Through the haze
Smoking, children and parents

Philip Pattemore

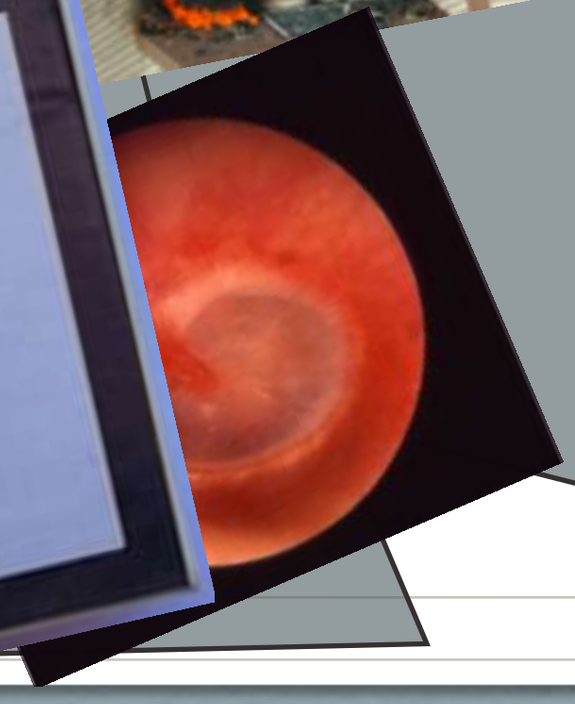
Hagley park in mist

Sneak Preview

- Update of effects of tobacco on fetus and child
- Smoking exposure estimates in NZ
- The Stages of Change Model – useful or outgrown?
- The ABC of smoking cessation incorporating Stages of Change and Nicotine replacement


CAMEL
SINCE 1913
FILTERS
Las Autoridades Sanitarias advierten:
Fumar
mata

BRYAN CURTIS, 34,
a longtime smoker
during the trial




Tobacco can harm the baby
even before the baby is conceived

Effects of pre-/peri-conceptional smoking

OR = Odds Ratio; aOR=adjusted Odds Ratio; pOR=pooled Odds Ratio; RR=Relative Risk

- Increased risks of:
  - anorectal malformations
    - Father smoking pOR 1.53(34)
  - childhood cancers(including ALL and AML(35-39))
    - Father smoking
  - Hepatoblastoma
    - mother smoking OR=2.68, both parents OR=4.74(40, 41)
- DNA mutations in sperm, and epigenetic modification of DNA--> effects on grandchildren

Effects of Smoking in Pregnancy on the Fetus

Effects on fetus of *in utero* smoking exposure

OR = Odds Ratio; aOR=adjusted Odds Ratio; pOR=pooled Odds Ratio; RR=Relative Risk

- Mother smoking: Increased risks to fetus of:
  - miscarriage (aOR=2.11(42)), fetal death, and stillbirth (pooled RR 1.26(43))
  - restricted fetal growth and low birth weight (pooled RR 1.82(43)) - ~200 g less BW on average
  - alteration of development of fetal airways(44)
  - cleft palate(45)
- Father only smoking: Similar but smaller risks, e.g. ~100g less BW on average

Postnatal effects of *in utero* smoking exposure

OR = Odds Ratio; aOR=adjusted Odds Ratio; pOR=pooled Odds Ratio; RR=Relative Risk

Increased risks of:

- reduced respiratory drive and arousal responses in infant(44)
- SUDI (pooled aOR=2.25(47))
- pyloric stenosis (aOR 2.0(61))
- hospitalisation in infancy (aOR=1.52(48))
- invasive meningococcal disease (pOR=2.93(49))
- LRI and bronchitis in young children(44)
- infant wheezing (aOR=4.9(50), pOR=1.4(51))
- asthma (≤2 yr. pOR=1.85; 5-18 yr. pOR=1.23(51))
- asthma in adolescent girls (aOR ~2(52))
- decreased lung function in adolescent boys(53)
- reduced response to inhaled corticosteroids(54)
- learning difficulties, behavioural problems and ADHD(55)
- sensorineural hearing loss (aOR=1.83(56))
- gestational diabetes in females(57)
- obesity (aOR=1.5 -2.65(58-60))
- smoking initiation (OR=2.1-2.7(62))

Pattemore. Frontiers in Pediatric Pulmonology. 2013;1:20.

Effects of Smoking around children

Effects of *postnatal* smoking exposure on children

OR = Odds Ratio; aOR=adjusted Odds Ratio; pOR=pooled Odds Ratio; RR=Relative Risk

Increased risks of:

- SUDI (pooled independent aOR=1.97(47))
- all respiratory tract infections [pneumonia, bronchiolitis, bronchitis, pharyngotonsillitis, sinusitis, otitis media, common cold [1.5-4 fold risks(55, 63)], severe influenza(64)
- invasive meningococcal disease (pOR=2.26(49))
- wheezing (≤2 yr. pOR 1.7, 5-18 yr. pOR=1.2-1.4(51))
- asthma (≤2 yr. pOR=2.47(51); pOR=1.32, paOR 1.27(65))
- increased severity of asthma(67-70)

Pattemore. Frontiers in Pediatric Pulmonology. 2013;1:20.

Effects of *postnatal* smoking exposure on children

OR = Odds Ratio; aOR=adjusted Odds Ratio; pOR=pooled Odds Ratio; RR=Relative Risk

II. Increased risks of

- high blood pressure(66)
- learning difficulties, behaviour problems and ADHD(55)
- childhood and adult cancers(37, 41)
- decreased pulmonary function(51, 53, 71-73)
- COPD (Women 1.9-fold incr. Men 1.7-fold incr.)
- injury from house fires(20)

Effects of *postnatal* smoking exposure on children

OR = Odds Ratio; aOR=adjusted Odds Ratio; pOR=pooled Odds Ratio; RR=Relative Risk

III Exposure in late childhood & adolescence:

Increased risks of:

- respiratory infections, severe asthma and decreased pulmonary function
- high diastolic blood pressure (aOR=2.25(74))
- adverse changes in serum lipids(75, 76)
- developing the metabolic syndrome (aOR=4.7(77))
- smoking initiation(10, 11)
- loss of a parent or grandparent to smoking

Pattemore. Frontiers in Pediatric Pulmonology. 2013;1:20.

