# Associate Professor Gerry Devlin

Clinical Cardiologist and Interventional Cardiologist

NZ Heart Foundation

Hamilton

## Saturday, June 10, 2017

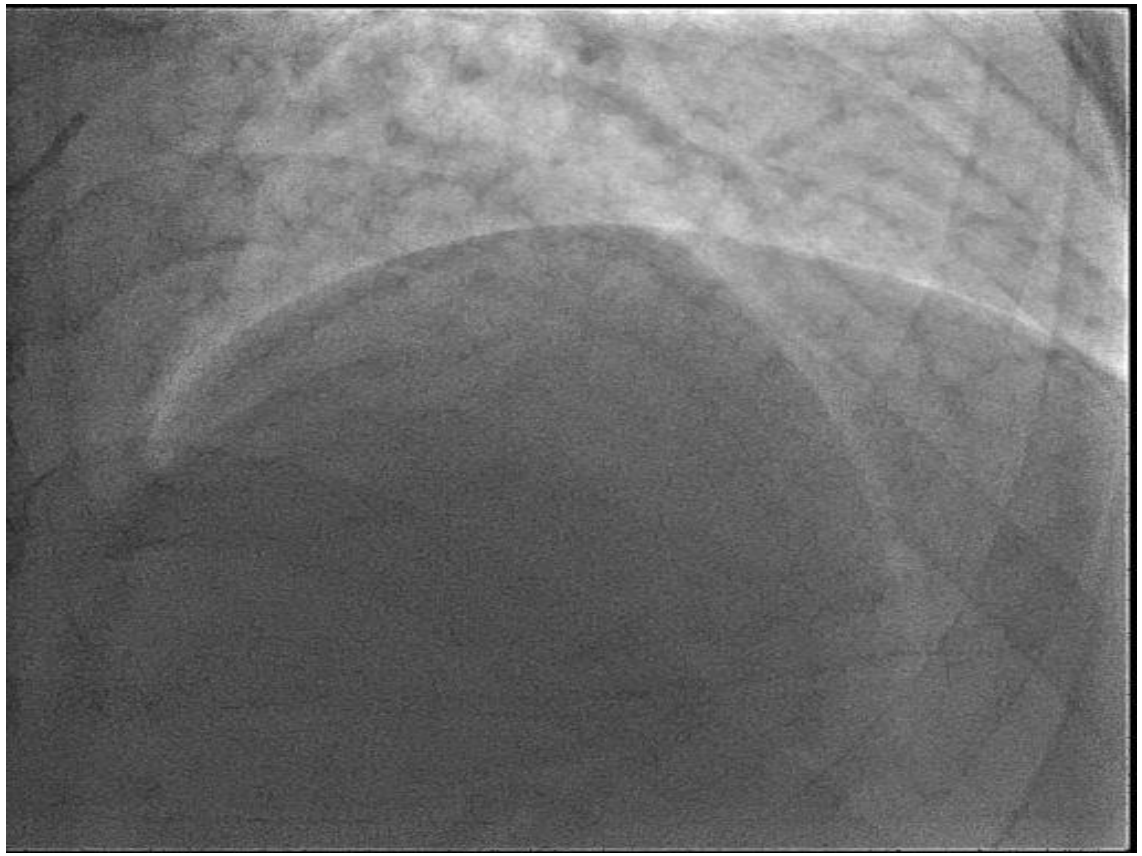
9:00 - 9:15 Secondary Prevention of IHD

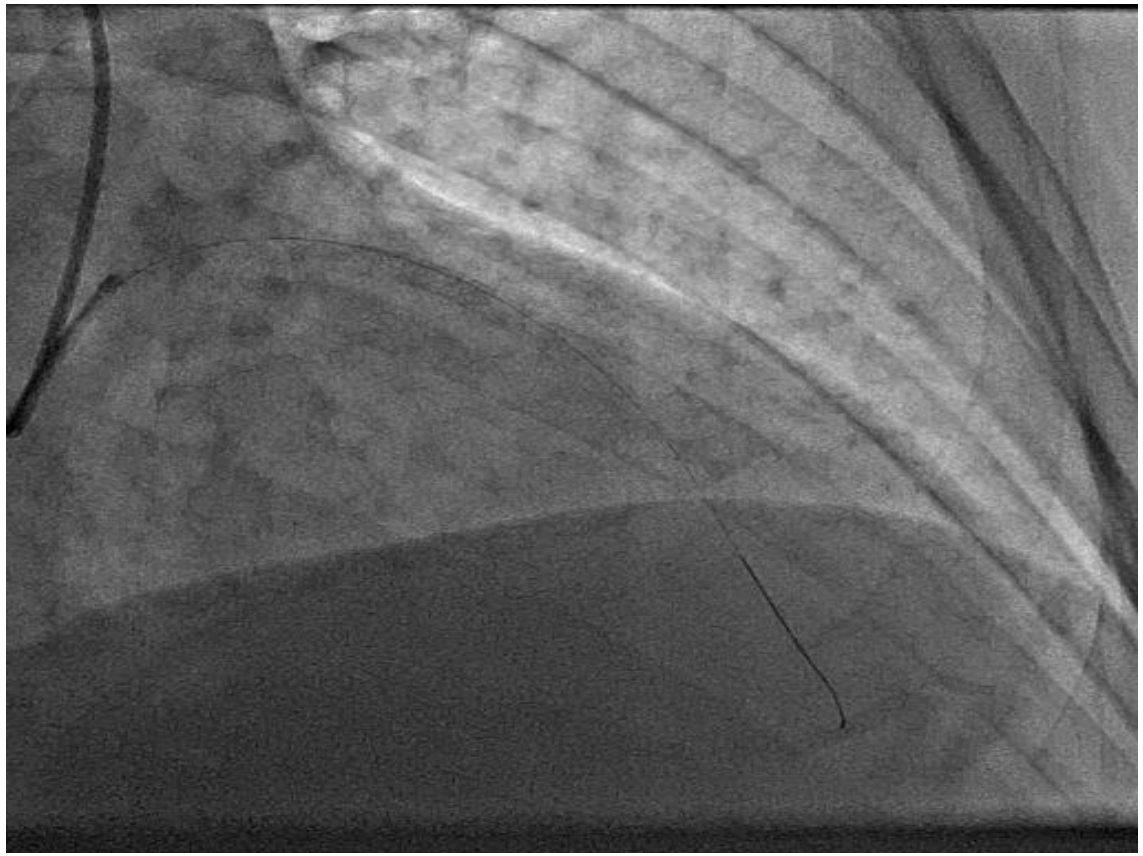
# The Challenge of Secondary Prevention

Associate Professor Gerry Devlin
University of Auckland
Medical Director Heart Foundation
Clinical Leader Cardiac Network
Cardiologist
Waikato Hospital

# Will

# 55 year old man with STEMI
# Artery opened and stented
# Home Day 3



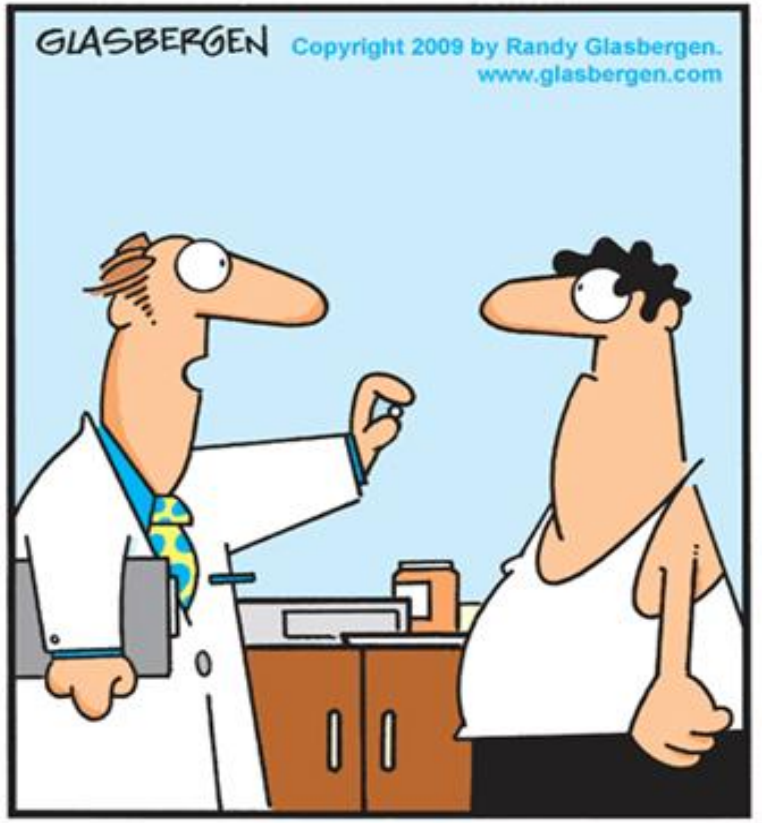


# Is this Optimal Care for Will ?

# Secondary Prevention of CHD

*describes all measures used to help people return to an active and satisfying life post heart event, and reduce their risk of further cardiovascular events."*

