

PREDICT electronic clinical decision support in primary care

Assessing CVD risk, profiling
population risk burden and
integrating risk prediction research

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Overview- presentation

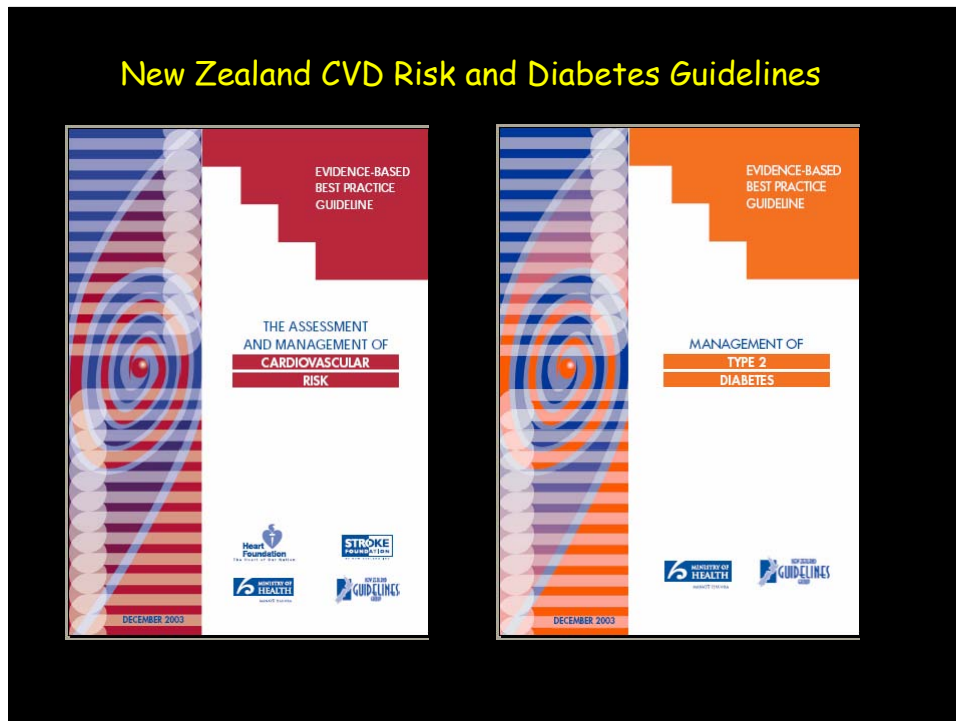
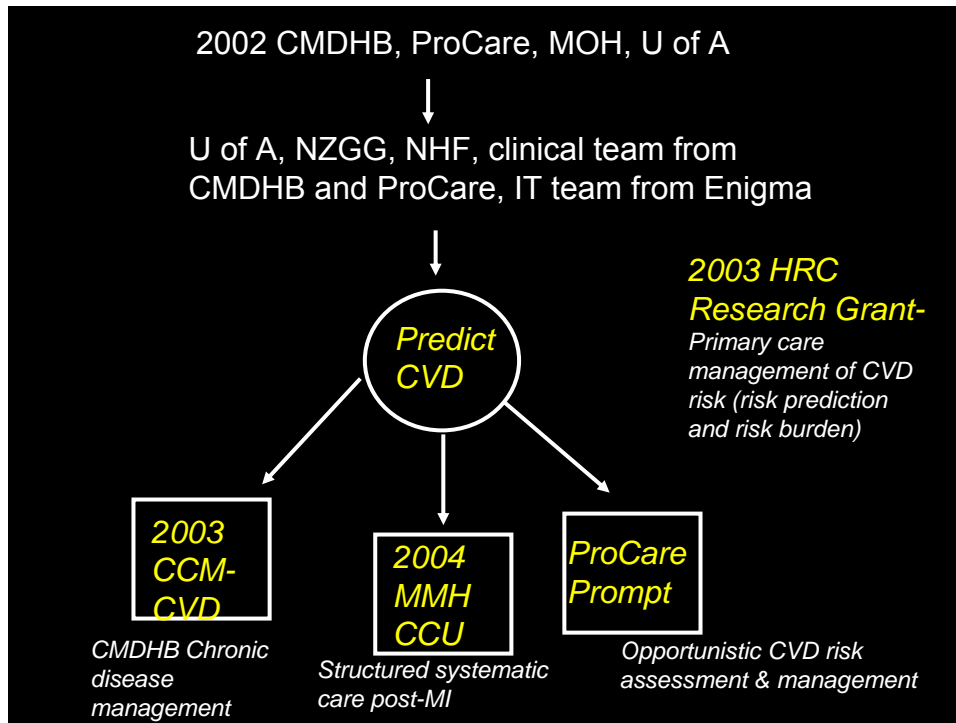
- Brief overview PREDICT development/clinical programmes
- Research project behind PREDICT
- Preliminary results from ProCare CVD risk assessment and management (Prompt) project

