

The Smoker's Journey: Macro and Micro Perspectives

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In collaboration with researchers in the UMBC HABITS Lab and the
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The Big Picture - 2004

90.2 million ever smokers (42.4% of pop with ≥ 100 lifetime cigarettes)

- 45.6 million (50.6%) former smokers

44.5 million people smoking the U.S.

- 36.1 million smoked every day

- 14.6 million of these (40.5%) stopped smoking for one day in past 12 mo trying to quit

- 8.3 million smoked some days

Smoking Prevalence Among U.S. Adults (>18)

• YEAR	Overall	Males	Females
• 1965	42.4	51.9	33.9
• 1970	37.3	44.1	31.5
• 1980	33.2	37.6	29.3
• 1990	25.5	28.4	22.8
• 1995	24.7	27.0	22.6
• 2000	23.3	25.7	21.0
• 2004	20.9	23.4	18.5

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Population VS Individual Perspectives on Cessation

- At Population Level
 - Smoking cessation one of the most successful health behavior changes in our history
 - Dramatic reduction in % of smokers over past 40 years
 - Over 50% of living ever smokers are quit
- Individual Level
 - Successful one year unaided quit rates range from 3 to 6%
 - Many smokers (40-47%) attempt to quit
 - Multiple unsuccessful quit attempts the norm
 - High interest in quitting but low uptake of help

A Personal Journey

- The journey into and out of nicotine addiction is a personal one marked by
 - Biological, psychological and social risk and protective factors
 - Social Influences (peers, media, tobacco companies, policies, current events)
 - Personal choices and decisions
 - A process of change that is common and a path that is unique for each smoker

WHY SMOKERS DON'T CHANGE?

- There are challenges for smokers in different parts of the journey or process represented simplistically as
 - NOT CONVINCED OF THE PROBLEM OR THE NEED FOR CHANGE - UNMOTIVATED
 - NOT COMMITTED TO MAKING A CHANGE - UNWILLING
 - DO NOT BELIEVE THAT THEY CAN MAKE A CHANGE - UNABLE

How Do People Change?

- People change voluntarily only when
 - They Become interested and concerned about the need for change
 - They Become convinced that the change is in their best interests or will benefit them more than cost them
 - They Organize a plan of action that they are committed to implementing
 - They Take the actions that are necessary to make the change and sustain the change