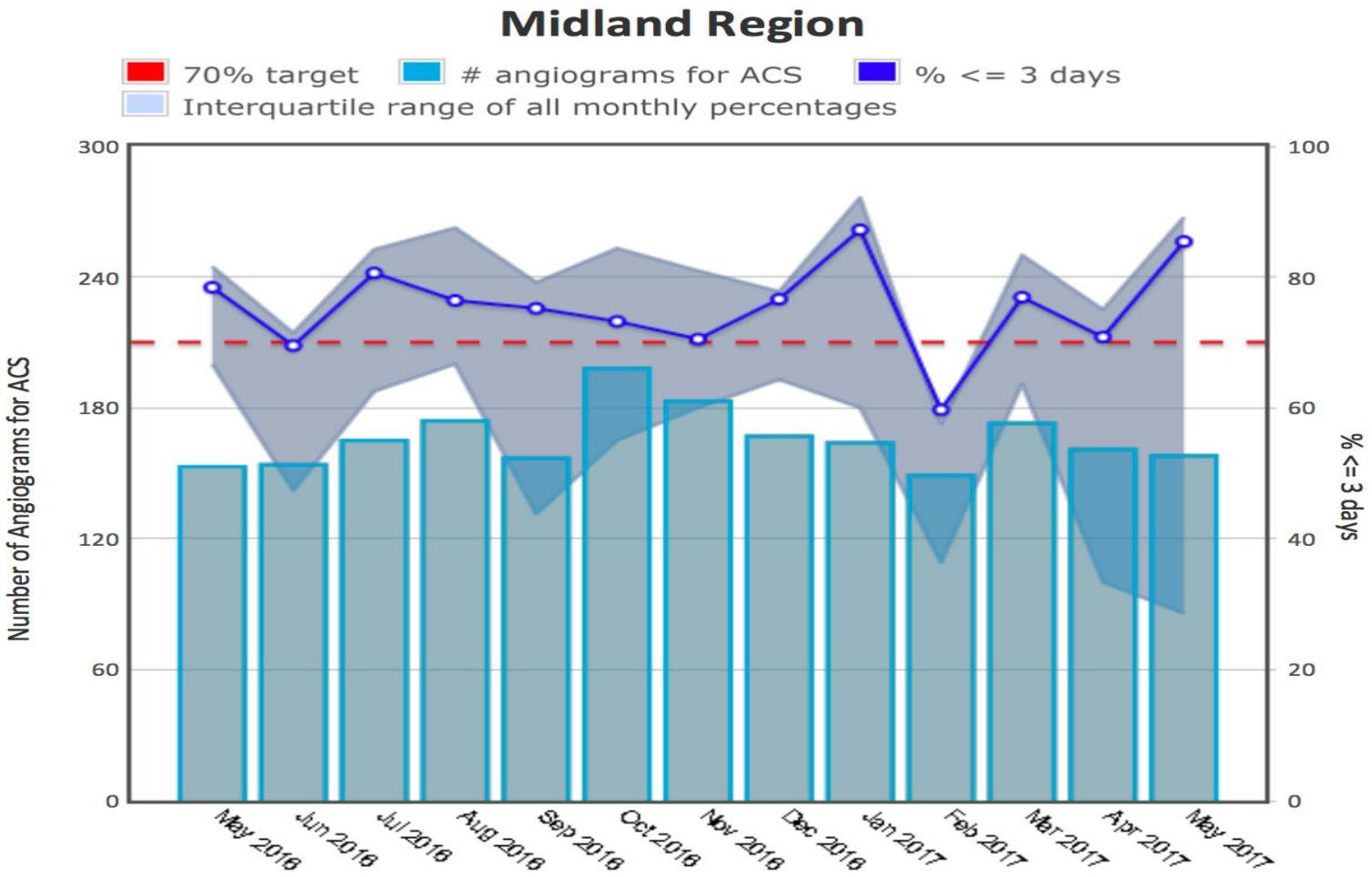
- ↓ subsequent events
- ↓ hospitalisation
- ↓ mortality




"To prevent a heart attack, take one aspirin every day. Take it out for a run, then take it to the gym, then take it for a bike ride..."

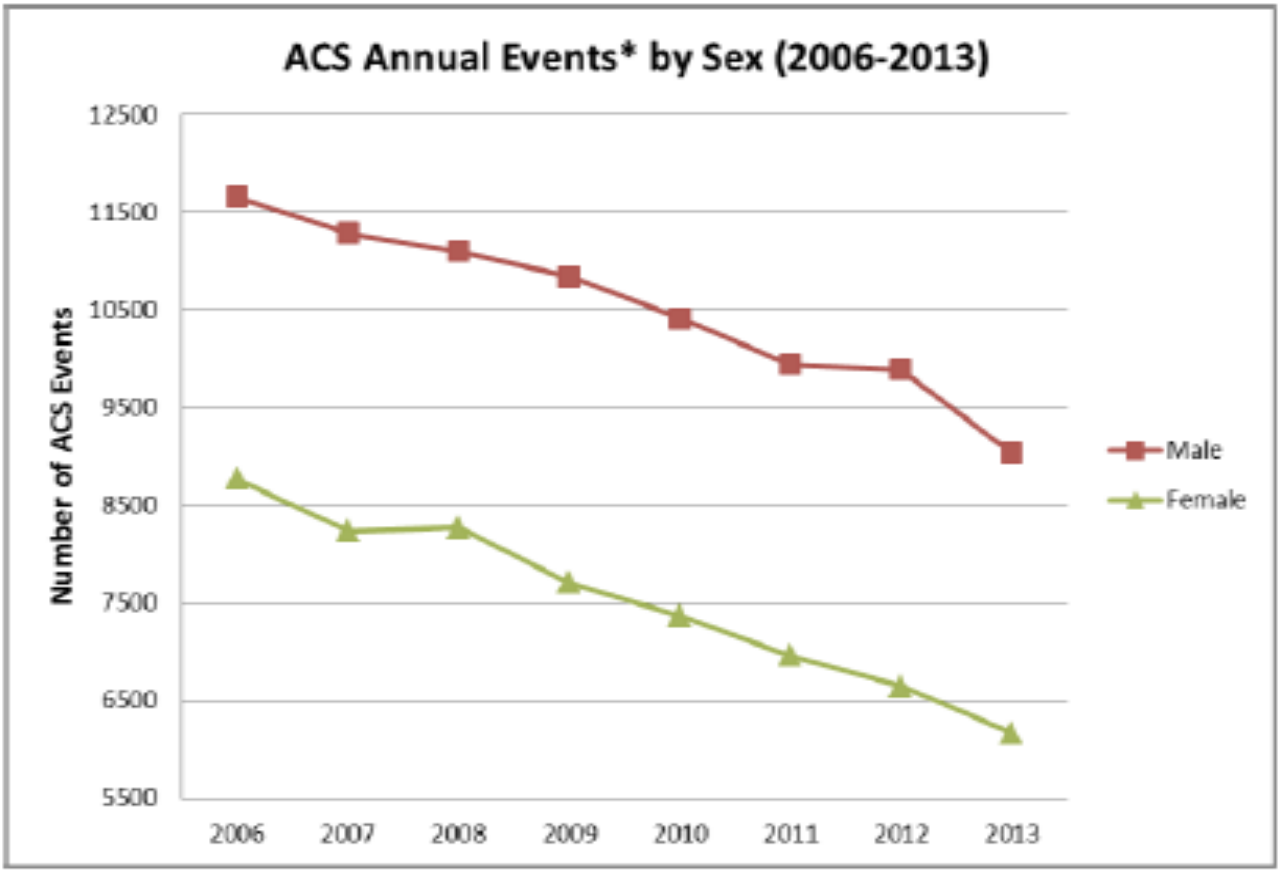
# We have come a long way

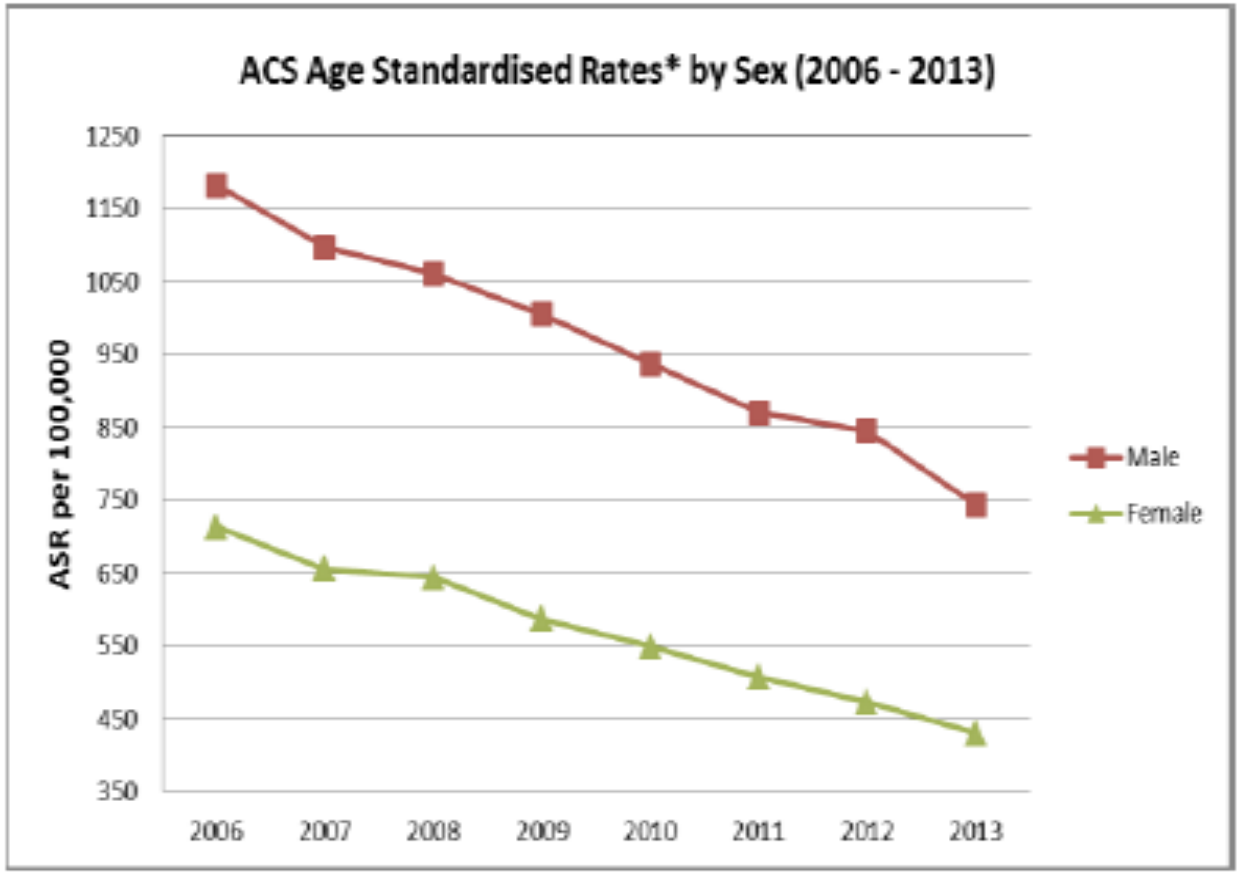
# ACS -3 Day Cath Target:



