

# **IMPACT trial**

## **– improving CVD Management in Primary Care**

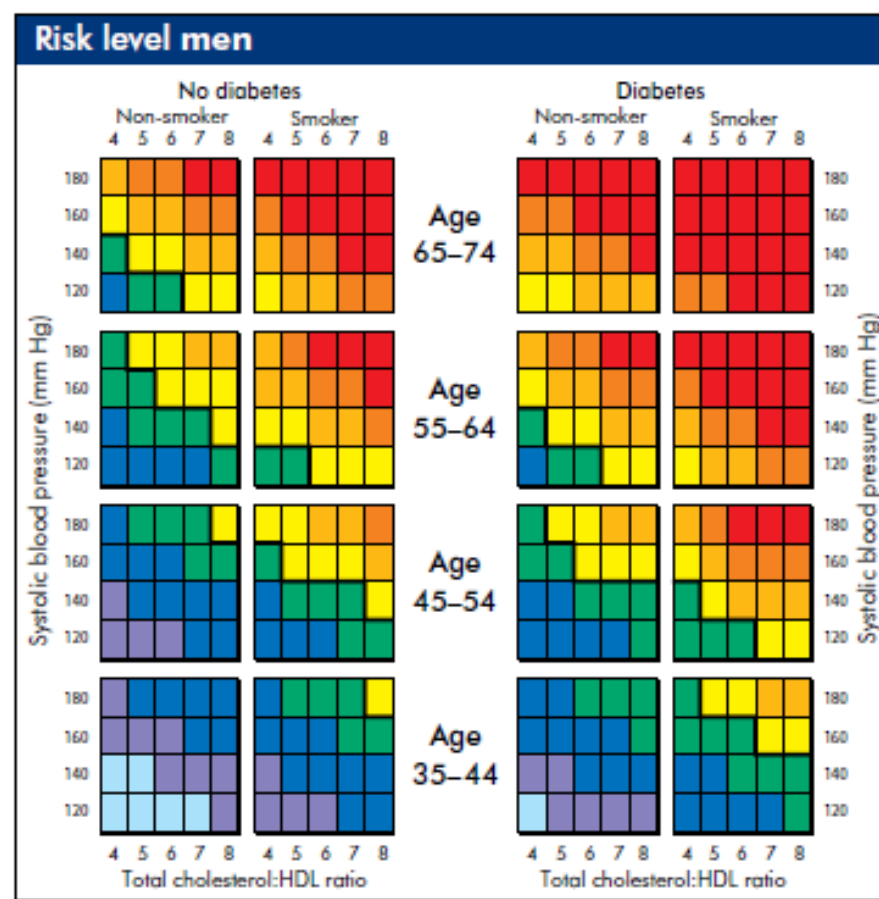
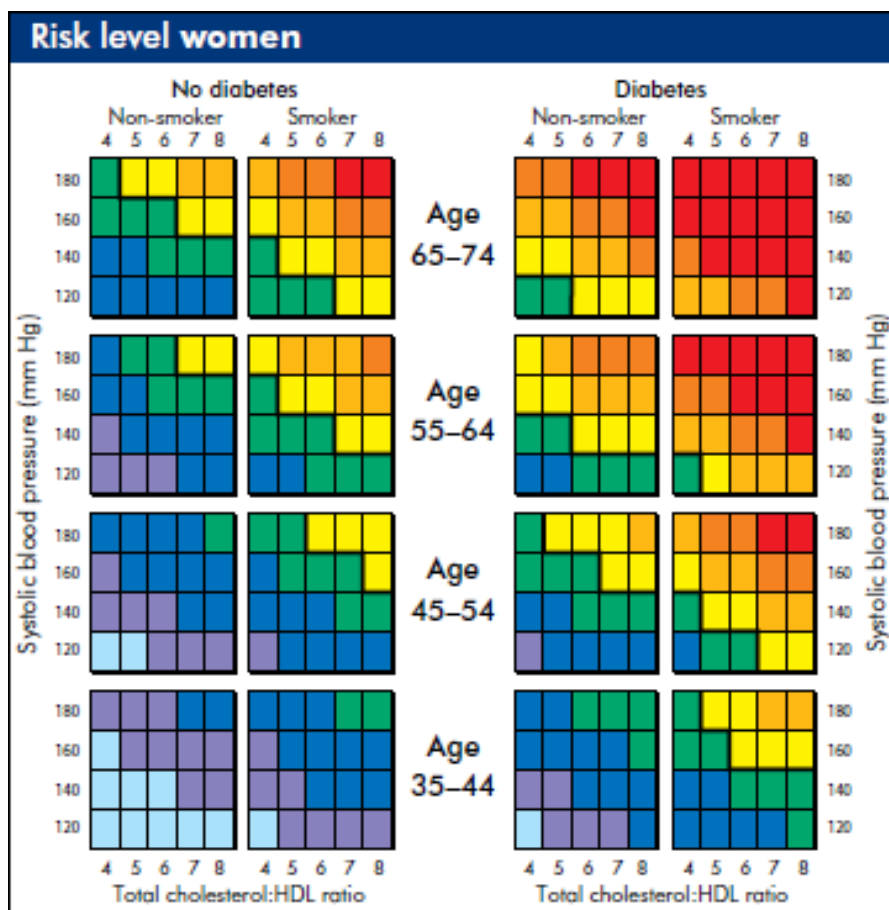
Raina Elley, Vanessa Selak, Sue Crengle, Matire  
Harwood, Angela Wadham, Dale Bramley,  
Anthony Rogers, Rod Jackson, Bruce Arroll