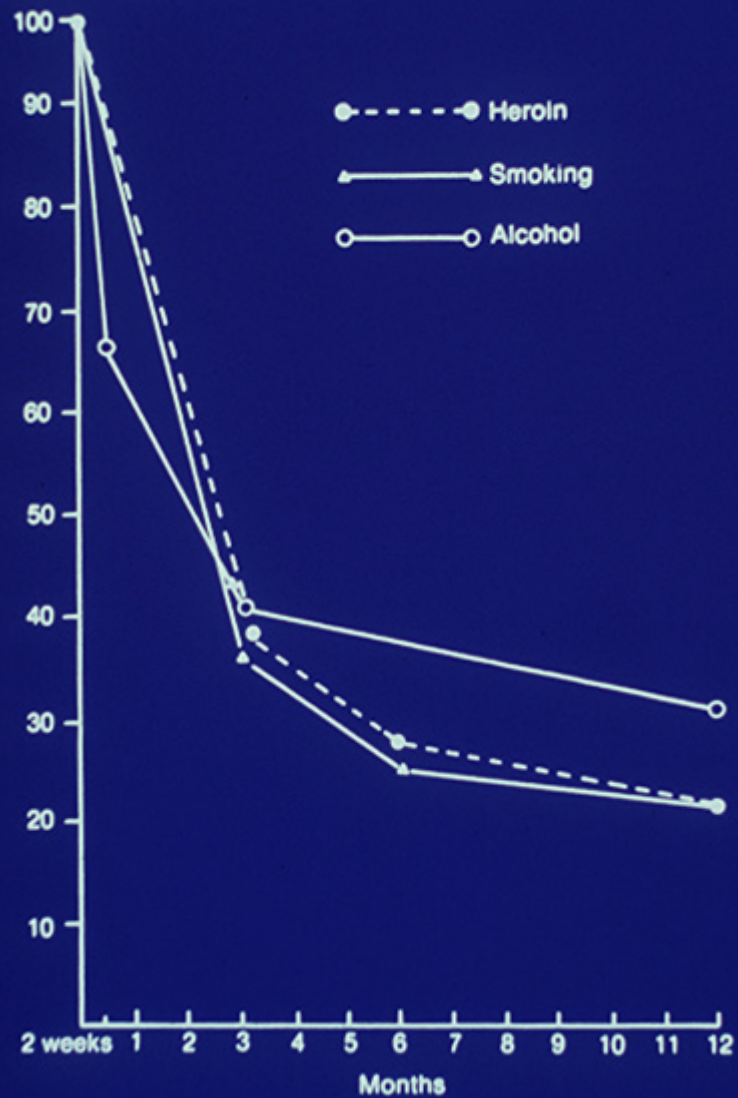
Stage of Change Tasks

- Precontemplation
 - Awareness, Concern, Hope, Confidence
- Contemplation
 - Risk-Reward Analysis & Solid Decision to Change
- Preparation
 - Commitment & Creating An Effective/Acceptable Plan
- Action
 - Adequate Implementation and Revising of Plan
- Maintenance
 - Integration of new behavior into Lifestyle

Composite Matrix of Stationary Transition Probability

Time A + 1	PC	C	PA	A	M
Time A					
PC	.611	.273	.052	.064	.000
C	.140	.609	.161	.084	.006
PA	.054	.277	.535	.115	.019
A	.025	.076	.182	.252	.465
M	.017	.003	.055	.069	.856

Relapse rate over time for heroin, smoking, and alcohol



Relapse: Not Just An Addiction Problem

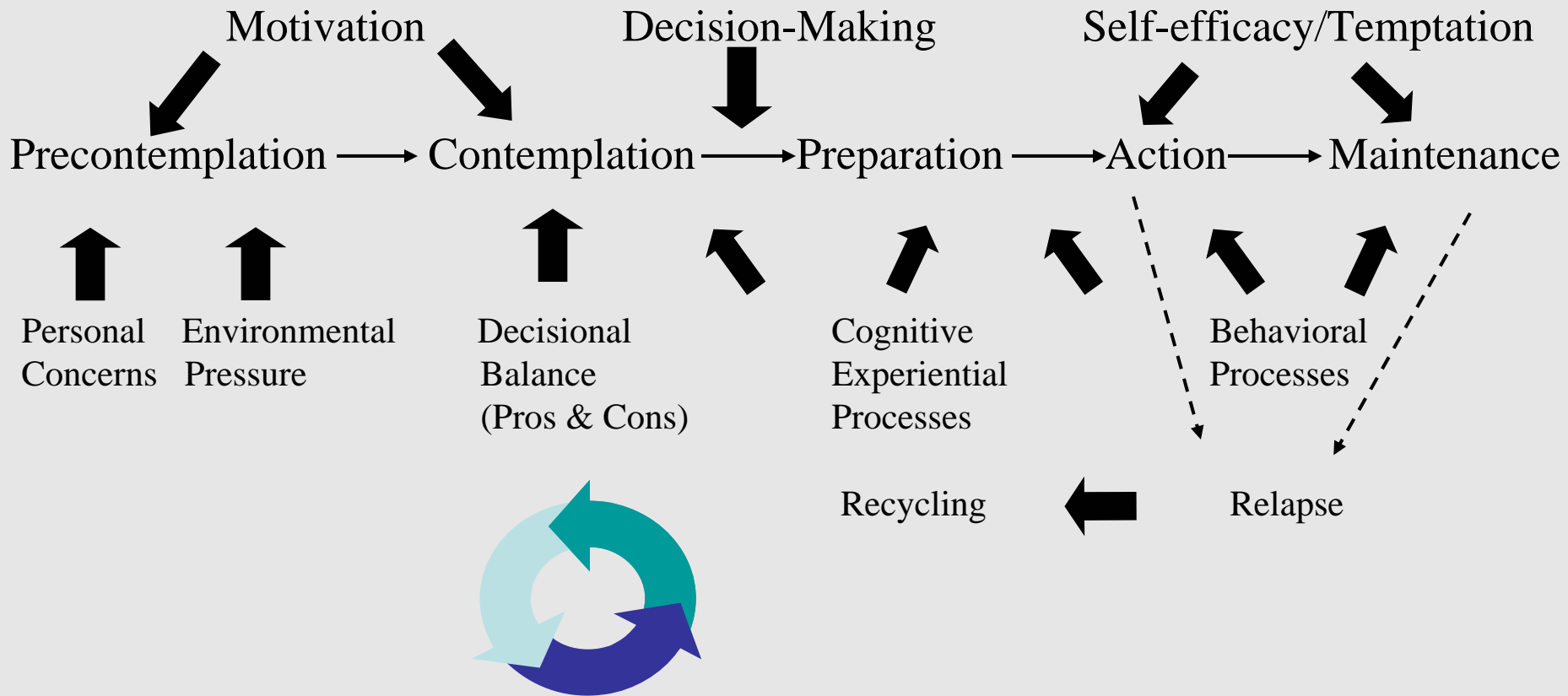
- Relapse is defined as noncompliance, failure to follow through on a proposed or needed behavior change, slipping back to status quo, inability to sustain change long term.
- Relapse occurs at similar rates for individuals with diabetes, hypertension, cardiovascular problems, HIV/AIDS, dietary change, physical activity, etc
- Relapse a problem of sustaining behavior change not simply addiction