# National ACS Incidence Rates (per 100,000)

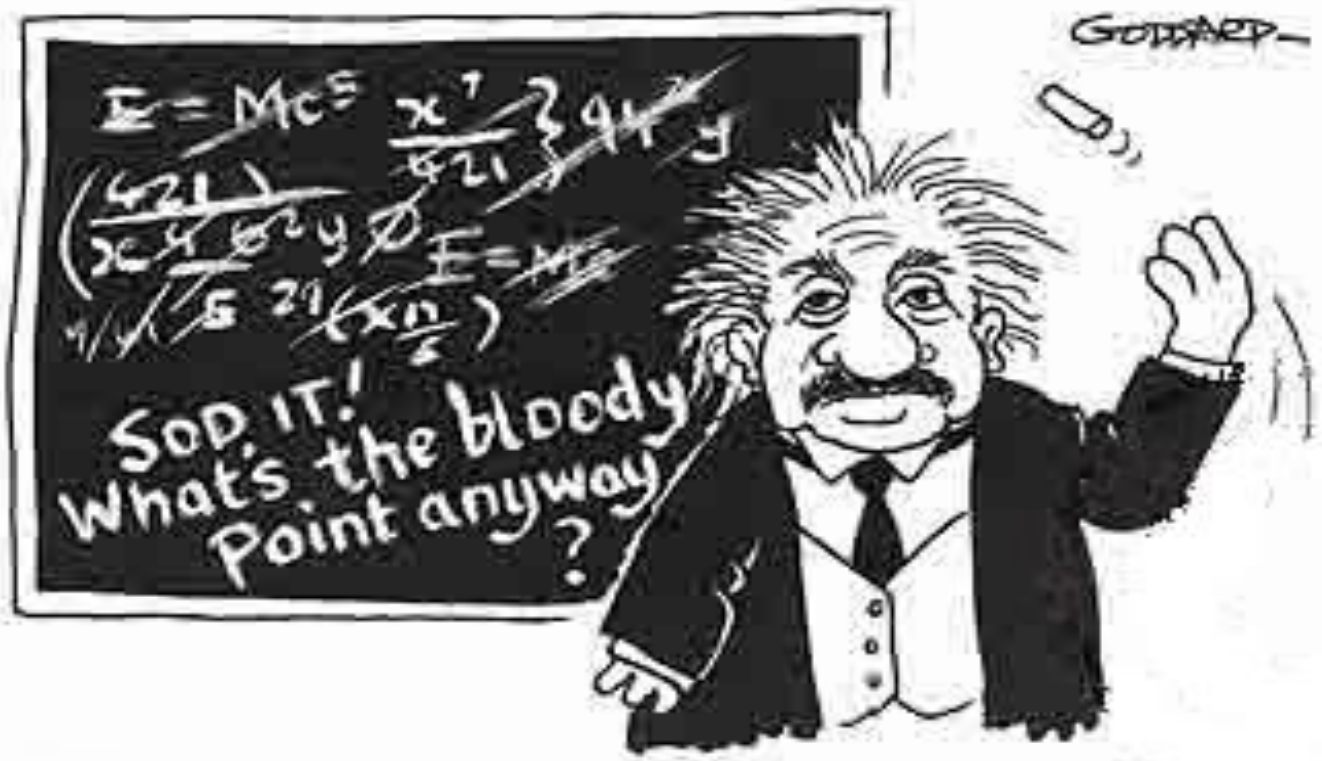
## 26% Reduction in Admissions with an ACS since 2006




*standardised to European Standard Population 2013

# So whats the problem?



**From 2007 – 2009**

**1 in 5 patients admitted to hospital with an ACS died within one year.**

# Cardiovascular risk in post-myocardial infarction patients: nationwide real world data demonstrate the importance of a long-term perspective

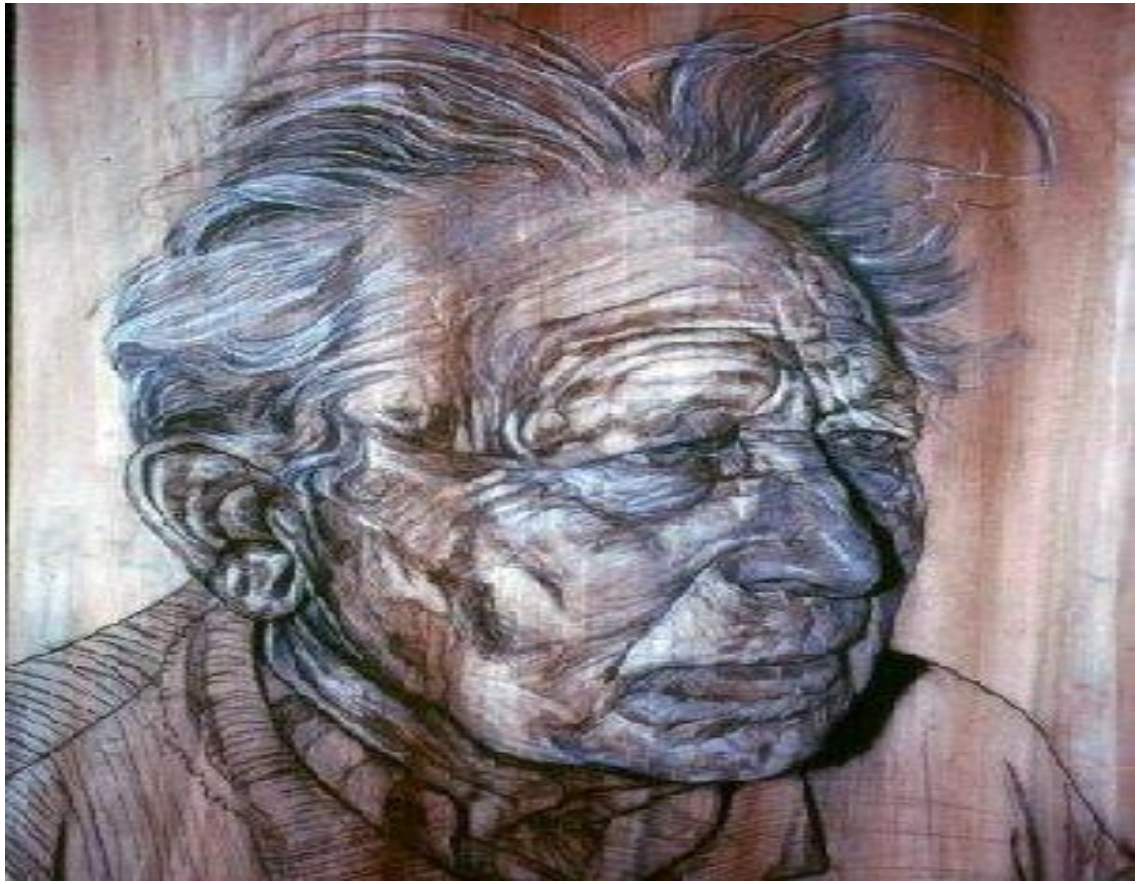
Tomas Jernberg[1]*, Pål Hasvold[2], Martin Henriksson[2], Hans Hjelm[3], Marcus Thuresson[4], and Magnus Janzon[5,6]

- Retrospective cohort study from Swedish registries from 2006 to 2011of 108315 patients post MI alive at 1 week
- Primary composite EP of non fatal MI, stroke or CV death at 1 year and from 12-48 months
- 18% composite EP in first year
- 20% composite EP in next 36 months