The Cost of Tobacco

2012

Pack/day
$5000/yr

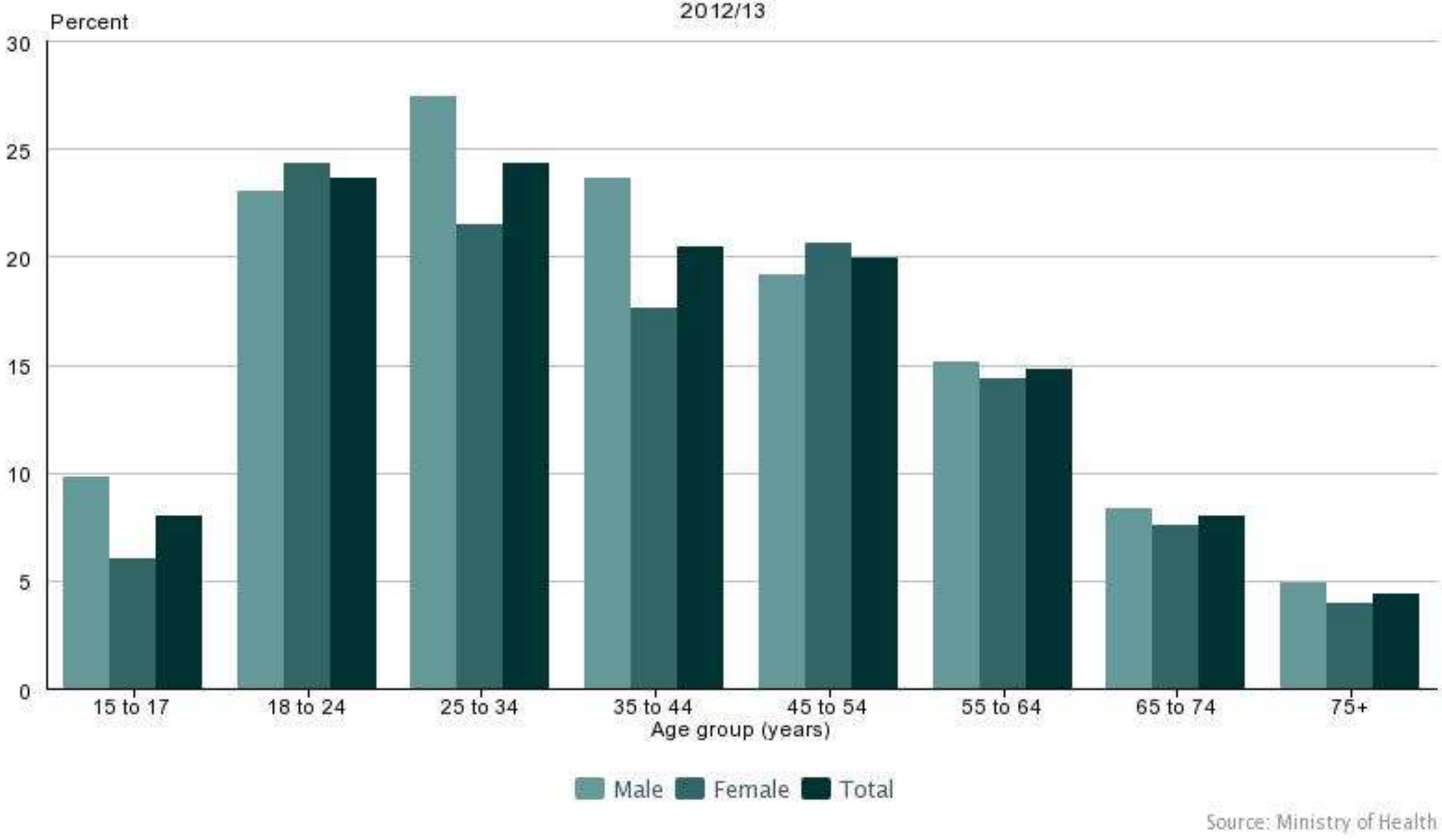
Pouch/day
$1600/yr

Calculator at: http://smokefree.org.nz/costs-smoking

Proportion of the population who currently smoke tobacco

15 years and older, by age group and sex

2012/13



Source: Ministry of Health

Proportion of the population who currently smoke tobacco

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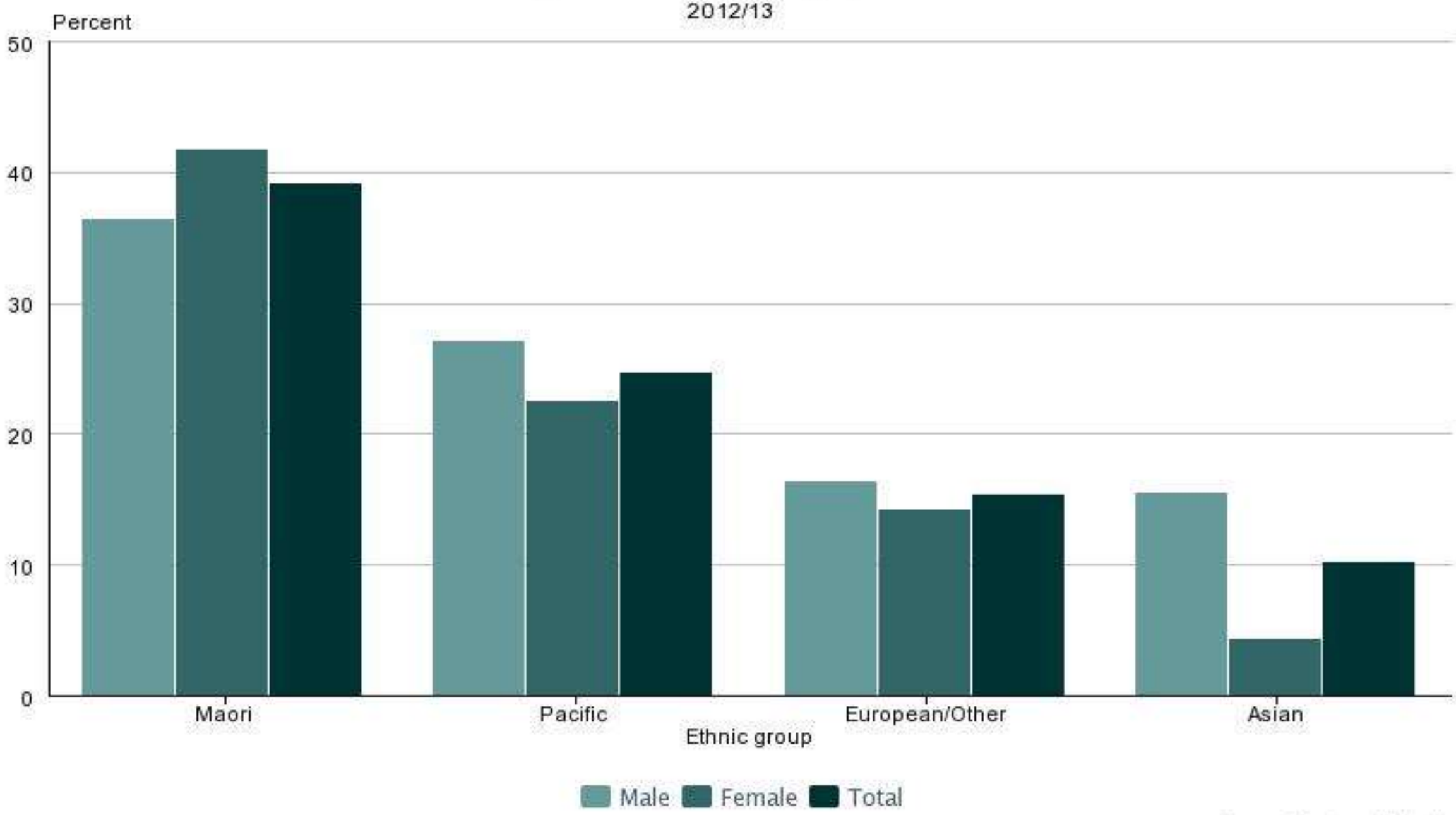