Cyclical Model for Cessation and Intervention

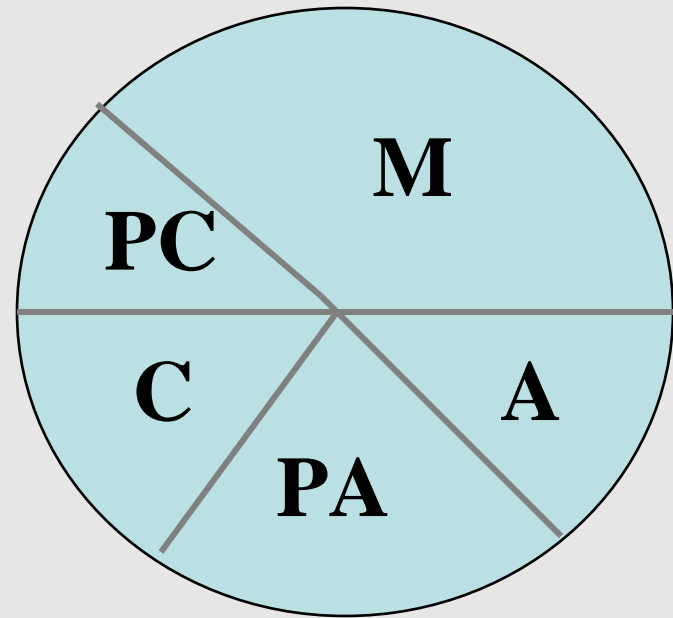
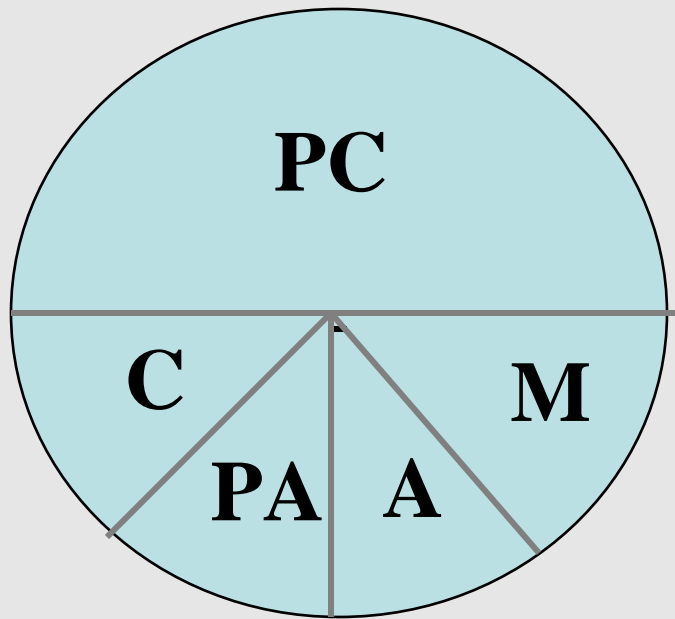
- However successful cessation occurs for large numbers of smokers over time.
- Most smokers will recycle through multiple quit attempts and multiple interventions.
- Keys to successful recycling
 - Persistent efforts
 - Repeated contacts
 - Helping the smoker take the *next step*
 - Bolster self-efficacy and motivation
 - Pick strategy that match smoker needs



