



Professor Norman Sharpe

Heart Foundation
West Coast

Primary care, the keystone for heart health improvement - Main Session

Friday, 21 June 2013

Start 8:35am

Duration: 25mins



Rotorua  **GP CME 2013** 

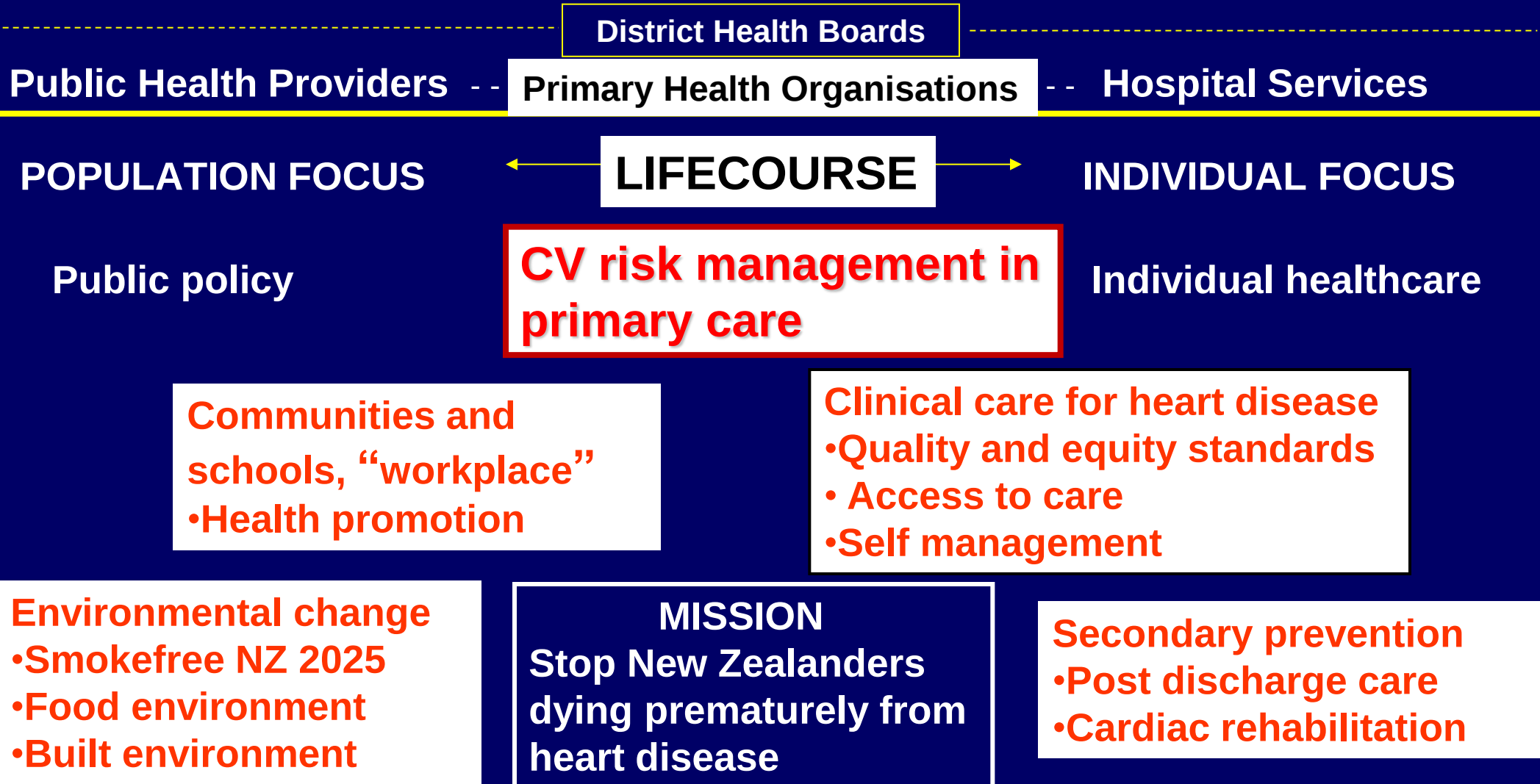
General Practice Conference & Medical Exhibition

20-23 June 2013 | Energy Events Centre | Rotorua

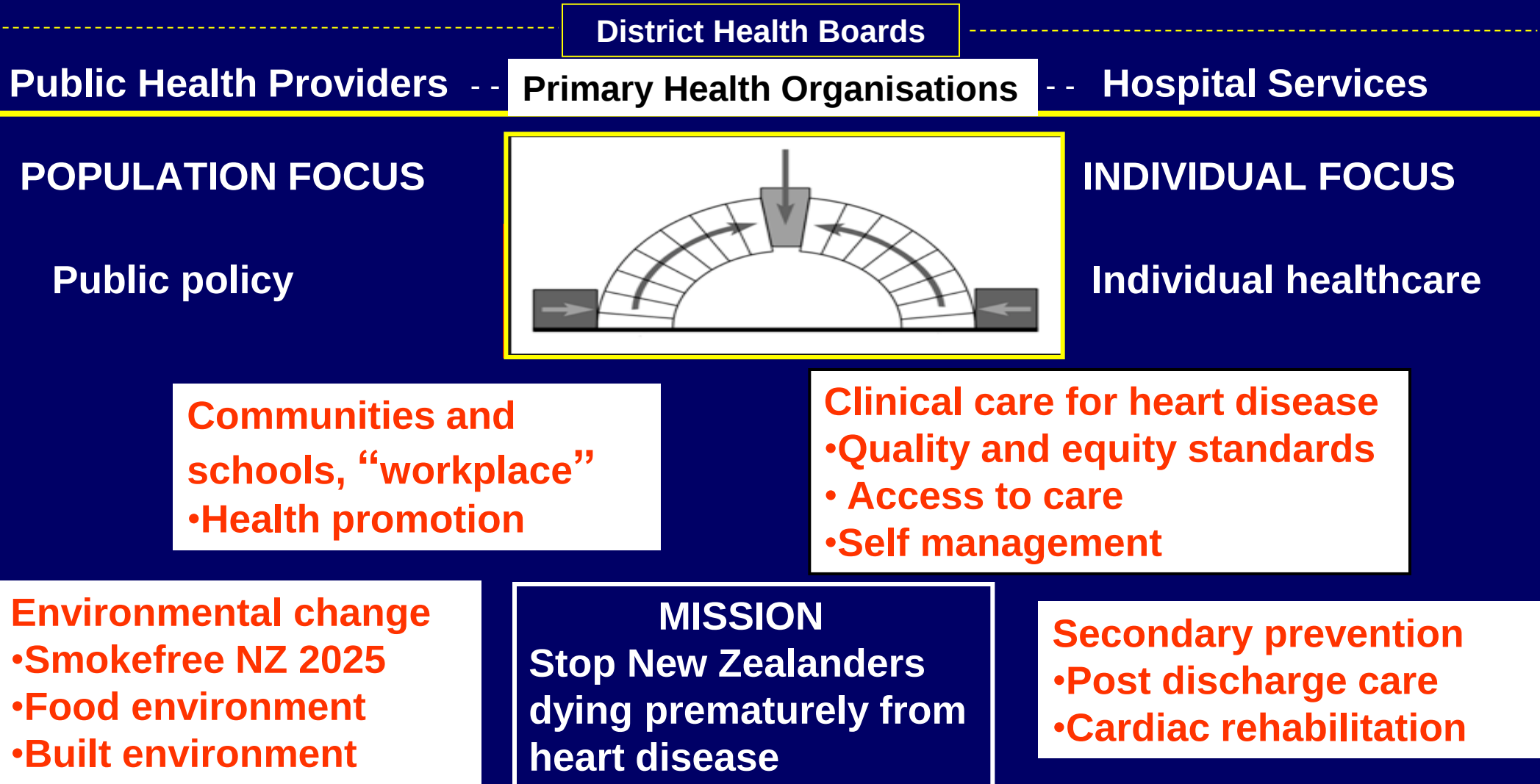
Primary Care the Keystone to Heart Health Improvement

- The heart health continuum and the keystone position
- The culprit disease – atherosclerosis
- The past
- The present
- Future prospects
- A new national health target – a step change, an opportunity and a challenge

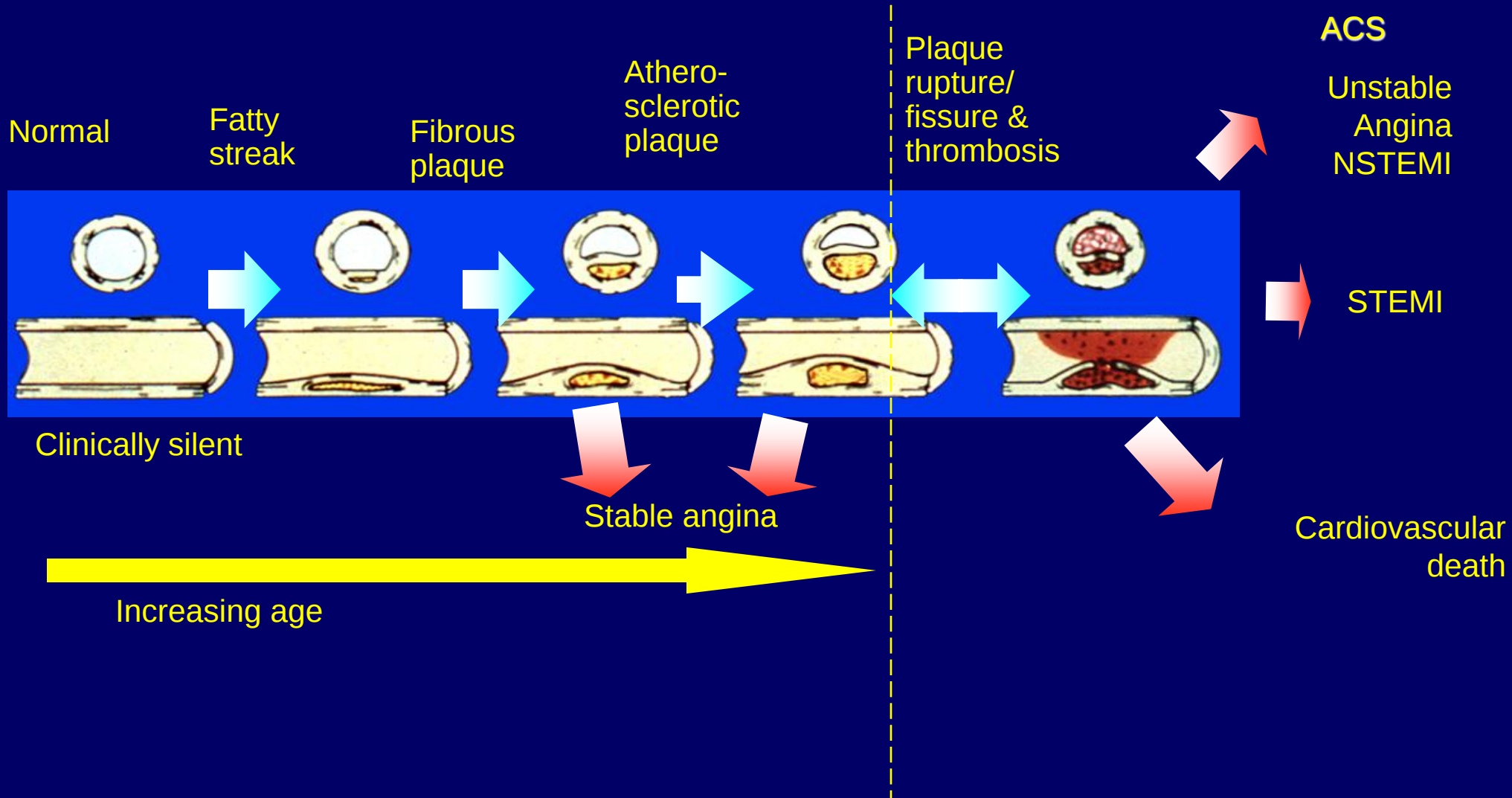
The Heart Health Continuum also The Lifecourse Journey



