GPI Atlantic

Genuine Progress Index for Atlantic Canada
Indice de progrès véritable - Atlantique

The Cost of Tobacco in Nova Scotia: An Update

Tobacco Control Summit, Halifax, NS

20 October, 2006

The larger context – GPI:

1) Tobacco, sickness as costs vs. $300m/yr on tobacco + $168m sickness = make GDP grow
2) GPI Question: Creating a healthier NS? – 2000-06 – Are we getting healthier, making genuine progress?

To answer this question, what does the evidence show:

1. Then and now: Smoking since 2000 GPI report
2. Then and now: SAM & Costs - Why the Lag?
3. What has made the most difference?
4. Where to from here? – Effects of tobacco control investment on SAM and costs
5. Lessons for health promotion

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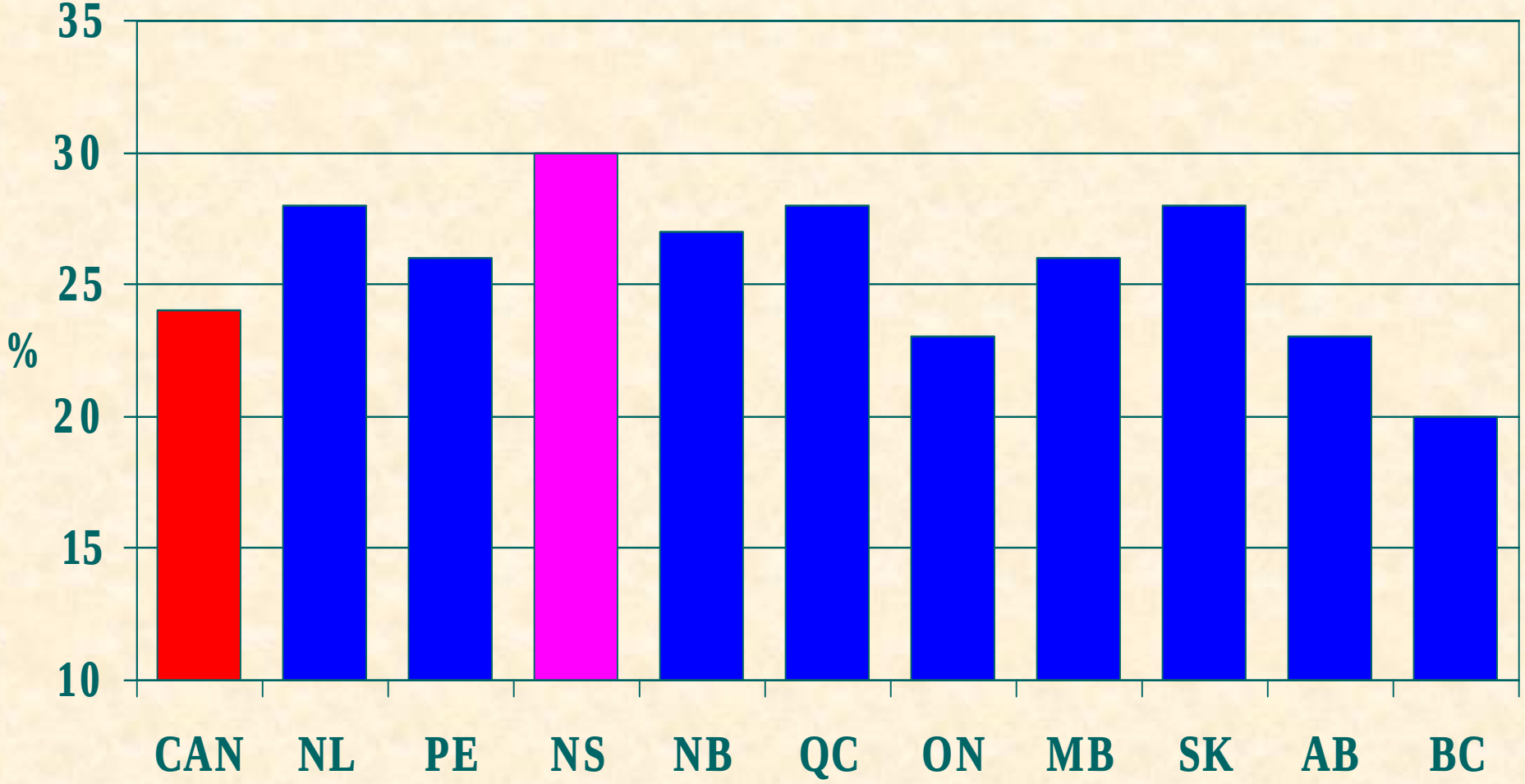
1) *Then... and Now...*
Smoking Prevalence, 15+, 2000



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2000: Smoking kills 1650/year = 21% of all deaths in NS

- NS - highest rate of deaths from cancer and respiratory disease in Canada
- 2nd highest circulatory deaths, diabetes
- Highest use of disability days
- Highest smoking rate in Canada (30%) – 25% higher than Can., 50% above BC

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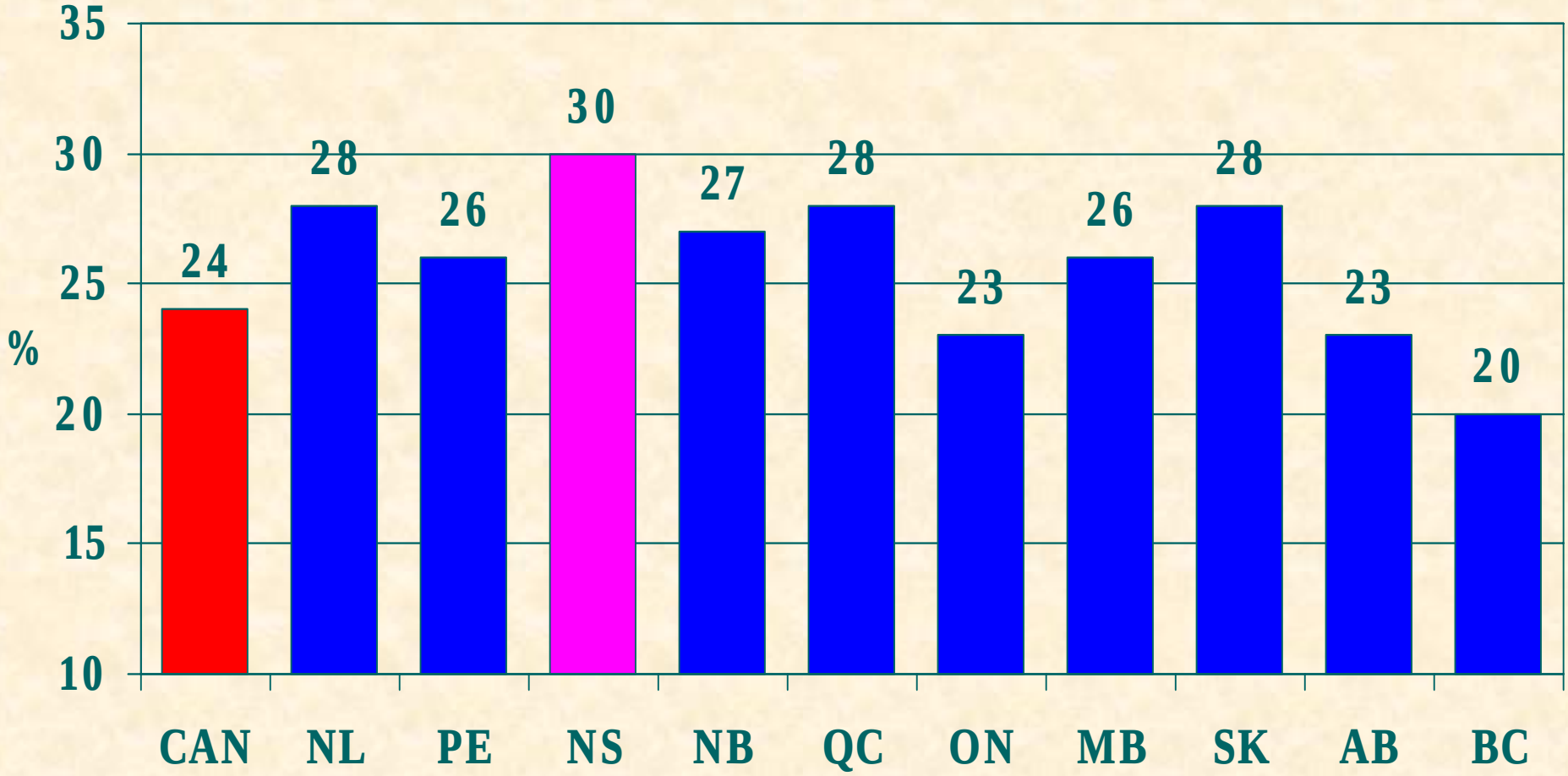
Then: Smoking Prevalence, Age 15+, 2000