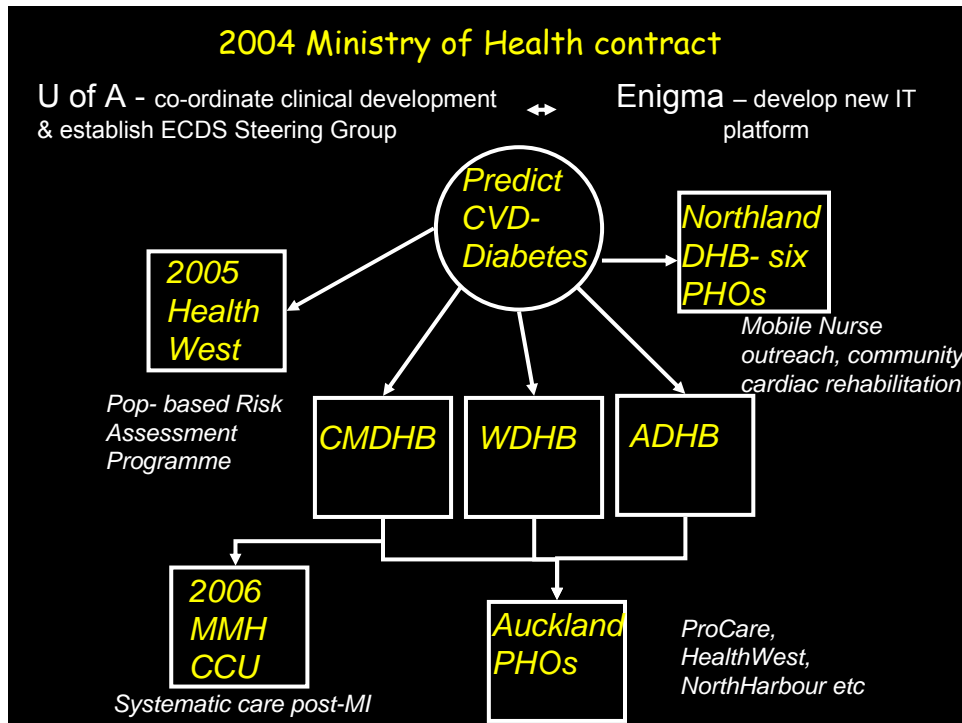
Cardiovascular statistics

- Leading cause of death & hospital admissions in NZ
- 10,500 deaths from cardiovascular disease each year (500 deaths on the roads, 600 deaths from breast cancer ^{Hay 2002})
- Approximately 30% under the age of 70 years
- CVD health disparities by ethnicity and deprivation

PREDICT strategy for CVD prevention

- Use Information Technology to provide on-line web-based CVD risk assessment and management advice which is:
 - Fast
 - User Friendly
 - Ideally integrated with patient electronic record
 - Guideline and evidence based
 - Patient Individualised





How does PREDICT work?

1. In GP surgery -doctor or practice nurse sees a patient and decides to assess their CVD risk



Patient-practitioner interaction

RISK ASSESSMENT INFO DEBUG INFO

DEMOGR: This After man NOT
Pr
De Clin
Exa

Note the BMI calculator on this page calculates the BMI value automatically from height and weight. All underlined items are required.

Examination

Height: 170 cm
Weight: 80 kg - Date: dd/mm/yyyy
BMI (Auto-calculated): 27.7 kg/m²
Waist circumference: 100 cm