Theoretical and practical considerations related to movement through the Stages of Change



Stage Based Epidemiology



Prevalence Differs by state and by stage

- There are broad differences by state in estimates of smoking prevalence:
 - Lowest - 10.5% in Utah & 14.5% California
 - Highest - 27.6 % Kentucky & 26.9% in West Virginia
- Percentages of smokers in various stages differ by region and state and even by county

Maryland Adult Tobacco Survey (MATS)

2000 MATS

- 16,596 participants
- 43.7% Male
- 76.7% White
- Mean Age = 45.8 years
- 71.3% Ever Married
- 86.5% HS grad

2002 MATS

- 27,192 participants
- 45.2% Male
- 72.9% White
- Mean Age = 42.4 years
- 74.9% Ever Married
- 89.1% HS grad+

County	2000 MATS % Current Smokers	2002 MATS % Current Smokers	Absolute Change in % Current
Allegany	18.9%	21.2%	2.3%
Anne Arundel	19.2%	13.3%	-5.9%
Baltimore	16.8%	15.2%	-1.6%
Calvert	21.3%	18.2%	-3.1%
Caroline	23.1%	21.3%	-1.8%
Carroll	18.0%	11.4%	-6.6%
Cecil	23.3%	22.9%	-0.4%
Charles	18.7%	17.2%	-1.5%
Dorchester	25.8%	18.8%	-7.0%
Frederick	17.9%	13.8%	-4.1%
Garrett	21.1%	16.4%	-4.7%
Harford	17.8%	13.5%	-4.3%
Howard	11.8%	10.6%	-1.2%
Kent	18.9%	15.4%	-3.5%
Montgomery	9.2%	10.2%	1.0%
Prince George's	14.1%	12.7%	-1.4%
Queen Anne's	23.8%	15.1%	-8.7%
St. Mary	20.8%	14.9%	-5.9%
Somerset	19.6%	15.3%	-4.3%
Talbot	14.2%	14.2%	0.0%
Washington	22.0%	18.7%	-3.3%
Wicomico	22.0%	19.5%	-2.5%
Worcester	21.4%	18.1%	-3.3%
Baltimore City	29.9%	24.0%	-5.9%
STATEWIDE	17.3%	14.9%	-2.4%

Stage of Change for Smoking Cessation in the Maryland Adult Tobacco Survey (MATS)

- Participants were classified into 5 Stages of Smoking Cessation:



- **Precontemplation** = Current smokers who are not planning on quitting smoking in the next 6 months



- **Contemplation** = Current smokers who are planning on quitting smoking in the next 6 months but have not made a quit attempt in the past year



- **Preparation** = Current smokers who are definitely planning to quit within next 30 days and have made a quit attempt in the past year



- **Action** = Individuals who are not currently smoking and have stopped smoking within the past 6 months



- **Maintenance** = Individuals who are not currently smoking and have stopped smoking for longer than 6 months but less than 5 years

DiClemente, 2003

Stages of Change for Ever Smokers

2000 MATS

2002 MATS

Stage of Change	N	%	N	%
Precontemplation	1664	20.8	2153	17.4
Contemplation	691	8.6	963	4.8
Preparation	621	7.8	966	10.8
Action	229	3.3	428	3.5
Maintenance (6 mos - 5 yrs)	904	12.4	1506	12.2
Maintenance (5+ yrs)	3767	47.1	6337	51.3

Table 1: Stages of Change for Current Smokers

2000 MATS

2002 MATS

Stage of Smoking Cessation	N	%	N	%
Precontemplation	1664	55.9	2153	52.7
Contemplation	691	23.2	963	23.6
Preparation	621	20.9	966	23.7