European Heart Journal (2015) 36, 1163–1170 doi:10.1093/eurheartj/ehu505

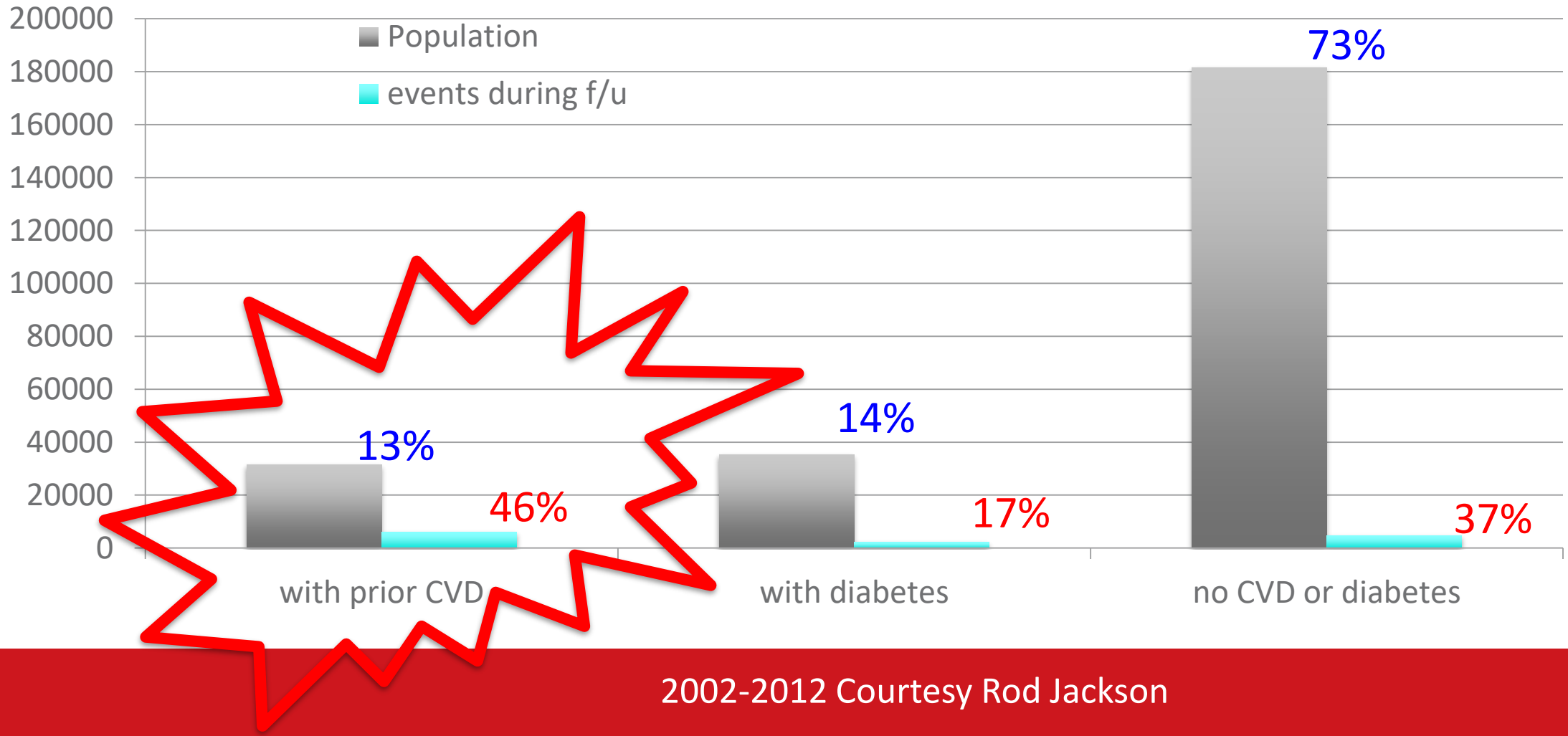
# Living longer with Heart disease

- Angina
- Atrial Fibrillation
- Heart Failure



# Heart Disease is a Chronic Condition associated with acute episodes of care

# CVD events during follow-up in PREDICT population 30-74 years, by clinical history



# Back to Will

- Ticagrelor
- Atorvostatin
- Bisoprolol
- Cilazapril
- Aspirin
- GTN Spray
- Referred Cardiac Rehab
- Referred Quit Line

# Cardiac Rehabilitation: the Bottomline

- There is evidence of the health benefits of CR
- Effective implementation of CR  is suboptimal, with overall participation rates <50%
- CR should  include health education and psychological counselling
- CR should offer a choice of community based and home based programmes to fit their needs and preferences
- Clinicians should endorse CR for ACS and heart failure admissions

# A national survey of cardiac rehabilitation services in New Zealand - 2015

- A large variety in delivery and content of CR in NZ , with poor understanding of the impact on patient wellbeing
- Just over half of the units (n=20, 56%) used key performance indicators to assess programme impact
- In order for programmes to be effective, it is important to have measurable outcomes and audit feedback for the evaluation of services and patient outcomes



Kira G et al A national survey of cardiac rehabilitation services in New Zealand 2015. NZMJ 27 May 2016, Vol 129 No1435 ISSN 1175-8716

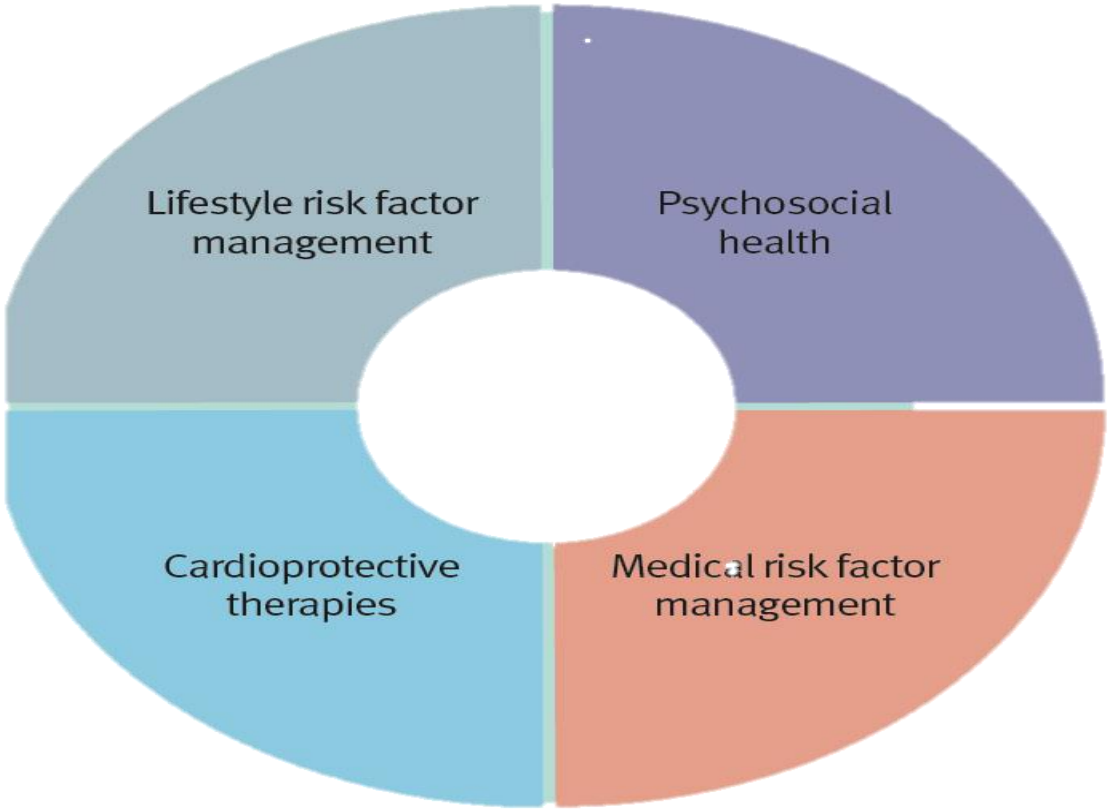
# How might we improve secondary prevention? Common themes

- Robust data collection and audit
- Meaningful patient specific outcomes
- One size does not fit all
- Co design CR
- Use of new technologies
- **Integrated primary / secondary care**

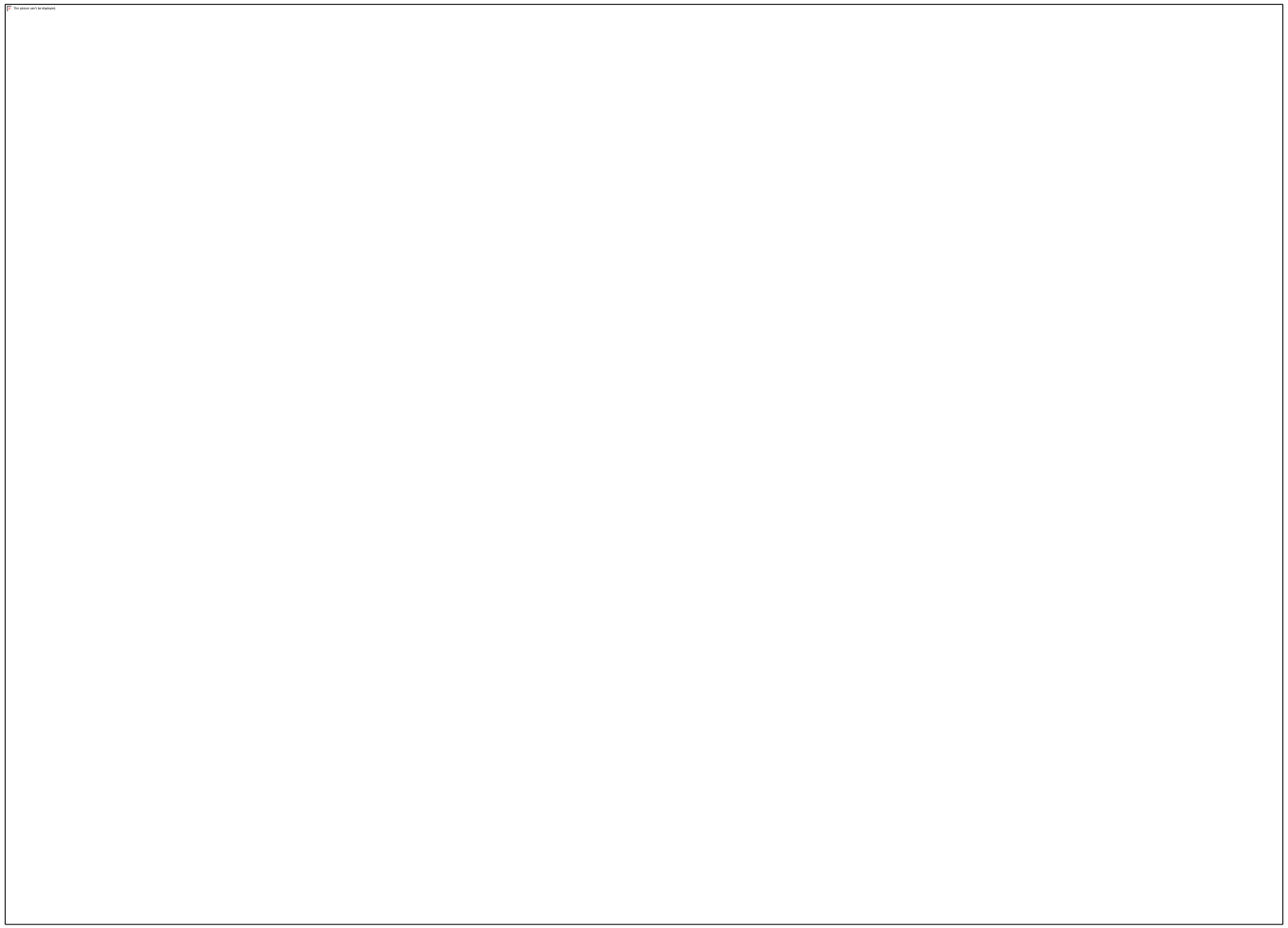
# Secondary Prevention

Primary and Secondary Care are expected to work together to provide a community and evidence based prevention programme tailored to individual needs and geographic location for patients with ACS