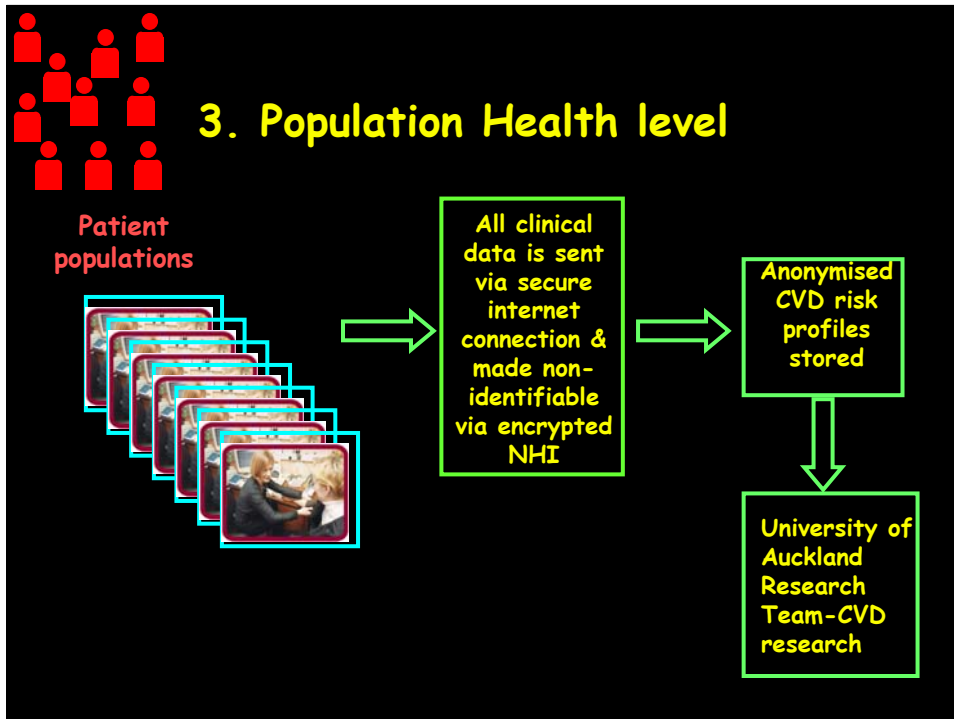
CVD medications

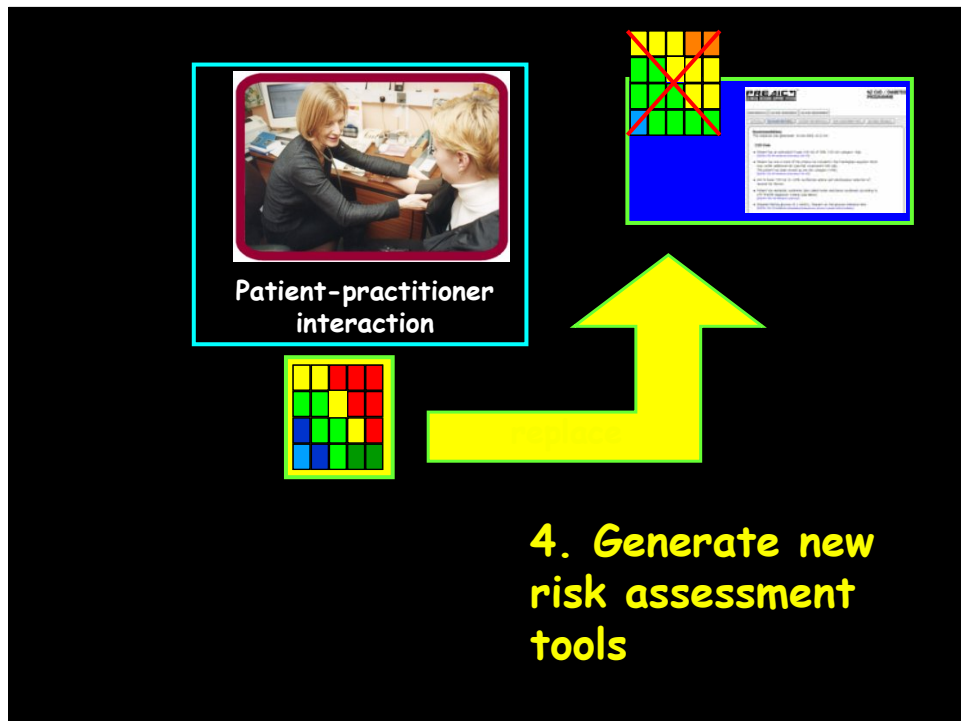
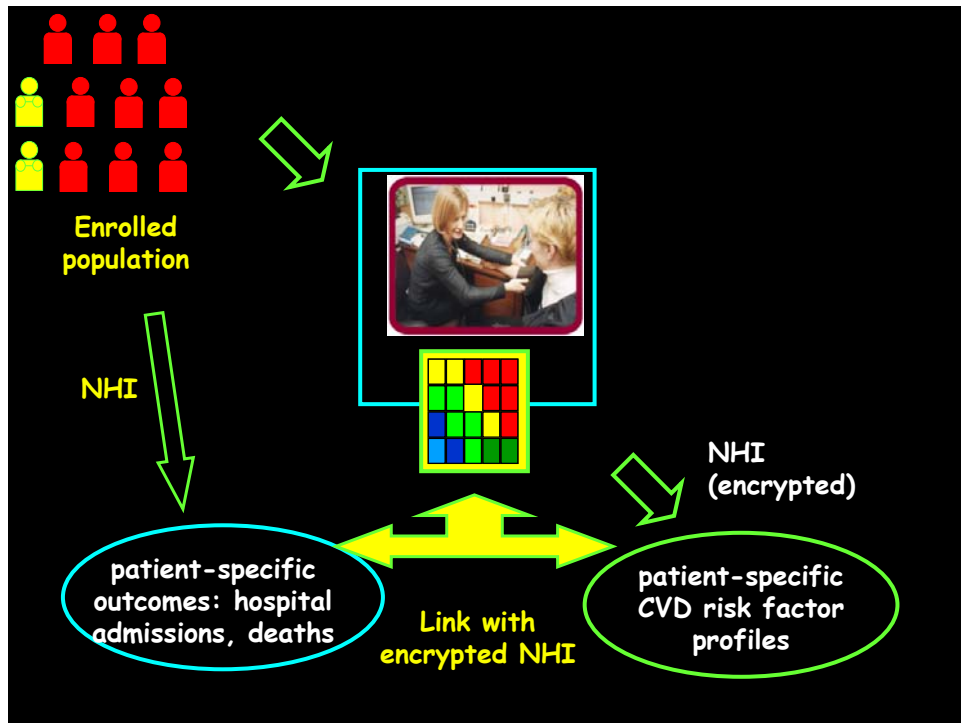
CAUTION: Please note that all medications default to "No". Please review carefully before proceeding.