Stages of Change & Ethnicity

2000 MATS

- Precontemplation
 - 33.4% vs. 42.7%
- Contemplation
 - 20.5% vs. 15.7%
- Preparation
 - 19.7% vs. 13.7%
- Action
 - 4.3% vs. 6.0%
- Maintenance
 - 22.0% vs. 21.9%

2002 MATS

- Precontemplation
 - 28.8% vs. 38.3%
- Contemplation
 - 18.1% vs. 15.3%
- Preparation
 - 22.3% vs. 13.7%
- Action
 - 6.4% vs. 7.5%
- Maintenance
 - 24.5% vs. 25.2%

County	2000 MATS				2002 MATS			
	% Current	Current Smokers			% Current	Current Smokers		
	Smokers	PC	C	P	Smokers	PC	C	P
Allegany	18.9%	71.5%	14.7%	13.7%	21.2%	52.4%	18.6%	29.0%
Anne Arundel	19.2%	60.6%	23.6%	15.8%	13.3%	53.8%	25.3%	20.9%
Baltimore	16.8%	58.3%	24.9%	16.8%	15.2%	40.4%	32.7%	26.8%
Calvert	21.3%	57.3%	21.0%	21.7%	18.2%	52.2%	24.8%	23.0%
Caroline	23.1%	56.9%	26.2%	16.9%	21.3%	48.4%	21.6%	30.1%
Carroll	18.0%	63.7%	16.0%	20.2%	11.4%	49.8%	27.3%	22.9%
Cecil	23.3%	54.8%	27.8%	17.4%	22.9%	40.7%	36.0%	23.3%
Charles	18.7%	63.4%	15.8%	20.9%	17.2%	56.5%	28.6%	14.9%
Dorchester	25.8%	54.5%	30.0%	15.5%	18.8%	58.8%	18.4%	22.8%
Frederick	17.9%	55.2%	22.9%	21.9%	13.8%	52.8%	17.7%	29.4%
Garrett	21.1%	58.6%	15.2%	26.2%	16.4%	65.3%	20.0%	14.7%
Harford	17.8%	53.5%	21.7%	24.8%	13.5%	53.2%	20.6%	26.2%
Howard	11.8%	59.7%	17.3%	23.0%	10.6%	42.9%	22.9%	34.2%
Kent	18.9%	60.3%	17.8%	21.9%	15.4%	50.9%	30.0%	19.1%
Montgomery	9.2%	57.7%	13.6%	28.7%	10.2%	52.1%	23.1%	24.8%
Prince George's	14.1%	51.2%	18.7%	30.1%	12.7%	41.8%	25.7%	32.4%
Queen Anne's	23.8%	47.7%	27.6%	24.7%	15.1%	59.4%	19.4%	21.2%
St. Mary	20.8%	52.1%	23.1%	24.8%	14.9%	55.2%	29.0%	15.8%
Somerset	19.6%	47.9%	28.2%	23.9%	15.3%	55.8%	25.7%	18.5%
Talbot	14.2%	53.6%	26.1%	20.4%	14.2%	55.5%	20.5%	24.0%
Washington	22.0%	59.1%	26.2%	14.7%	18.7%	65.1%	19.1%	15.8%
Wicomico	22.0%	59.9%	23.1%	17.0%	19.5%	57.5%	16.4%	26.1%
Worcester	21.4%	61.9%	17.8%	20.3%	18.1%	54.4%	24.8%	20.7%
Baltimore City	29.9%	45.5%	31.4%	23.1%	24.0%	43.4%	25.1%	31.5%