# Background

- CVD is biggest killer and leading cause of loss of healthy life years in NZ
- >200,000 with existing CVD
- 8-year disparity in life expectancy between Maori and European largely due to CVD
- CVD risk assessment and management guidelines



# CVD risk assessment & management

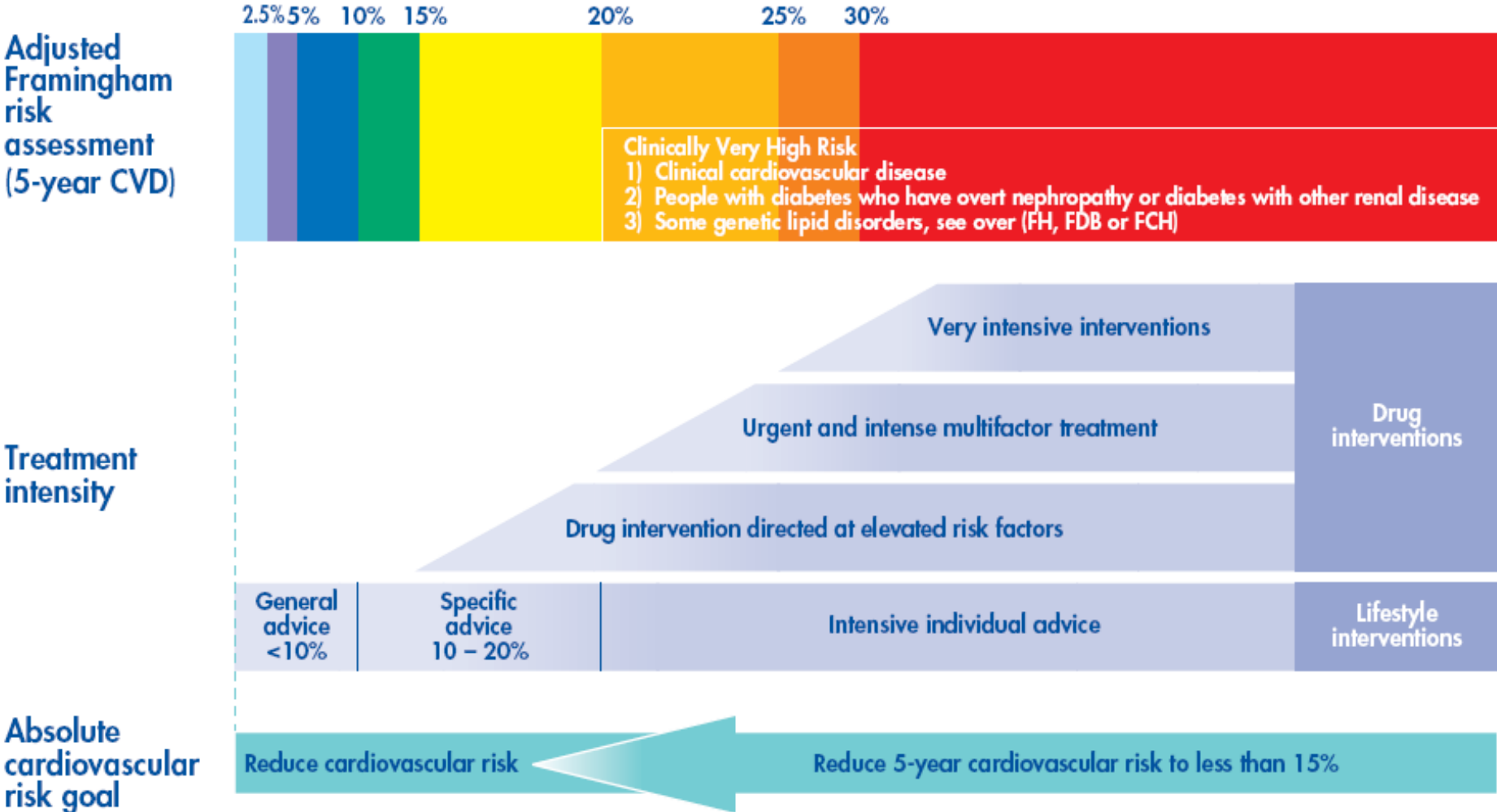


Risk level (for women and men)  
5-year cardiovascular disease (CVD) risk (fatal and non-fatal)



