



The impact of undiagnosed chronic conditions (diabetes, asthma & COPD) on health-related quality of life: results from the North Western Adelaide Health Study

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& the North West Adelaide Study Team



Government of South Australia
Department of Health



The Queen Elizabeth Hospital
& Health Service



Lylell MacEwin Health Services



THE UNIVERSITY
OF ADELAIDE
ADELAIDE SA





Organisations involved

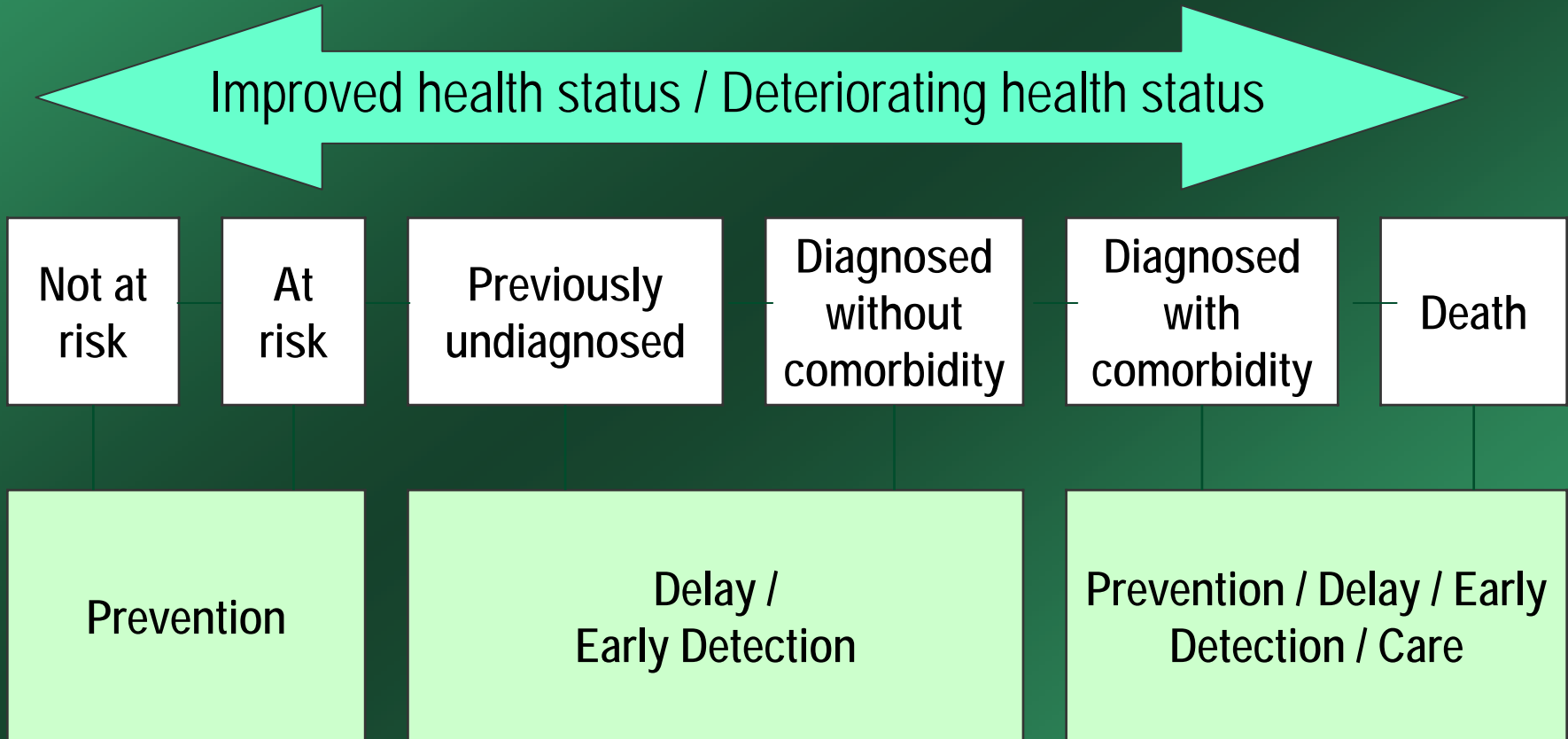
- Population Research and Outcomes Studies, South Australian Department of Health
- The Queen Elizabeth Hospital
- Lyell McEwin Health Service
- The University of Adelaide
- University of South Australia