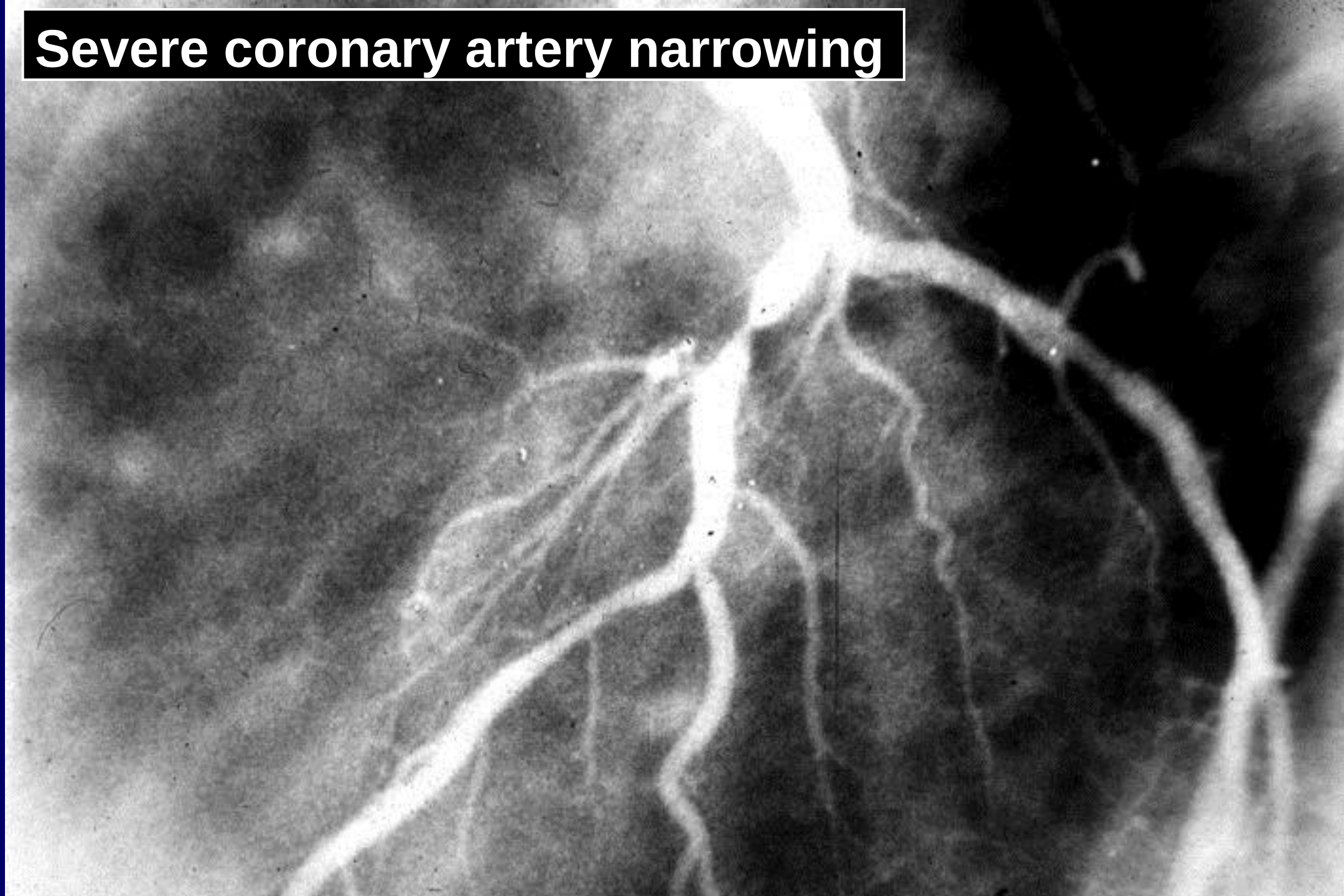
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Atherosclerotic plaque progression



Severe coronary artery narrowing





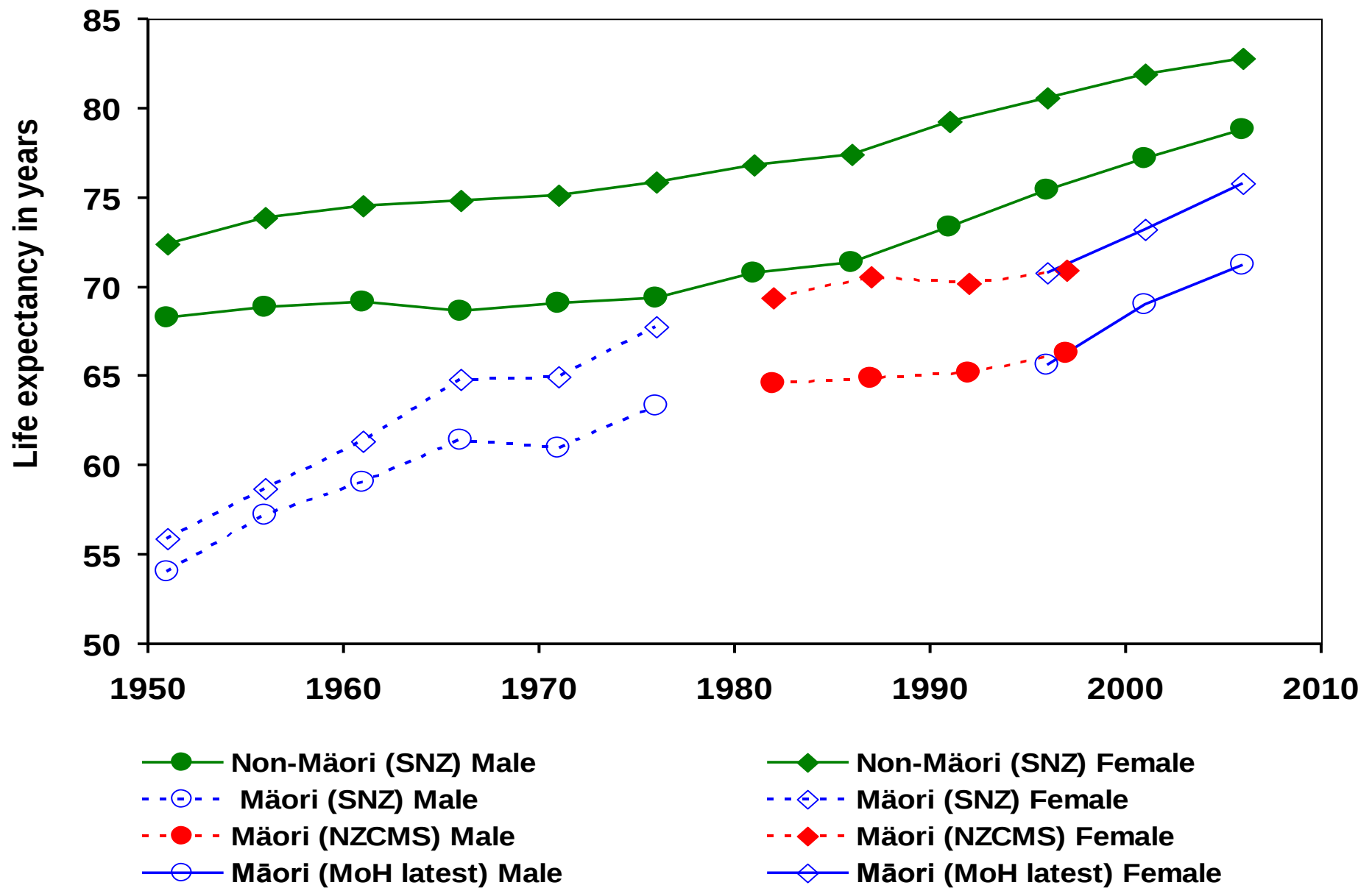
A magnified cross-section of a coronary artery. The lumen is almost completely occluded by a dark, irregular, and textured mass of thrombotic material. The surrounding vessel wall is pale and fibrous. The image is set against a dark blue background.

**Magnified cross section of
blocked coronary artery**

UA



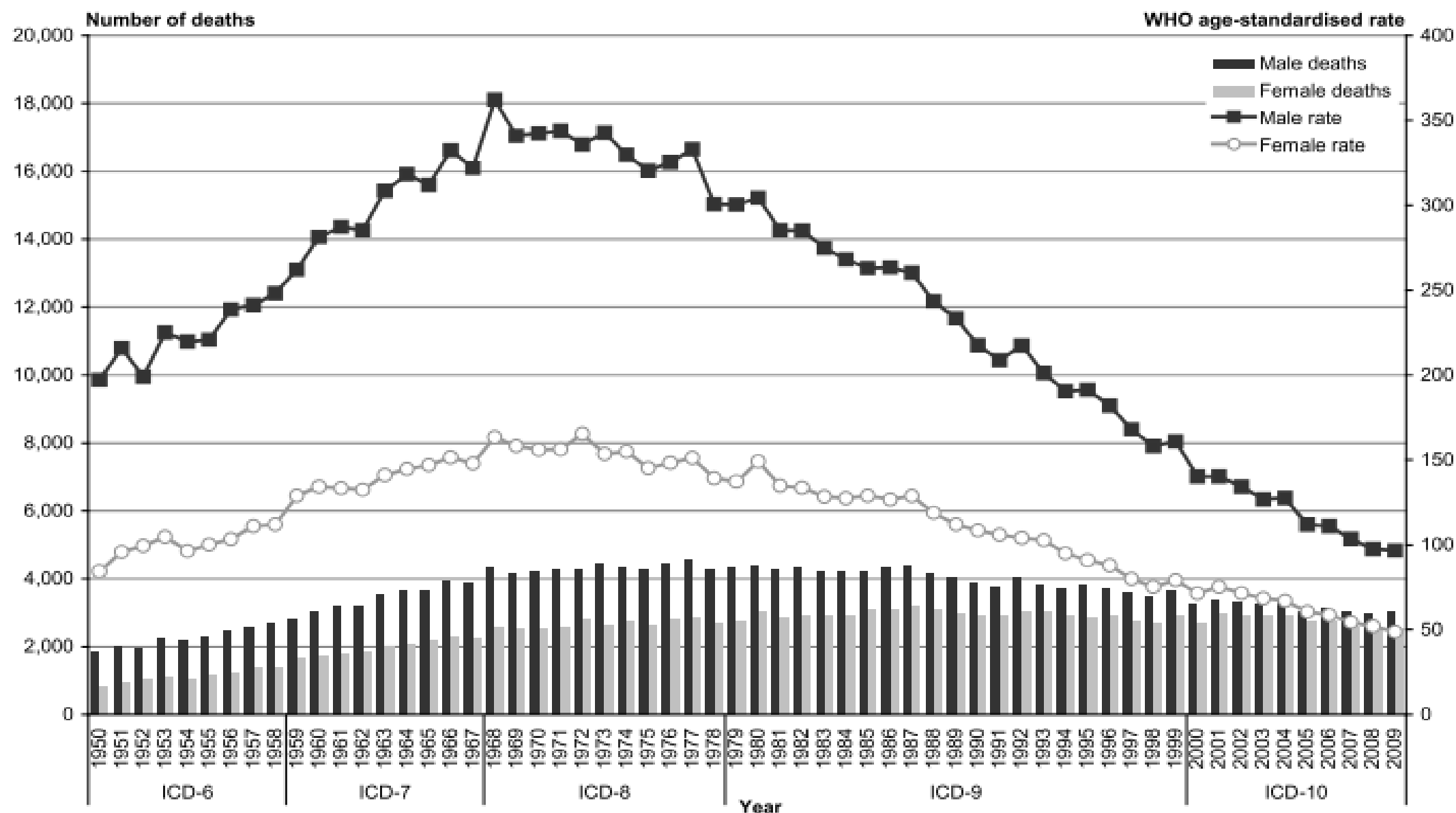
The Past



Source: Blakely T, Tobias M, Robson B, Ajwani S, Bonne M, Woodward A. Widening ethnic mortality disparities in New Zealand 1981-99. *Soc Sci Med* 2005;61(10):2233-2251.

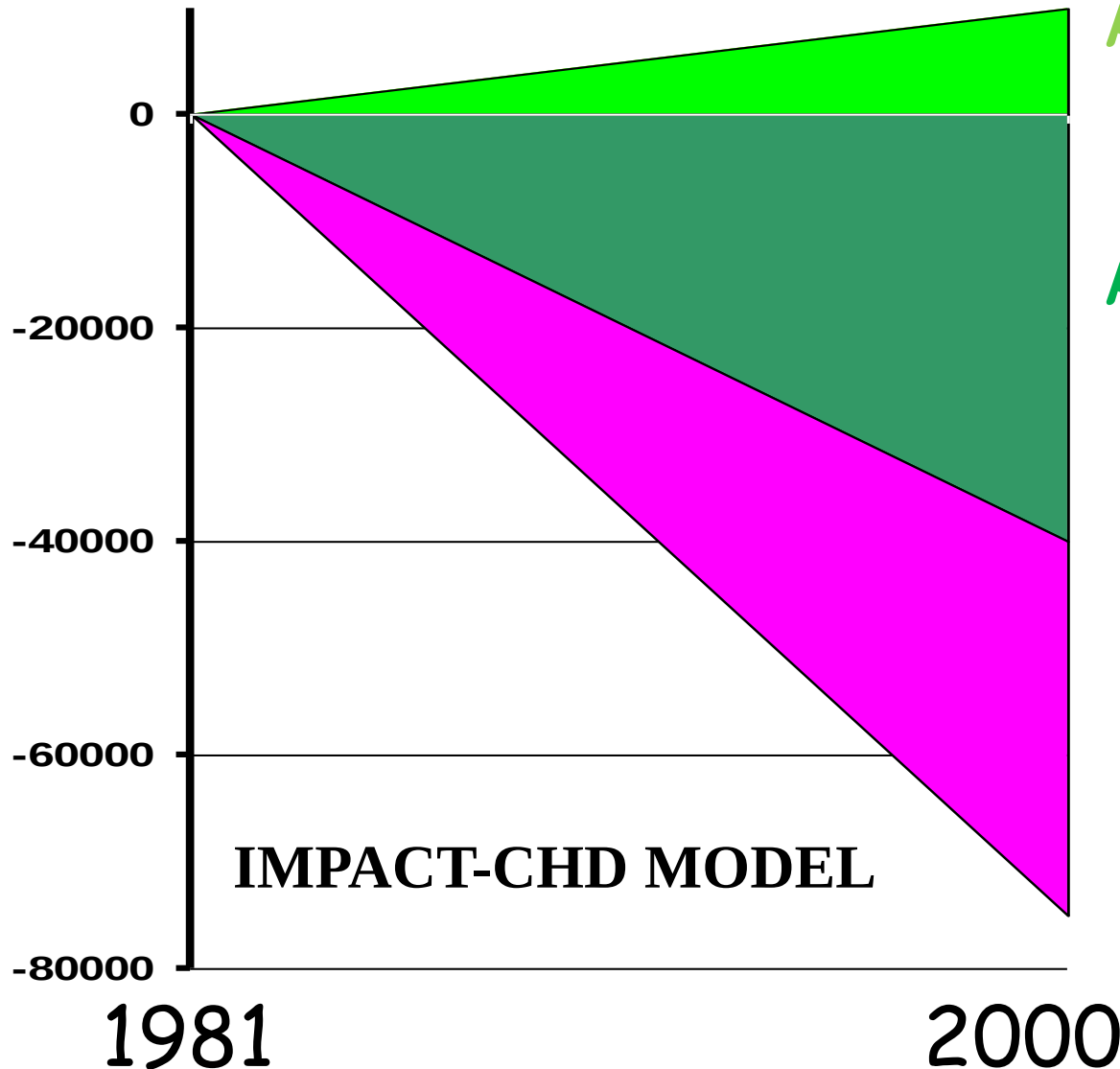
Updated in: Blakely T. "Social injustice is killing people on a grand scale". *N Z Med J* 2008;121(1281):7-11.