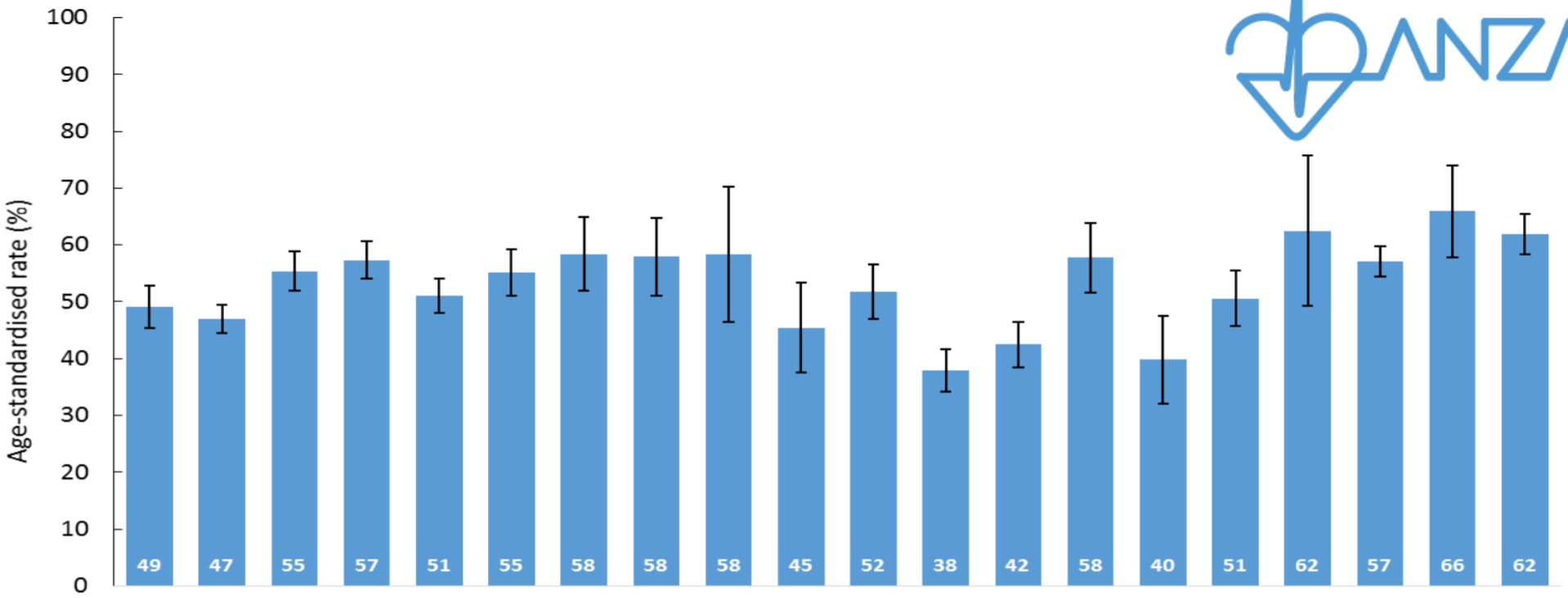
# Core Components of Secondary prevention



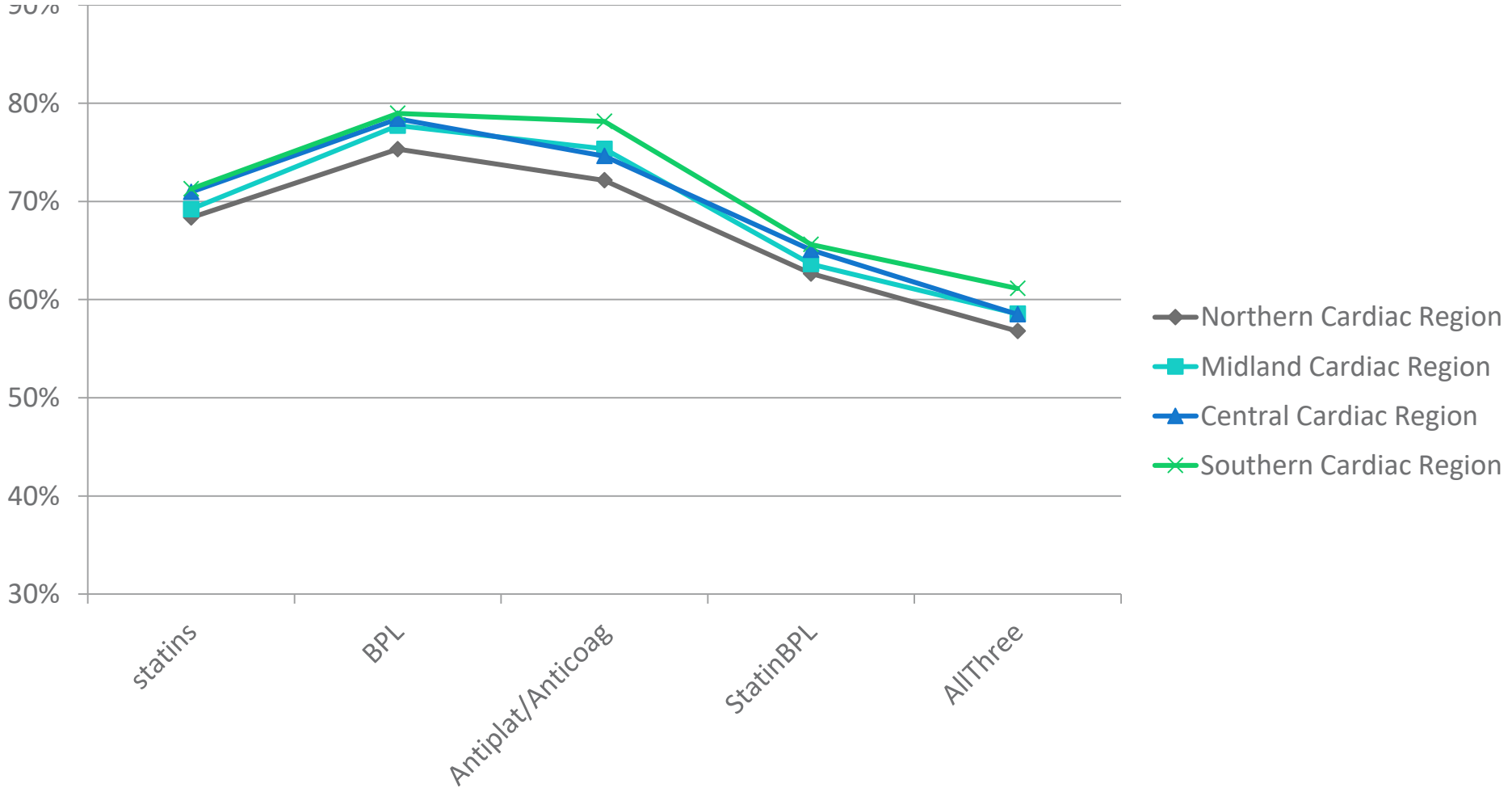
# Core Components of Secondary prevention