Source: Ministry of Health

Estimated Exposure and Morbidity in New Zealand:

ANNUAL EXPOSURE

200,000 (20%) **- 300,000** (30%)

children under 15 yrs

[Chch Hosp Acute Paediatrics Units July 2014: All 31%, Preschool 34%]

ANNUAL MORBIDITY DUE TO SMOKING

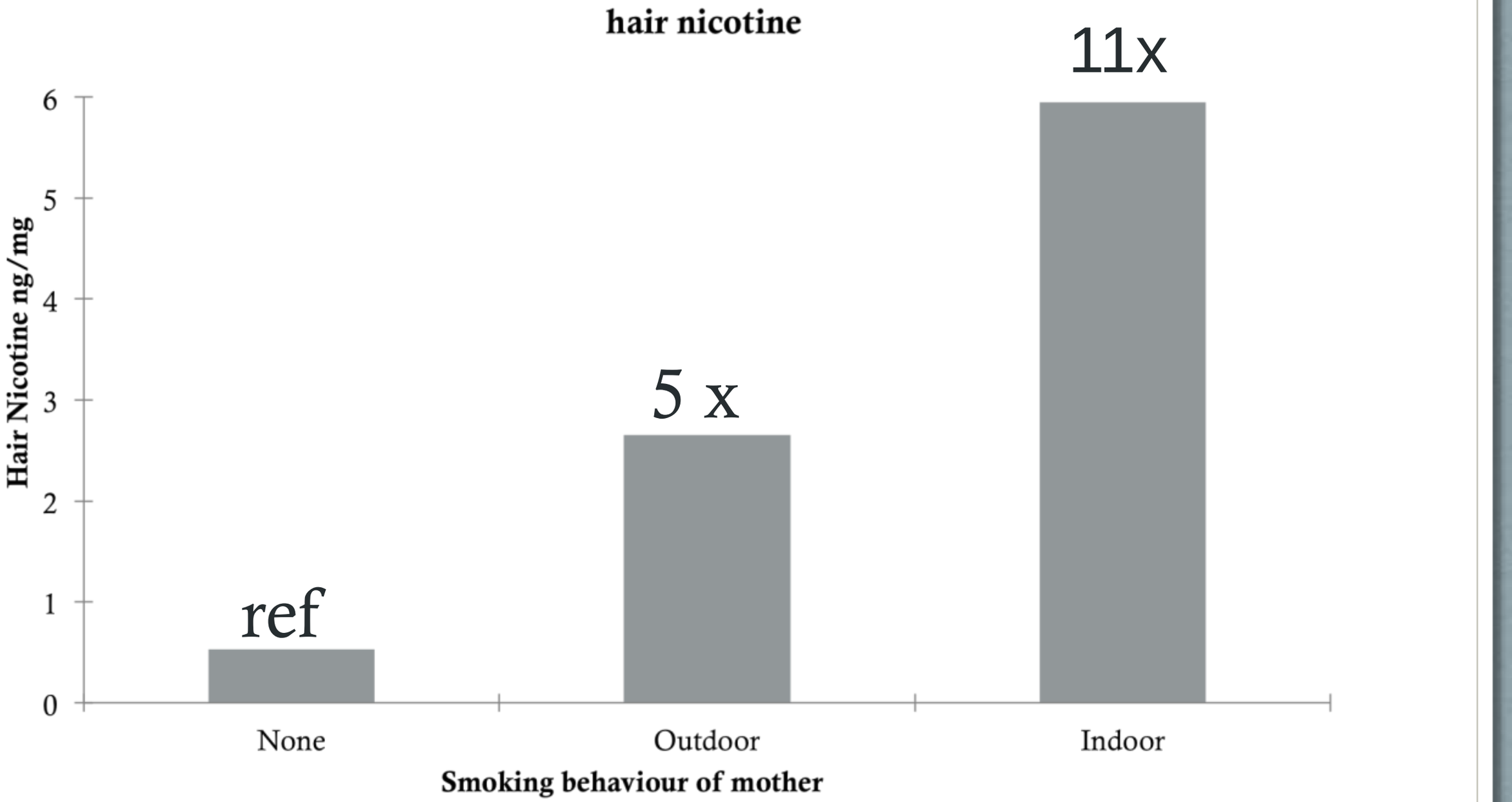
- 27,000 GP visits for childhood respiratory disease
- 15,000 episodes of asthma
- 1,500 operations for glue ear

- Woodward A, Laugesen M. Morbidity attributable to second hand cigarette smoke in New Zealand Report to the Ministry of Health. March 2001

Smoking around Children

50% of the world's children are exposed (WHO)