Aspirin: No
Clopidogrel: No
Warfarin: No
ACE Inhibitor: No
Angiotensin II Receptor Blocker: No
Beta Blocker: No
Thiazide: No
Calcium Antagonist: No
Other drug therapy for Hypertension: No
Statin: No
Fibrate: No
Other Lipid lowering drugs: No

Investigation

Fasting glucose: 6.1 mmol/L - Date: 26/10/2004 dd/mm/yyyy
LDL Cholesterol (fasting): 9.3 mmol/L - Date: 26/10/2004 dd/mm/yyyy
Triglyceride (fasting): 2.2 mmol/L - Date: 26/10/2004 dd/mm/yyyy
HDL Cholesterol: 1 mmol/L - Date: 26/10/2004 dd/mm/yyyy





Preliminary Data from ProCare Health Ltd

- Opportunistic CVD risk assessment and management programme
- Rolling Implementation from Aug 2002

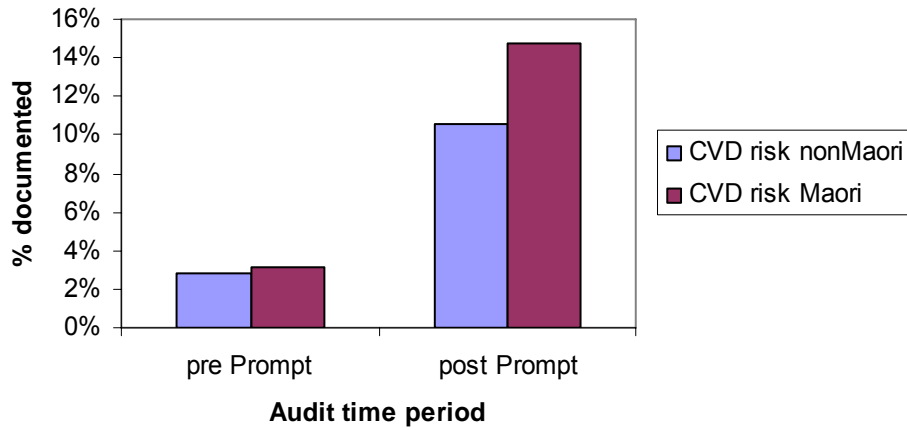


Prompt Implementation

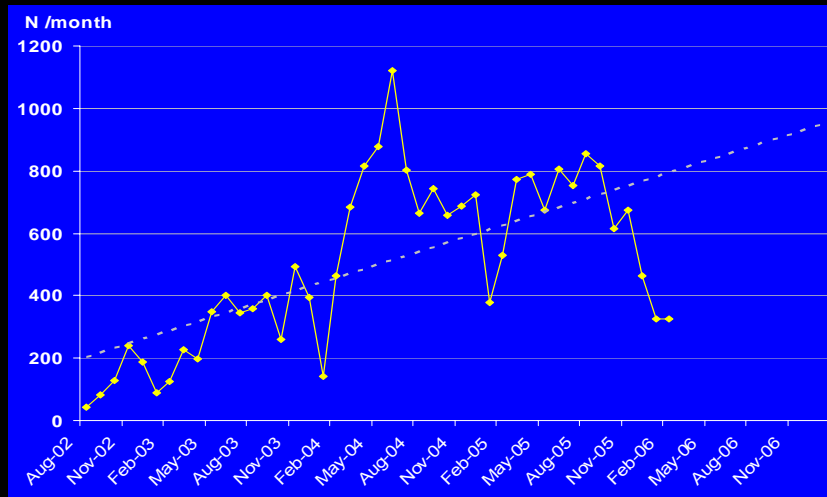