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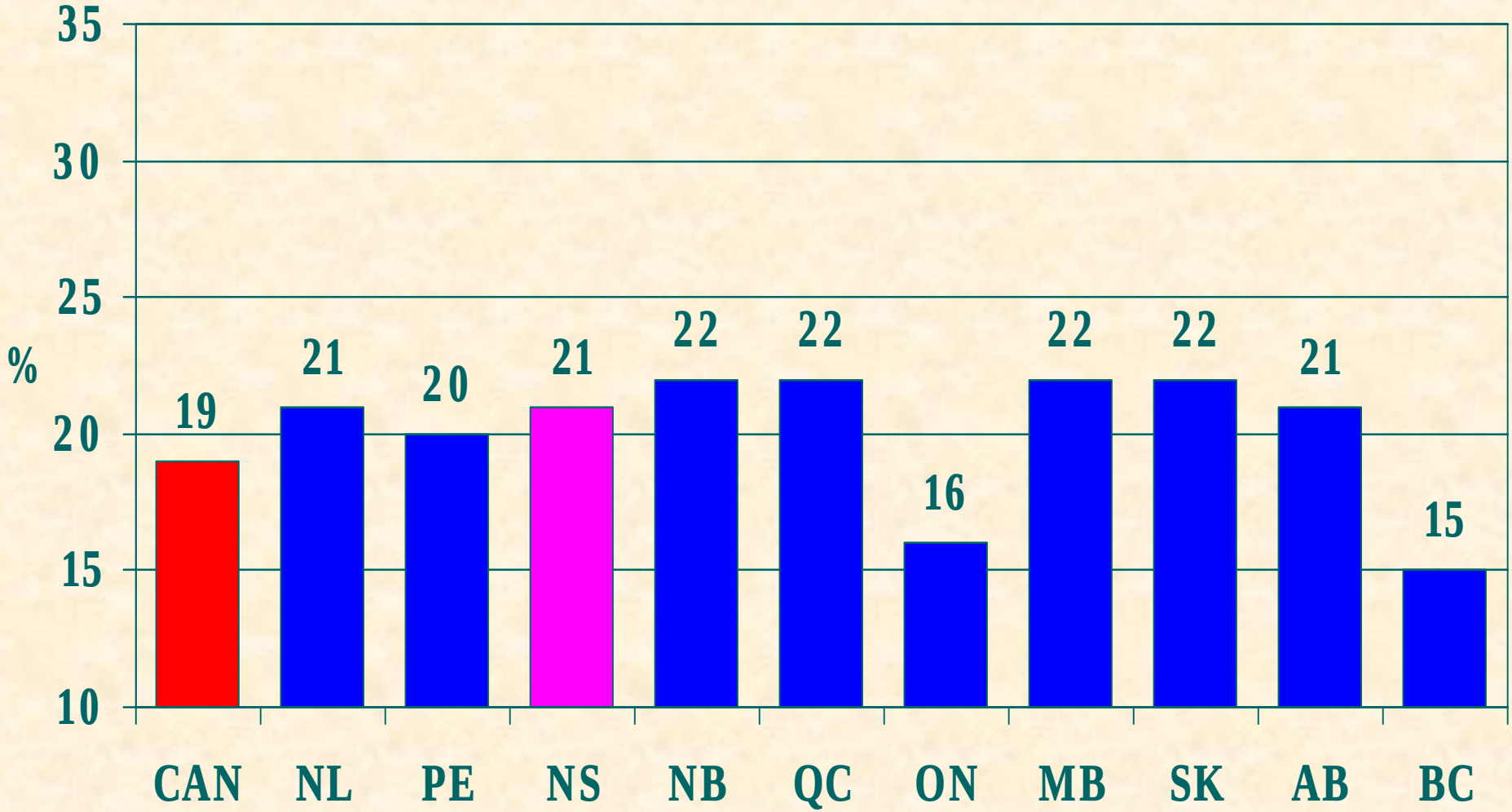
Now: Smoking Prevalence,

Age 15+, 2005



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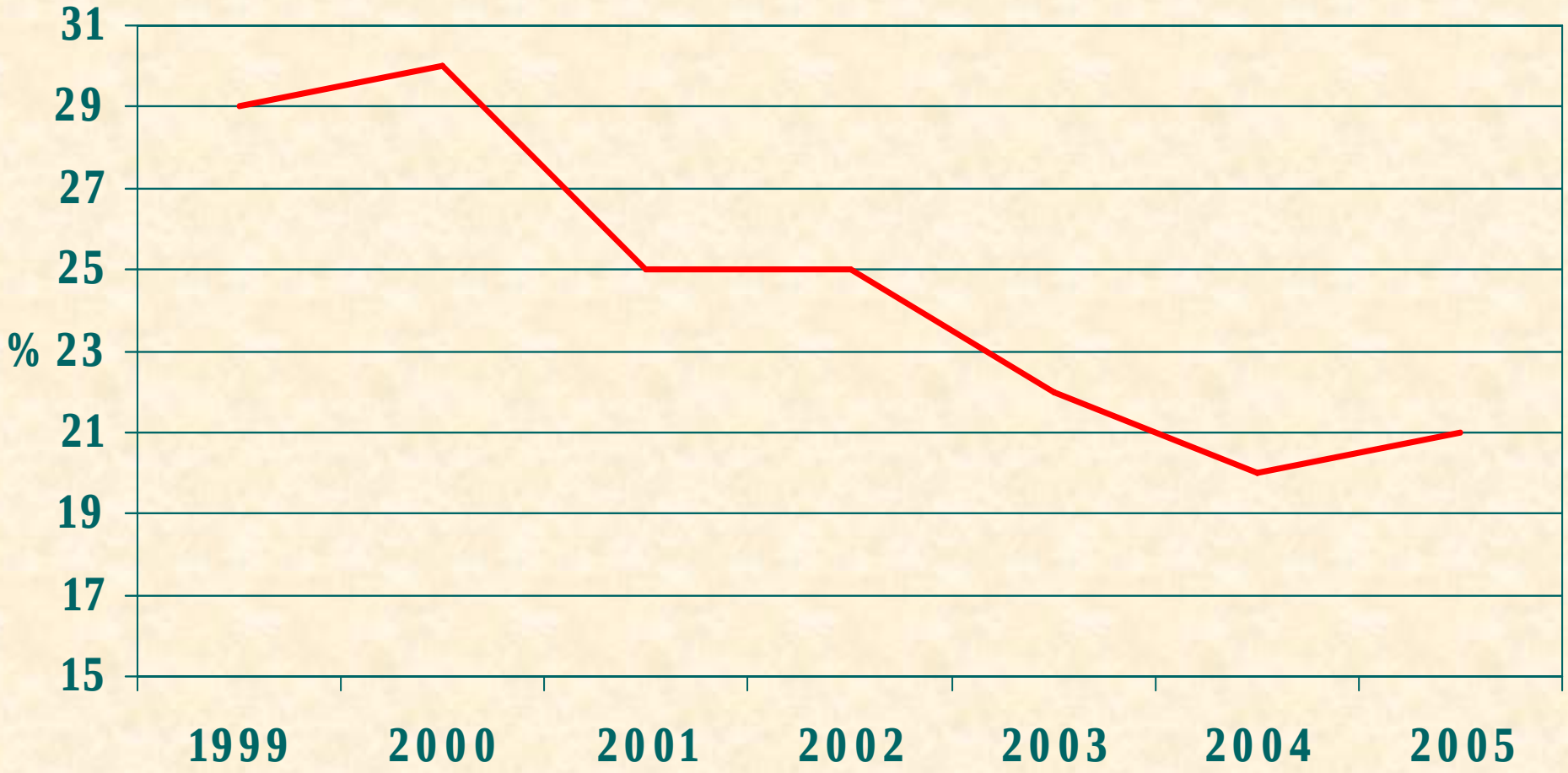
Nova Scotia: Smoking Prevalence, Age 15+, 1999-2005