Figure 21: Death rates from ischaemic heart disease, by sex, 1950–2009



Note: Rates per 100,000 population, age-standardised to WHO World Standard Population.

Explaining the fall in coronary heart disease deaths in England & Wales 1981-2000



Risk Factors worse +13%

Obesity (increase)	+3.5%
Diabetes (increase)	+4.8%
Physical activity (less)	+4.4%

Risk Factors better -71%

Smoking	-41%
Cholesterol	-9%
Population BP fall	-9%
Deprivation	-3%

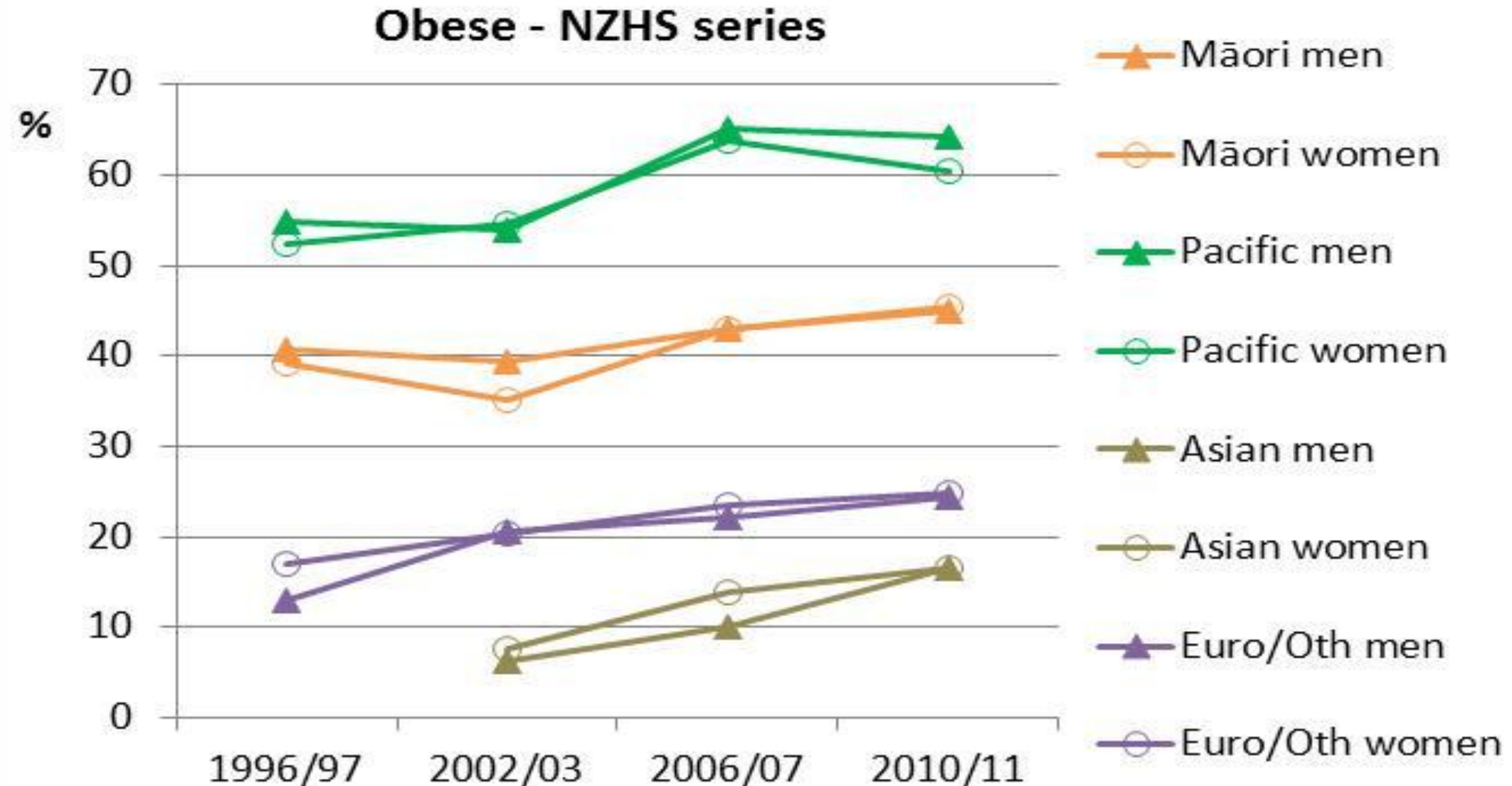
Other factors -8%

Treatments -42%

AMI treatments	-8%
Secondary prevention	-11%
Heart failure	-12%
Angina: CABG & PTCA	-4%
Angina: Aspirin etc	-5%
Hypertension therapies	-3%

Trends in adult obesity prevalence

NZ Health Survey series, Ministry of Health



[\[full text\]](#) [\[PDF\]](#)

Prevalence of diagnosed and undiagnosed diabetes and prediabetes in New Zealand: findings from the 2008/09 Adult Nutrition Survey

Kirsten J Coppell, Jim I Mann, Sheila M Williams, Emmanuel Jo, Paul L Drury, Jody C Miller, Winsome R Parnell

Abstract

Diabetes & prediabetes increasing in NZ

Aim

To describe the prevalence of diagnosed and undiagnosed diabetes and prediabetes for New Zealand adults.

Methods

The 2008/09 New Zealand Adult Nutrition Survey was a nationally representative, cross-sectional survey of 4,721 New Zealanders aged 15 years and above. Self-reported diabetes and the 2010 American Diabetes Association cutoffs for HbA1c were used to define diagnosed diabetes, undiagnosed diabetes and prediabetes. Prevalence rates were calculated and age-specific diagnosed diabetes rates were compared with those from the Virtual Diabetes Register.

Results

Overall, prevalence of diabetes was 7.0%, and prevalence of prediabetes 18.6%. Prevalence of diabetes was higher in men (8.3%, 95% CI: 6.4, 10.1) than in women (5.8%, 95% CI: 4.7, 7.0), and was higher among the obese (14.2%, 95% CI: 11.6, 16.9) compared with the normal weight group (2.4%, 95% CI: 1.4, 3.6). Prevalence of undiagnosed diabetes was highest among Pacific people (6.4%, 95% CI: 3.8, 9.1) compared with Māori (2.2%, 95% CI: 1.2, 3.1) and New Zealand European and Others (1.5%, 95% CI: 0.9, 2.1).

Conclusion

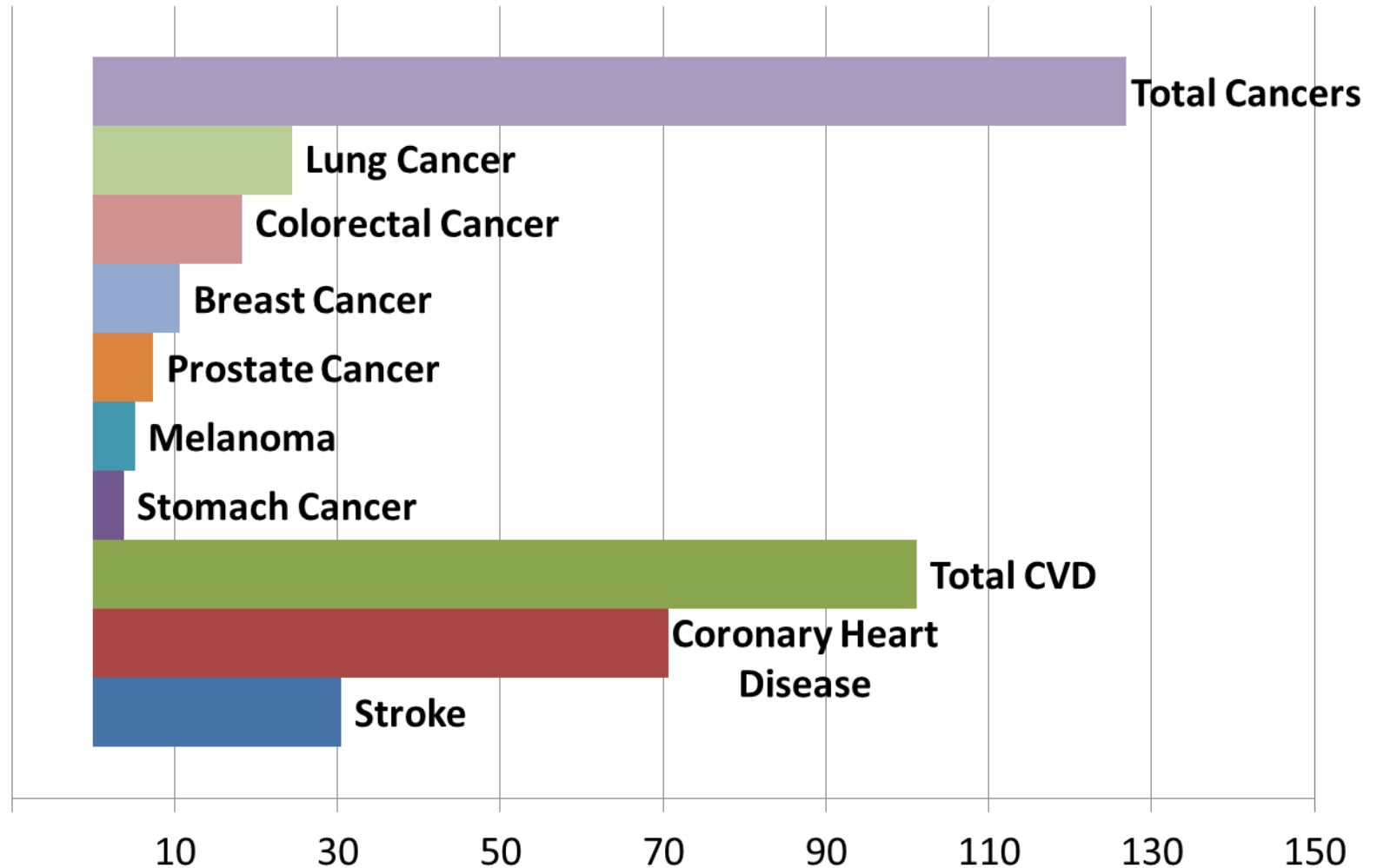
The high prevalence of prediabetes indicates the prevalence of diabetes will continue to increase in New Zealand. Implementation of effective evidence-based prevention strategies is required to reduce the increasing costs of the diabetes epidemic.