- GPs offered \$10 per patient risk assessment up to 90 patients
- Partially offset costs of broadband installation and 3 months rental
- Clinical/IT support via practice facilitators
- CME programme for GPs

Prompt Evaluation Study 2004 (NZMJ 2006)

Documentation of 5yr absolute CVD risk



PROMPT risk assessments over time



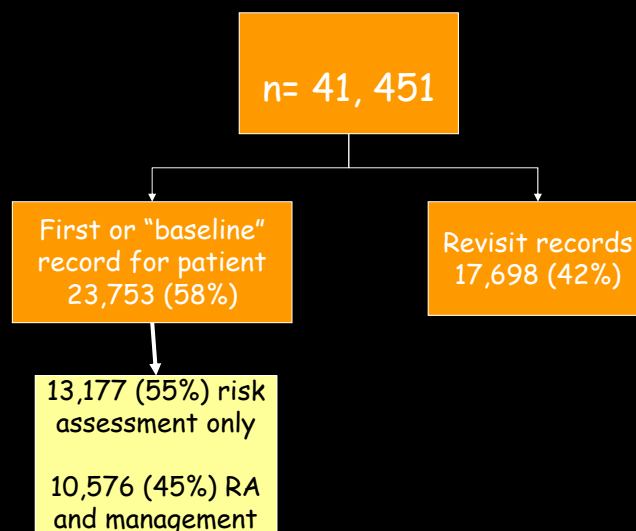
Projected: ~25,000 people by end July 2006

Actual: 23,753 people

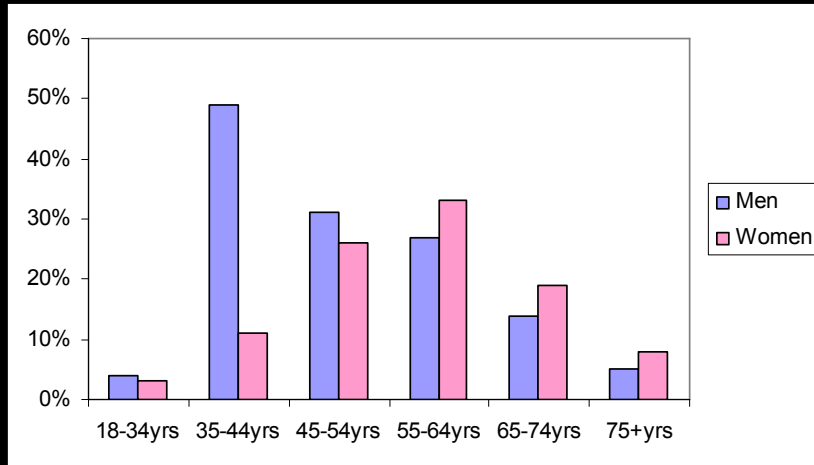
PROMPT users (as at July 2006)

	Doctors	Nurses	Total
No. of users	407	89	496
No. of patients	22,246	1,507	23,753
Patients per user			
Mean	55	17	48
Max	586	129	586
Median	15	3	10
% of users with under 10 pts	2.7%	11.0%	2.6%

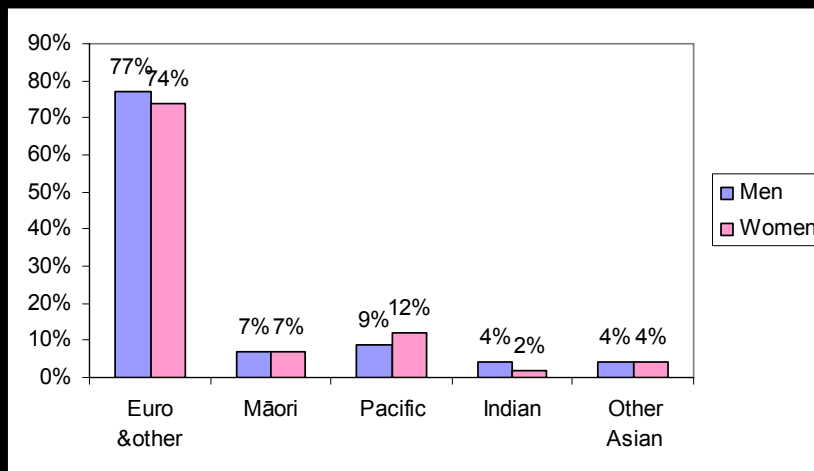
CVD profile data (as at July 2006)