Indoor, outdoor or no smoking: Exposure measured in the child



***Matt et al. Tobacco Control* 2004;13;29-37**

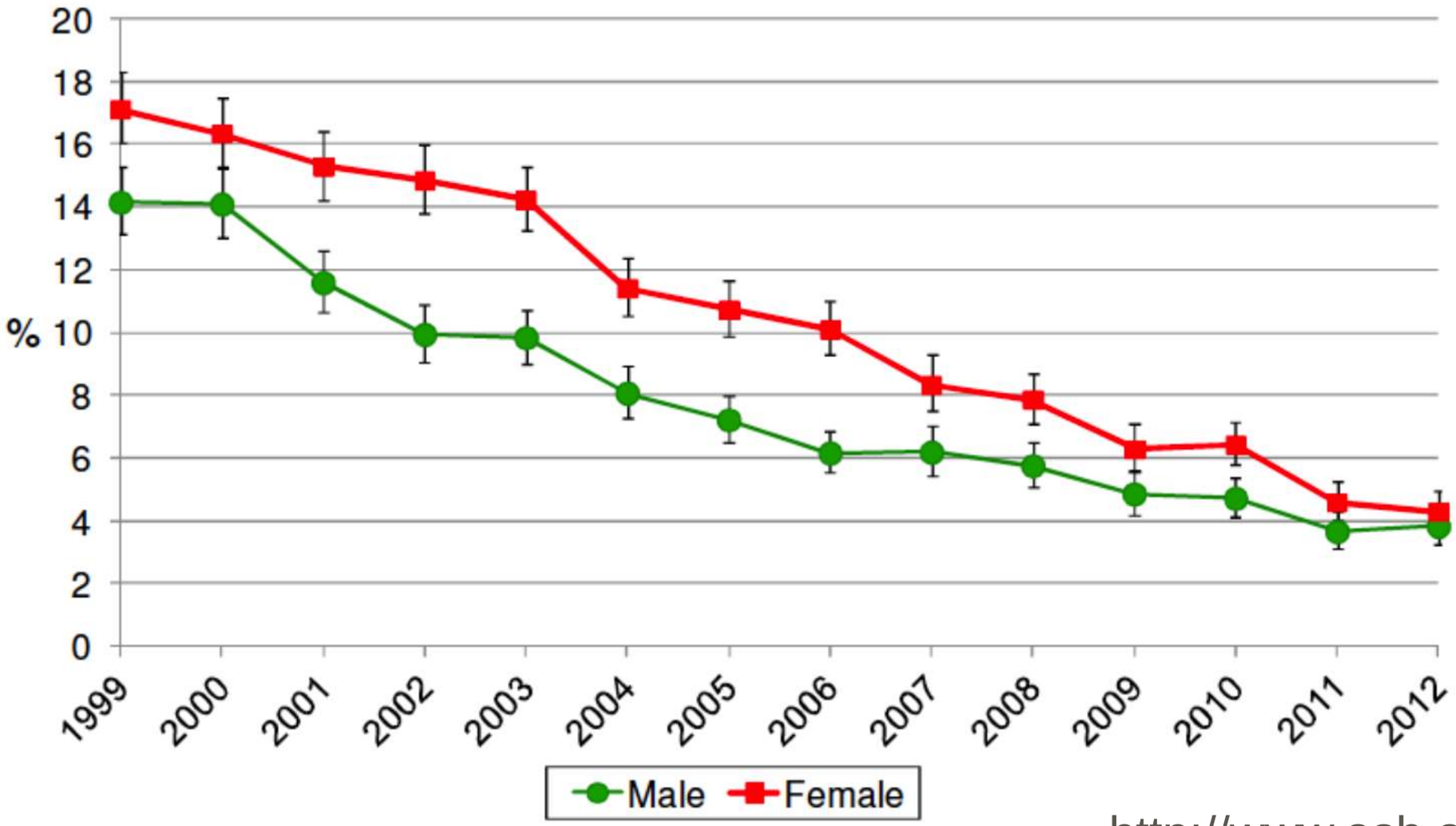
New Zealand


EVERY YEAR OVER
2000
children **under the age of 10**
take their first puff on a cigarette


The average age of smoking initiation in
New Zealand youth is 14.6 years

ASH Year 10 survey

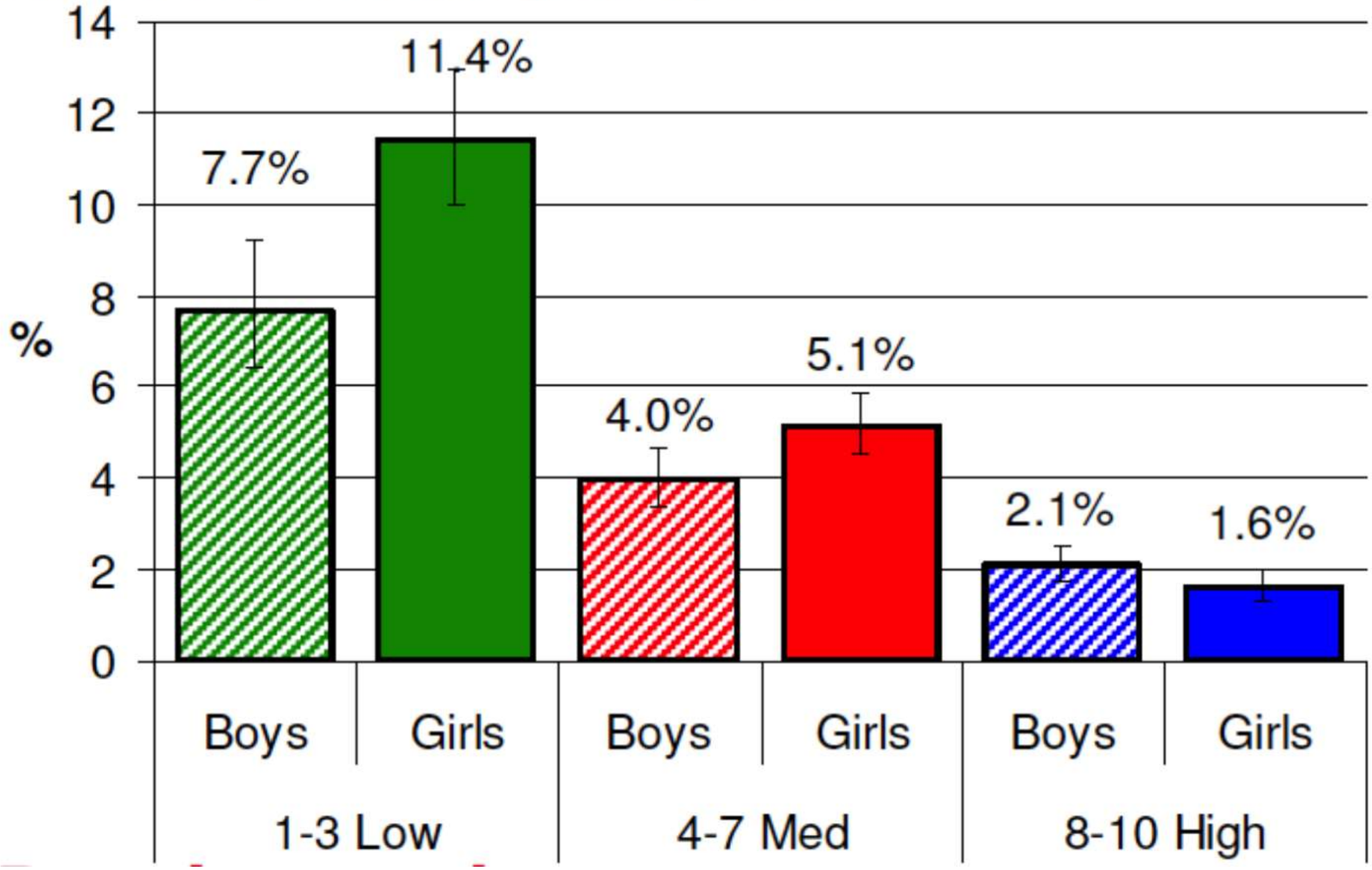
Figure 4: Percentage of Year 10 students who were daily smokers by gender, 1999-2012