The Present



Rates for Selected Causes 2009

Age standardised death rates per 100,000



Death Rates by Ethnicity

Age Standardised Death Rates per 100,000 for Selected Causes

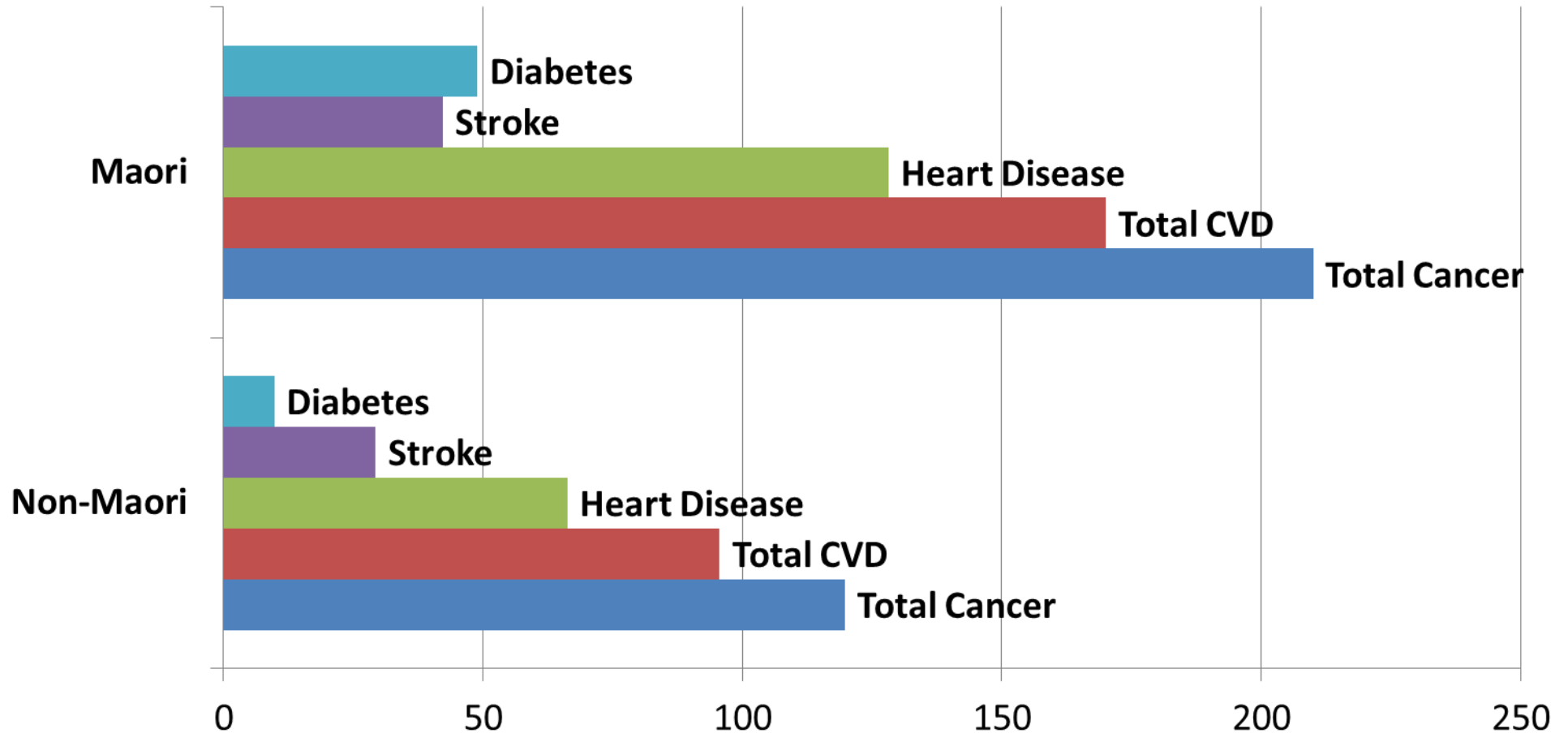
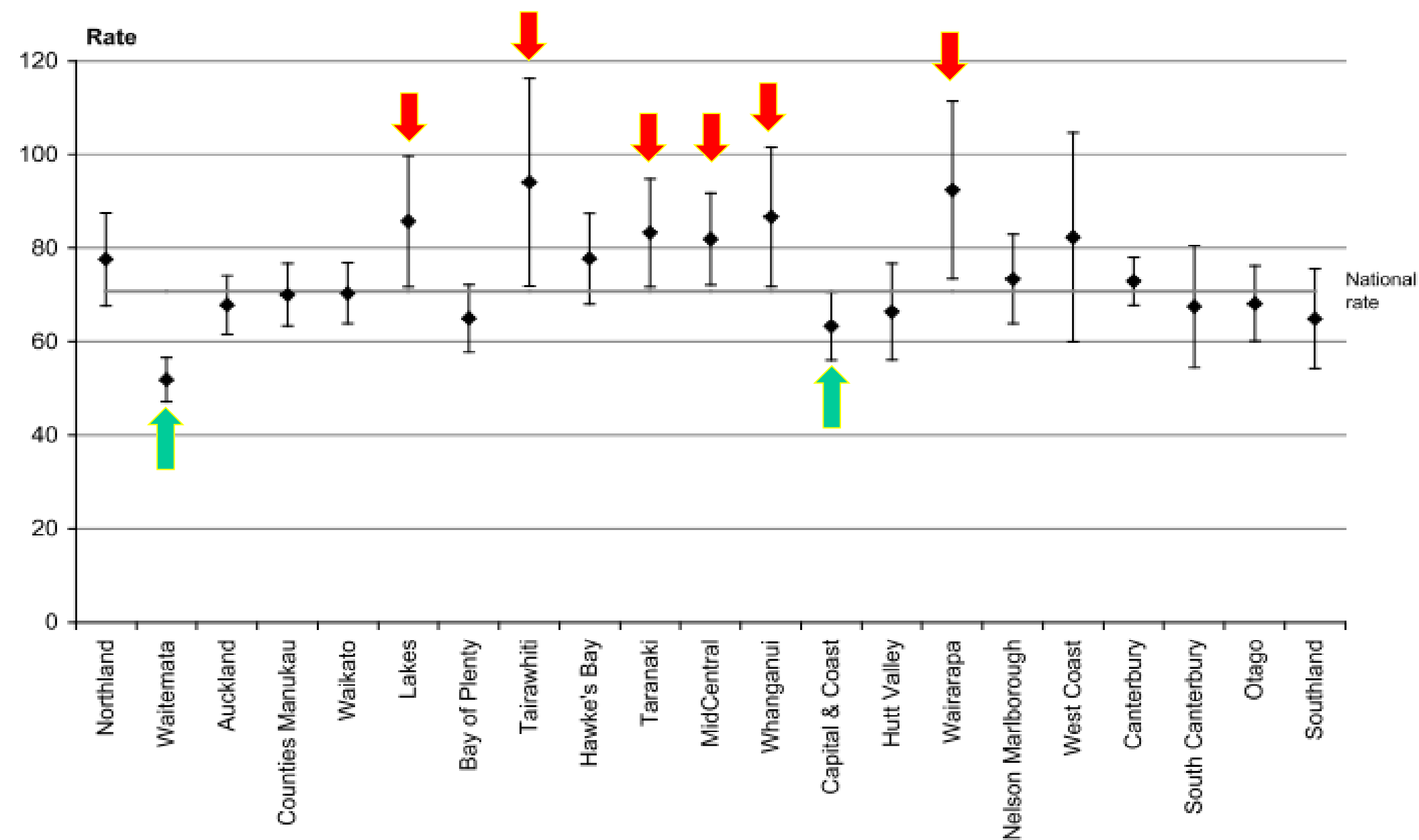


Figure 24: Ischaemic heart disease death rates by DHB region, total population, age-standardised rates, 2009



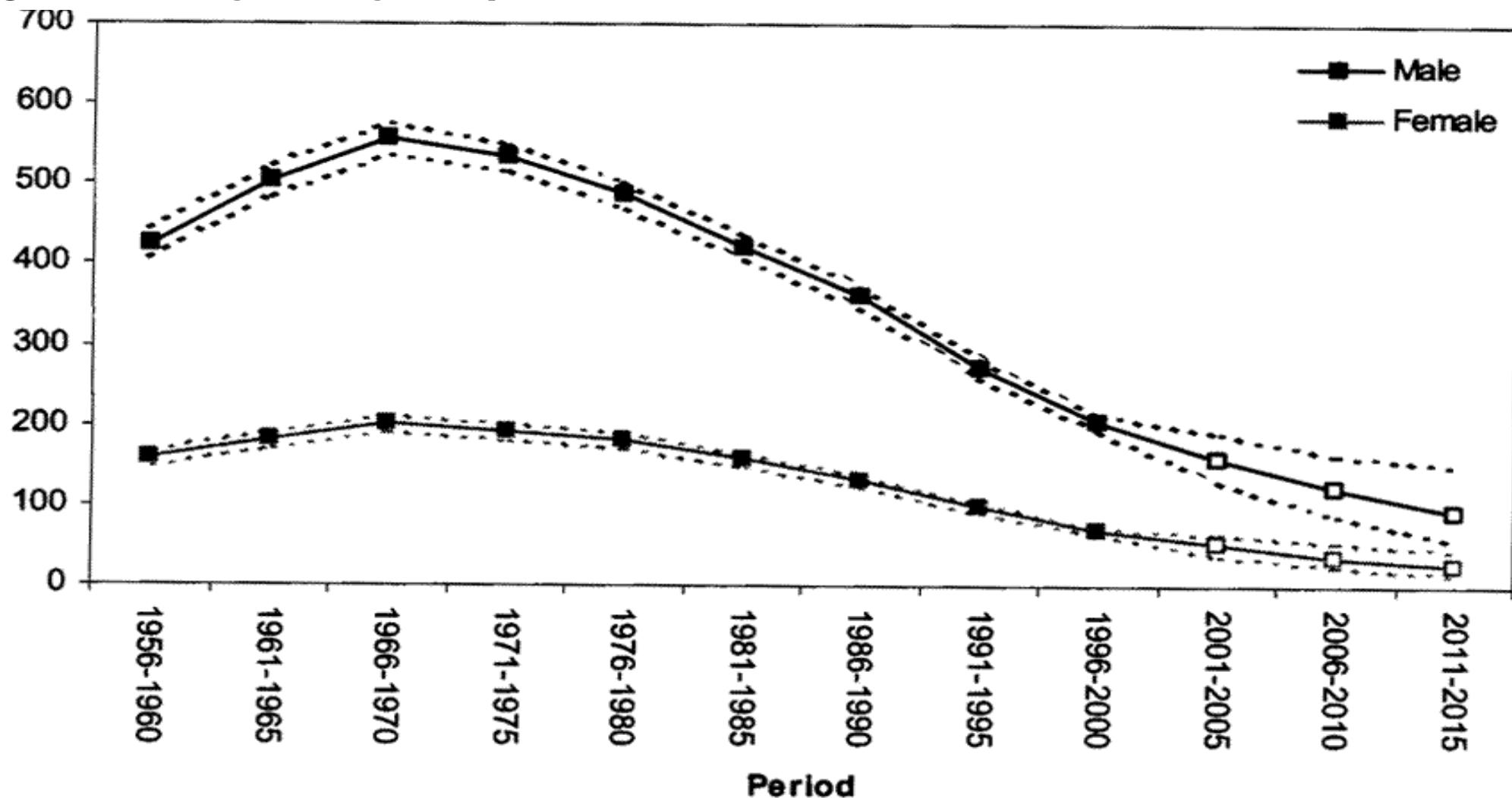


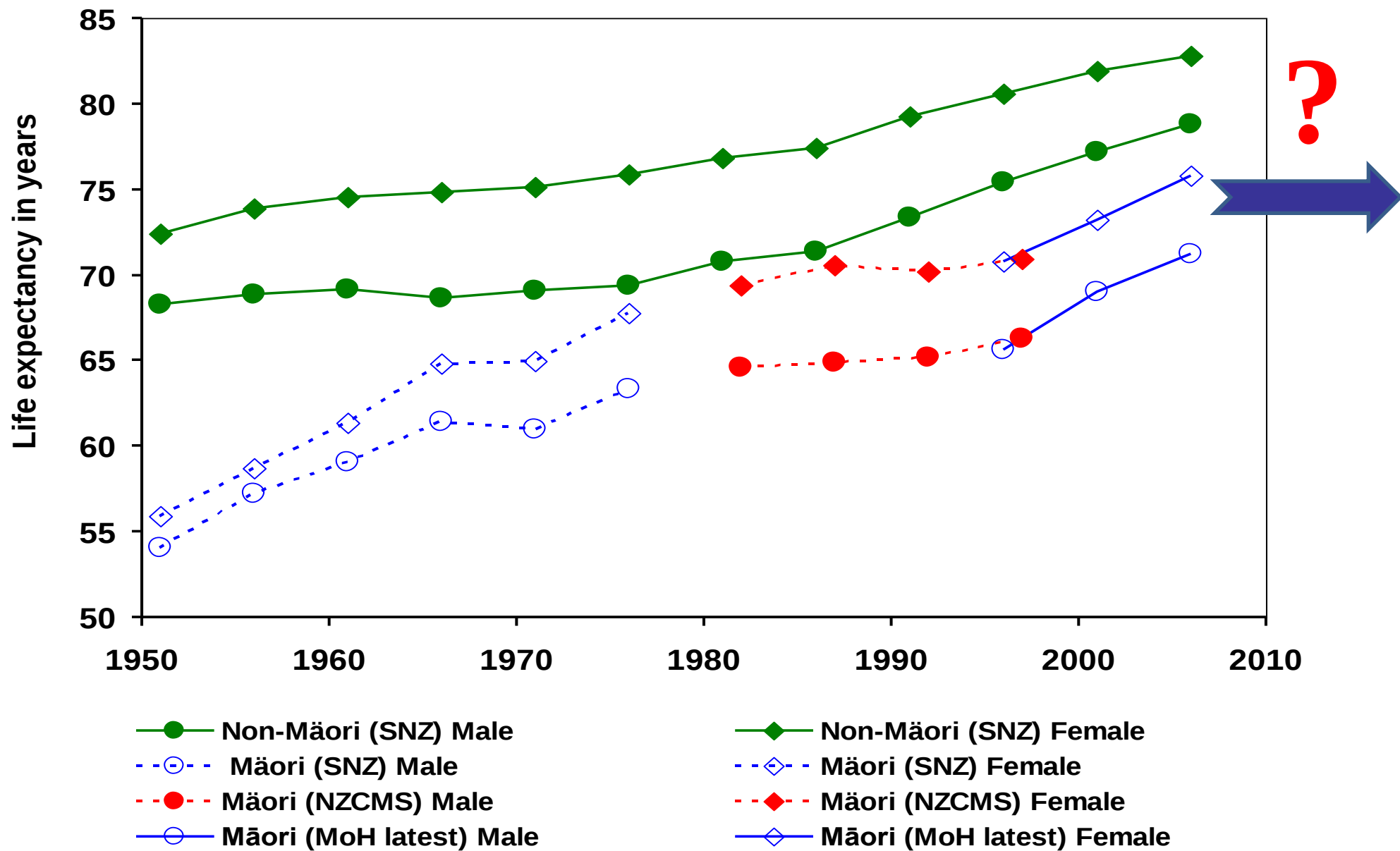
The Future

IHD Mortality in NZ Trends and Projections

Tobias et al NZMedJ April 2006

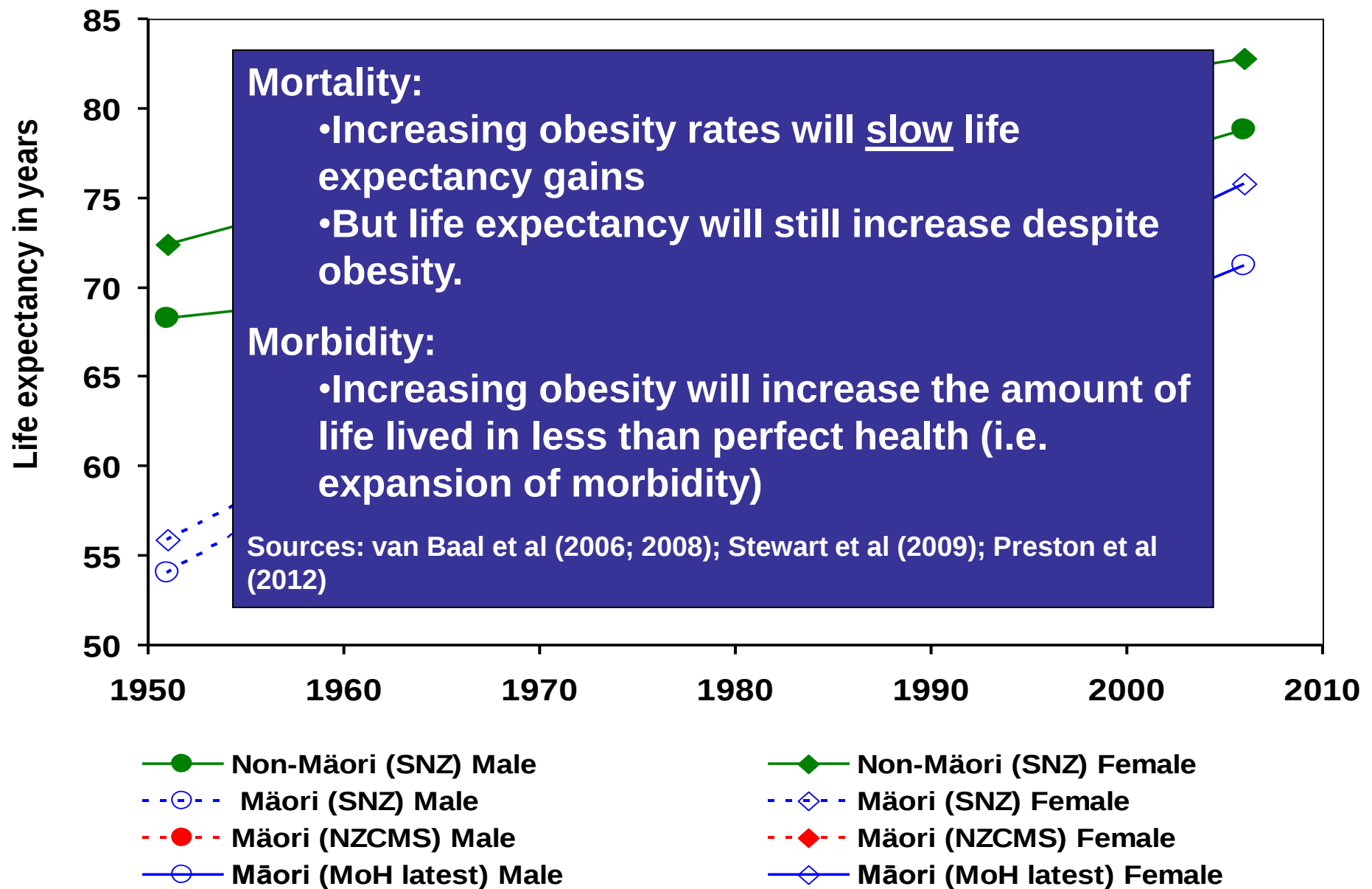
Total population age-standardised IHD mortality projections
ages 35-74 yrs, 5 year periods 1956-2015