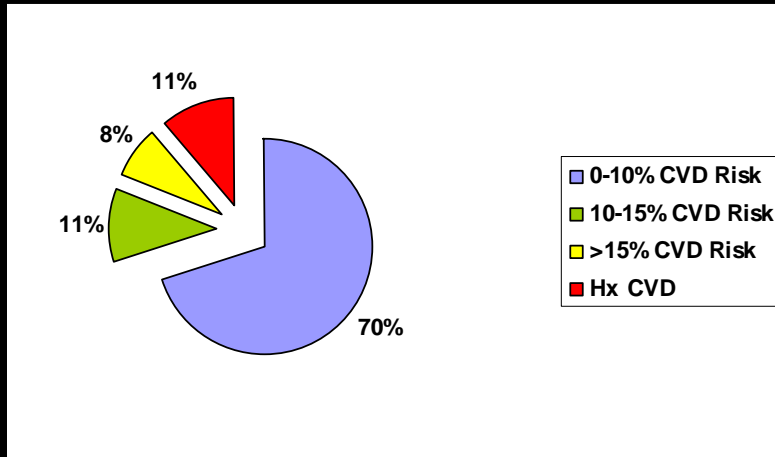
Age/Gender distribution assessed patients



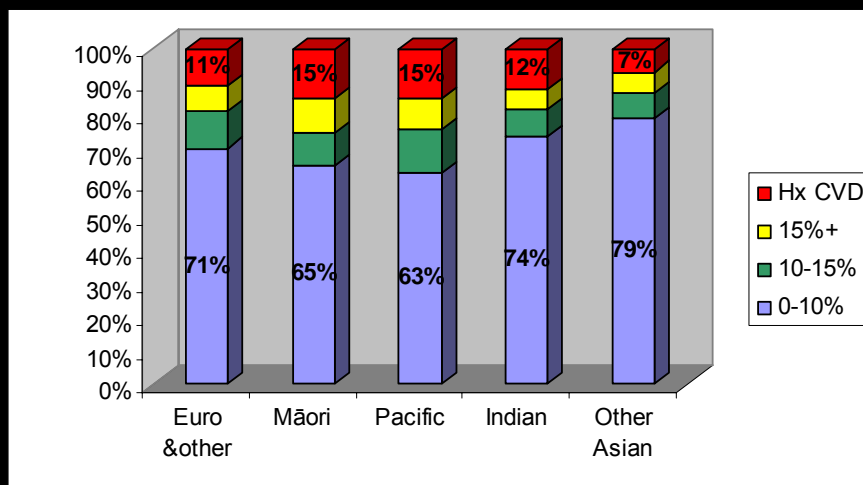
Gender/Ethnicity distribution of assessed patients