County	Current Smokers (2000)			Current Smokers (2002)			Absolute Change (2002-2000)		
	PC	C	P	PC	C	P	PC	C	P
Allegany	71.5%	14.7%	13.7%	52.4%	18.6%	29.0%	-19.1%	3.9%	15.3%
Anne Arundel	60.6%	23.6%	15.8%	53.8%	25.3%	20.9%	-6.8%	1.7%	5.1%
Baltimore	58.3%	24.9%	16.8%	40.4%	32.7%	26.8%	-17.9%	7.8%	10.0%
Calvert	57.3%	21.0%	21.7%	52.2%	24.8%	23.0%	-5.1%	3.8%	1.3%
Caroline	56.9%	26.2%	16.9%	48.4%	21.6%	30.1%	-8.5%	-4.6%	13.2%
Carroll	63.7%	16.0%	20.2%	49.8%	27.3%	22.9%	-13.9%	11.3%	2.7%
Cecil	54.8%	27.8%	17.4%	40.7%	36.0%	23.3%	-14.1%	8.2%	5.9%
Charles	63.4%	15.8%	20.9%	56.5%	28.6%	14.9%	-6.9%	12.8%	-6.0%
Dorchester	54.5%	30.0%	15.5%	58.8%	18.4%	22.8%	4.3%	-11.6%	7.3%
Frederick	55.2%	22.9%	21.9%	52.8%	17.7%	29.4%	-2.4%	-5.2%	7.5%
Garrett	58.6%	15.2%	26.2%	65.3%	20.0%	14.7%	6.7%	4.8%	-11.5%
Harford	53.5%	21.7%	24.8%	53.2%	20.6%	26.2%	-0.3%	-1.1%	1.4%
Howard	59.7%	17.3%	23.0%	42.9%	22.9%	34.2%	-16.8%	5.6%	11.2%
Kent	60.3%	17.8%	21.9%	50.9%	30.0%	19.1%	-9.4%	12.2%	-2.8%
Montgomery	57.7%	13.6%	28.7%	52.1%	23.1%	24.8%	-5.6%	9.5%	-3.9%
Prince George's	51.2%	18.7%	30.1%	41.8%	25.7%	32.4%	-9.4%	7.0%	2.3%
Queen Anne's	47.7%	27.6%	24.7%	59.4%	19.4%	21.2%	11.7%	-8.2%	-3.5%
St. Mary	52.1%	23.1%	24.8%	55.2%	29.0%	15.8%	3.1%	5.9%	-9.0%
Somerset	47.9%	28.2%	23.9%	55.8%	25.7%	18.5%	7.9%	-2.5%	-5.4%
Talbot	53.6%	26.1%	20.4%	55.5%	20.5%	24.0%	2.0%	-5.6%	3.6%
Washington	59.1%	26.2%	14.7%	65.1%	19.1%	15.8%	6.0%	-7.1%	1.1%
Wicomico	59.9%	23.1%	17.0%	57.5%	16.4%	26.1%	-2.4%	-6.7%	9.1%
Worcester	61.9%	17.8%	20.3%	54.4%	24.8%	20.7%	-7.5%	7.0%	0.4%
Baltimore City	45.5%	31.4%	23.1%	43.4%	25.1%	31.5%	-2.1%	-6.3%	8.4%
STATEWIDE	55.3%	23.0%	21.7%	47.4%	25.6%	27.0%	-7.9%	2.6%	5.3%

County Comparisons: A, O, & X in 2000 & 2002 MATS

County	% Smokers 2000	% in PC 2000	% Smokers 2002	% in PC 2002	# of Residents*	% White*	Median Income*	% in Poverty*
A	18.9%	71.5%	21.2%	52.4%	~75,000	93%	~\$30,800	14.5%
O	9.2%	57.7%	10.2%	52.1%	~873,000	65%	~\$71,500	5.4%
X	29.9%	45.5%	24.0%	43.4%	~650,000	32%	~\$30,100	22.9%
Entire State	19.6%	55.9%	14.9%	47.4%	5.3 million	64%	~\$52,900	8.5%

* Data derived from the 2000 US Census

Challenges Along the Smoker's Journey to Cessation

- Becoming convinced of the need to quit NOW
- Making a firm decision supported by strong emotional and rational reasons and values
- Creating a strong commitment and a viable, effective plan
- Making quitting a priority among multiple demands
- Managing the initial withdrawal and early threats to give up on the effort and return to smoking
- Integrating abstinence from smoking into daily routines and lifestyle
- Being willing to keep trying despite setbacks and to learn from relapses how to get cessation right