Source: Blakely T, Tobias M, Robson B, Ajwani S, Bonne M, Woodward A. Widening ethnic mortality disparities in New Zealand 1981-99. *Soc Sci Med* 2005;61(10):2233-2251.

Updated in: Blakely T. "Social injustice is killing people on a grand scale". *N Z Med J* 2008;121(1281):7-11.

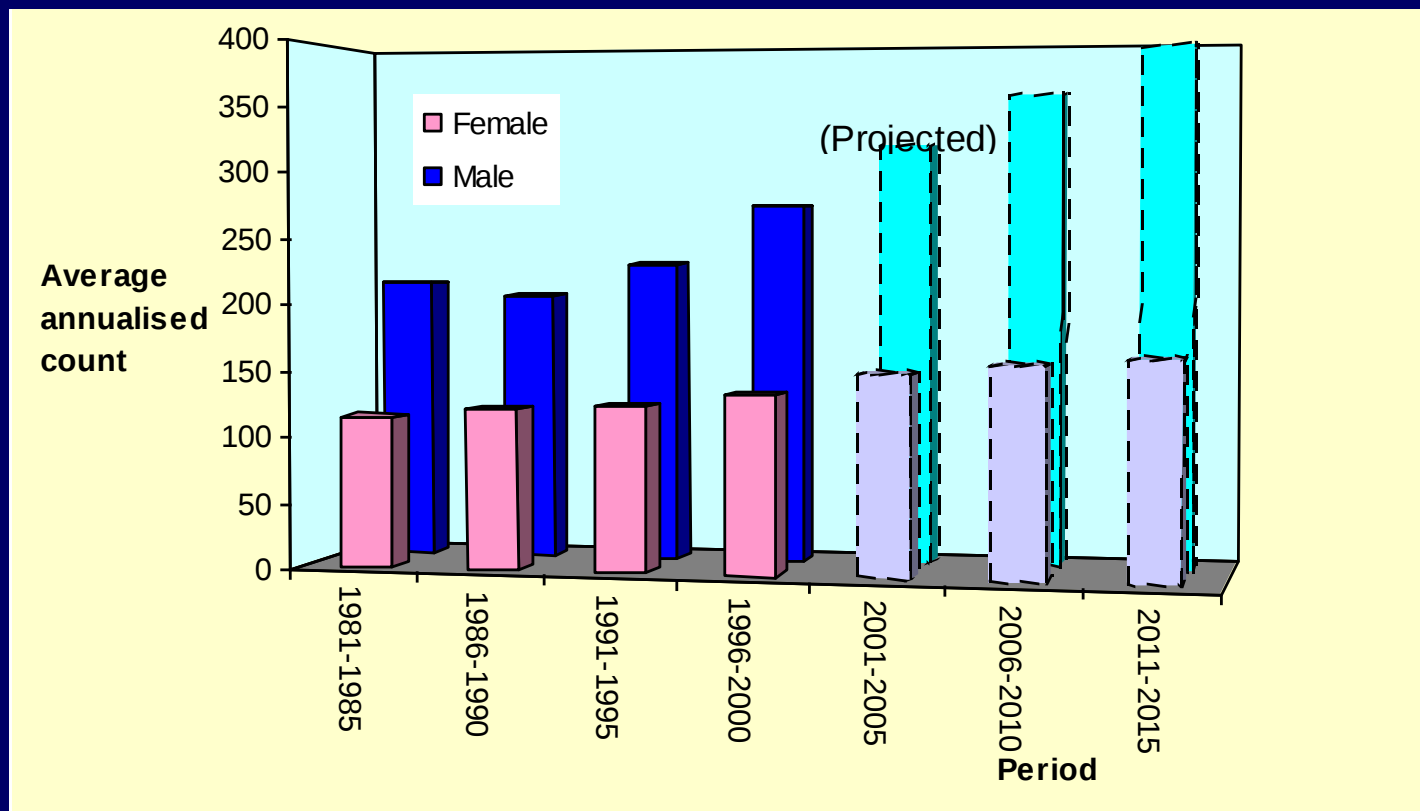


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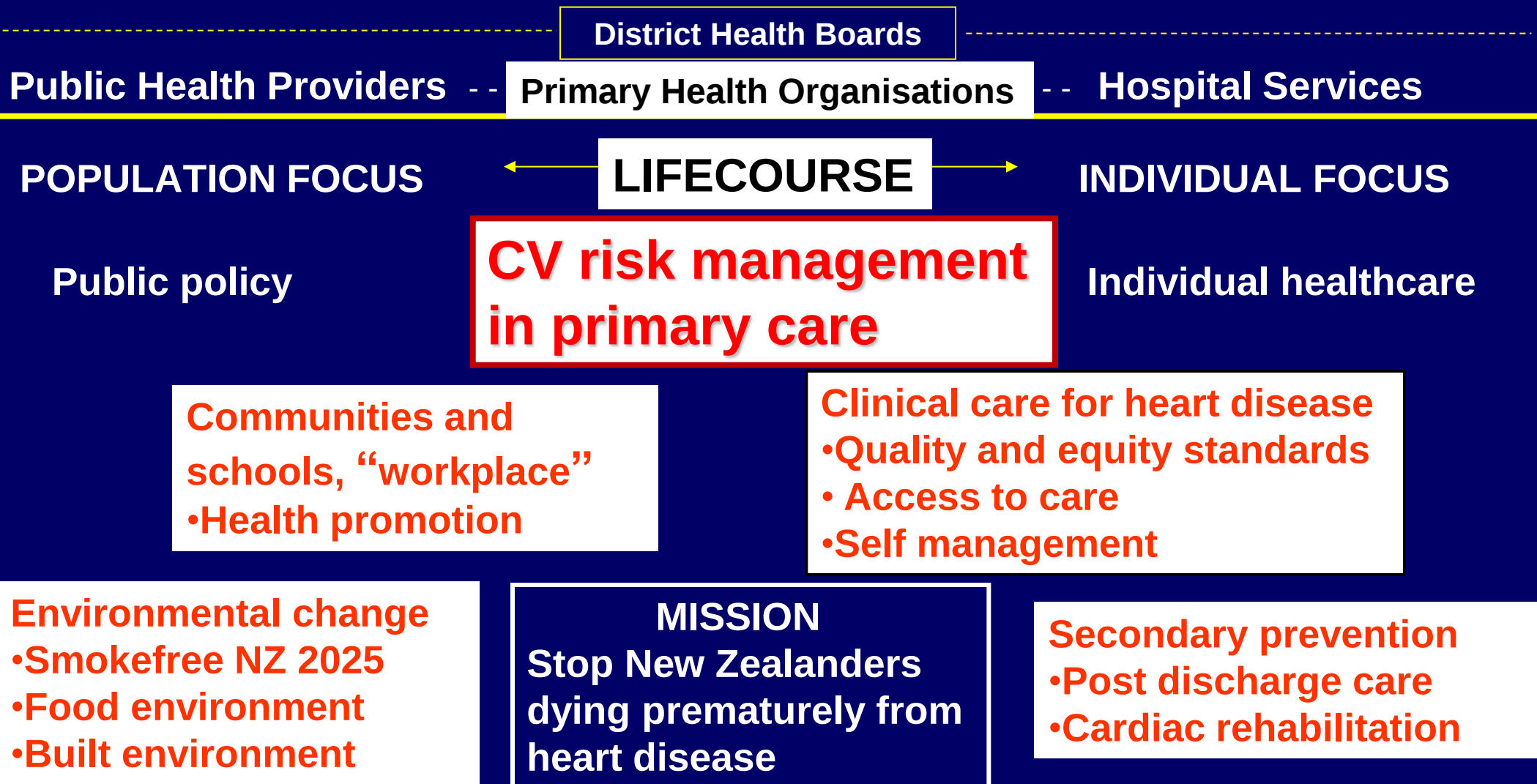
An increasing burden for Māori

Annualised CHD mortality count for Māori men and women, 35 – 74 years, 1981 – 2015



For Māori, an actual increase in the absolute number of deaths is projected for males and a relatively stable number for females

The Heart Health Continuum also The Lifecourse Journey



Why bother about CVD in primary care?

In a population of 10,000 primary care patients, every year there are about:

- 10 coronary & stroke deaths
- 1 diabetic death
- 1 breast cancer death
- 1 prostate cancer death
- 1 suicide every year
- 1 road traffic death
- (1 cervical cancer death every 5 years)