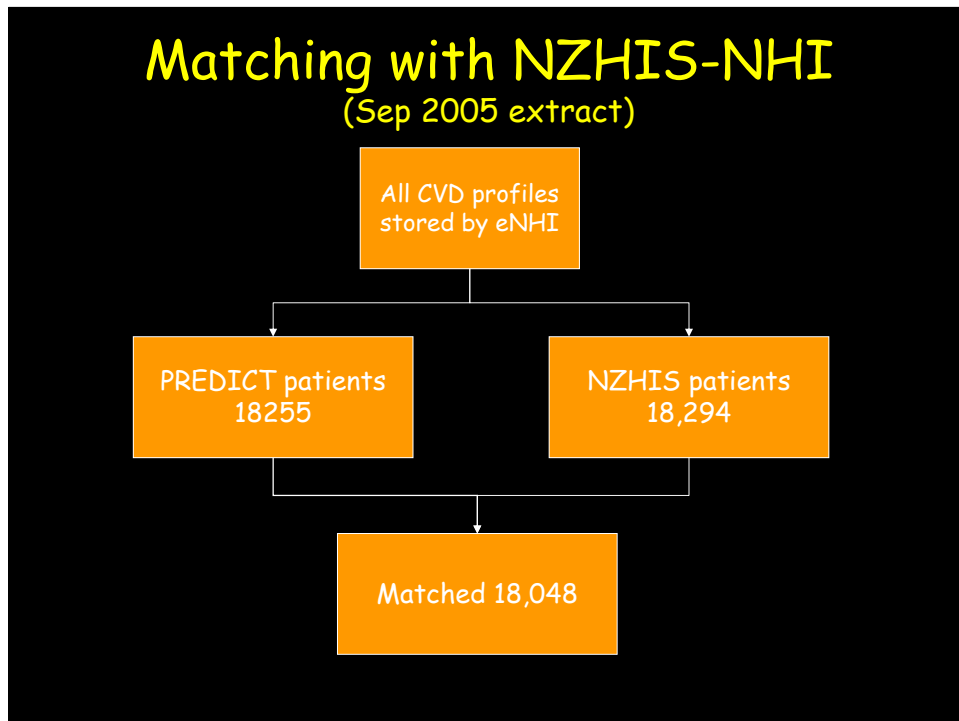
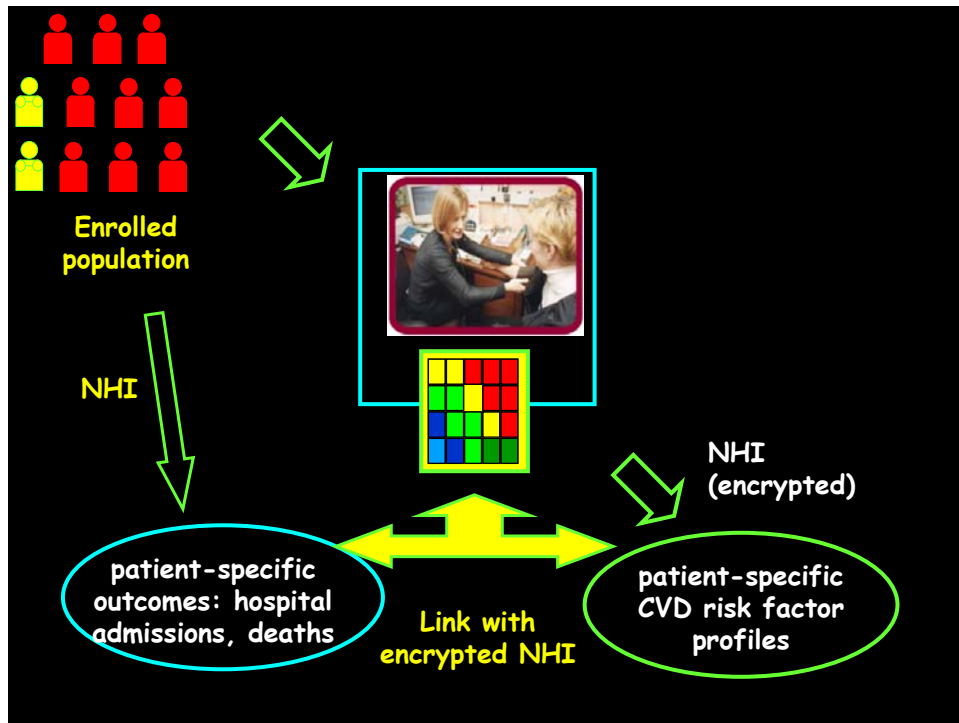


