



Chronic Conditions

Diabetes

Stage 2

Epidemiological Series Report # 2007-04

April 2007

Introduction

The following overview presents the prevalence and incidence of diabetes among the participants of the North West Adelaide Health Study, and the demographic and risk factors associated with diabetes. Stage 1 (baseline examination) was conducted between 2000 and 2003, with Stage 2 (second examination) conducted from 2004 to 2006.

Measurement and definition of diabetes

People with diabetes were defined as those who had a fasting plasma glucose (FPG) level of at least 7.0mmol/L or those who self-reported having been told by a doctor that they have diabetes.

Incidence of diabetes

The annual incidence of diabetes between Stage 1 and Stage 2 was 6.8 incident cases per 1000 in the adult population.

Prevalence of diabetes – Stage 1 & Stage 2

The prevalence of diabetes is shown in Table 1. Overall in Stage 1, **6.6%** (95% CI 5.8-7.4) and in Stage 2, **7.2%** (95% CI 6.3-8.1) of study participants had diabetes.

Table 1: Prevalence of diabetes

	Stage 1		Stage 2	
	n	%	n	%
No diabetes	3793	93.4	2949	92.8
Diabetes	267	6.6	228	7.2
Total	4060	100.0	3178*	100.0

* Note: (Stage 2) 28 participants did not provide blood and were excluded

Transition to and from diabetes

Overall, 2.1% (95% CI 1.7-2.7) went from having not having diabetes in Stage 1 to having diabetes in Stage 2. There was also a proportion of respondents who reported that they had diabetes in Stage 1 but did not have diabetes in Stage 2 (0.8%; 95% CI 0.5-1.1). The results are summarised in Table 2.

Table 2: The transition to and from diabetes

Stage 1	Stage 2	n	%
No diabetes	No diabetes	2925	92.1
No diabetes	Diabetes	68	2.1
Diabetes	Diabetes	160	5.0
Diabetes	No diabetes	24	0.8
Total		3178	100.0

Some respondents that went from diabetes to no diabetes, or from no diabetes to diabetes, typically just qualified as having diabetes, and could be added to the no diabetes/no diabetes group.

The prevalence of diabetes in Stage 1 was 6.6% compared to 7.2% in Stage 2.

Overall, 2.1% of respondents who did not have diabetes in Stage 1, had diabetes in Stage 2.

Diabetes was significantly more likely to be among those who were: male; in older age groups; adults living in a house without children or those in a step, sole or shared parenting arrangement; separated, divorced or widowed; retired or undertaking home duties.

Demographic profile of people with diabetes

The prevalence of diabetes was statistically significantly higher among those who were in the older age groups, adults living alone or without children or those in a step, sole or shared parenting relationship, those separated, divorced or widowed, or those retired or undertaking home duties. The prevalence was statistically significantly lower among those who were female, had never been married, had an income greater than \$20,000, or had an education level above secondary (Table 3).

Table 3: Univariate Odds Ratios for demographic variables associated with diabetes

Variable	n	%	OR	(95% CI)	p value
Sex					
Male	129/1559	8.3	1.00		
Female	99/1618	6.1	0.73	(0.55-0.95)	0.02
Age group					
20 to 49 years	37/1837	2.0	1.00		
50 to 59 years	53/534	9.9	5.32	(3.45-8.20)	<0.001
60 years and over	139/806	17.2	10.09	(6.95-14.66)	<0.001
Highest education level obtained*					
Secondary	130/1416	9.2	1.00		
Trade/apprenticeship/cert/diploma	78/1169	6.7	0.71	(0.53-0.95)	0.02
Bachelor degree or higher	13/545	2.4	0.24	(0.14-0.43)	<0.001
Gross annual household income*					
Up to \$20,000	89/601	14.8	1.00		
\$20,001- 40,000	67/724	9.2	0.58	(0.42-0.82)	0.002
\$40,001- 60,000	29/686	4.2	0.25	(0.16-0.39)	<0.001
More than \$60,000	25/1039	2.4	0.14	(0.09-0.23)	<0.001
Family structure*					
Family & children, 2 biological/adoptive parents	44/1198	3.7	1.00		
Adult living with partner, no children	84/847	9.9	2.88	(1.98-4.19)	<0.001
Adult living alone	50/427	11.8	3.50	(2.30-5.33)	<0.001
Adults – related/unrelated, living together	22/336	6.6	1.84	(1.09-3.11)	0.02
Step/sole/shared parenting & other	21/330	6.3	1.76	(1.03- 3.01)	0.04
Marital status*					
Married or living with partner	151/2124	7.1	1.00		
Separated/divorced	29/272	10.7	1.57	(1.04-2.39)	0.03
Widowed	34/210	16.4	2.57	(1.72-3.84)	<0.001
Never married	12/564	2.1	0.29	(0.16-0.52)	<0.001
Work status*					
Full time employed	49/1432	3.4	1.00		
Part time/casual employed	18/529	3.3	0.98	(0.56-1.70)	0.93
Unemployed	3/76	4.2	1.25	(0.39-3.97)	0.70
Home duties/retired	150/982	15.3	5.14	(3.68-7.18)	<0.001
Student/other	7/149	4.7	1.42	(0.63-3.17)	0.40