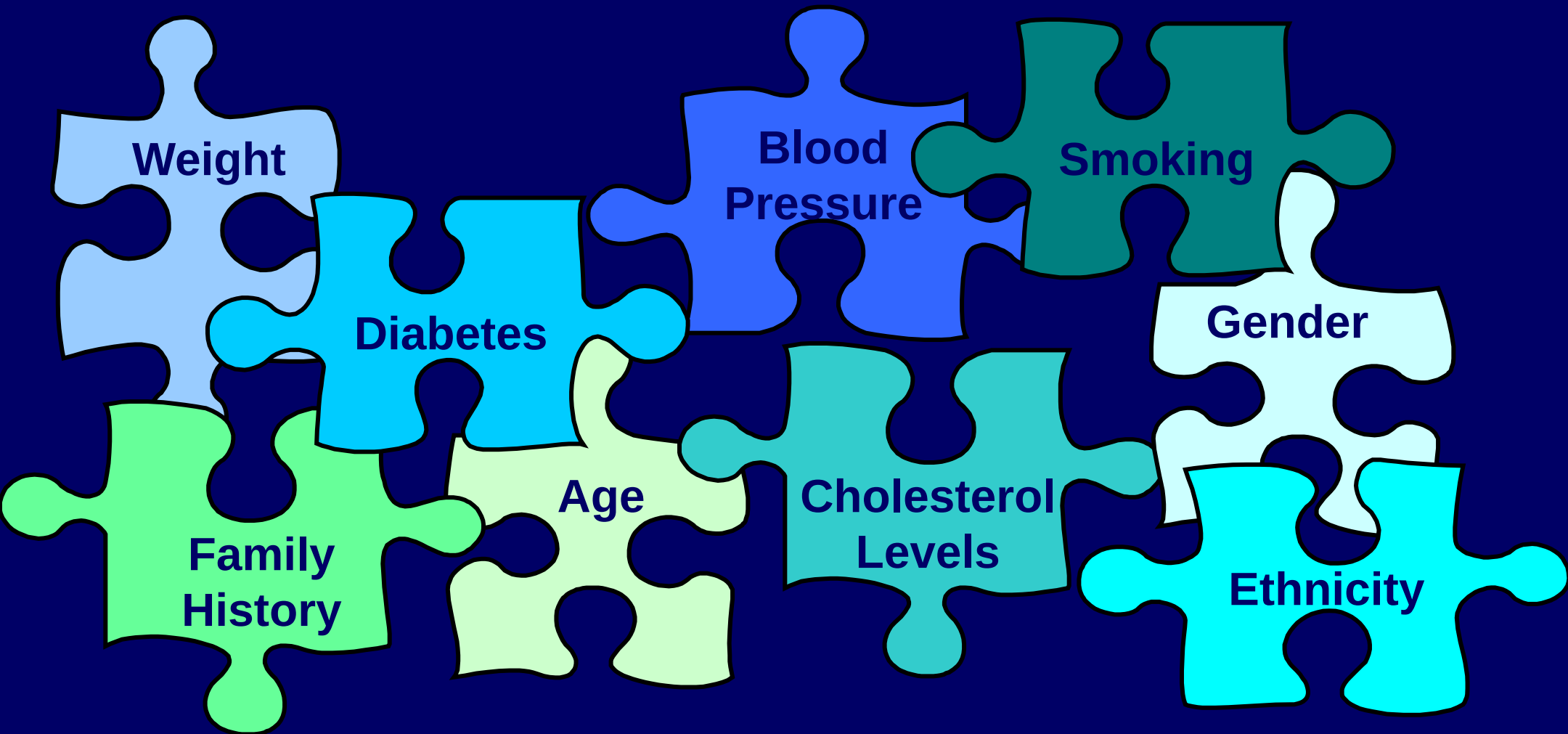
Assessment of absolute CV risk

What to measure and record

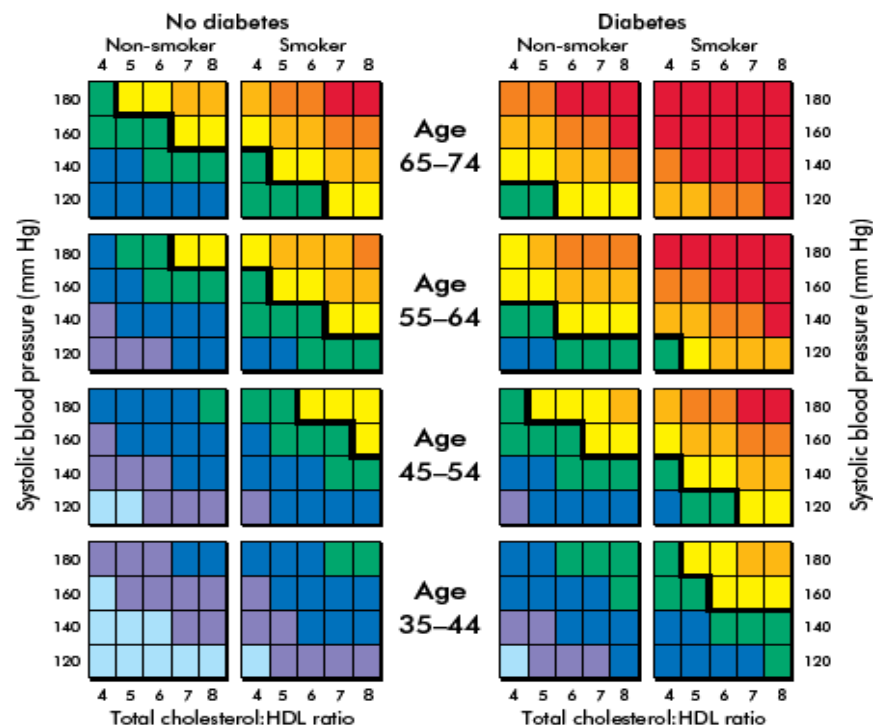
- Age and sex
- Ethnicity
- Smoking history
- Family history
- Fasting lipid profile and fasting glucose
- Average of two sitting BPs
- BMI and waist circumference

**Assessment of absolute risk is
the starting point for discussion**

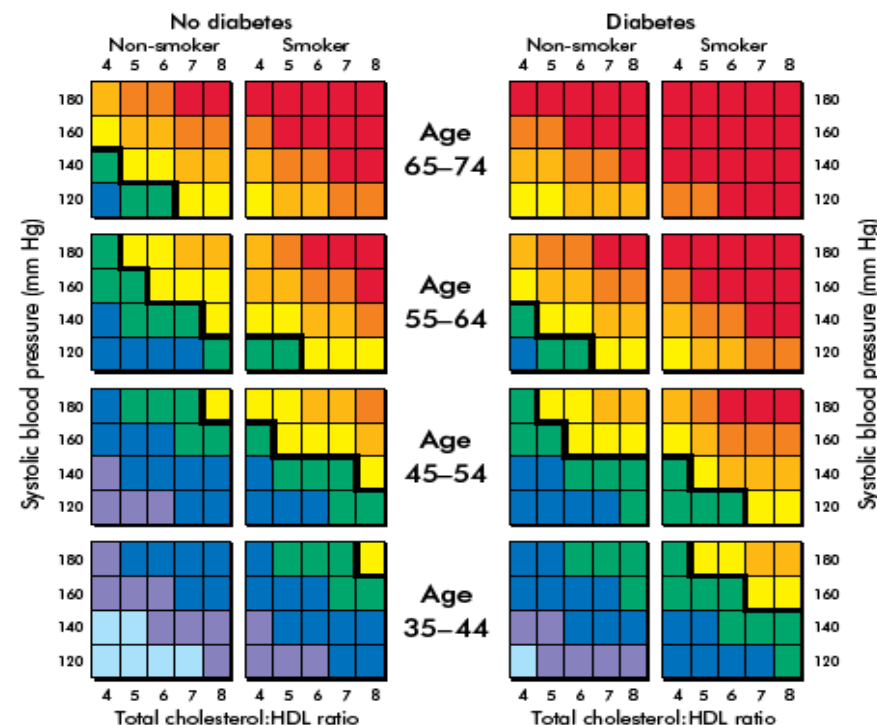
What does a Risk Assessment Involve?



Risk level women

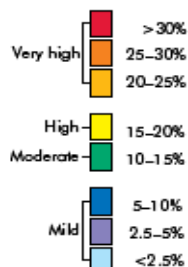


Risk level men



Key

5-year cardiovascular disease (CVD) risk (fatal and non-fatal)



Using the Charts

- Identify the chart relating to the person's sex, diabetic status, smoking history and age.
- Within the chart choose the cell nearest to the person's age, systolic blood pressure (SBP) and total cholesterol (TC):HDL ratio. People who fall exactly on a threshold between cells are placed in the cell indicating higher risk.

Note: The risk charts now include values for SBP alone, as this is the most informative of conventionally measured blood pressure parameters for cardiovascular risk. Diastolic pressures may add some predictive power, especially at younger ages (eg, a diastolic pressure consistently >100 mm Hg in a patient with SBP values between 140 and 170 mm Hg).

Certain groups may have CVD risk underestimated using these charts. See Cardiovascular Guidelines Handbook (2009 Edition) for details.

Risk level: 5-year CVD risk (fatal and non-fatal)	Benefits: NNT for 5 years to prevent one event (CVD events prevented per 100 people treated for 5 years)		
	1 intervention (25% risk reduction)	2 interventions (45% risk reduction)	3 interventions (55% risk reduction)
30%	13 (7.5 per 100)	7 (14 per 100)	6 (16 per 100)
20%	20 (5 per 100)	11 (9 per 100)	9 (11 per 100)
15%	27 (4 per 100)	15 (7 per 100)	12 (8 per 100)
10%	40 (2.5 per 100)	22 (4.5 per 100)	18 (5.5 per 100)
5%	80 (1.25 per 100)	44 (2.25 per 100)	36 (3 per 100)

NNT = Number needed to treat

Based on the conservative estimate that each intervention: aspirin, BP treatment (lowering SBP by 10 mm Hg) or lipid modification (lowering LDL-C by 20%) reduces cardiovascular risk by about 25% over 5 years.

Note: Cardiovascular events are defined as myocardial infarction, new angina, ischaemic stroke, transient ischaemic attack (TIA), peripheral vascular disease, congestive heart failure and cardiovascular-related death.

kidney Health



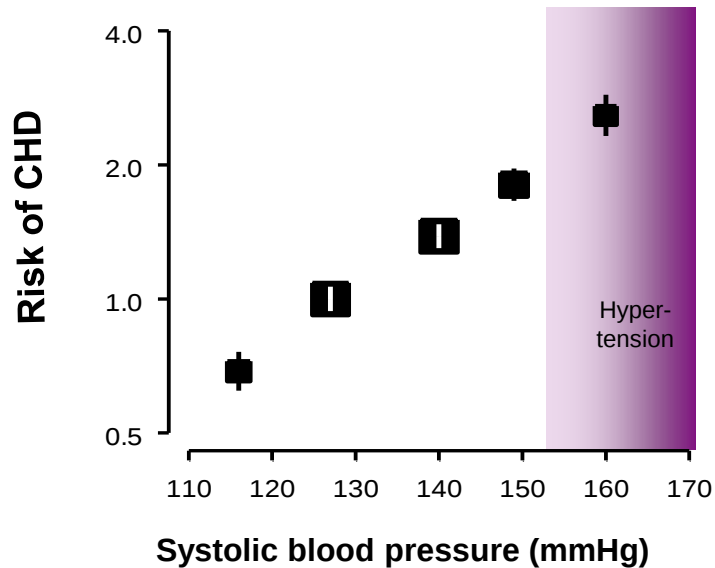
STROKE

Global

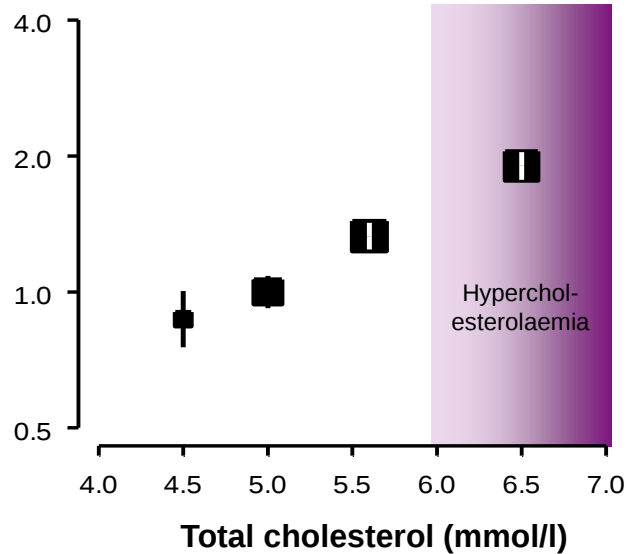


APCSC: blood pressure, cholesterol and body mass index and the risk of coronary heart disease