http://www.ash.org.nz

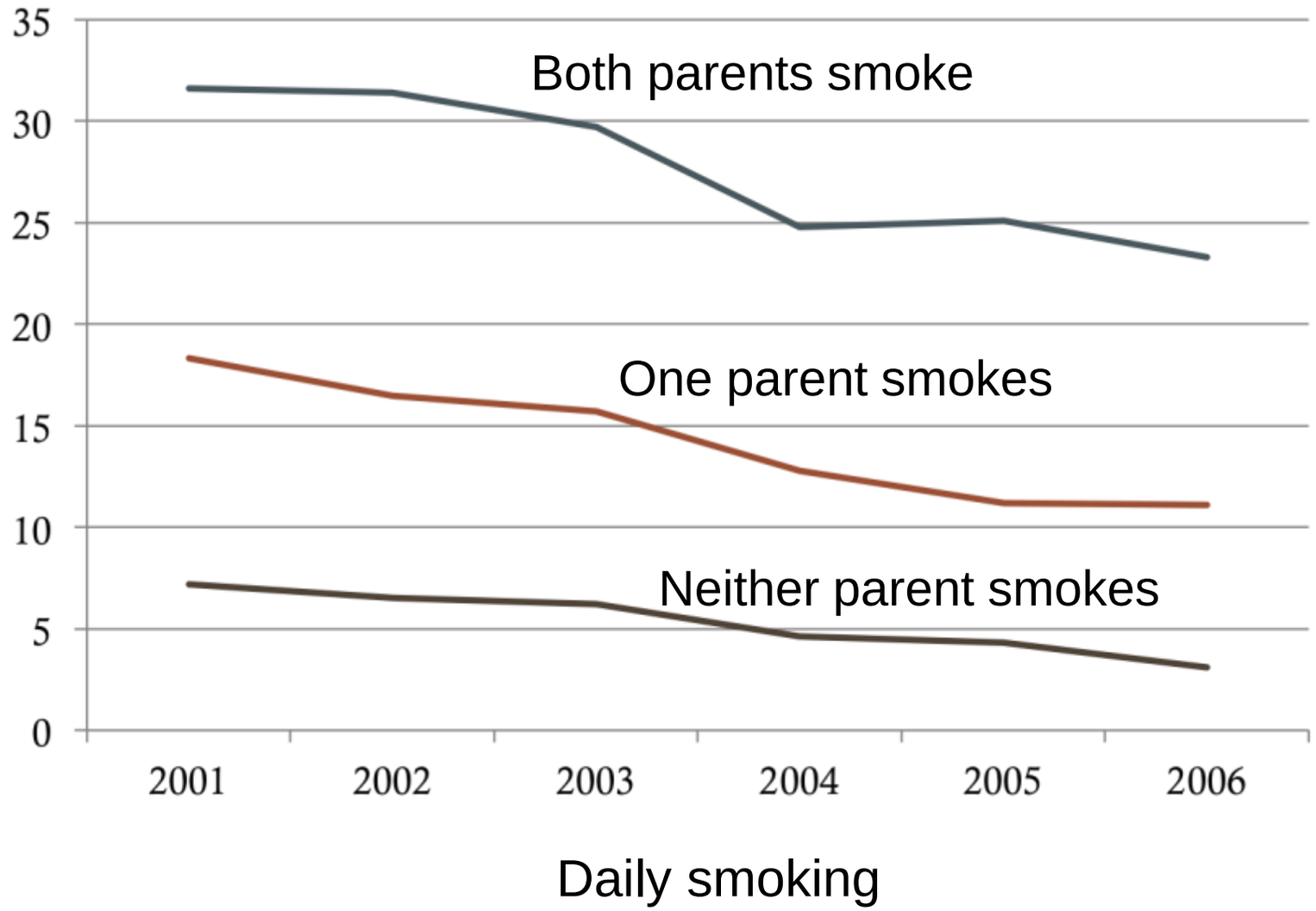
ASH Year 10 survey

Figure 1: Percentage of Year 10 students who were daily smokers by SES and gender, 2011



http://www.ash.org.nz

Year 10 Smoking prevalence by parental smoking

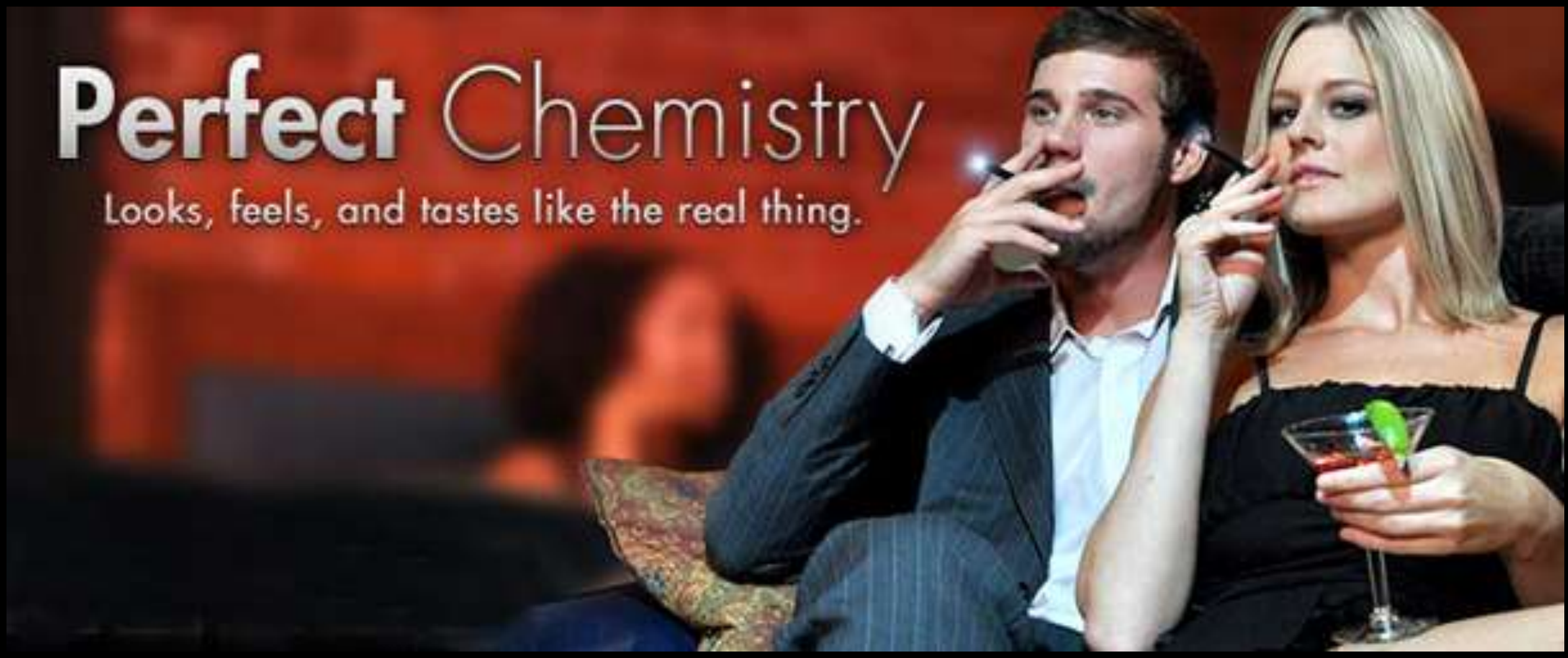


Scragg R. Report of 1999-2006 National Year 10 Snapshot Smoking Surveys. ASH and Health Sponsorship Council, 2007