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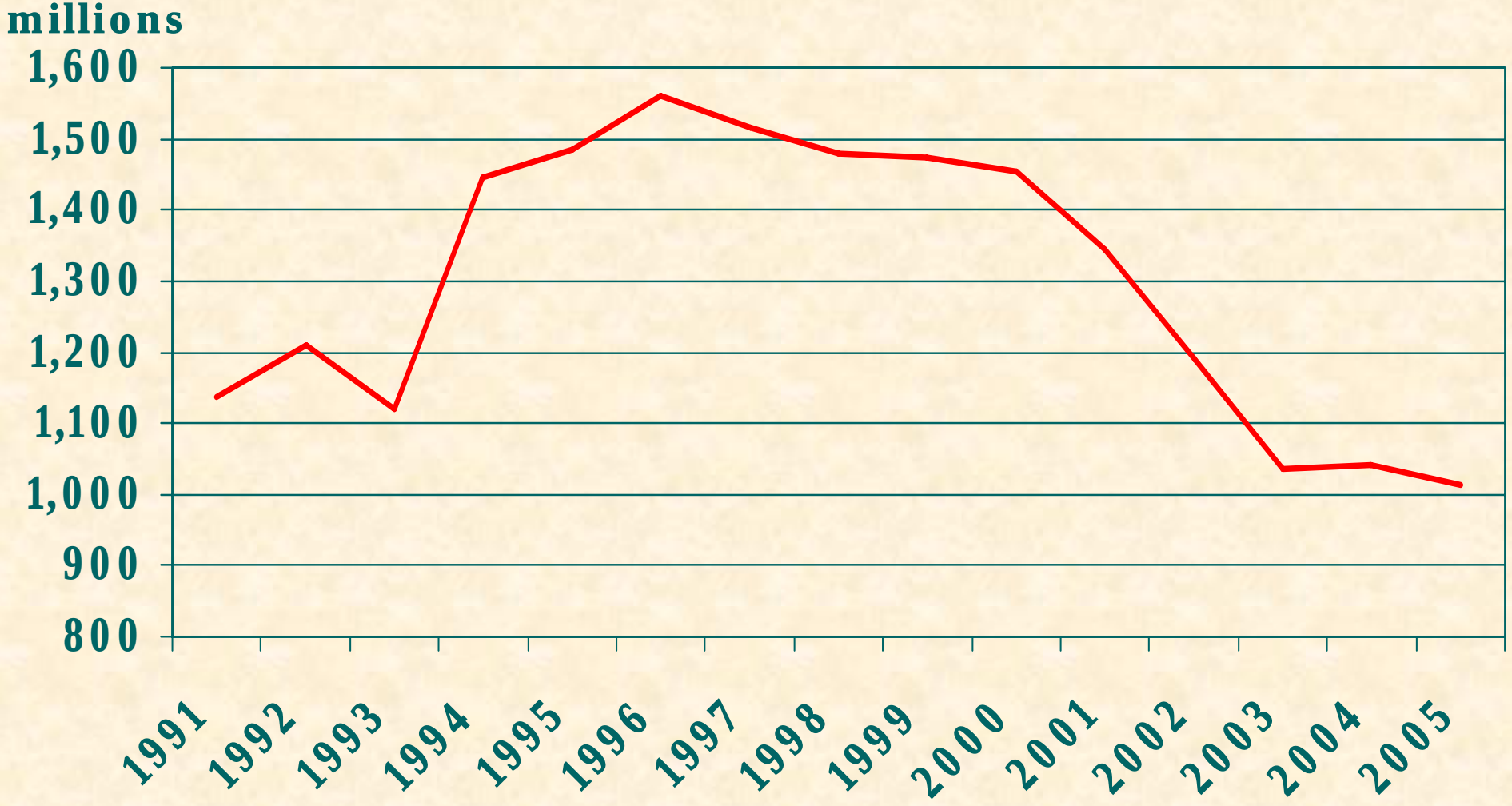
Cigarette Sales in NS, 1991-2005
(down 35% since '96) (consumption/risk)



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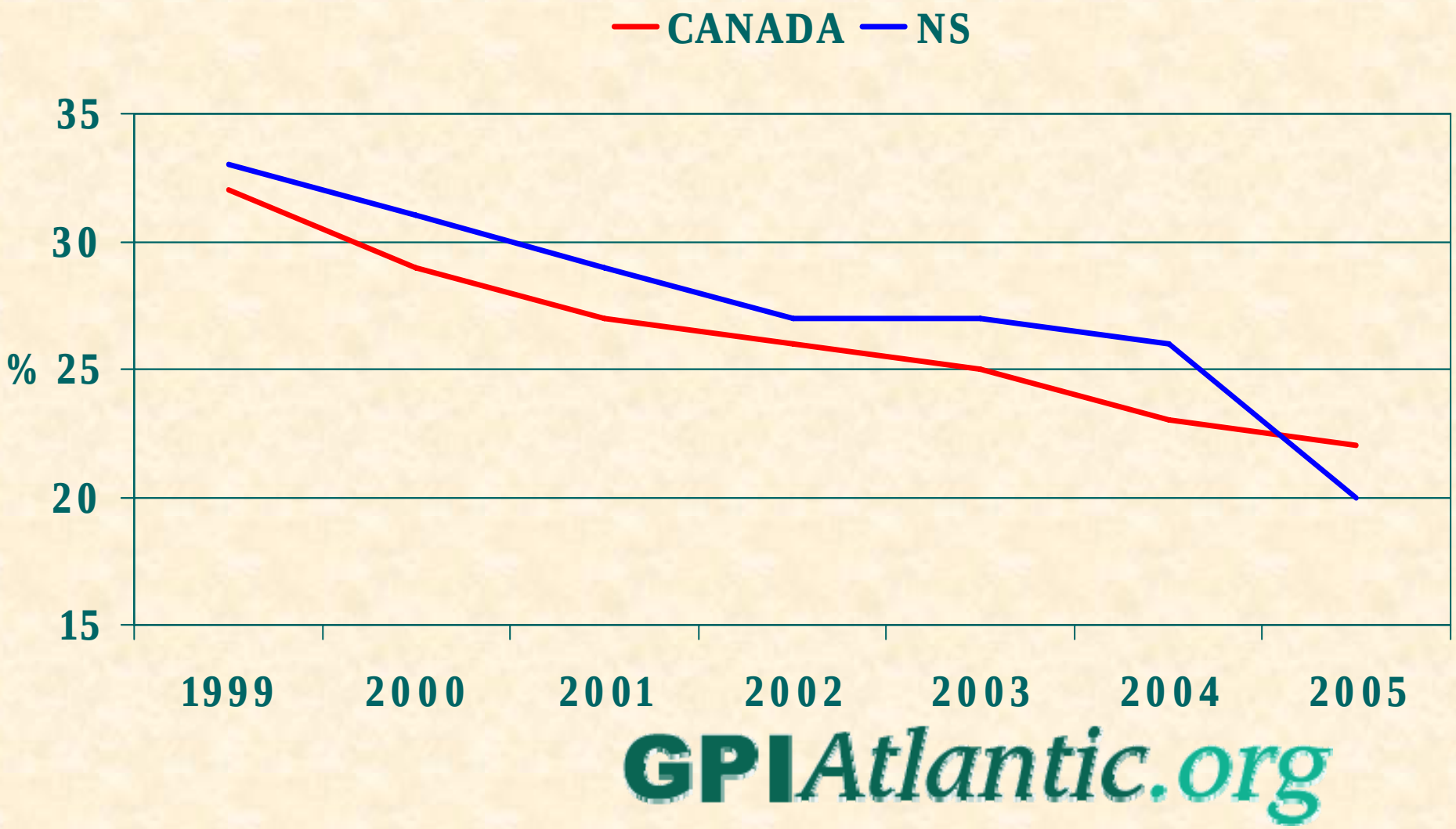
Smoking rates Canada and NS, Age 15- 24