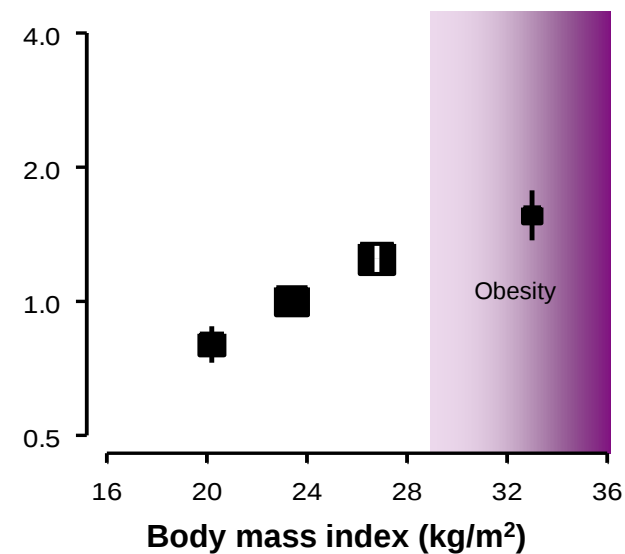
Blood pressure



Cholesterol

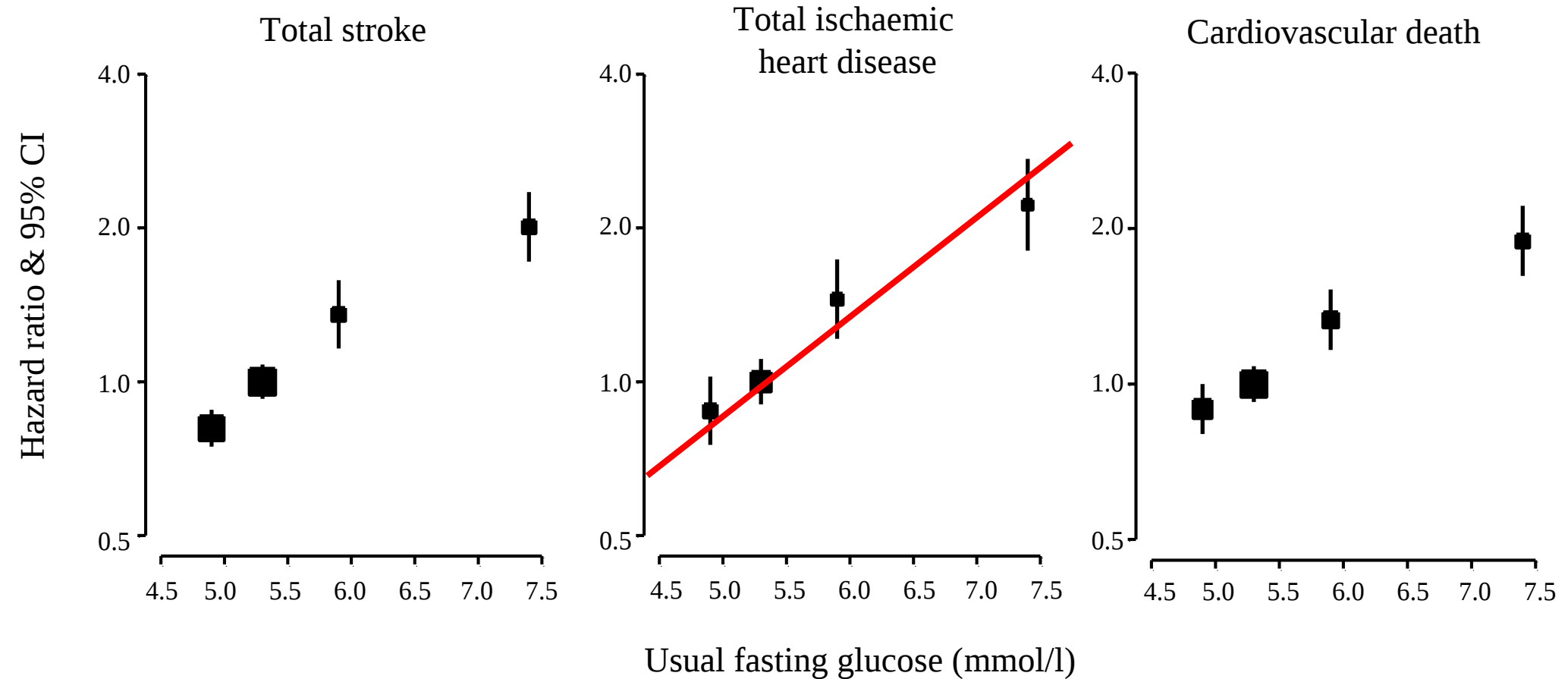


Body mass index



APCSC: glucose and the risks of stroke, CHD, CV death

238,257 participants and 1.2M person years of follow up

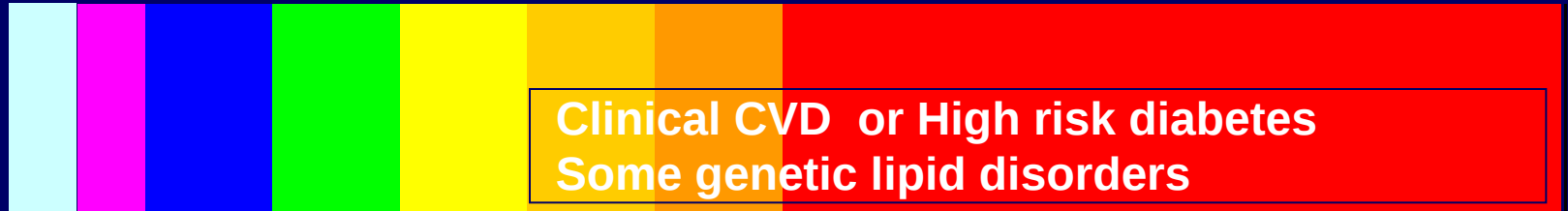


1mmol/l reduction in UFG relates to 23% reduced risk IHD

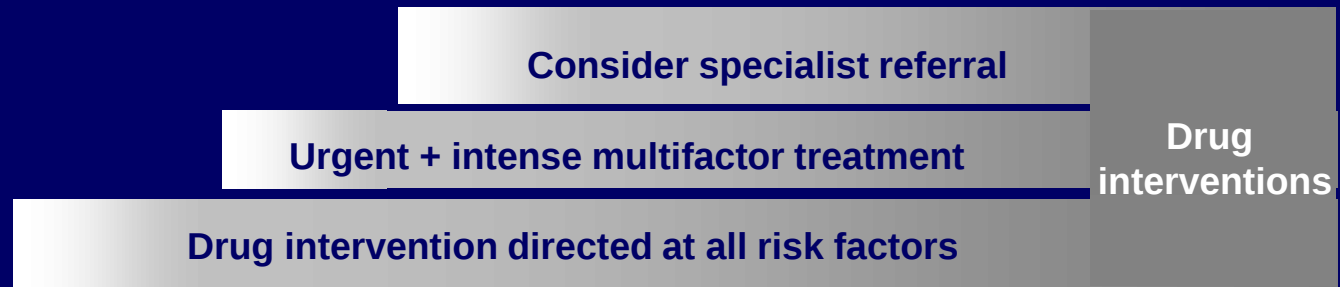
**Diabetes Care
27: 2836, 2004**

0 5 10 15 20 25 30 **Clinically High Risk**

**Adjusted
CVD Risk**



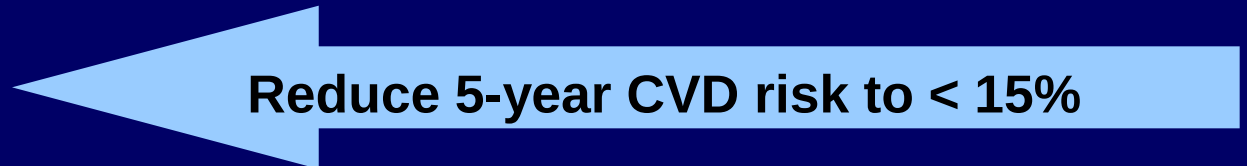
**Treatment
Intensity**



Lifestyle change
Healthy eating & physical activity

**CVD Risk
goal**

Reduce risk



Intervention for high absolute risk >15% 5 year CV risk

Vigorous lifestyle measures and ---

Simultaneous drug treatment of all modifiable risk factors

- Aspirin (low dose)
- BP lowering (combinations of thiazide, ACE inhibitor, beta-blocker)
- Lipid modification (statin usually)
- Glycaemic control if diabetic



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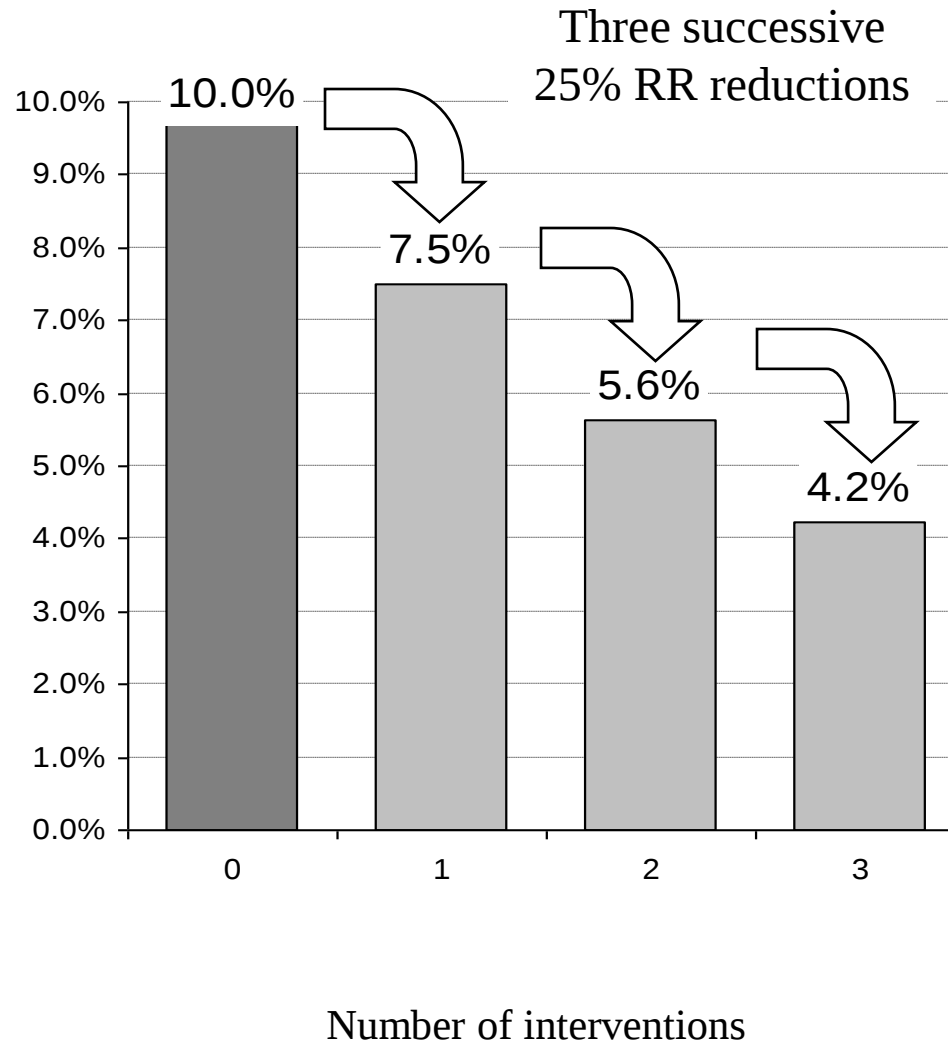


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Combined effect of 3 drugs (or 2 drugs & smoking cessation) that each lower CVD by approximately 25%

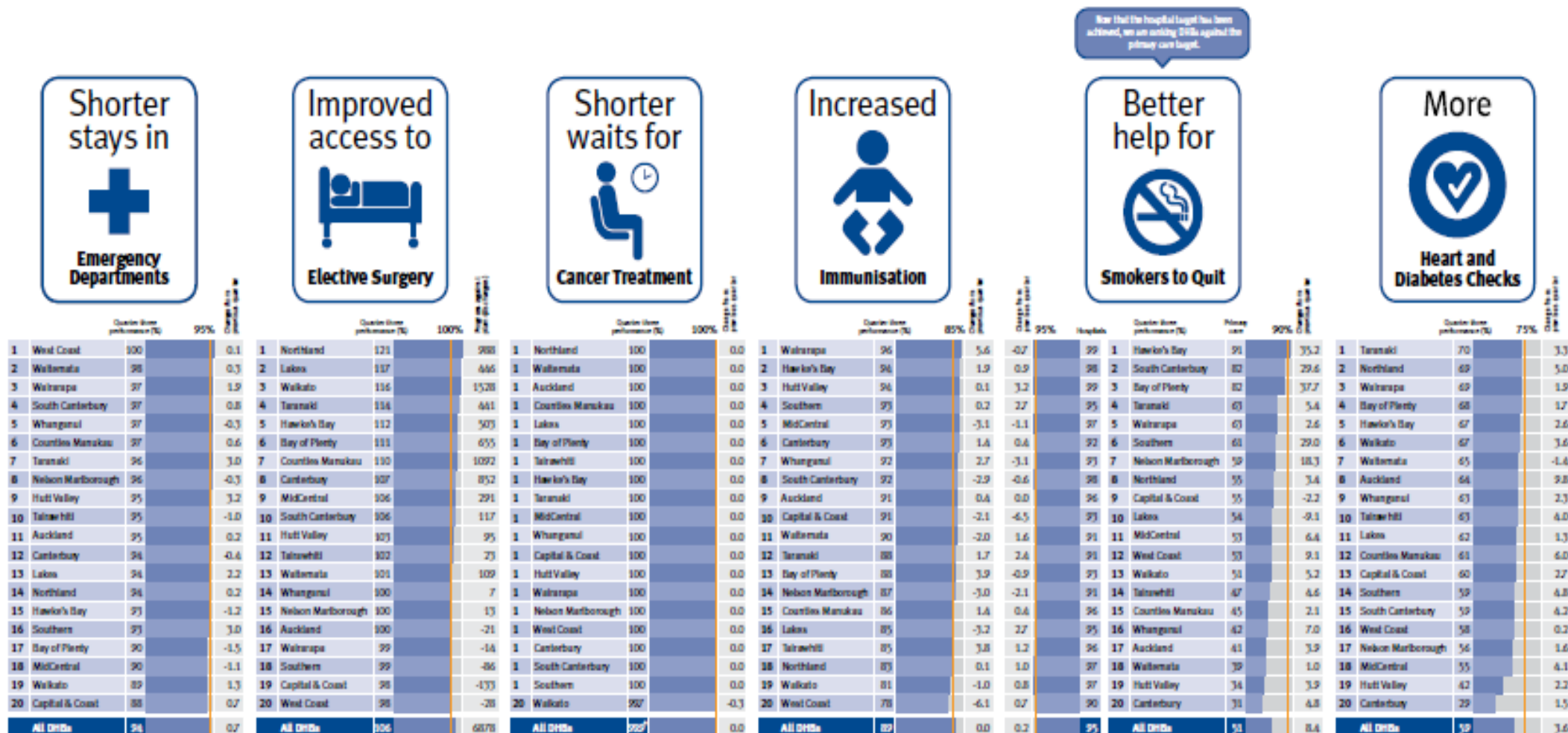


A New National Health Target

- In 2012, heart health and diabetes checks became **a new national health target** mandated in primary care
- Linkage of **population and individual health care** – a keystone initiative and step change
- Discuss **screening vs risk assessment**
- An entry point for **effective life-long management**
- Focus on the disadvantaged – an immediate opportunity to **reduce inequalities**

How is My DHB performing?

www.health.govt.nz/healthtargets



Smokers to Quit

Change from previous quarter	90%	Primary care	Quarter two performance (%)	Hospitals	95%	Change from previous quarter
11.4		63	1 Lakes	100		0.0
4.5		56	2 Hawke's Bay	100		1.0
13.3		52	3 Northland	98		3.1
0.5		60	4 Wairarapa	98		-2.1
10.2		53	5 South Canterbury	97		0.1
1.3		30	6 Hutt Valley	96		-1.3
3.2		38	7 Waitemata	96		-0.2
0.4		44	8 Bay of Plenty	96		3.1
8.3		40	9 Nelson Marlborough	96		-0.2
-1.2		57	10 Capital & Coast	96		-1.7
3.2		43	11 Counties Manukau	95		0.0
3.9		37	12 Auckland	95		2.0
3.8		46	13 Waikato	94		1.2
1.9		42	14 Tairāwhiti	93		-1.5
-0.2		35	15 Whanganui	93		0.1
4.9		58	16 Taranaki	93		5.9
0.4		32	17 Southern	92		1.9
-0.6		26	18 Canterbury	90		1.7
0.0		47	19 MidCentral	89		-2.5
4.2		44	20 West Coast	89		-1.9
3.1		43	All DHBs	95		0.9

Better help for smokers to quit

The target is 95 percent of patients who smoke and are seen by a health practitioner in public hospitals, and 90 percent of patients who smoke and are seen by a health practitioner in primary care, are offered brief advice and support to quit smoking.