Electronic cigarettes

- A rapidly growing sales and income source for tobacco companies
- Aggressively marketed where tobacco advertising is banned
- No harm from smoke, but prolonged nicotine use is harmful and addictive on its own
- Proposed as an aid to quitting, but some smokers are using them as their public cigarette while continuing to smoke cigarettes at home
- Teenagers are being attracted to e-cigarettes, which increases their susceptibility to taking up smoking tobacco


THE BETTER SMOKING CHOICE
Make the Switch Today and Live Healthier
SMOKE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cigarettes...
“freedom


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SWITCH TO BLU
blu is the smart choice for smokers wanting a change. Take back your freedom to smoke when and where you want without ash or smell. blu is everything you enjoy about smoking and nothing else.
Nobody likes a quitter, so make the switch today.
Visit blucigs.com


“I DONT ALWAYS VAPE,
BUT WHEN I DO, I CHOOSE VAPOR SHARK.”
- KRIS KRINGLE
vaporshark
Electronic Cigarettes
005472
CLEARCHANNEL


No Tar or Yellow Teeth
No Smelly Clothes
Smoke Anywhere!
complete kit!

BAT NZ and Youth Smoking

The base of our business is the high school student

Lorillard document
Aug 1978
BATES
03537131-03537132

(Message: labelling smoking as an adult behaviour will look like we want to discourage youth smoking initiation)

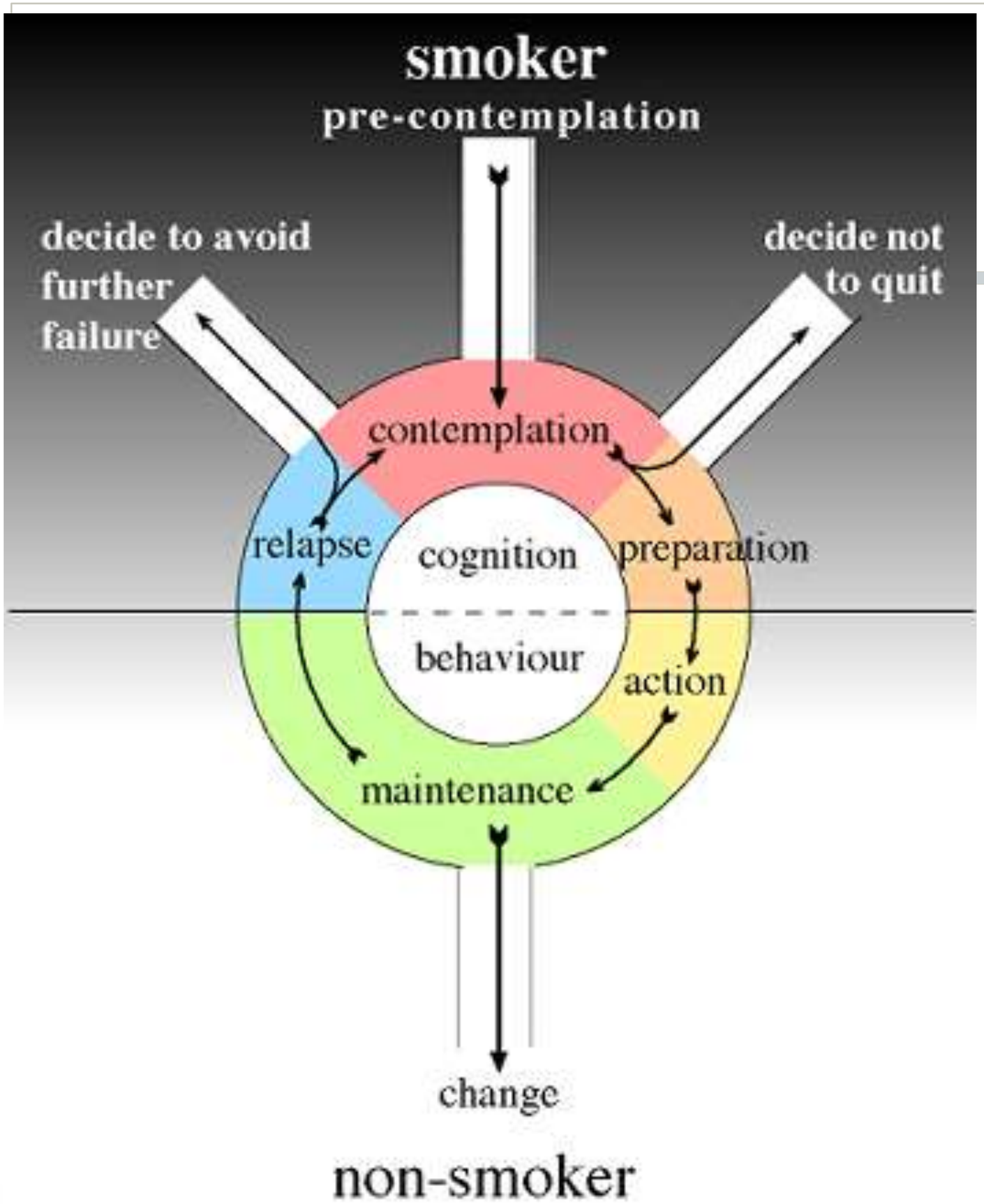
Young people will want to smoke while they see adults smoking

Key times to intervene: Pregnancy and Parenthood
When smoking directly affects more than the person “choosing” to smoke

Smoking Cessation
Blowing away the clouds

Once deemed as useful for doctors as searching
for the end of the rainbow

Stages of Change



(after Prochaska JO & DiClemente CC. 1982)