Profile risk burden first 21,000+ patients

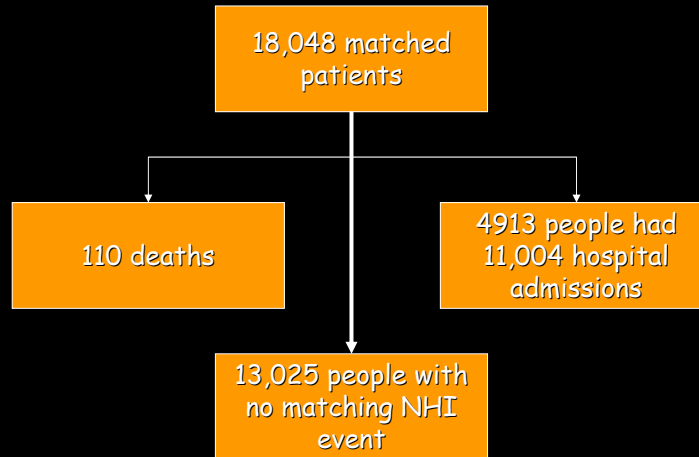


CVD Risk distribution/ethnicity

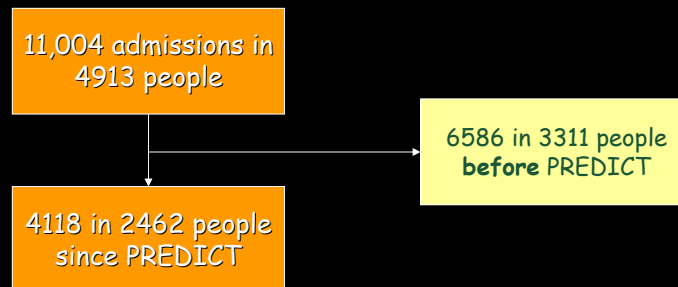




Health Outcome Events

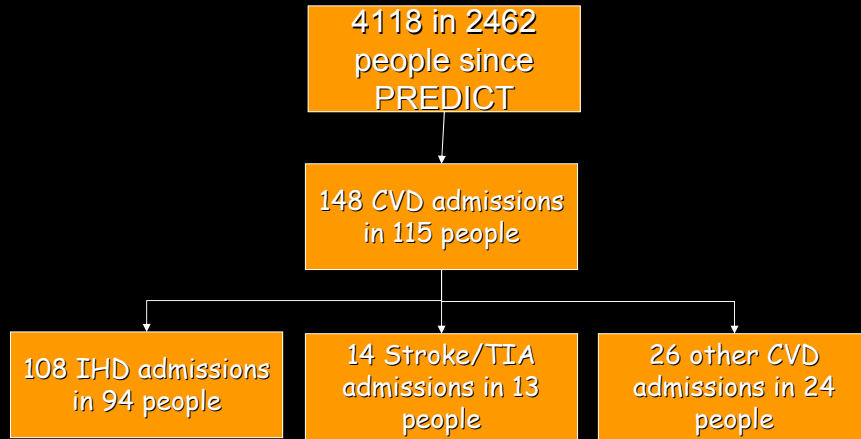


NZHIS Hospital admissions *(since 1993)*

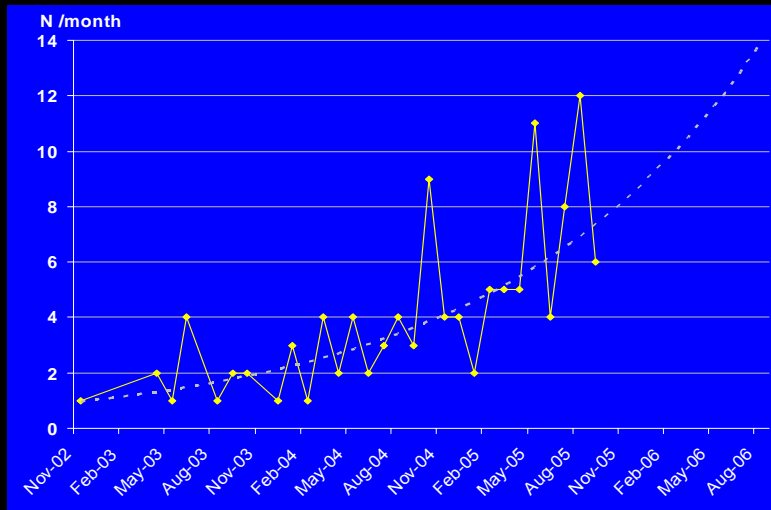


At discharge, there may be up to 20 diagnostic or procedural codes per person (ICD-9, ICD-10) – need to sort by CVD event as primary code

CVD Events since risk assessment



Hospitalisations - accrual



Projected: ~200 CVD events by end July 2006

CVD hospitalisations & risk group

■ Sneak preview:

CVD risk	Events	People	Events/1000
1-<10	17	10411	1.6
10-<15	6	2457	3.2
15-<20	4	1114	3.6
20+	17	2114	18.0
HxCVD	71	1908	37.2

2nd to last slide - PREDICT

- Supports patient centred care
 - Fast moment of care evidence-based support, tailored to individual patient profile
- Supports integrated care
 - Generates standardised patient data
 - Enables health organisations to individually/collectively monitor care, population health needs
- Research programme behind PREDICT
- E-bridge to integrated research
 - Research findings will feed directly back to patient care
- Acknowledge work and support of so many people and organisations

Acknowledgements

- Many many GPs, practice nurses and clinical medical/nursing specialists
- New Zealand Guidelines Group
- National Cardiovascular Advisory Group
- Maori Cardiovascular Group
- Ministry of Health Clinical Services Directorate
- National Heart Foundation
- Diabetes NZ
- Primary Healthcare organisations -esp ProCare, HealthWest,
- Counties Manukau District Health Board esp Chronic Care Management programme, Middlemore Hospital Coronary care Unit and Diabetes Clinic
- Medtech Global Ltd
- Health Research Council