Overall NWAHS study aims

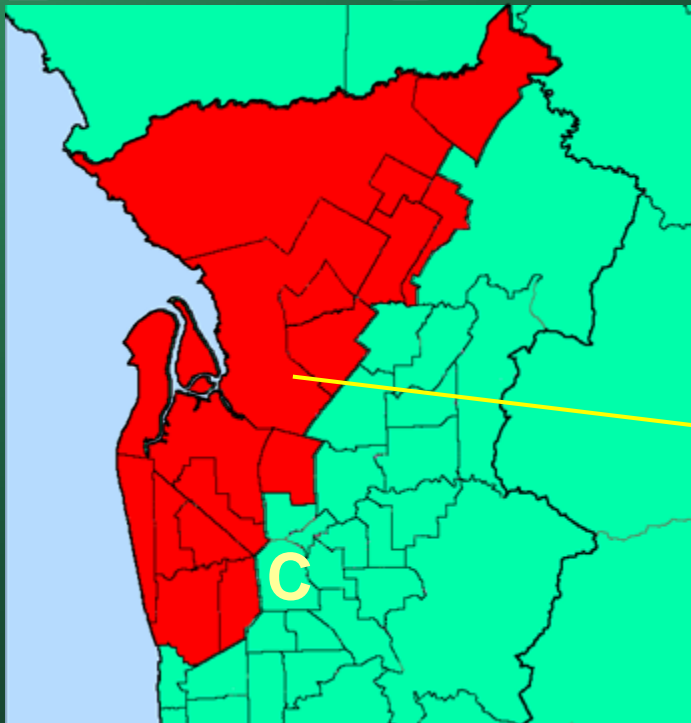
- Assess prevalence of priority health problems (diabetes, asthma and COPD), risk factors and their demographic distributions.
- Segment each chronic condition into subgroups along a continuum
 - More precise targeting.
 - More effective interventions and policy.
- Track cohort over time.

Chronic disease continuum





The North West Adelaide Health Study (NWAHS) Region





Methodology overview

Methods

- North West region of Adelaide
- Recruitment using CATI
 - ◆ Random selection of telephone numbers from White Pages
 - ◆ Random selection of respondents within the household, 18 years and over
- Data collection
 - ◆ Telephone interview
 - ◆ Self completion questionnaire
 - ◆ Bio-medical assessments attending clinic

Self-administered Questionnaire

Methods

- Self-reported diabetes, asthma, COPD (emphysema and bronchitis)
- Risk factors (smoking, physical activity, alcohol consumption, family history of diabetes, heart disease and stroke)
- Health service use
- Demographics
- SF-36

Clinic assessment

- Blood pressure
- Height and weight measurements
- Waist and hip circumference
- Fasting blood sample (glucose, lipid profile, glycated haemoglobin)
- Allergy skin test (rye grass, cat, house dust mite, alternaria, feather and cockroach)
- Lung function tests (spirometry followed by ventolin inhalation and retesting)

Definition of diabetes, asthma and COPD

Diabetes

Fasting plasma glucose ≥ 7.0 mmol/L

Asthma

15% increase in FEV1 OR 12% increase in FEV1, if absolute difference in FEV1 > 200 ml.

COPD

The result of FEV1:FEVC is less than :