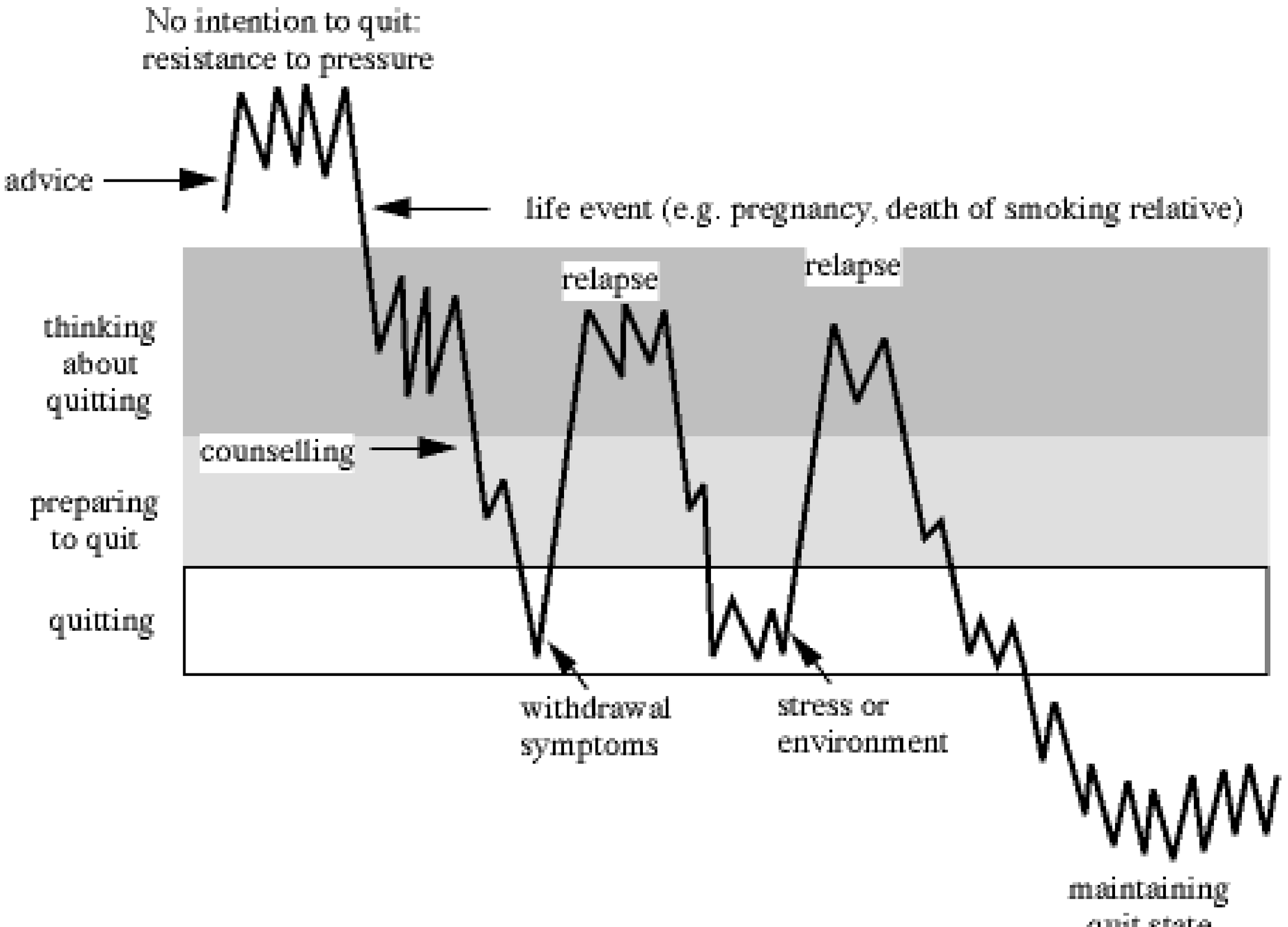
The Stages of Change Model

- Voices for and against Stages of Change Model
  - Velicer WF, Prochaska JO, Fava JL, Norman GJ, CA R. Transtheoretical Model. 2013 Nov 19;:1–14. Available from: http://www.uri.edu/research/cprc/TTM/detailedoverview.htm
  - Cahill K, Lancaster T, Green N. Stage-based interventions for smoking cessation. Cochrane database of systematic reviews (Online). 2009 Dec 31;(11):CD004492–2.
  - West R. Time for a change: putting the Transtheoretical (Stages of Change) Model to rest. Addiction. 2005 Aug;100(8):1036–9.

- Bottom line (PP): There are good reasons to offer cessation therapy and nicotine replacement regardless of the stage of change.

- However the model is empowering for clinicians as it deals with people in context, sees change as a process with many opportunities for intervention, offers hope for brief interventions, and allows relapse a place in change.

Stages of Change in Practice



ABC

Part 2 – All health care workers

As a health care worker, your role is to motivate people to make a quit attempt, and to help them access cessation support. This section provides guidance on how to do this.

ASK ABOUT THE ELEPHANT

The ABC pathway for helping people to stop smoking

A

Ask about and document every person's smoking status.

Smoking status definitions

- **Non-smoker** has smoked fewer than 100 cigarettes in their lifetime.
- **Ex-smoker** has smoked more than 100 cigarettes in their lifetime, but has not smoked any tobacco in the last 28 days.
- **Current smoker** has smoked more than 100 cigarettes in their lifetime and has smoked tobacco in the last 28 days.

B

Give Brief advice to stop to every person who smokes.

- You can give this advice in 30 seconds.
- Where possible, tailor your brief advice to the person in front of you. Advice could be health or financially related.

C

Strongly encourage every person who smokes to use Cessation support and offer them help to access it. Refer to, or provide, cessation support to everyone who accepts your offer.

- The best results are achieved when a person uses behavioural support and stop-smoking medication in combination.
- Where people choose to use stop-smoking medication, check that they understand how to use it and, later, whether they have experienced any adverse effects.

Brief Intervention for Tobacco Cessation

- **A**sk everyone about smoking
  - Assess – willingness to quit, addiction level
- **B**rief advice
  - a doctor's strong advice is effective
- **C**essation
  - nicotine replacement, refer, arrange follow up

Ask

- Smoking Status should be recorded as a Vital Sign - routine for nursing and medical admission
  - Ask if any one that lives with the child smokes
    - Addicts will notice if a health professional doesn't ask
  - Ask "Have you considered quitting?"
    - Readiness to quit
  - Ask about first smoke in morning – within 30min of waking suggests heavy addiction
    - Amount of nicotine replacement needed

Brief Advice to quit

- A doctor's strong advice to quit is a powerful simple intervention
  - "I advise you very strongly to quit smoking for the sake of your [child's] health"
- Personalise the message – to the condition for which the child is being seen etc.
- Advice is to be helpful, not confrontational
- Tailor advice to readiness to quit / listen

Brief intervention by Stage of Change

- Pre-contemplation - resistive: **Don't hassle**
  - Strong advice to quit: 1-sentence 1- strong reason.
  - Offer pamphlet, nicotine replacement and help in future.