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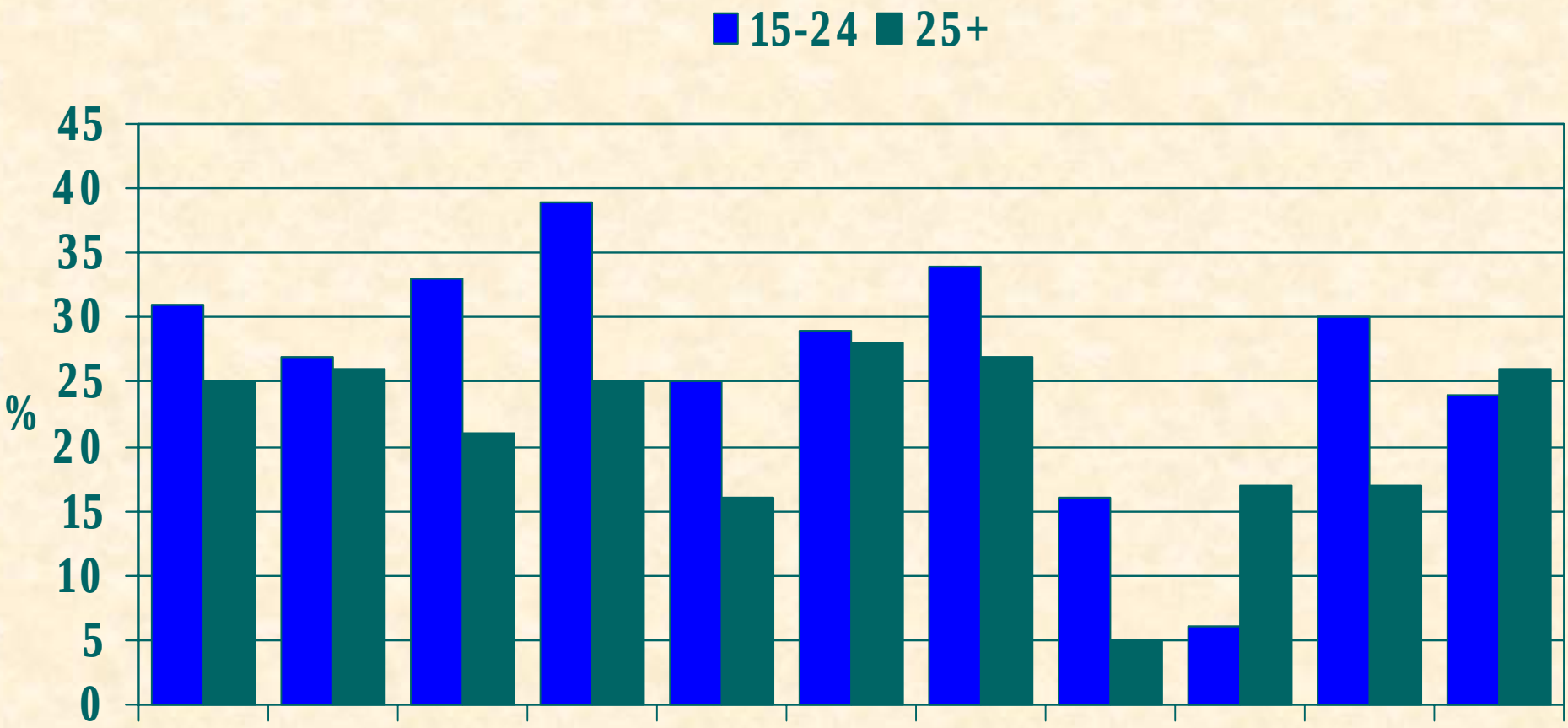
% Decline in Smoking: Can and NS, Ages 15-24 and 25+ (1999 to 2005)



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2) 2000 – Costs of Smoking

- Chronic diseases cost NS $3 billion/yr (direct + indirect) = 13% GDP – huge burden
- Good news: 40% chronic disease; 50% premature death; $500 m./yr health care costs ***avoidable*** = small # risk factors -> OHP
- Tobacco – single largest preventable cause of death and sickness = $168m. in health care costs + $300m. In indirect costs +ETS costs

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2006 Costs of Tobacco (preliminary estimates)

- 1,730 deaths (up from 1,650); $220 million health care costs + $550 million indirect costs (up since 2000 despite decline in prevalence)
- = Due to 'backlog' of older ex-smokers (former high smoking rates) + female lag
- Health Canada: Despite declining prevalence, SAM = 38,357 (1989), 45,000 ('96), 47,581 ('98)
- US: Lung cancer peaked early 90s despite drop in cig consumption: 3800 (1965) – 2800 (1993)

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But benefits *will* accrue: Time lag (ACS study of 1 million)

- 2-4 years: ***lung cancer death*** risk down - ex-light smoker = 2/3; ex-heavy smoker = 13%; 5 years: ex-light smoker risk = non-smoker; ex-heavy smoker down 50%
- ***CHD death risk***: ex-light smokers = down 50% in 5 years; 100% in 10 years; Ex-heavy smokers much longer = down 1/3 after 7 years; down 2/3 after 10+ years
- ***COPD –*** much longer, no return to normal

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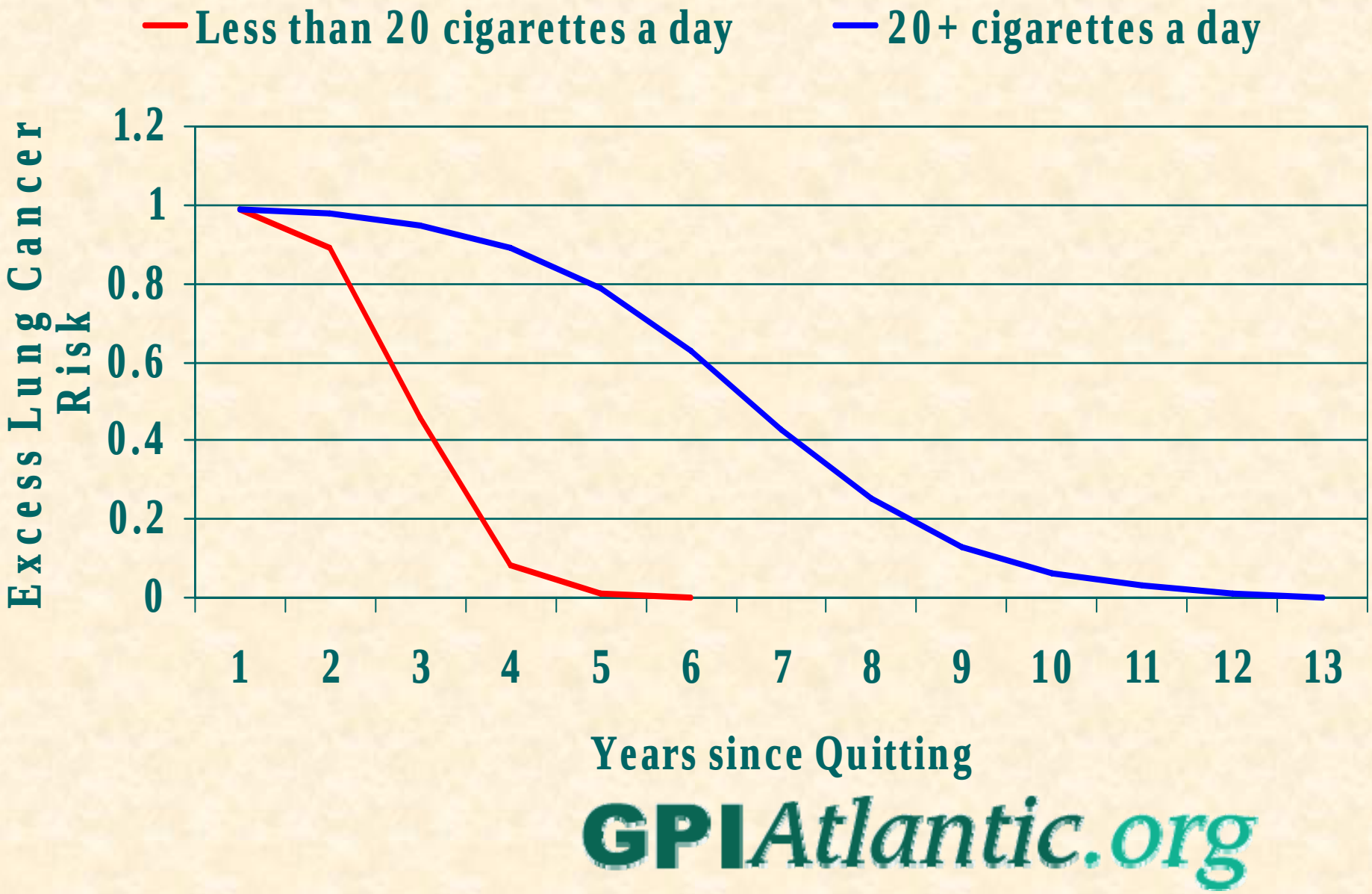
Lung Cancer Risk