$(87.21 - (0.18 \times \text{age}) * 0.882)$ for Males

$(89.10 - (0.19 \times \text{age}) * 0.893)$ for Females

Diagnosed

Previous doctor diagnosis

Undiagnosed

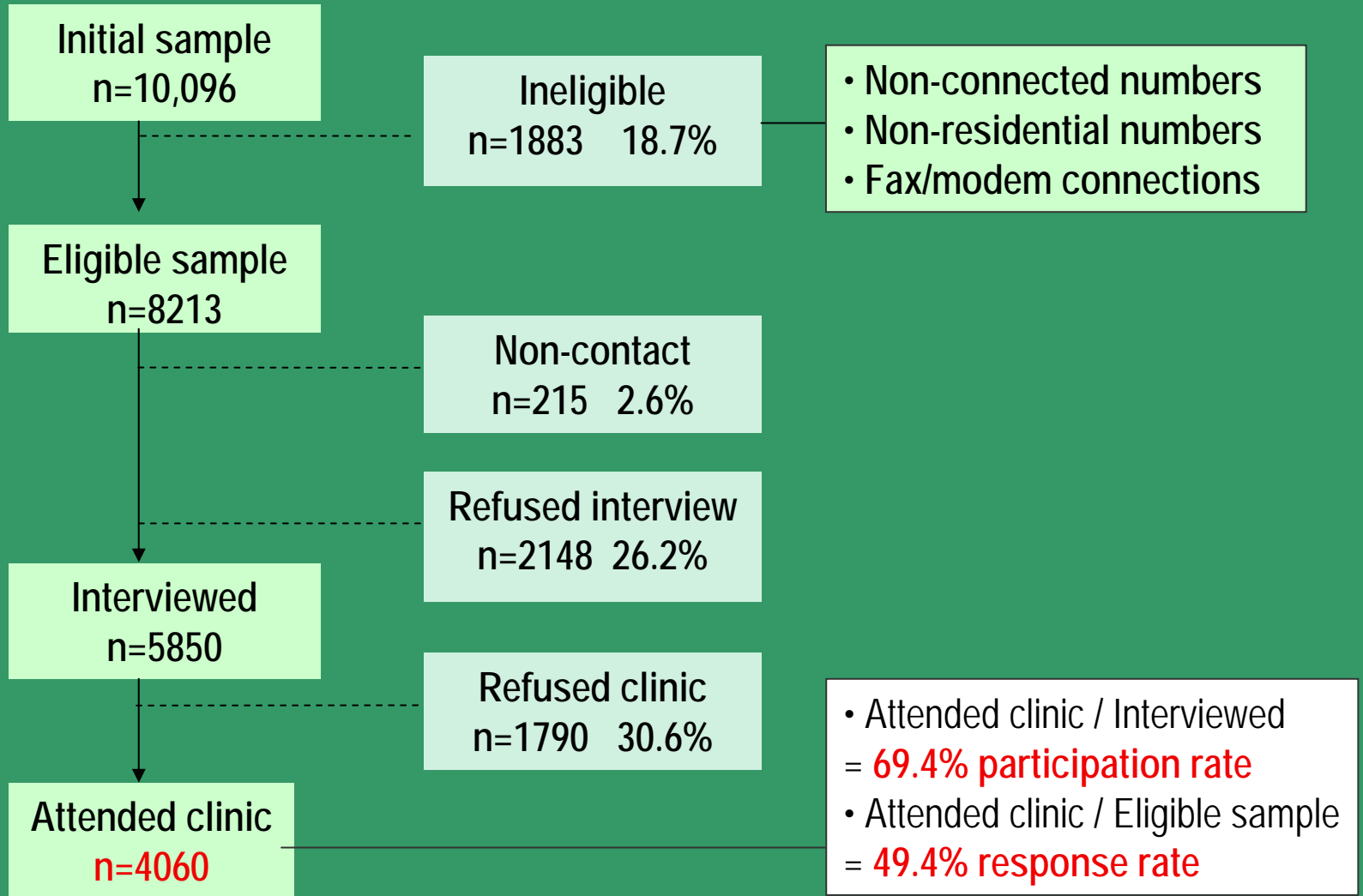
Condition diagnosed at NWAHS clinic
AND no previous doctor diagnosis

Quality of life (SF-36)

- Short Form 36 (SF-36) – comparing different population groups; validated
- Eight dimensions
- Transformed to standard scores
- Effect sizes
 - ◆ Mild
 - ◆ Moderate
 - ◆ Severe