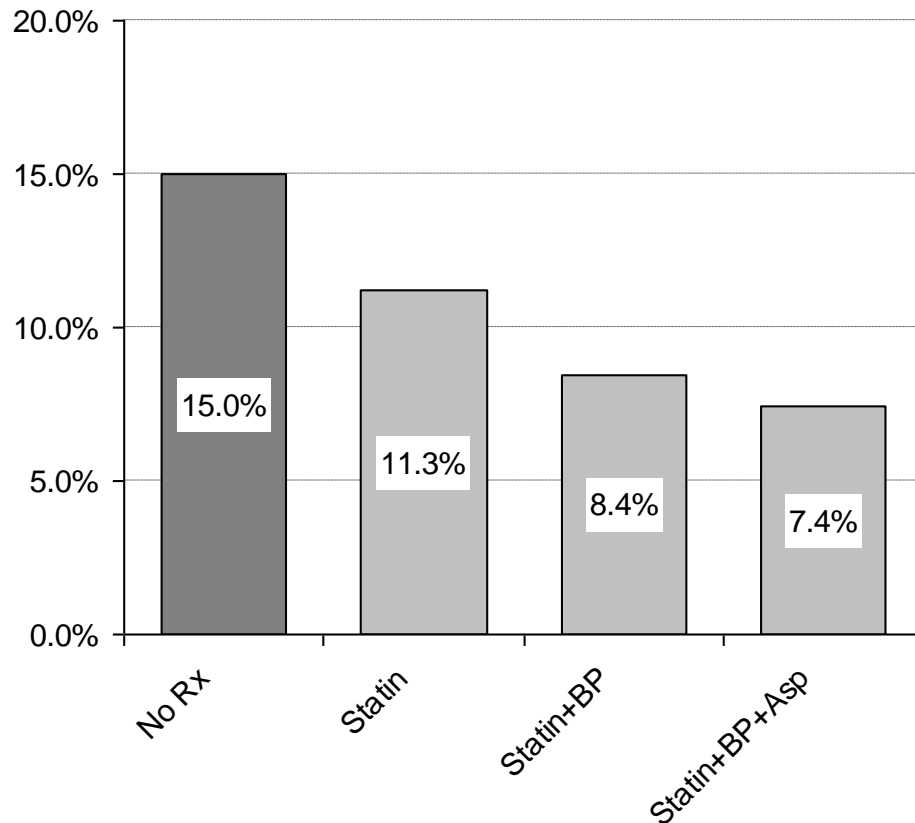
Risk level: 5-year CVD risk (fatal and non-fatal)	Benefits: NNT for 5 years to prevent one event (CVD events prevented per 100 people treated for 5 years)		
	1 intervention (25% risk reduction)	2 interventions (45% risk reduction)	3 interventions (55% risk reduction)
30%	13 (7.5 per 100)	7 (14 per 100)	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)