# Age-standardised rates of 5-drug prescription at discharge post-ACS, by DHB of domicile (n = 6,129)



# % NZders with previous CVD hospitalisations dispensed drugs: statins, BP ↓, antiplatelets, by region 2013



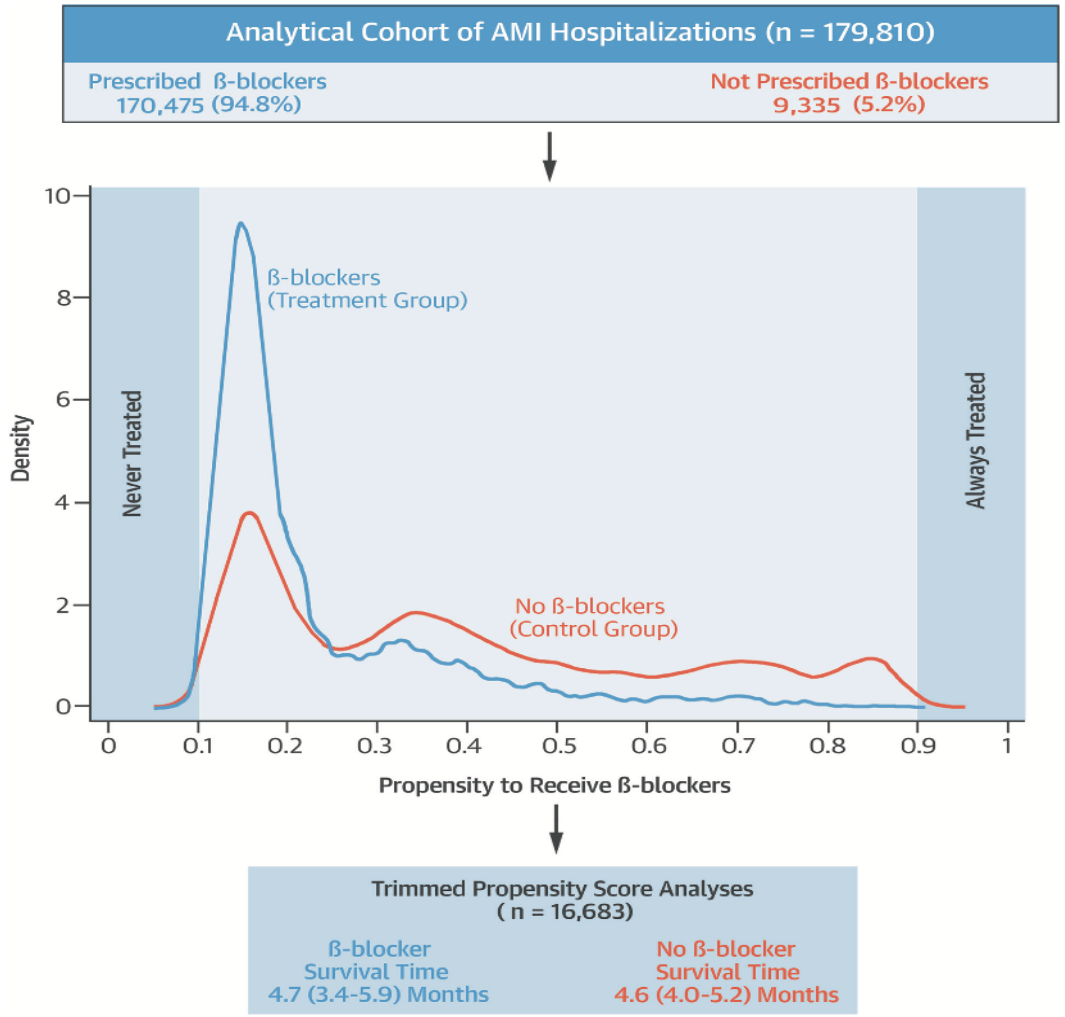
# Understanding the Evidence-Practice Gap

# Are B-blockers needed for all post ACS?

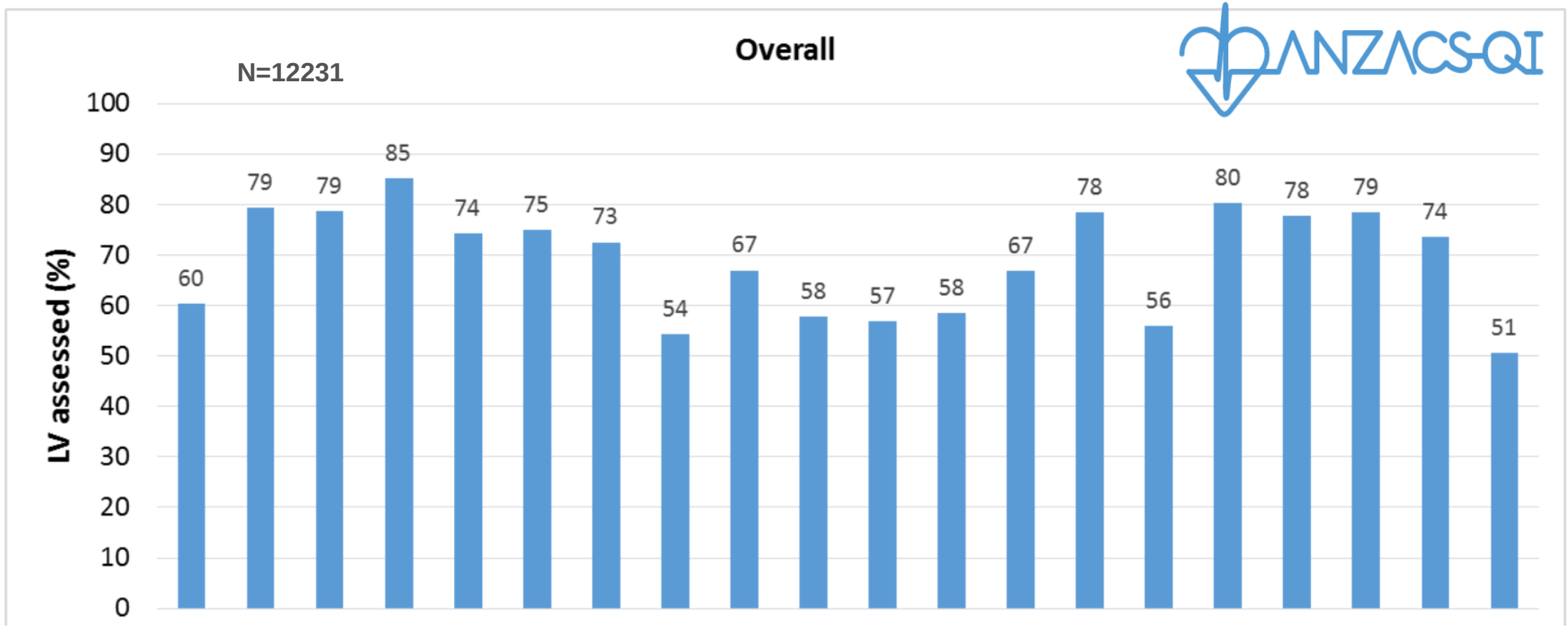
**B-Blockers and Mortality After Acute Myocardial Infarction in Patients Without Heart Failure or Ventricular Dysfunction**

**Cohort study used national English and Welsh registry data from the Myocardial Ischaemia National Audit Project.**

**Conclusions: Among survivors of hospitalization with AMI who did not have HF or LVSD as recorded in the hospital, the use of b-blockers was not associated with a lower risk of death at any time point up to 1 year.**



# Assessment of LV Function post ACS

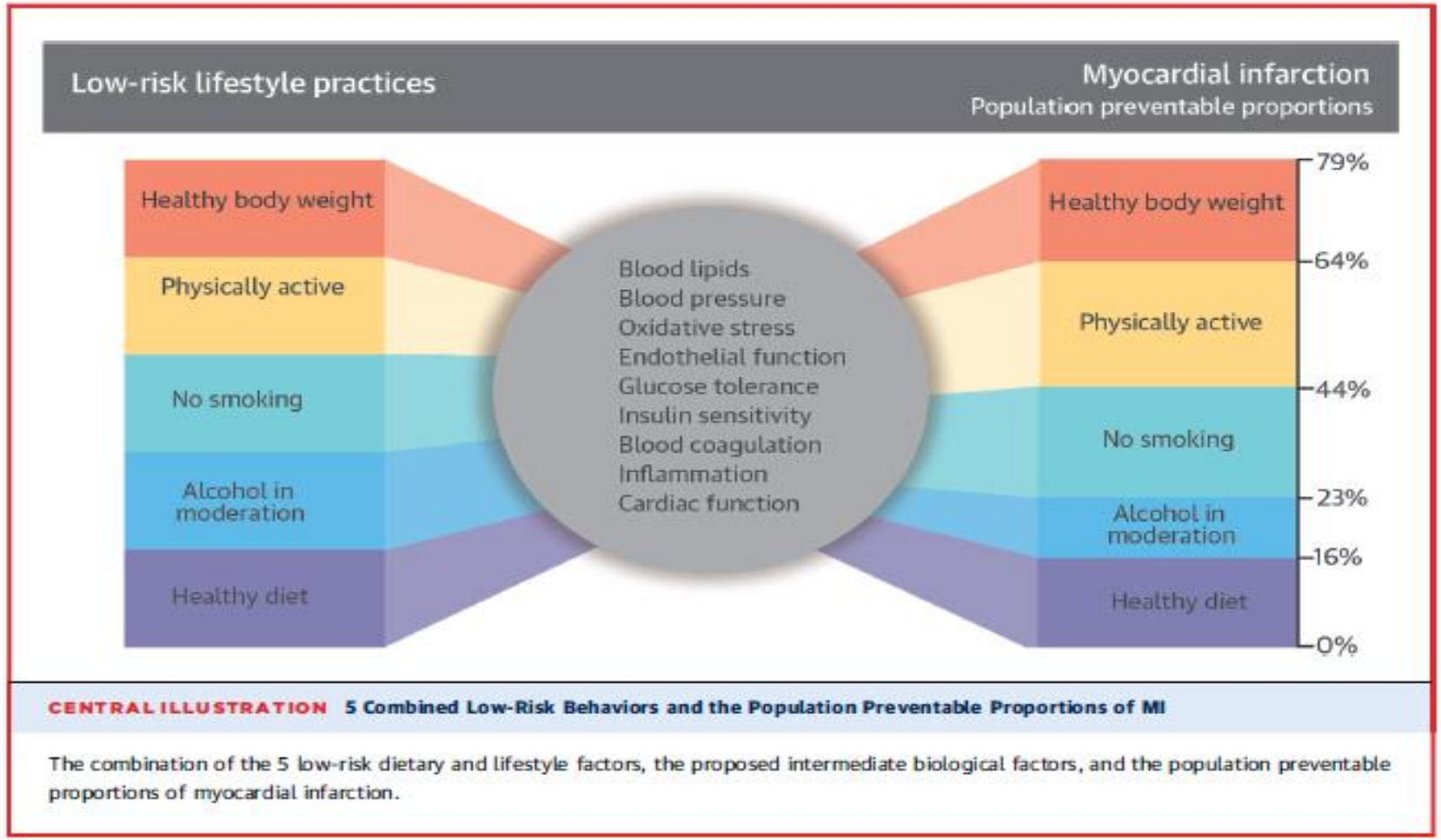


# Can we rationalise therapy to improve compliance?

# Depression and Heart Disease

- Effects approximately 1 in 3 post ACS
- independently associated with increased cardiovascular morbidity and mortality
- screening tests for depressive symptoms should be used to identify patients who may require further assessment and treatment