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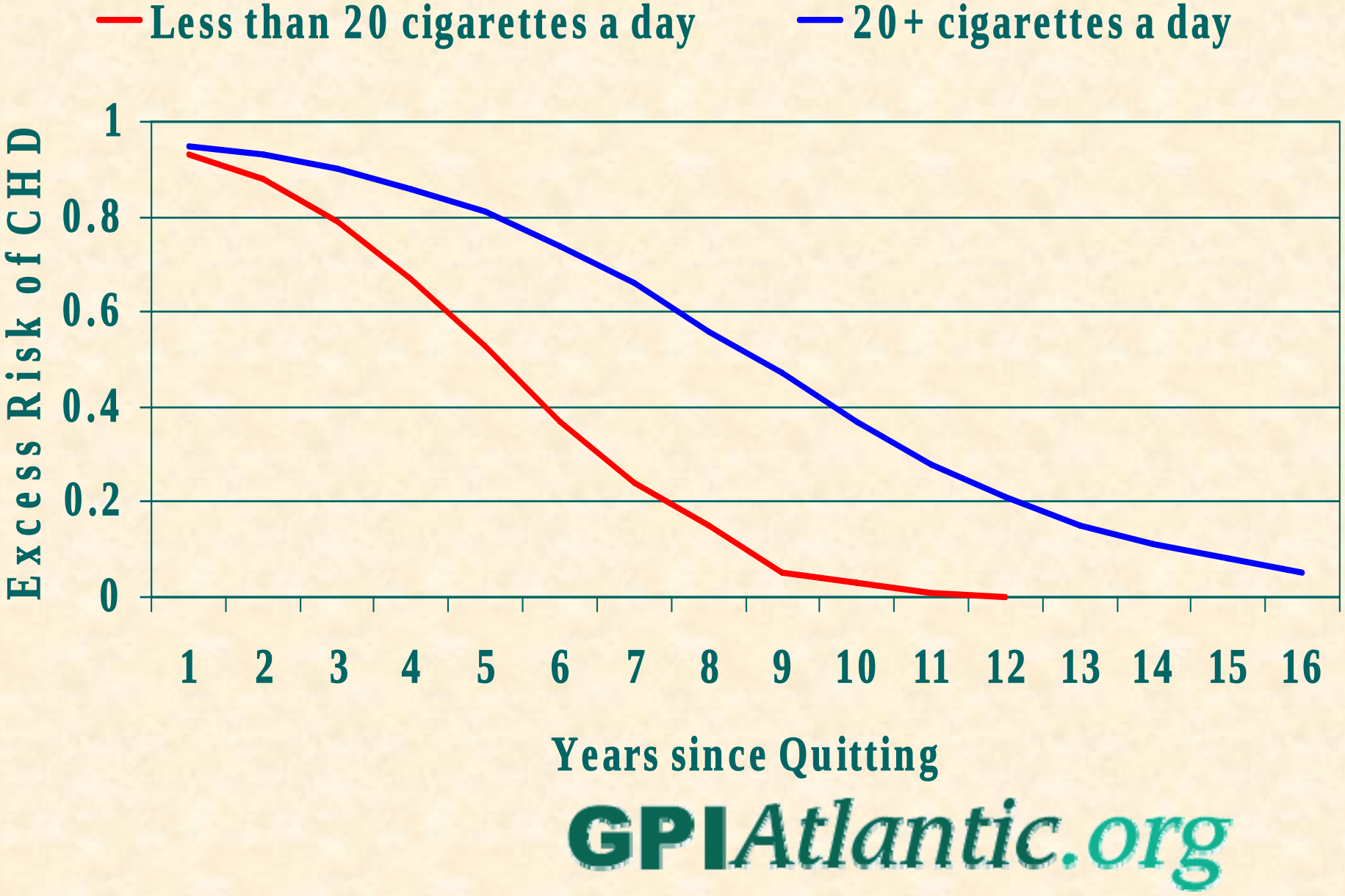
Chronic Heart Disease Risk



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Lifetime smoker costs and cessation benefits, NS

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3) Key changes since 2000

- *BMJ* + World Bank: Cigarette taxes = "single most effective intervention" to reduce tob. demand
- 10% increase in price -> 4% drop consumption -> 7% drop among youth, pregnant women
- NS price ***more than doubled*** since 2000; Consumption dropped by more than 30%
- NS tax: $9.64/carton = 2000 -> $31.04 (2004); Prov tax revenue more than doubled = $76m in 1999-2000 to $162m in 2003-04

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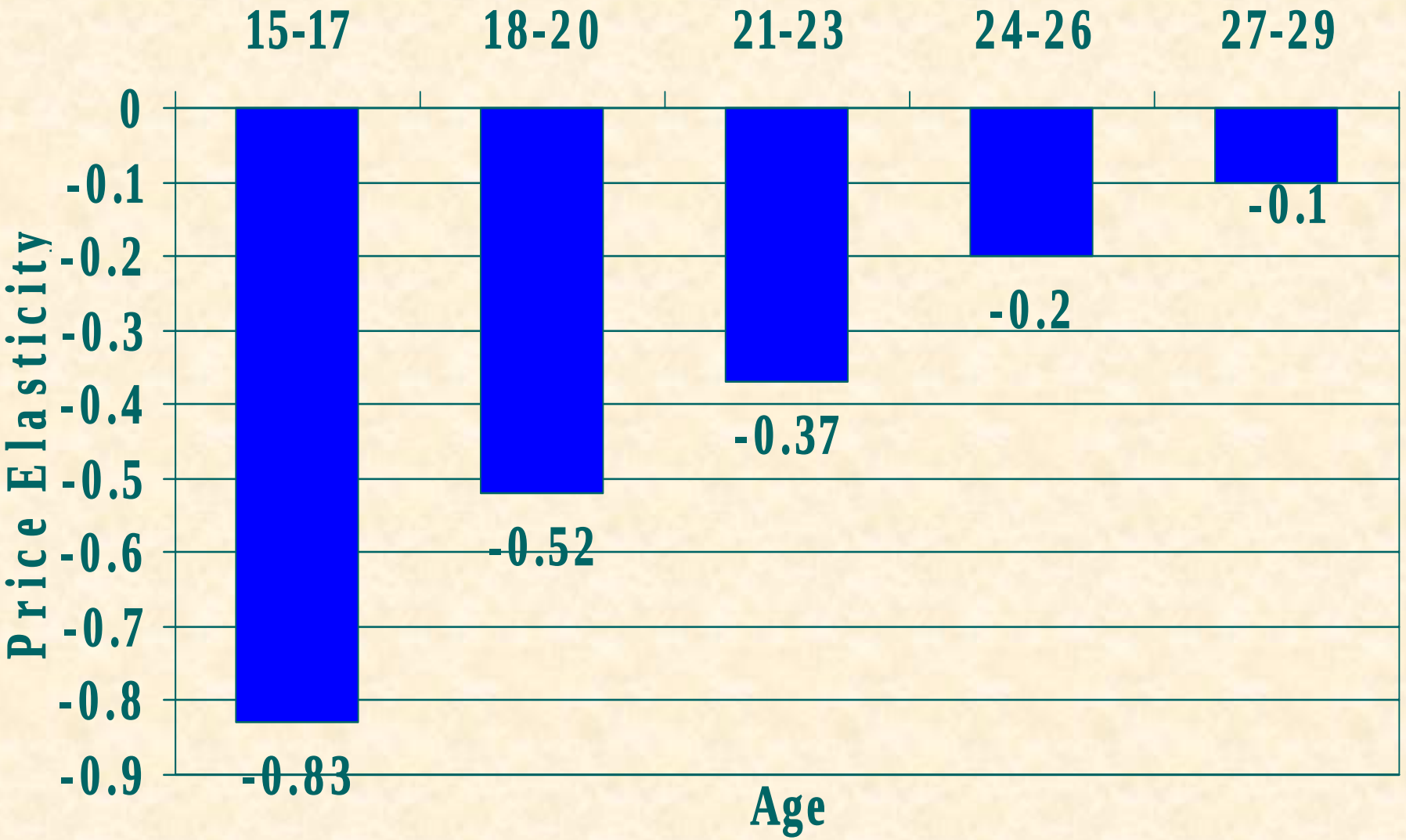
Price Elasticity by age