National Health Target: More heart and diabetes checks Q3 Jan-Mar 2013

		Quarter three performance (%)	75%	Change from previous quarter
1	Taranaki	70		3.3
2	Northland	69		5.0
3	Wairarapa	69		1.9
4	Bay of Plenty	68		1.7
5	Hawke's Bay	67		2.6
6	Waikato	67		3.6
7	Waitemata	65		-1.4
8	Auckland	64		9.8
9	Whanganui	63		2.3
10	Tairāwhiti	63		4.0
11	Lakes	62		1.3
12	Counties Manukau	61		6.0
13	Capital & Coast	60		2.7
14	Southern	59		4.8
15	South Canterbury	59		4.2
16	West Coast	58		0.2
17	Nelson Marlborough	56		1.6
18	MidCentral	55		4.1
19	Hutt Valley	42		2.2
20	Canterbury	29		1.5
All DHBs		59		3.6

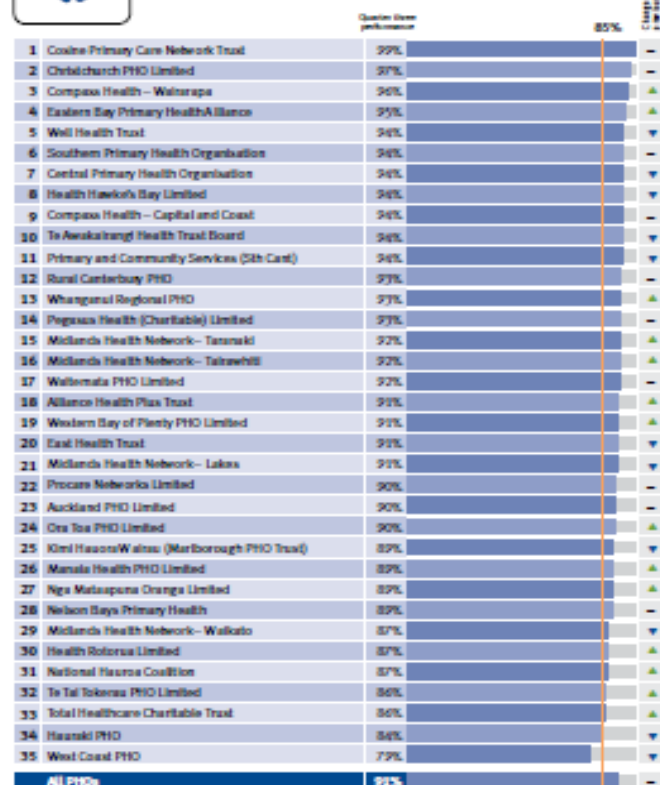


How is My PHO performing?

2012/13 QUARTER THREE (JANUARY TO MARCH) RESULTS



Increased Immunisation Using PHO Performance Programme (PPP) Data

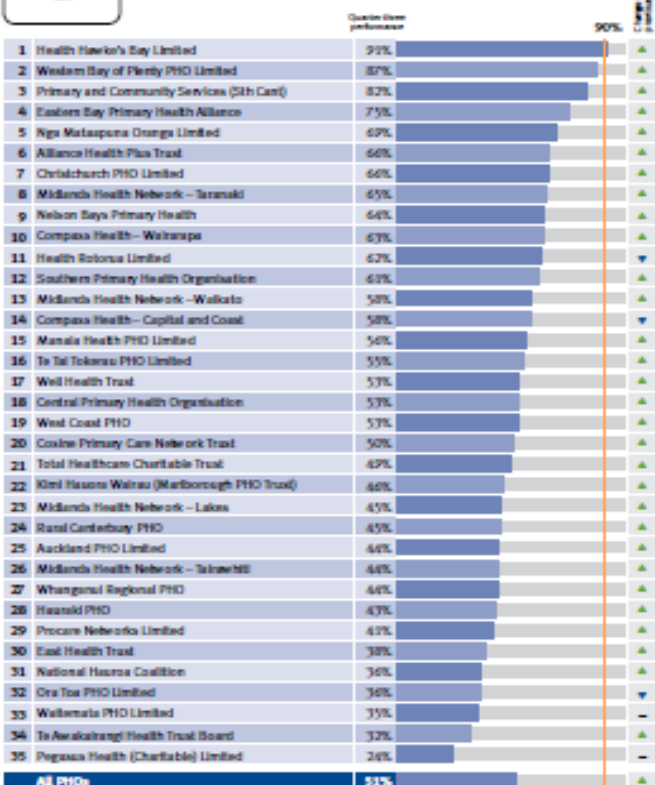


Increased immunisation

The national immunisation target is 85 percent of eight-month-olds will have their primary course of immunisation at six weeks, three months and five months on time by July 2013. This quarterly progress includes children who turned eight months between January and March 2013, are enrolled in a PHO and who were fully immunised at that stage. Consequently, the All PHOs percentage above (90%) will be different to the All DBs percentage (89%).



Better Help for Smokers to Quit Using PHO Performance Programme (PPP) Data

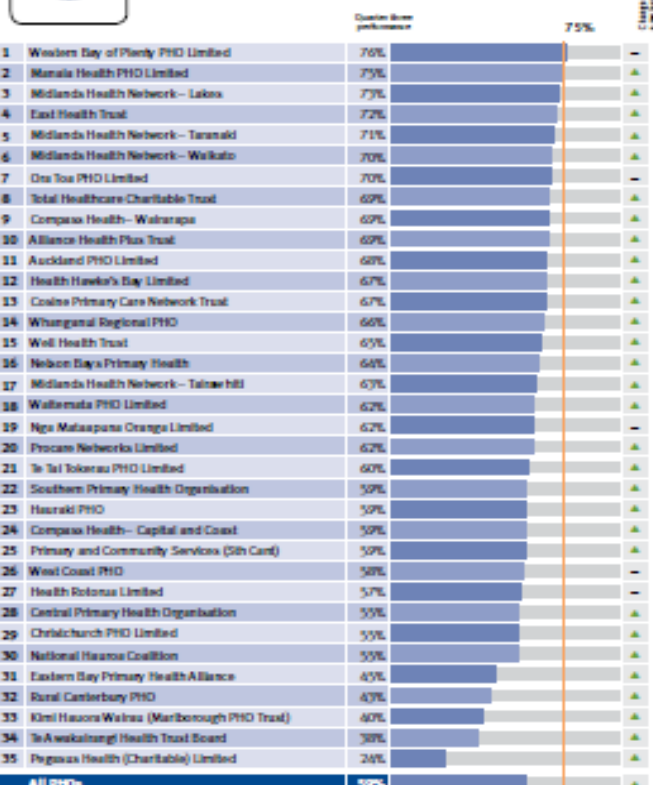


Better help for smokers to quit

The national target is that 90 percent of patients who smoke and are seen by a health practitioner in primary care are offered brief advice and support to quit smoking.



More Heart and Diabetes Checks Using PHO Performance Programme (PPP) Data



More heart and diabetes checks

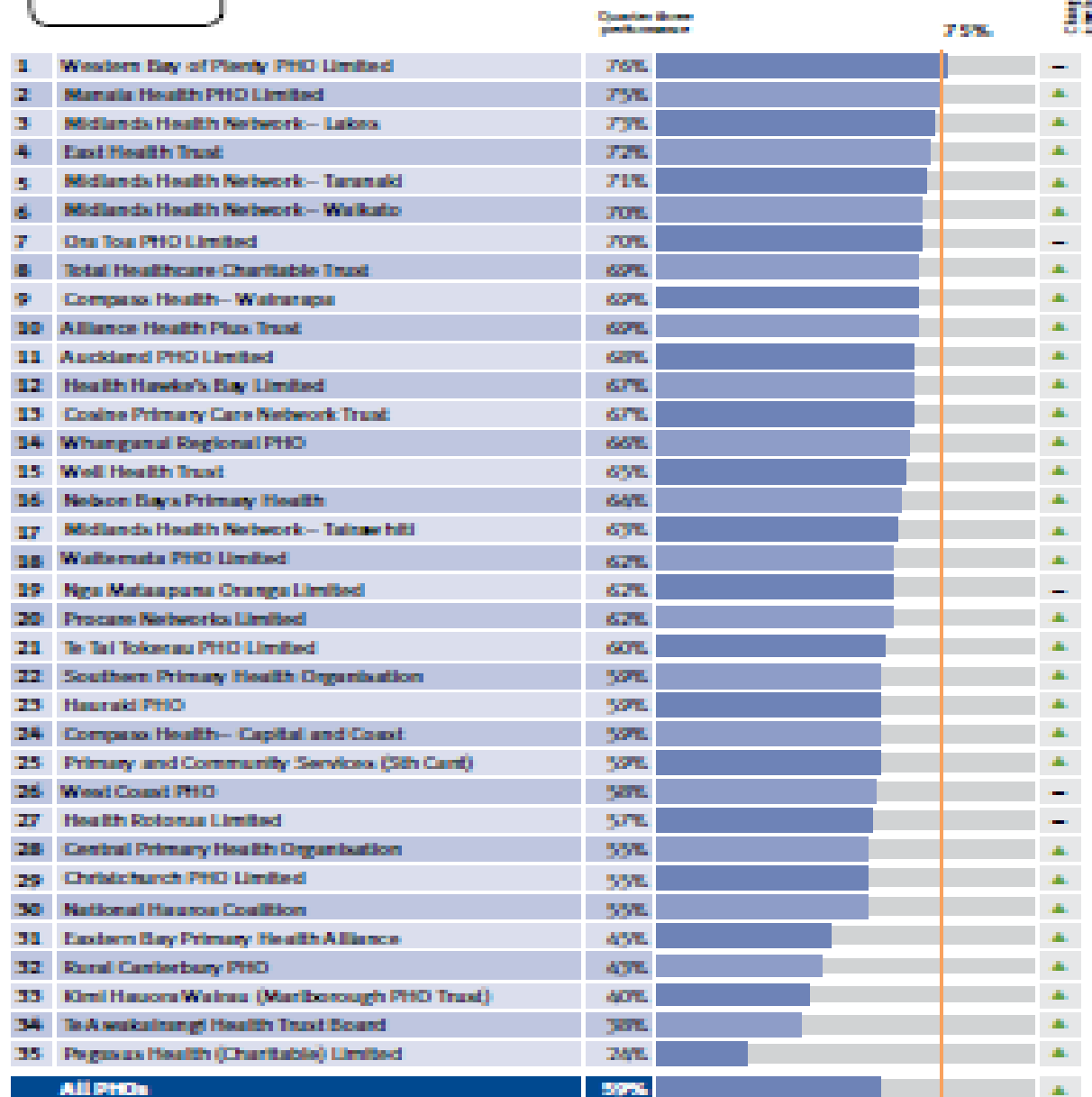
This target is 90 percent of the eligible population will have had their cardiovascular risk assessed in the last five years to be achieved in stages by July 2014. The first stage is to achieve 75 percent by July 2013.

More information on the health targets can be found on www.health.govt.nz/healthtargets

PHO results Quarter three Jan-Mar 2013

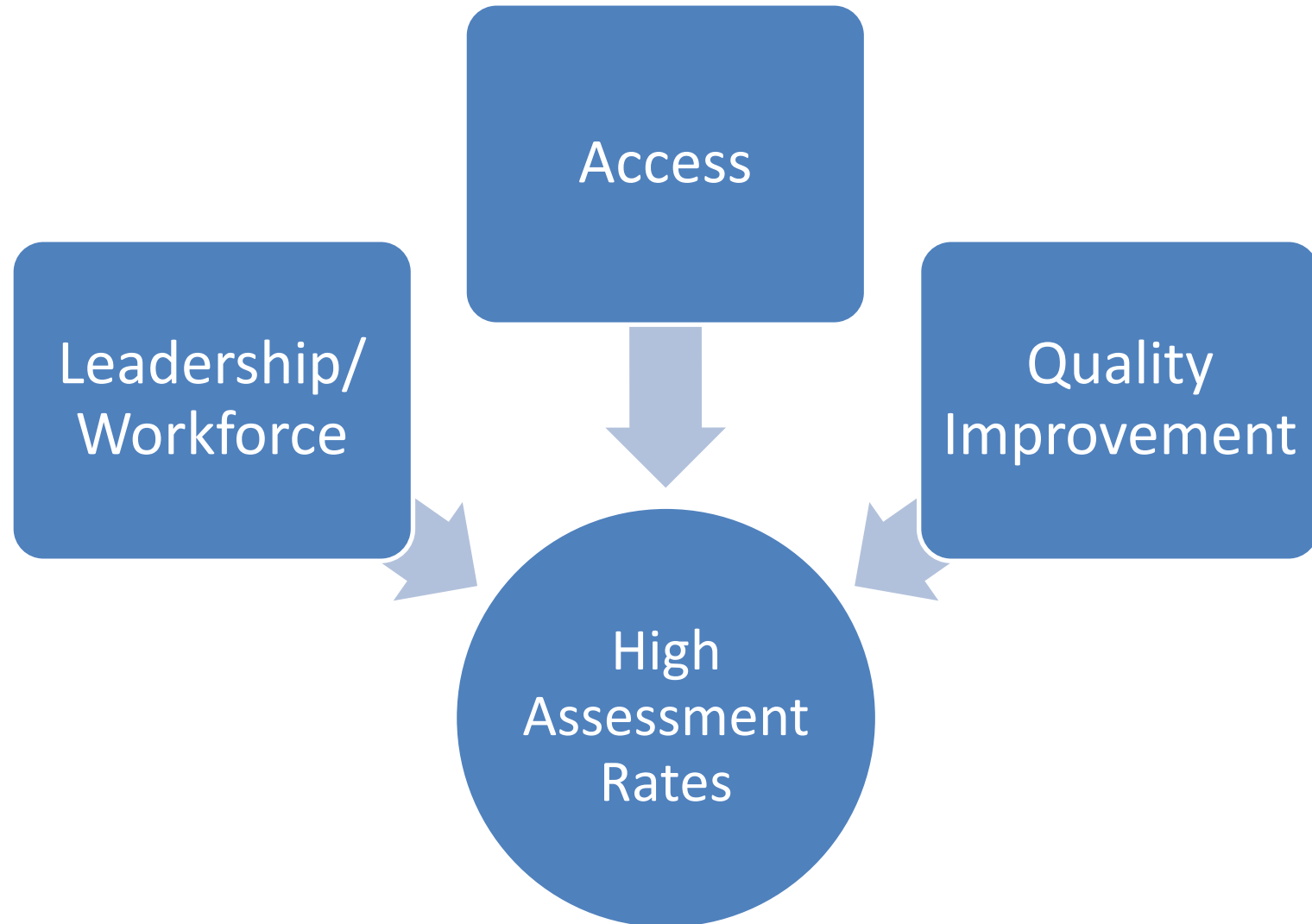


More Heart and Diabetes Checks Using PHO Performance Programme (PPP) Data



Leaders in Cardiovascular Risk Assessment

Factors Determining Success



Your
HEART FORECAST
© 2008-2012

Showing your risk of a heart attack, stroke or other major
problems with your arteries as you get older...

Start ►



Heart
Foundation

*Fulfil
a lifetime*

Taking control
My plan for heart health