*Not stated category not reported

Self reported risk factor profile of people with and without diabetes

The prevalence of diabetes was statistically significantly lower among those who undertook some level of physical activity (Table 4)

Table 4: Univariate Odds Ratios for self-reported risk factor variables associated with diabetes

Variable	n	%	OR	(95% CI)	p value
Physical activity					
Sedentary	89/838	10.6	1.00		
Undertakes some level of exercise	115/2057	5.6	0.50	(0.37-0.67)	<0.001

* Don't know/ refused/ not stated category not reported

Diabetes was significantly less likely among those who did some exercise

Diabetes was significantly more likely to be among those who were overweight, obese or those who had high blood pressure.

Measured risk factor profile of people with and without diabetes

The prevalence of diabetes was statistically significantly higher among those who were overweight or obese, those who had a high waist hip ratio, or high blood pressure. The prevalence was statistically significantly lower among those who had high cholesterol (Table 5).

Table 5: Univariate Odds Ratios for measured risk factor variables associated with diabetes

Variable	n	%	OR	(95% CI)	p value
BMI					
Underweight/normal	33/1056	3.1	1.00		
Overweight	85/1188	7.2	2.41	(1.60-3.64)	<0.001
Obese	110/932	11.8	4.19	(2.81-6.25)	<0.001
Waist/hip ratio (>1.0 men, >0.85 women)					
No	110/2415	4.6			
Yes	116/734	15.8	3.92	(2.97-5.16)	<0.001
High blood pressure (≥140/90mmHg)					
No	117/2341	5.0	1.00		
Yes	109/810	13.5	2.95	(2.24-3.88)	<0.001
High total cholesterol (≥5.5mmol/L)					
No	166/1877	8.8	1.00		
Yes	60/1288	4.7	0.50	(0.37-0.68)	<0.001

Quality of life profile of people with diabetes

Figure 1 shows the mean scores of the SF-36 subscales for people who did and did not have diabetes. People with diabetes scored statistically significantly lower on all dimensions of the SF-36 than people without diabetes.

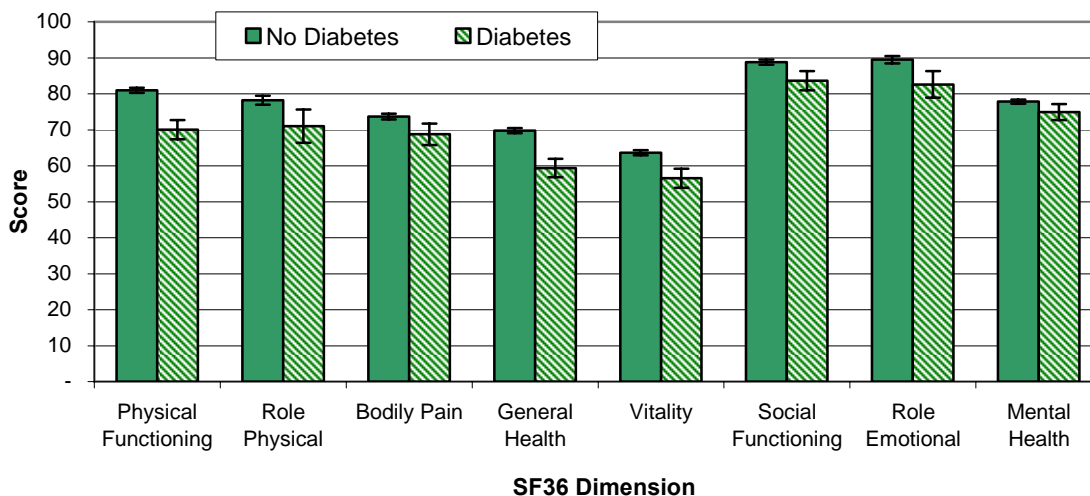


Figure 1: SF-36 mean scores for people who did and did not have diabetes

This document is one of a series of reports concerning Stage 2 of the North West Adelaide Health Study. Please see website for other reports in the series - www.health.sa.gov.au/pros/

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People with diabetes scored significantly lower all dimensions of the SF-36.