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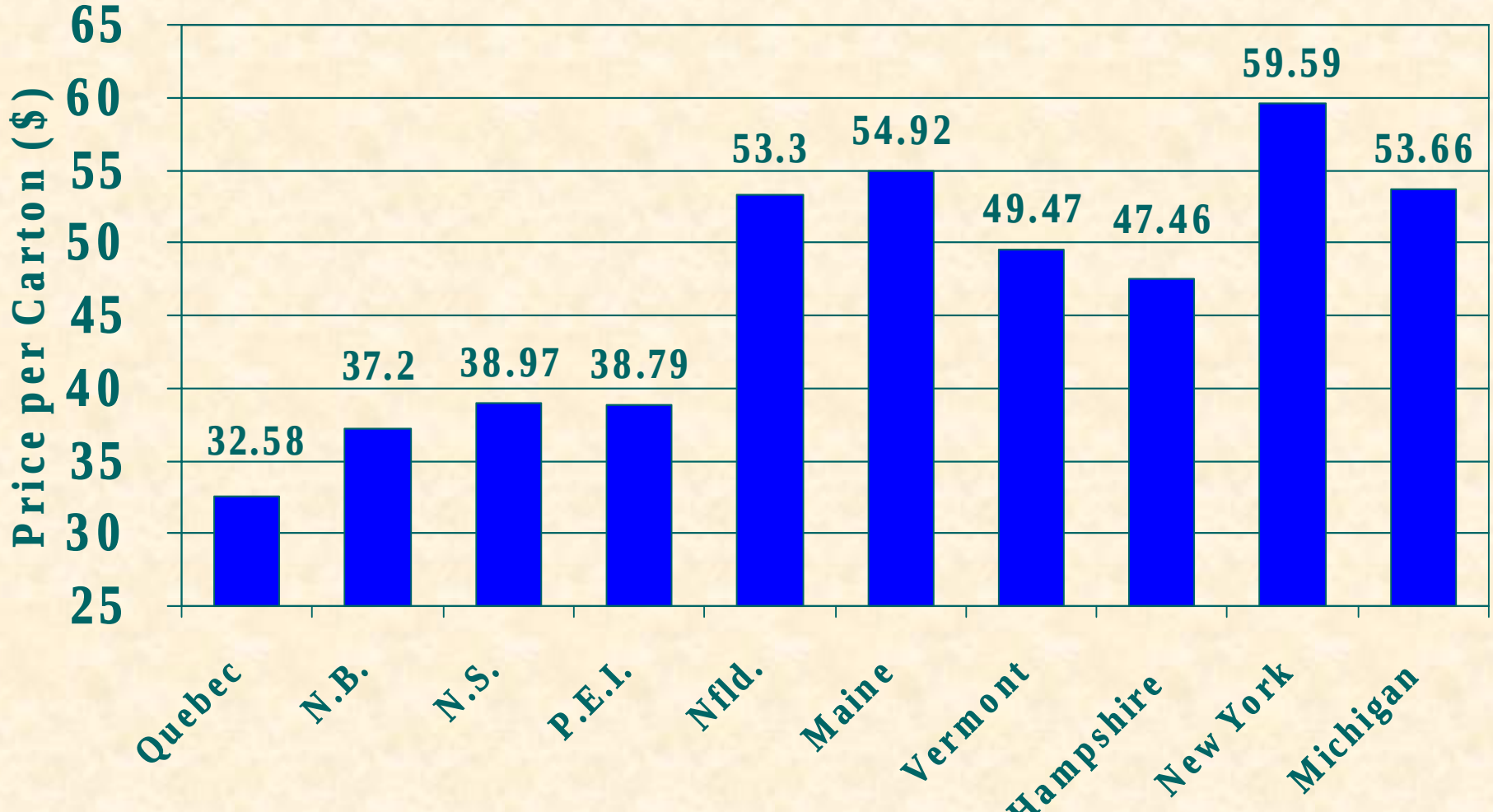
Cigarette Prices – US & Canada, 2000



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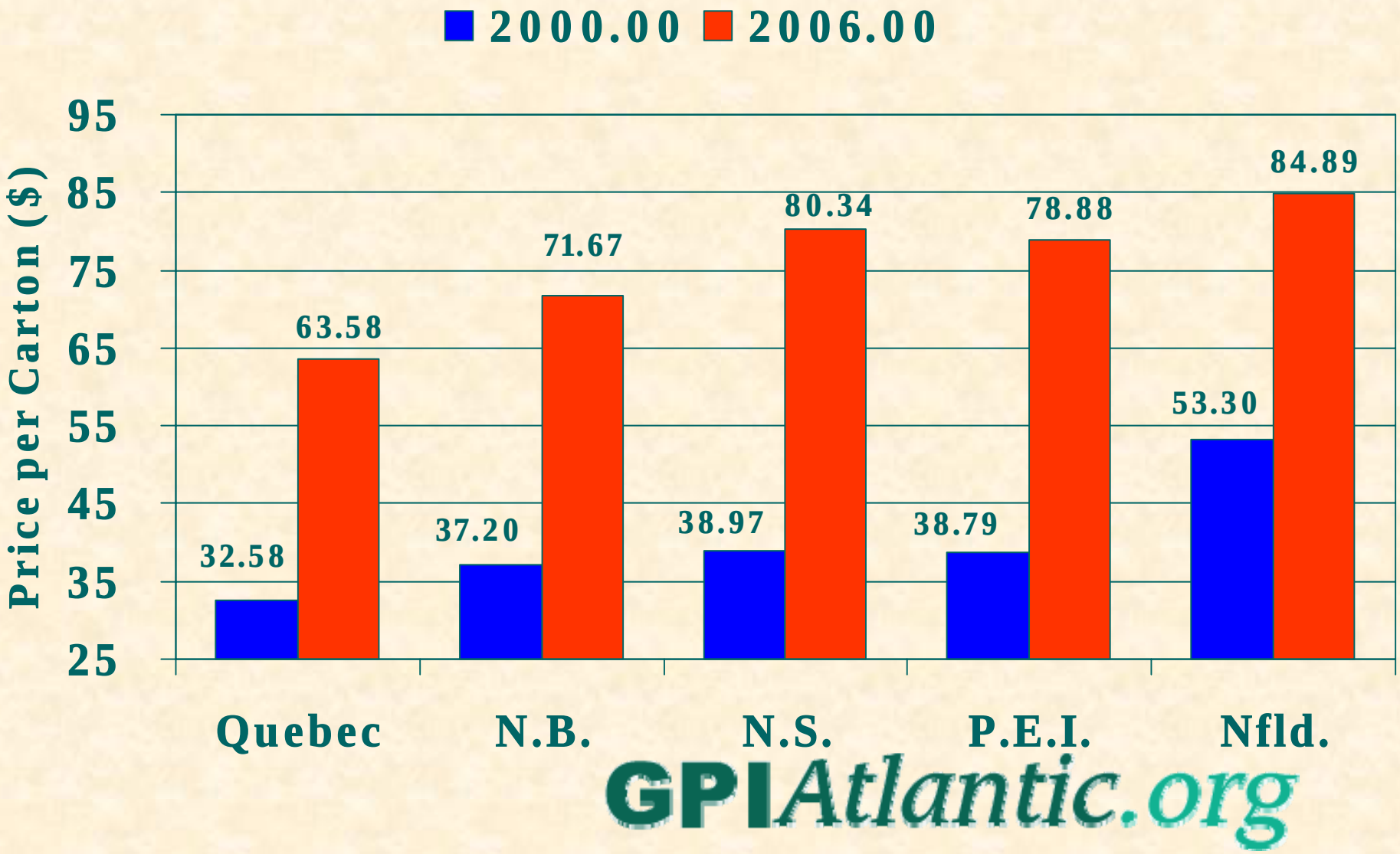
Cigarette Prices, Selected Provinces



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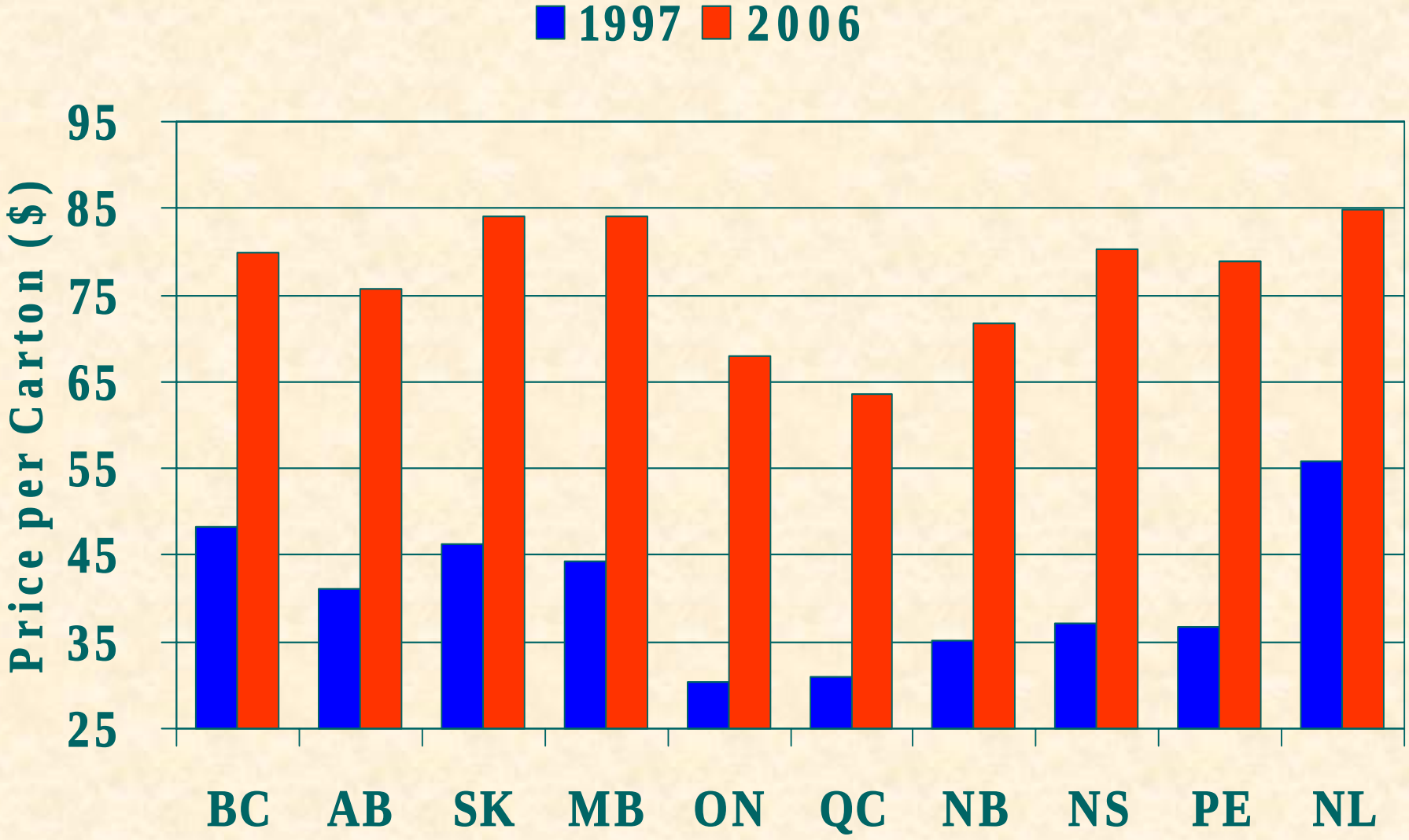
Cigarette Prices