Participation rates – Stage 1

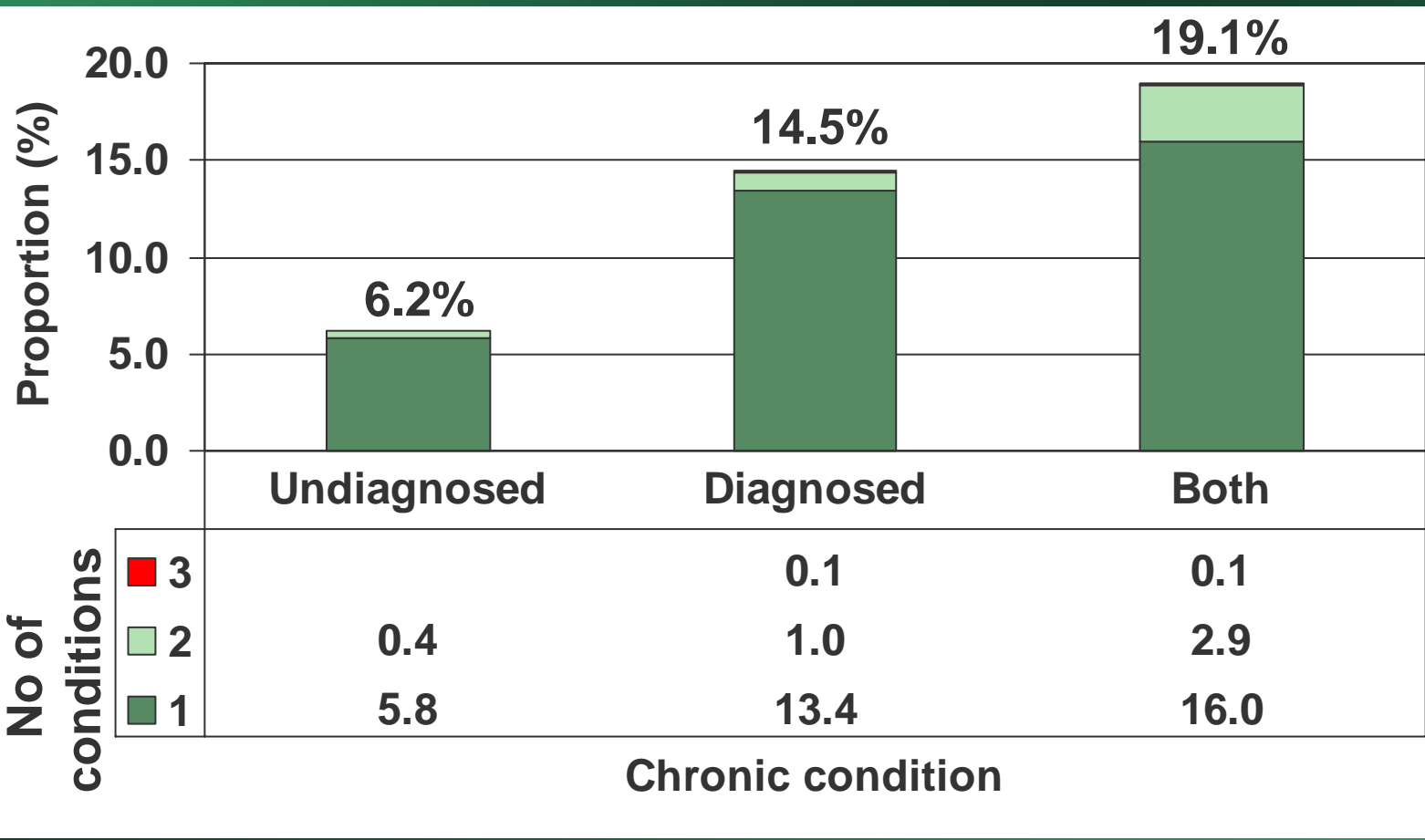
Jan 2000 to July 2002



Results - prevalence

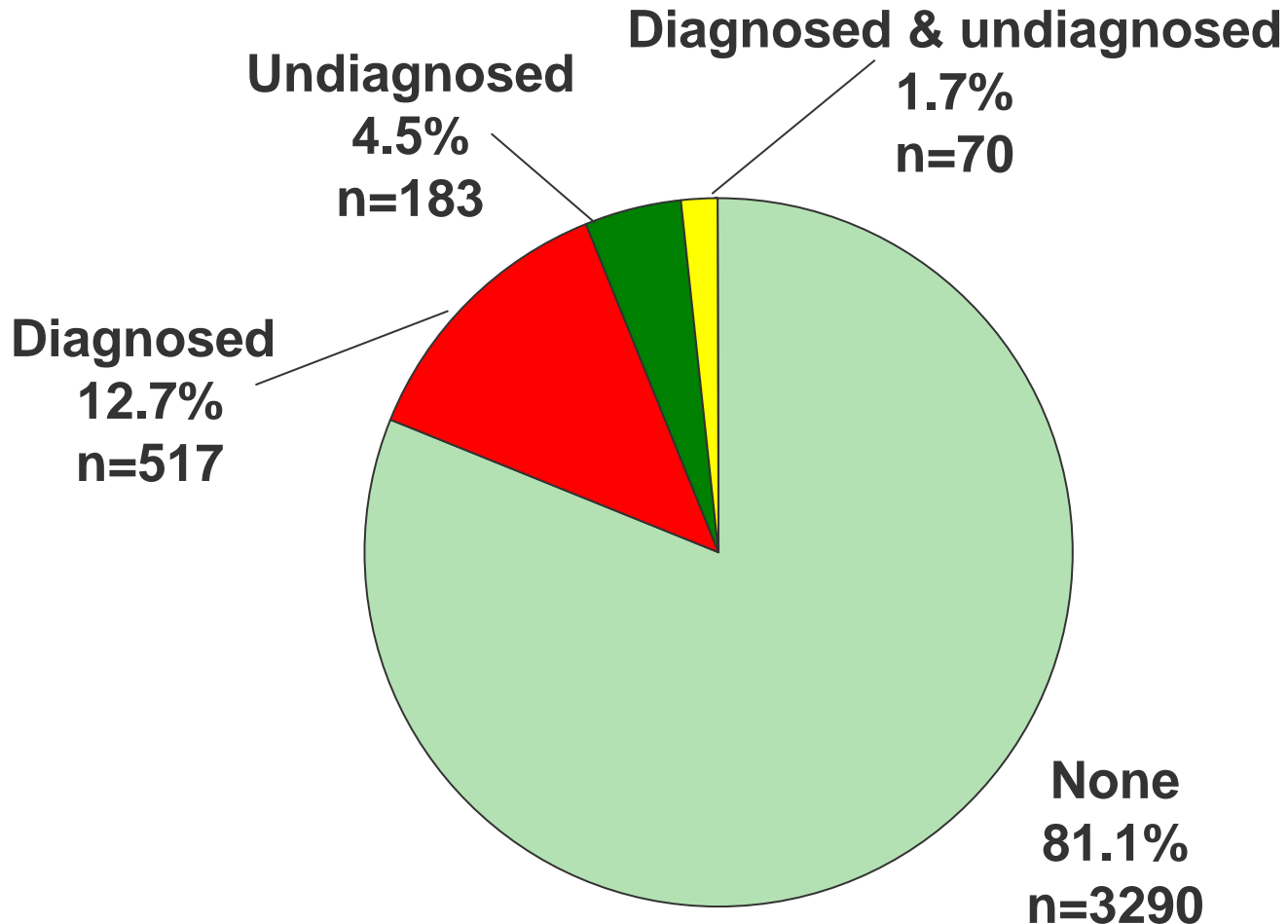
	Diabetes	Asthma	COPD
No	89.1	88.0	96.5
Undiagnosed	1.0	2.7	2.8
Diagnosed	5.6	9.4	0.7
Overall prevalence	6.6% (5.8-7.4)	12.3% (11.3-13.3)	3.5% (2.9-4.0)

Proportion of NWAHS participants with diagnosed or undiagnosed chronic conditions (diabetes, asthma, COPD)



