral cavity. Oral cancer can include cancer of the lip, tongue, cheeks, gums, and the floor and roof of the mouth.
- People who use oral snuff for a long time have a much greater risk for cancer of the cheek and gum than people who do not use smokeless tobacco.
- The possible increased risk for other types of cancer from smokeless tobacco is being studied.

4. What are some of the other ways smokeless tobacco can harm users' health?

Some of the other effects of smokeless tobacco use include addiction to nicotine, oral leukoplakia (white mouth lesions that can become cancerous), gum disease, and gum recession (when the gum pulls away from the teeth). Possible increased risks for heart disease, diabetes, and reproductive problems are being studied.

5. Is smokeless tobacco a good substitute for cigarettes?

In 1986, the Surgeon General concluded that the use of smokeless tobacco "is not a safe substitute for smoking cigarettes. It can cause cancer and a number of noncancerous conditions and can lead to nicotine addiction and dependence." Since 1991, NCI has officially recommended that the public avoid and discontinue the use of all tobacco products, including smokeless tobacco. NCI also recognizes that nitrosamines, found in tobacco products, are not safe at any level. The accumulated scientific evidence does not support changing this position.

6. What about using smokeless tobacco to quit cigarettes?

Because all tobacco use causes disease and addiction, NCI recommends that tobacco use be avoided and discontinued. Several non-tobacco methods have been shown to be effective for quitting cigarettes. These methods include pharmacotherapies such as nicotine replacement therapy and bupropion SR, individual and group counseling, and telephone quitlines.

7. Who uses smokeless tobacco?

In the United States, the 2000 National Household Survey on Drug Abuse, which was conducted by the Substance Abuse and Mental Health Services Administration, reported the following statistics:

- An estimated 7.6 million Americans age 12 and older (3.4 percent) had used smokeless tobacco in the past month.
- Smokeless tobacco use was most common among young adults ages 18 to 25.
- Men were 10 times more likely than women to report using smokeless tobacco (6.5 percent of men age 12 and older compared with 0.5 percent of women).

People in many other countries and regions, including India, parts of Africa, and some Central Asian countries, have a long history of using smokeless tobacco products.

8. Where can people find help to quit using smokeless tobacco?

Several national organizations provide information about the health risks of smokeless tobacco and how to quit:

The **National Institute of Dental and Craniofacial Research's National Oral Health Information Clearinghouse** offers educational booklets that discuss spit tobacco use in a colorful and graphic format. These booklets are designed specifically for young men who have decided to quit or are thinking about it.

Organization: National Oral Health Information
Clearinghouse
National Institute of Dental and Craniofacial
Research

Address: One NOHIC Way
Bethesda, MD 20892-3500

Telephone: 301-402-7364

E-mail: nohic@nidcr.nih.gov

Web site: <http://www.nohic.nidcr.nih.gov/>

The Centers for Disease Control and Prevention's Office on

Smoking and Health distributes a brochure for teens who are trying to quit cigarettes or smokeless tobacco. The Office also maintains a database of smoking and health-related materials.

Organization: The Office on Smoking and Health
Centers for Disease Control and Prevention

Address: Mail Stop K-50
4770 Buford Highway, NE.
Atlanta, GA 30341-3724

Telephone: 1-800-232-1311 (1-800-CDC-1311)

E-mail: tobaccoinfo@cdc.gov

Web site: <http://www.cdc.gov/tobacco/how2quit.htm>

The mission of the **National Spit Tobacco Education Program (NSTEP)** is to prevent people, especially young people, from starting to use tobacco, and to help users to quit. NSTEP offers information and materials on spit tobacco use, prevention, and cessation.

Organization: National Spit Tobacco Education Program
Oral Health America

Address: Suite 352
410 North Michigan Avenue
Chicago, IL 60611

Telephone: 312-836-9900

Web Site: <http://www.nstep.org>

The **American Cancer Society** publishes a series of pamphlets with helpful tips and techniques for smokeless tobacco users who want to quit.

Organization: American Cancer Society

Address: 1599 Clifton Road, NE.
Atlanta, GA 30329

Telephone: 1-800-227-2345 (1-800-ACS-2345)

Web site: <http://www.cancer.org>

The **American Academy of Family Physicians** has a fact sheet with information on how to quit using smokeless tobacco. The fact sheet is available at <http://familydoctor.org/handouts/177.html> on the Internet.

Organization: American Academy of Family Physicians

Address: 11400 Tomahawk Creek Parkway
Leawood, KS 66211-2672

E-mail: email@familydoctor.org

Web site: <http://familydoctor.org>

A number of other organizations provide information about where to find help to stop using smokeless tobacco. State and local health agencies often have information about community tobacco cessation programs. The local or county government section in the phone book (blue pages) has phone numbers for health agencies. Information to help smokers who want to quit is also available through community hospitals, the yellow pages (under "drug abuse and addiction"), public libraries, health maintenance organizations, health fairs, and community helplines.

9. What other resources are available?

A person's dentist or doctor can be a good source of information about the health risks of smokeless tobacco and about quitting. Friends, family members, teachers, and coaches can help a person quit smokeless tobacco use by giving them support and encouragement.

###

National Cancer Institute (NCI) Resources

Cancer Information Service (toll-free)

Telephone: 1-800-4-CANCER (1-800-422-6237)

TTY: 1-800-332-8615

Online

NCI's Web site: <http://www.cancer.gov>

LiveHelp, NCI's live online assistance:

<https://cissecure.nci.nih.gov/livehelp/welcome.asp>