- Contemplative -ambivalent: **Help clear thinking**
  - Ask about pro's and cons for smoking
    - paper / whiteboard if you have the time
  - Emphasise positive aspects of quitting
    - Child health, breath, taste of food, fitness, parent health, savings
  - Counsel re perceived negatives of quitting esp. weight gain
  - Offer nicotine replacement, referral & follow-up

Brief intervention by Stage of Change

- Ready to quit : **Help to set a quit date**
  - Congratulate, provide nicotine replacement
  - Practical lifestyle advice
  - Refer and arrange follow-up
- Relapse – guilt & failure – **Learn and retry**
  - Congratulate on trying.
  - Relapse is a learning experience – what can they learn about their habit and how to avoid further relapse
  - Offer nicotine replacement and set another quit date.

Cessation

- Support:
  - Nicotine replacement therapy
  - Quit date & follow-up
  - Advise to give up completely
- Refer:
  - **GP** **Quitline** **Smokechange**
  - **Pacific Trust Canterbury** **Aukati Ka**

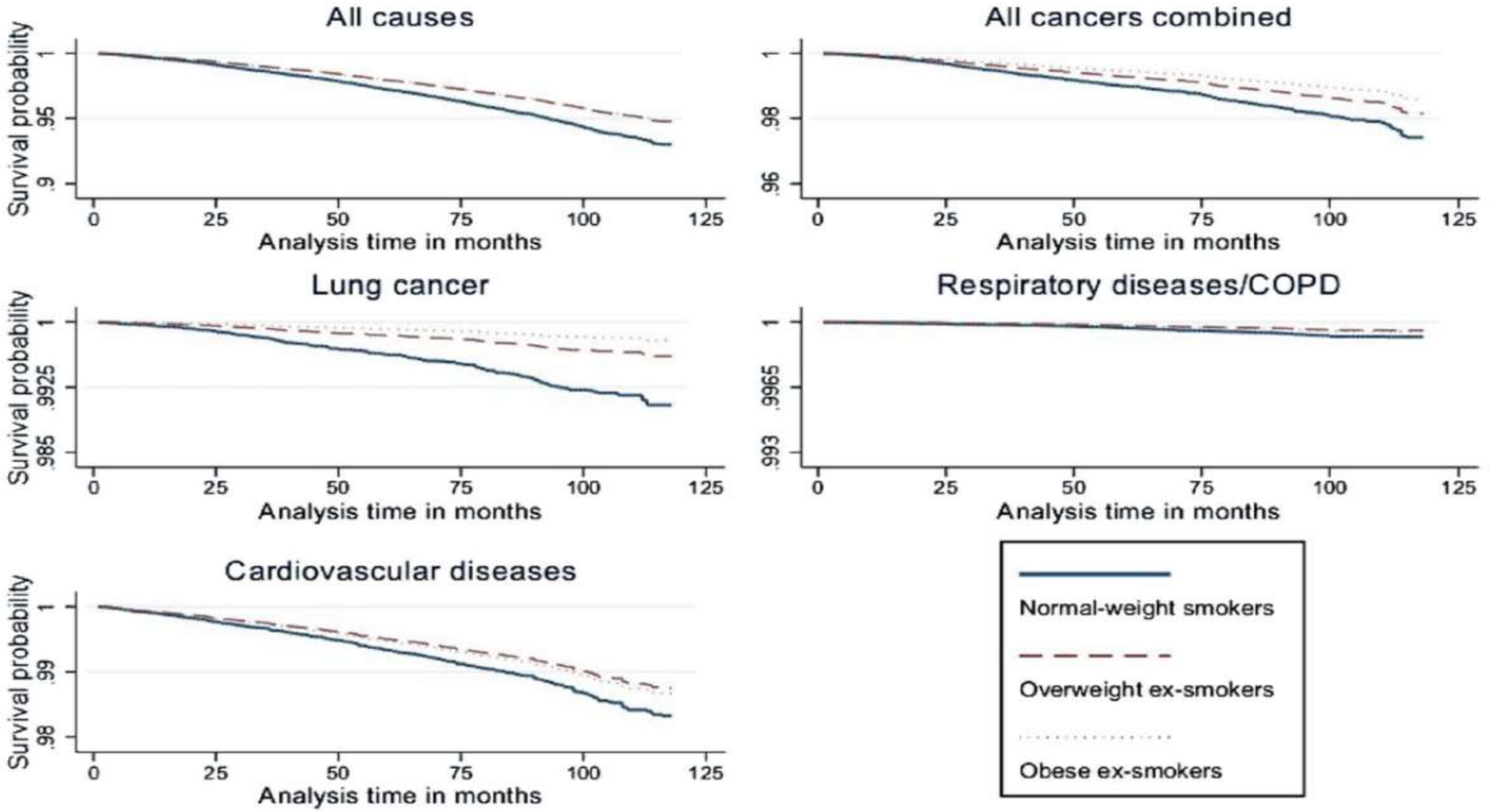
Nicotine replacement: at least 8w

- Usually Patch daily + Gum / Lozenge hourly

- Patch:
  - 21 mg – morning-morning (24 hr)
  - 14 mg – morning-evening (15 hr)
  - Skin irritation
- Gum: 2 & 4 mg (highly addicted): chew intermittently & park
- Lozenge (sublingual tablet) 2 mg: park

- Inhaler?

Normal weight female smokers vs. overweight ex-smokers

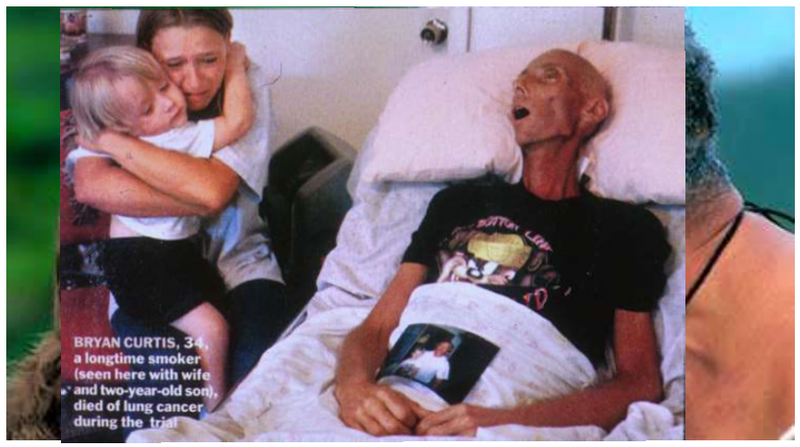


Survival curves for women by cause of death. COPD, chronic obstructive pulmonary disease.

Siahpush M, *et al*. *Tob Control* 2014;**23**:395–402. doi:10.1136/tobaccocontrol-2

Parents: the epicentre of smokefree change

Lobbying Legislation Cessation Support Smokefree media and education



Hagley park in the clear