Results

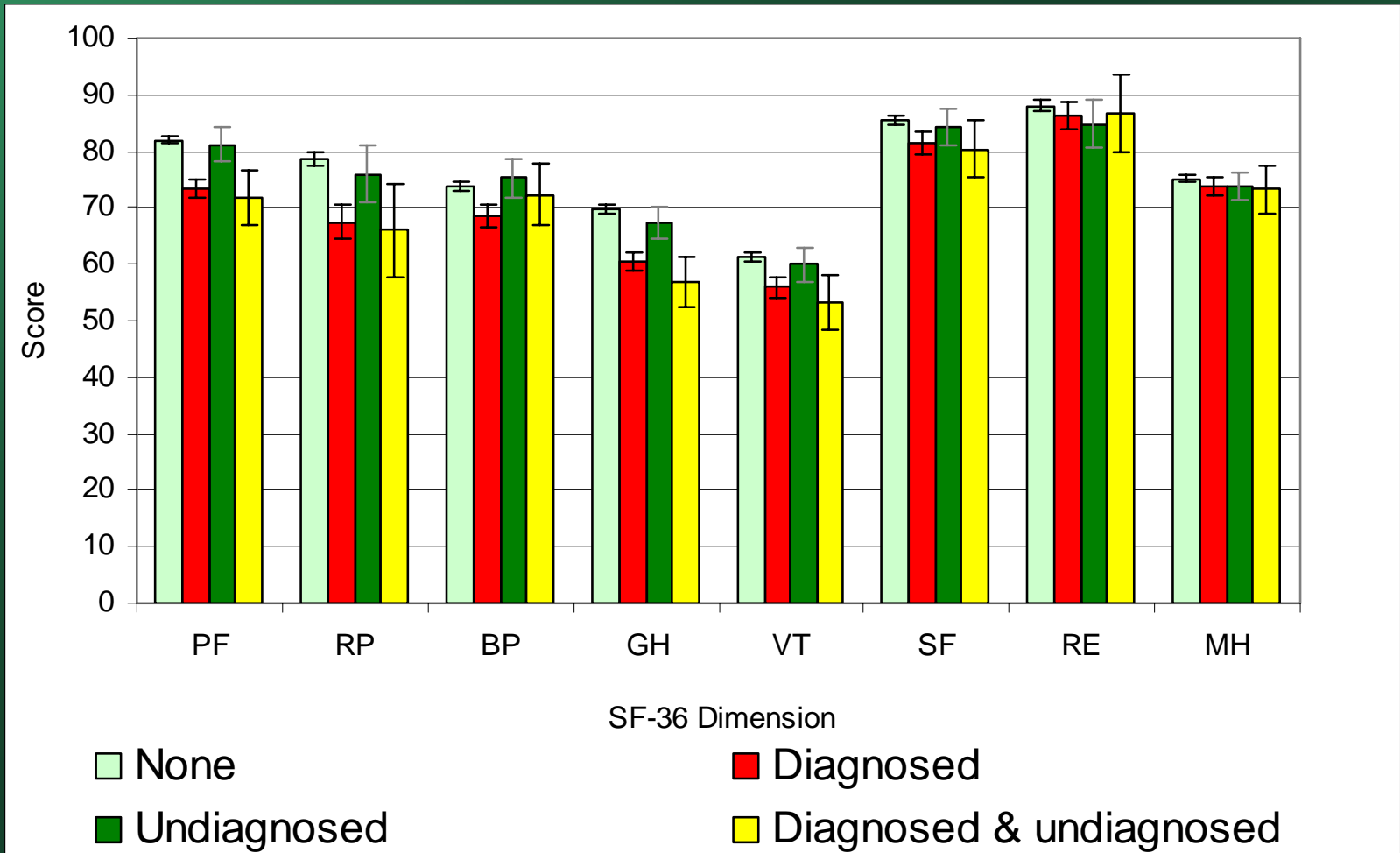
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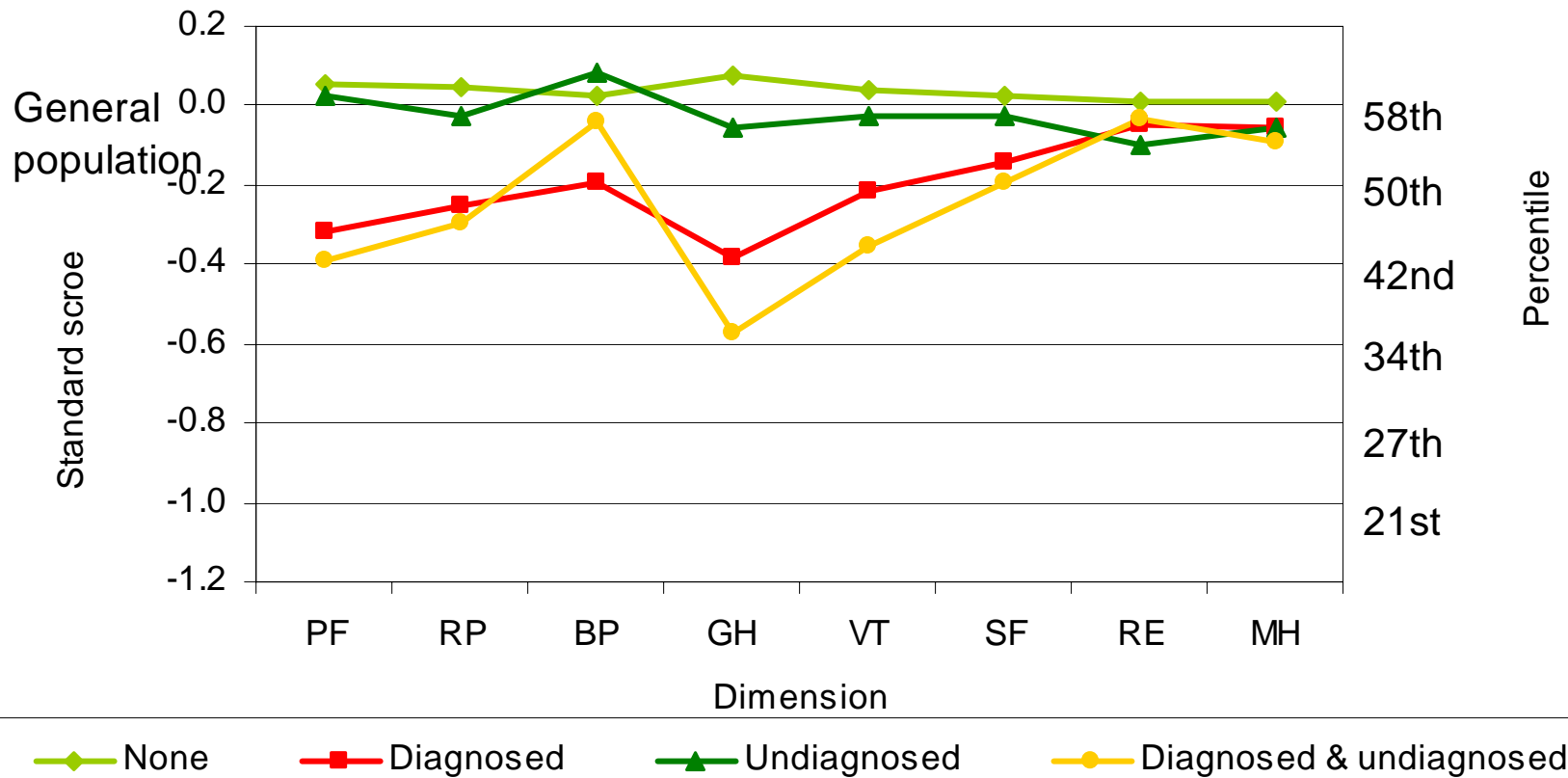
Demographic profile

	Sex (% male)	Age (mean & sd)	Income (% <\$20K)
No conditions	49.4	43.7 (17.7)	19.7
Diagnosed	44.9	49.5 (19.3)	32.4
Undiagnosed	52.5	54.9 (17.1)	32.7
Diagnosed & undiagnosed	51.6	54.3 (18.7)	30.7

Mean SF-36 scores for those with none, diagnosed or undiagnosed chronic conditions, controlled for age and sex



SF-36 standard scores for those with none, diagnosed or undiagnosed chronic conditions, controlled for age and sex



Conclusions

- Poor quality of life (physical dimensions) are associated with of people with diagnosed, and diagnosed + undiagnosed.
- In addition to clinical symptoms, aspects of social, emotional and mental functioning should be considered in the assessment and clinical management of people with chronic conditions.



Contact details

- North West Adelaide Health Study website

<http://www.nwadelaidhealthstudy.org>

- Population Research & Outcome Studies Unit
(SA Department of Health)

<http://www.health.sa.gov.au/pehs/PROS.html>