# The Benefits of Combined Low risk Behaviour

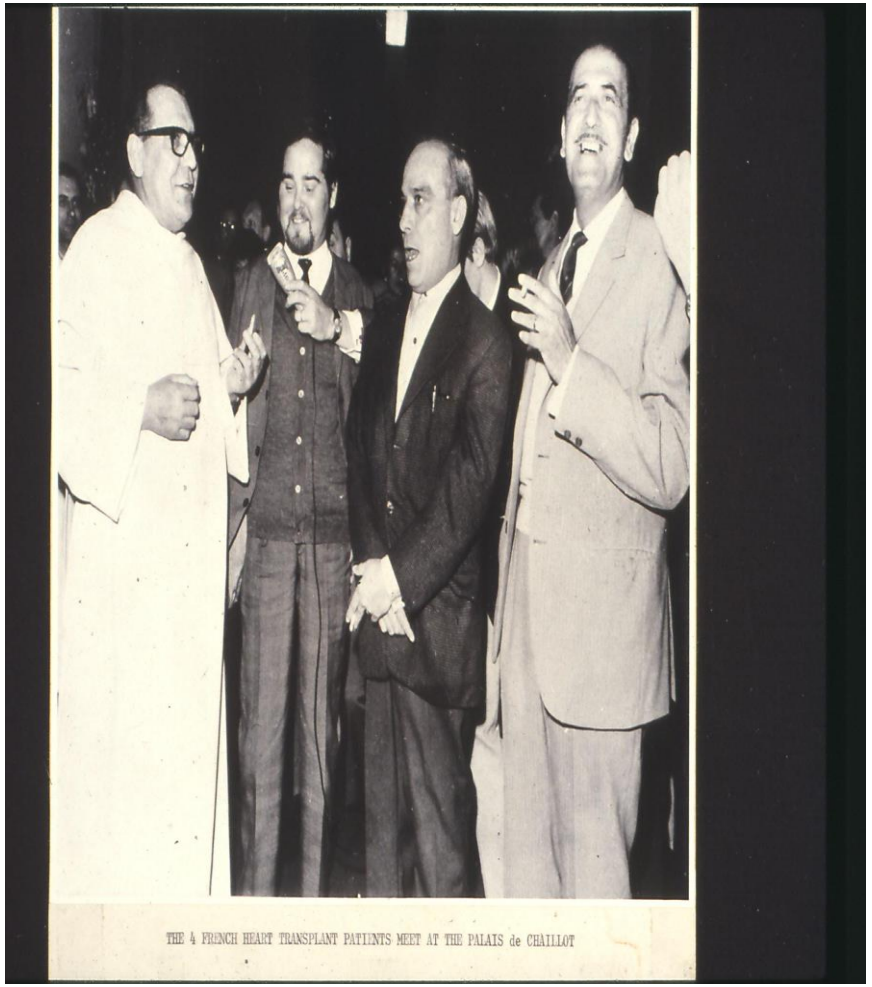



**CENTRAL ILLUSTRATION** **5 Combined Low-Risk Behaviors and the Population Preventable Proportions of MI**

The combination of the 5 low-risk dietary and lifestyle factors, the proposed intermediate biological factors, and the population preventable proportions of myocardial infarction.

Akesson JACC 64(13) Sept 14

# Smoking Cessation




| Age | 35-44 | 45-54 | 55-64 | 65-74 | 75-84 | 85+ |
|---|---|---|---|---|---|---|
| With a history of CVD and current smoker | 31.4% (n=1,095) 344 smokers | 24.7% (n=4,888) 1,207 | 17.4% (n=10,065) 1,751 | 9.9% (n=12,246) 1,212 | 4.1% (n=7,546) 309 | 1.8% (n=2,128) 38 |

# Effective smoking Interventions

**Offering help generates more quit attempts**

| Intervention versus comparison |
| --- |
| • Brief advice from a health professional vs no intervention |
| • Proactive telephone support vs reactive telephone support |
| • Automated text messaging vs messaging not related to smoking |
| • Face-to-face, individual behavioural support vs brief advice or written materials |
| • Face-to-face, group-based behavioural support vs brief advice or written materials |

Adapted from: West R, Raw M, Dowling S, et al. 2013. Interventions to promote tobacco cessation: a review of effectiveness and affordability for use in national guideline development. Unpublished.

# Technology

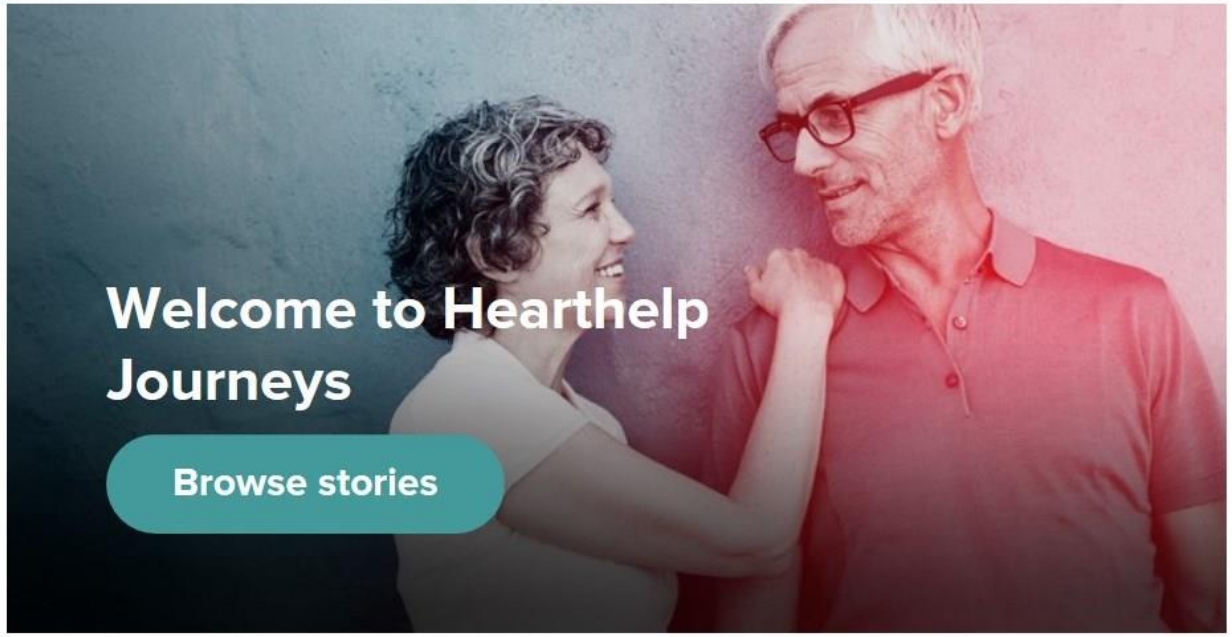
Associate Professor Ralph Maddison
University of Auckland

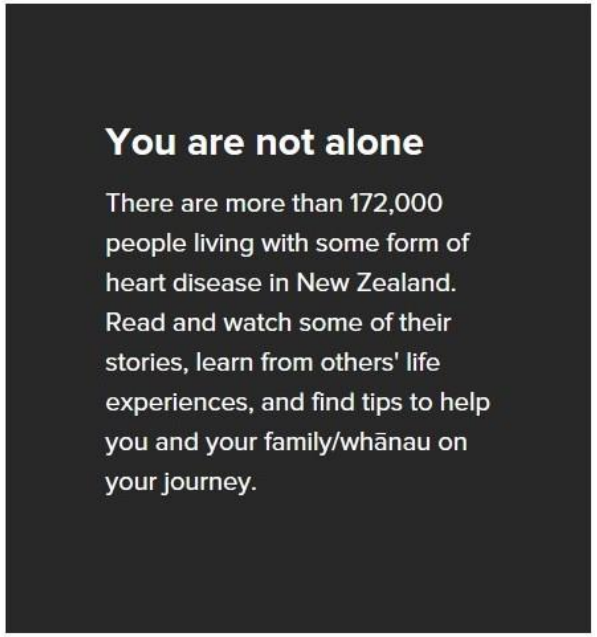
**Text4Heart: Enhancing self-management of cardiovascular disease**