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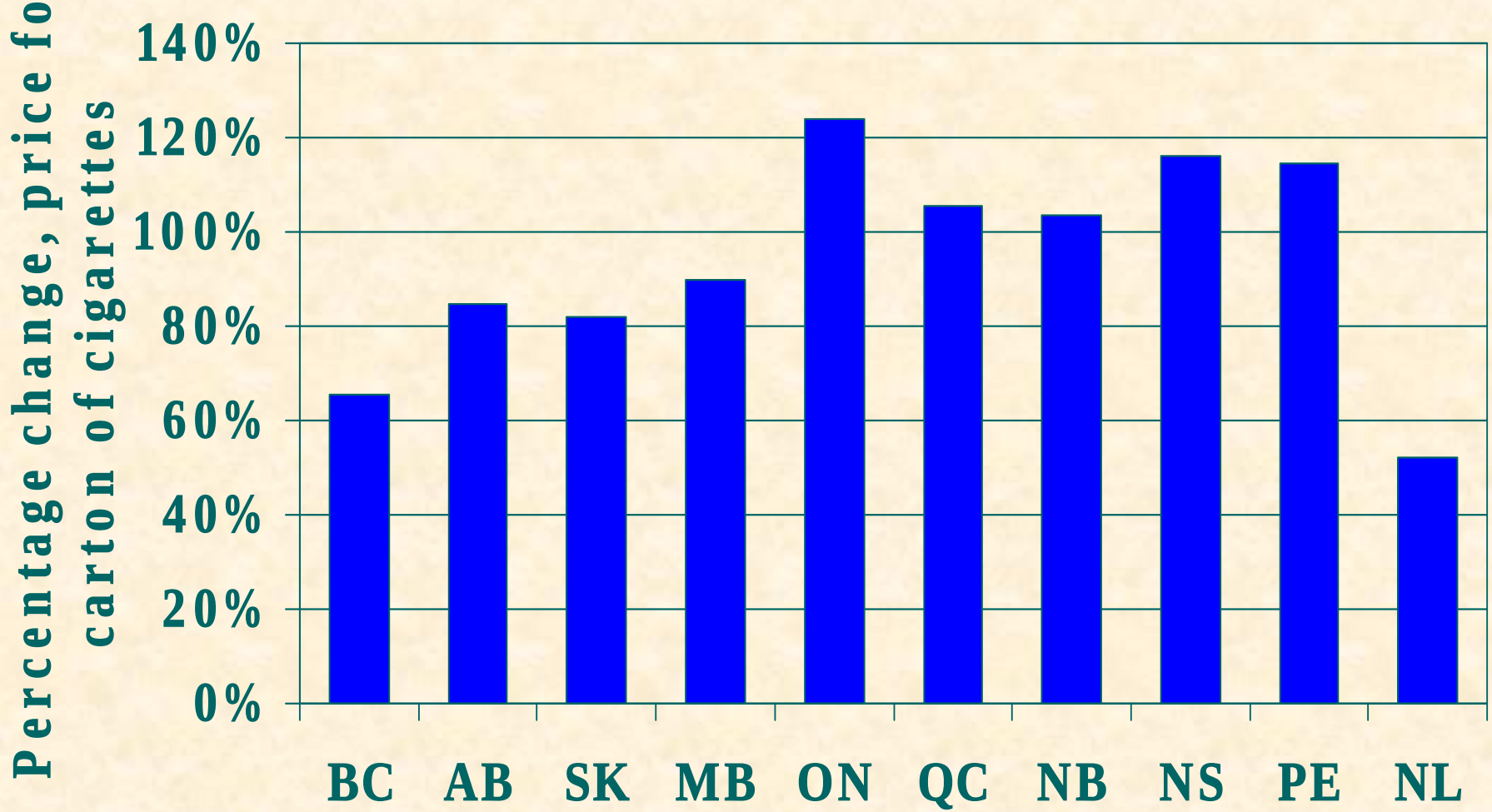
% Change in Cigarette Prices, 1997-2006



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Other actions since 2000

- ***Smoke-free act*** - associated with 14% drop in prevalence; 25% drop in consumption
- Comprehensive tobacco control strategy - up 4x: $500,000 (2001-02) ->$1,960,000 (2003-04) + *coordinated*: OHP – DHPP
- Education: Package warnings; display bans; media campaign; school-based programs + Youth access denial + workplace programs
- Quit aids: Counselling/help line/support groups

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4) Where to from here?
Complacency or build on success?

- NS smoking rate = 21%; BC = 15%; Calif = 14%
- **California** Proposition 99 (1988); raised prices by 25c/pack; earmarked 25% of new revenue for tobacco control program
- Results: 50% drop in consumption = 50% faster than rest of US; 25% drop in prevalence; decline in lung and bronchus cancer = 3x US average; est. 33,000 fewer deaths from heart disease

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Economics of tobacco control: All studies show high ROI

- Cal. saves $3 for every $1 on tobacco control
- Mass saves $2 in health care costs alone for every $1 spent on tobacco control
- School-based prevention = 15:1; physician advice = 12:1; prenatal counselling = 10:1; media advertising = 7:1; counsel/NRT = 3-4:1 (doubles quit rates)
- $1 per capita increase in education spending ->20% prevalence decline (BMJ)

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Is NS tobacco control adequate?

- NS still 1 billion cigs/yr = 1 pack for every Nova Scotian – can reduce by 1/3 to Calif. rates
- NS collects $162m in tobacco tax revenues; spends 1.2% of that on tobacco control = $2pp
- CDC int'l best practices = $8-$23Cdn pp small states (<3m) = $7.5 m - $21.5 m in NS
- At min. CDC level, OMA estimates $90m Ontario program will reduce prevalence 15%, save $1.3b in health care, and add $2.4b sales and inc. tax (prod. incr), + $7.5b tobacco taxes

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Estimated benefits of best practice strategy

- OMA = $3 saved in avoided health care costs for every $1 invested + $6 in sales, income tax (not count tob. tax revenue)
- If prevalence drops 20% then = 12:1 + Would save 116 NS lives/yr by year 5; 300+ lives/yr by year 10; 500+ lives/yr by year 15 + 26,000 avoided hosp. Days
- To justify $7.5m NS investment, using only health care savings as benefit, program need only induce 5% Nova Scotians to quit

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+ Benefits to employers

- Empirical research using 10 objective measures of productivity shows ex- smokers = 5% more productive than current smokers
- Conference Board of Canada = Smoker costs employer $2,280/year more than non-smoker =$250m/yr in NS (smoke breaks, absenteeism)
- Extrapolating from OMA Ontario results - productivity gains from $7.5m NS program -> add $177m in higher income and sales taxes over program duration

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OMA: “The province is not forced to choose between social spending and responsible fiscal management – it can accomplish both goals through one policy.”