# CVD risk assessment & management

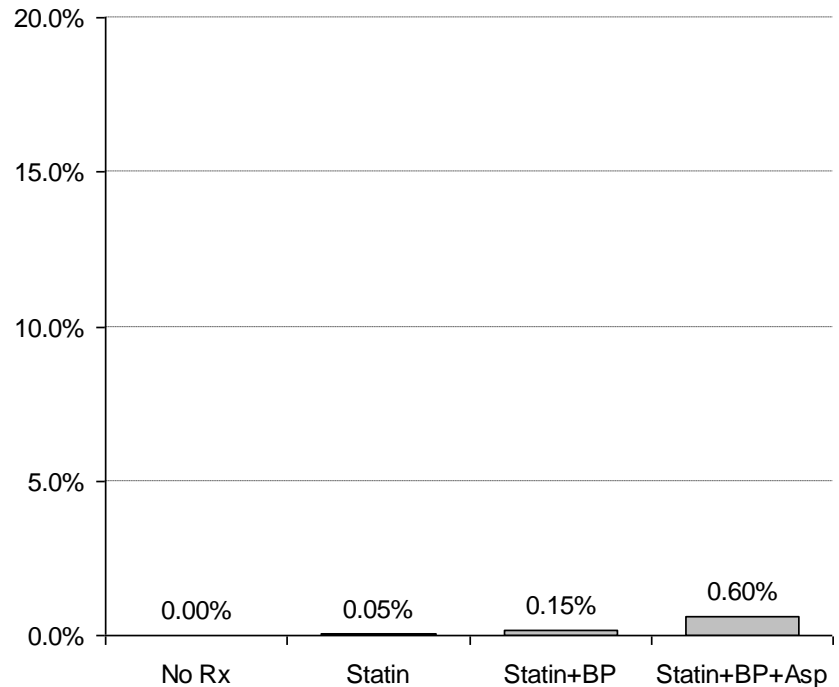


# Reduction CV events with preventive medications:

CVD events



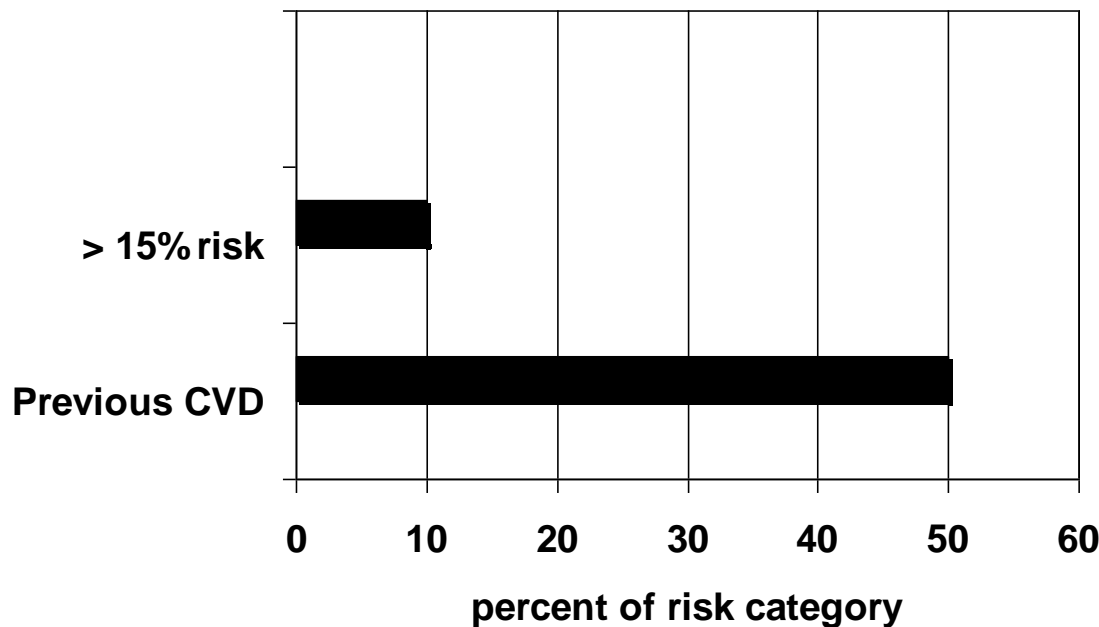
Major side effects\*



**\*e.g. man aged 60-69**

# CVD risk assessment & management

- Low rates of preventive treatment prescribing



PREDICT baseline data, Sue Wells 2009

# CVD risk assessment & management

- Low rates of preventive treatment prescribing
- Low rates of adherence ( $\geq 50\%$ )
  - Satisfactory refill adherence for thiazides is 55%, ACE inhibitors is 59% and beta-blocking agents is 66%  
(Andersson *Eur J Public Health* 2005,15(6): 621-6).

# CVD risk assessment & management

- Low rates of preventive treatment prescribing
- Low rates of adherence ( $\geq 50\%$ )
- WHO:
  - “increasing the effectiveness of adherence interventions may have a far greater impact on the health of the population than any improvement in specific medical treatments”

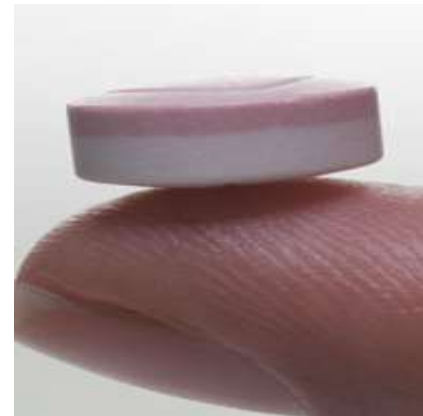
# Polypill

Put several medications in one tablet and call it the polypill

Wald & Law, BMJ 2003

Easier to take?

But...does one size fit all?



# IMPACT: (IMProving Adherence using Combination Therapy) Clinical Trial

- Aims:
  - To assess whether a ‘polypill’ can improve adherence and reduce CV risk (and events) compared with ‘usual care’ in people at high CV risk



**IMPACT**

## IMPACT trial

- Primary care based RCT
- n=600, 50% Maori
- Usual tablets or polypill ('Red Heart Pill')
- 1 year - adherence, BP, cholesterol

Will any improvements in adherence outweigh the reduced flexibility to tailor drugs and doses?



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# IMPACT trial

- Trial planning:
  - Funded by HRC (2005) and NHF (2009)
  - Delayed due to polypill 'formulation' problems (DRL)
  - Polypill re-developed as 'capsule' and re-tested
  - NZ Medsafe now approved and has ethics approval
  - Due to re-start recruitment May 2010
  - *IMPACT research team*: Raina Elley, Vanessa Selak, Angela Wadham, Sue Crengle, Matire Harwood, Liz Glen, Puti Nicholls, Denise Miller, Rina Prasad
  - *Other co-investigators/advisors*: Anthony Rogers, Rod Jackson, Bruce Arroll, Rob Doughty, Linda Bryant, Dale Bramley, Richard Milne, Natasha Rafter, Stephen Vander Hoorn