# Empowering Patients

# Journeys

*Real people sharing their stories to help and support others*

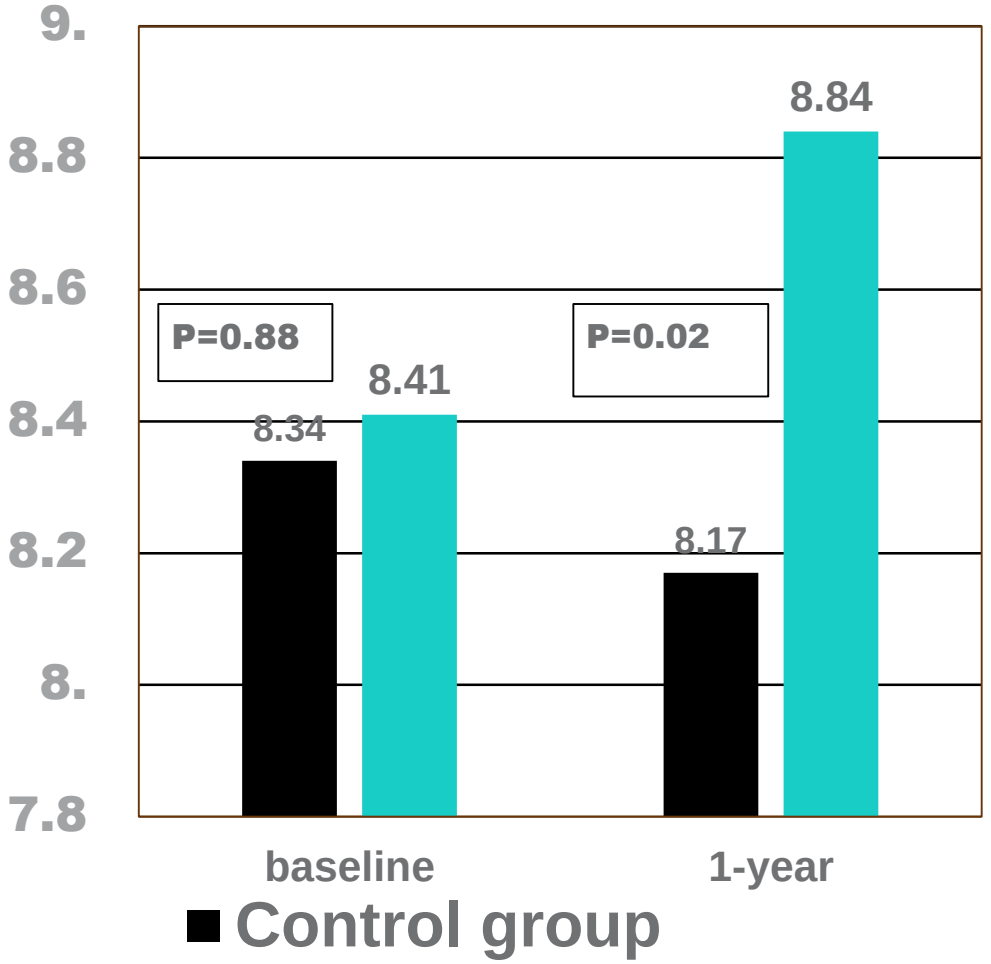



www.heartfoundation.org.nz/journeys

# A Comprehensive Lifestyle Peer Group–Based Interventionon Cardiovascular Risk Factors The Randomized Controlled Fifty-Fifty Program

- 543 adults (25 to 50) with at least 1 CV risk factor
- Subjects were randomized 1:1 to a peer group–based intervention group or a self-management control group (CG) for 12 months
- Peer group intervention had beneficial effects on cardiovascular risk factors, with significant improvements in the overall score and specifically on tobacco cessation.



# Acute myocardial infarction hospital admissions and deaths in England

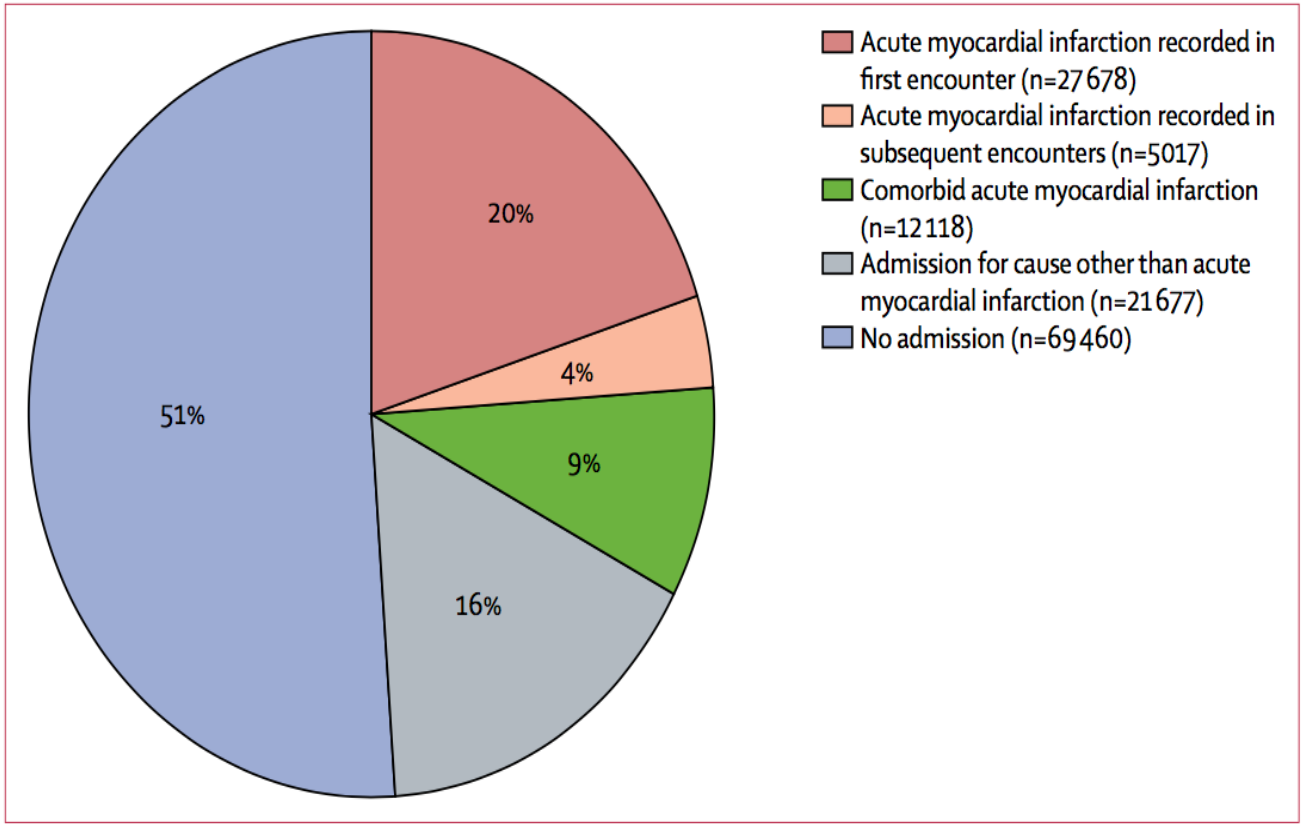
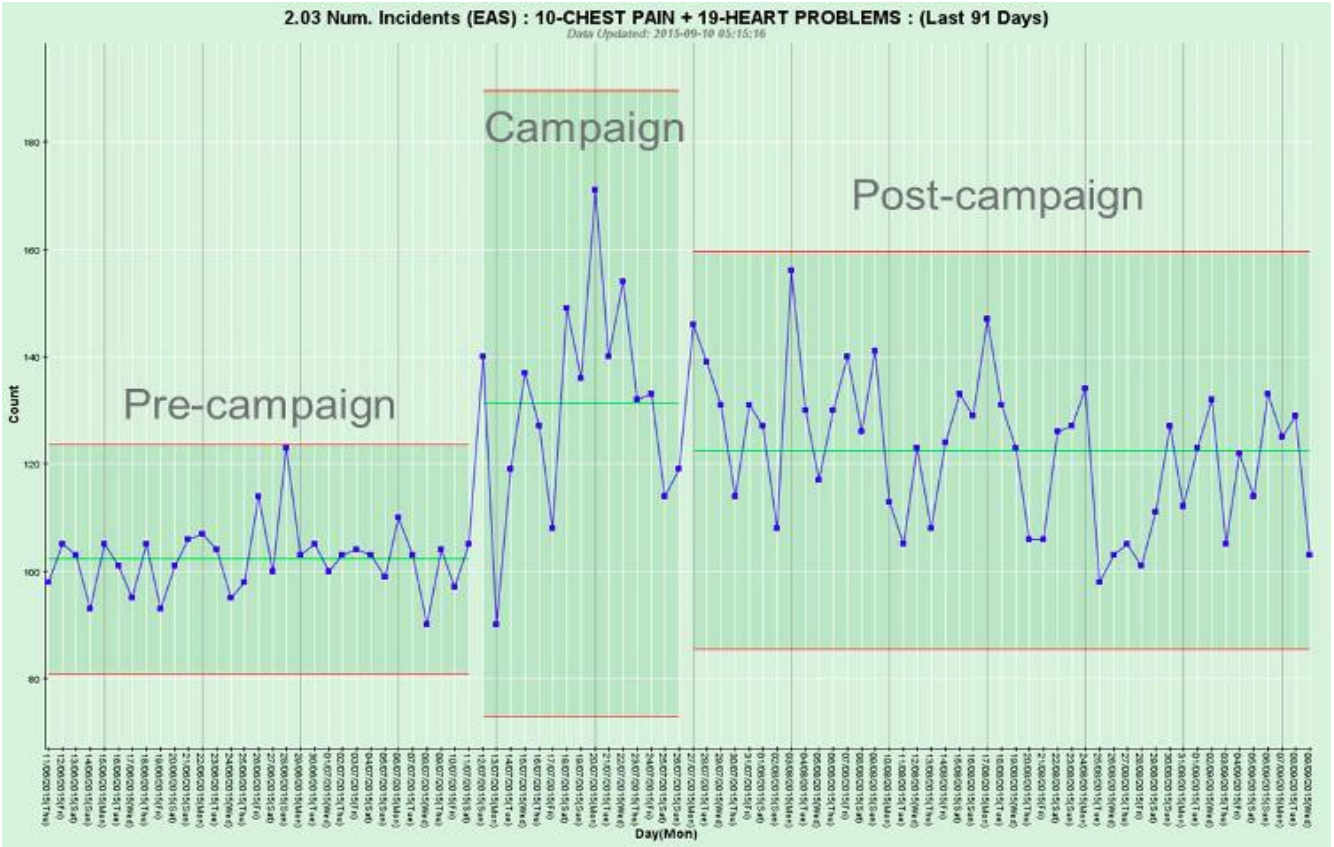



***Figure 2:*** **Hospital admissions in the 28 days preceding death from acute myocardial infarction**
Includes 135 950 deaths with acute myocardial infarction as the underlying cause in people aged 35 years and older.

# Heart Attack Awareness




St Johns Chest Pain Responses

# Final Thoughts on Improving Secondary Prevention

- Heart Disease is a Chronic condition
- Understand the Evidence- Practice Gap
- Empower Patients
- Primary care role in improving outcomes

*“Whilst we must not drop investment in rare conditions and cancer we must redouble efforts and funding on common and chronic conditions”*

**Rob Califf , Cardiologist**
**former FDA comissioner**