	10% fall in prevalence		*15% fall in prevalence*		*20% fall in prevalence*	
	Lives saved	**Avoided hosp. days**	**Lives saved**	**Avoided hosp. days**	**Lives saved**	**Avoided hosp. days**
Year 5	56	3005	87	4,507	116	6,010
Year 10	154	8,035	232	10,539	309	16,069
Year 15	251	13,103	377	19.655	502	26,206

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5) Applying the lessons to other health promotion strategies

- Build on, expand success – ***comprehensive*** program works; ***values*** change. E.g. CDC found cig sales drop 2+x as much in states with comprehensive programs cf US av.
- -> Comprehensive health promotion program = no smoking, healthy eating, healthy weights, physical activity
- + attention to ***social*** determinants. E.g. CDC found 10% price increase = low-income smokers 4x more likely quit cf higher-income (E.g. St Henri, Montreal)

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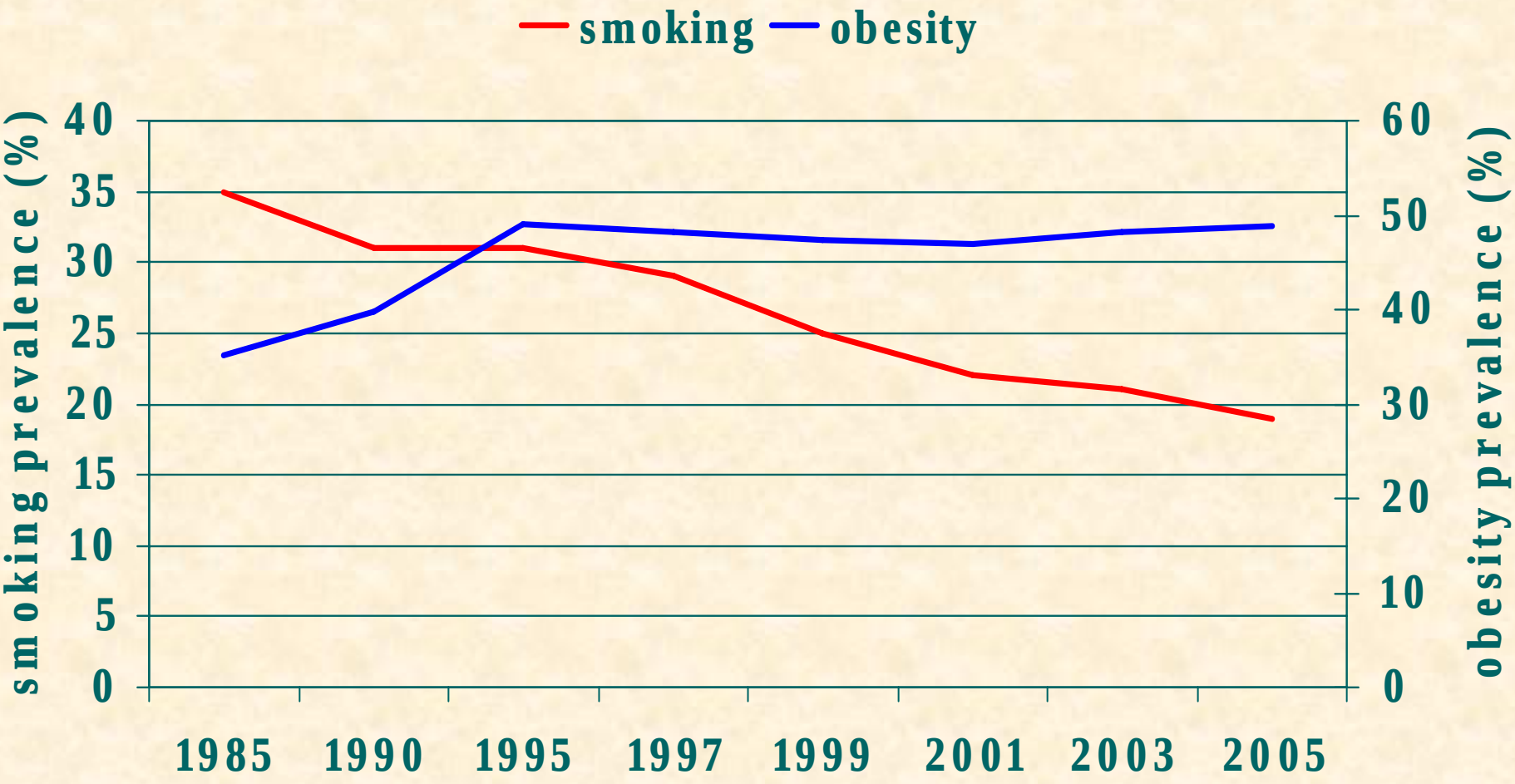
Can: Smoking Down, O'wt+Obese Up
BMI>25: Can = 48.9%, NS = 56.5%



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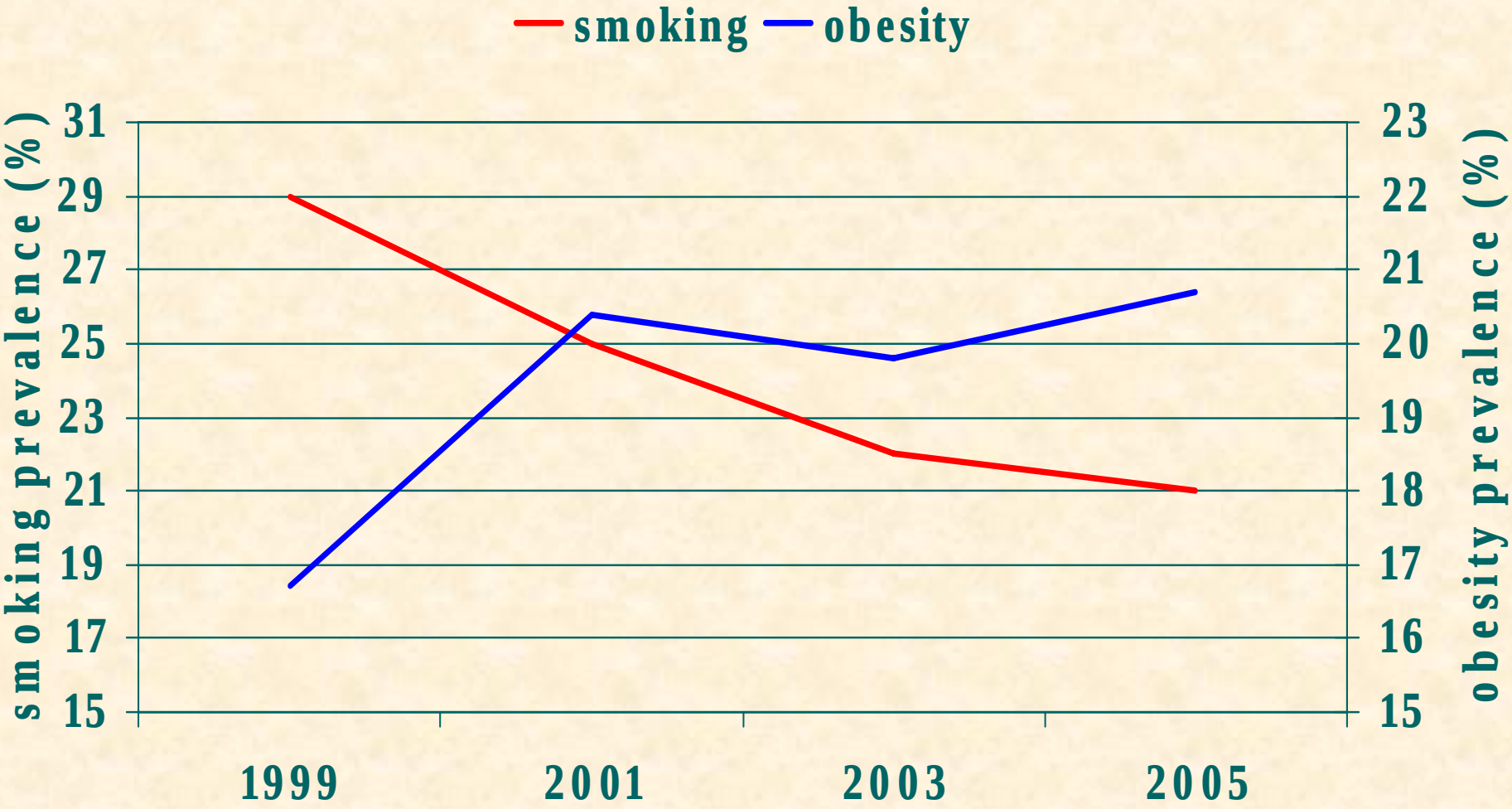
NS - Smoking Down, Obesity Up
BMI>30: NS = 20.7%, Can = 15.5%



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Costs of other risk factors

- RAND Health study found obesity costs for first time have passed smoking costs in US
- NS: Obesity and physical inactivity kill more than 1,000 Nova Scotians/ yr; diabetes up; cost NS health care system $150m+/yr + cost economy $250m+/yr productivity loss
- E.g. GPI estimate that 10% drop in physical inactivity would save 50 lives/year, $7.5m in avoided health care costs + $17.2m in economic productivity gains

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As with comprehensive tobacco control program:

- DHPP school healthy eating program very positive. Now supplement with:
  - price measures (Brownell),
  - labelling (Finland),
  - education (Singapore – reduced youth obesity by up to 50%),
  - regulatory mechanisms
  - media campaign,
  - physician advice, counselling etc.

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Comprehensive tobacco control and health promotion strategy will create a healthier Nova Scotia for our children –

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