

A STRATEGY TO REDUCE THE INCIDENCE OF DIABETES IN SOUTHLAND

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 Date Prepared: **30 September 2004**

PROJECT DETAILS	
Project Title	Diabetes Strategy – Southland District Health Board (SDHB)
Project Sponsor	General Manager (GM) Planning and Funding
Project Manager	Diabetes Co-ordinator
Project Team members	<p>Members of Local Diabetes Team (LDT)</p> <p>Internal: Dr Charles Renner, Diabetes Physician; Dr Paul Tomlinson, Paediatrician; Dr Mylan Newkirk, Ophthalmologist; Liz Kelly and Donna Madden, Diabetes Nurse Specialists; Margaret Waterman, Dietitian; Rene Cook, Kaiwhakangunu, (Māori Nurse Specialist); Lee Marie and Aniva Ripley, Pacific Island Nurse Specialists; Julie Symons, Paediatric Resource Nurse.</p> <p>External: Dr Hugh Tapper, GP representative; Jenny Britland, Diabetes Nurse Specialist, Queenstown; Oraka Aparima Health and Social Services, Awarua Social and Health Services, Māori Health Providers; Lesley Dark, Practice Nurse; Henry and Marie Osborne, June Wright, Diabetes Southland; Larelle Gibbs, Diabetes Youth Southland; Jan Wilson, Te Waka Hauora, Public Health South.</p>

DOCUMENT CONTROL		
Version number	03	Date: 23/09/04
Associated projects	Cardio-Vascular Strategy Healthy Eating Healthy Action Implementation Strategy (HEHA) Smokefree Projects Public Health South Review Healthy Communities Gore Investigation	

DEFINITIONS	
Background to project	<p>The New Zealand Health Strategy (2000) lists the prevention and management of diabetes as one of its priorities and this has been identified as one of the 4 key priorities for SDHB following findings outlined in the 2001 Healthy Needs Analysis (HNA). There are several New Zealand Health Strategy priority areas which relate to diabetes including:</p> <ul style="list-style-type: none"> • Reducing the incidence and impact of diabetes • Reducing obesity • Increasing the level of physical activity • Reducing smoking • Improving nutrition • Reducing the incidence and impact of cardiovascular disease <p>The evidence supports the expected rapid growth in the number</p>

	<p>of people with diabetes, in particular Māori and Pacific populations. The incidence for Māori is 2 to 3 times higher than European New Zealanders, whilst the hospitalisation rates for Pacific people are higher than both Māori and other New Zealanders (HFA, 2000).</p> <p>The Ministry of Health Key Performance Indicators (KPIs) enables each DHB to assess how successful they are at achieving their desired targets. In 2003, SDHB achieved one third of the KPI targets, providing succinct evidence that further work is needed in this area. These targets are modified annually.</p> <p>Cardiovascular disease is the leading cause of death in people with diabetes. The presence of diabetes increases the risks of coronary artery disease 2 – 3 fold in men and 4 – 5 fold in women. Diabetes and cardiovascular risk factors are very similar. Therefore public awareness and uptake of lifestyle modification programmes need to be promoted. Diabetes awareness needs to be expanded outside the current knowledge base environment.</p>
Project Goal	To provide a diabetes strategy which includes both short and long term goals to reduce the incidence and impact of diabetes for the people of Southland. (Appendix 1).
Project Objectives	<p>The primary objectives of this project are to:</p> <ul style="list-style-type: none"> • To reorientate providers and service users towards a community based preventative model for the delivery of service. The current model is heavily dominated by secondary care. • To instil a sense of ownership in community providers and stakeholders. • To equip primary & secondary service providers with a sustainable and integrated information base allowing informed decision making and seamless care. • Ensure increased collaboration between primary and secondary care diabetes service providers resulting in improved coordination and integration across diabetes services • To increase the number and range of programmes offered in Southland for both patients diagnosed with diabetes and those identified to be “at risk” of developing Type 2 diabetes. Specific education programmes for both Maori and Pacific Island people focused on lifestyle change mandatory.
Deliverables	<ul style="list-style-type: none"> • A tangible number of programmes designated to educate and improve lifestyle choices including: dietary modification, exercise and other intervention strategies specifically aimed at groups at high risk of developing Type 2 diabetes • Intersectorial partnerships. For example, between health providers and workplaces, schools and Territorial Local Authorities. • An integrated information management system [Clinical Information System (CIS) and Patient Administration System

	<p>(PAS)].</p> <ul style="list-style-type: none"> • An electronic Southland diabetes register. • Improved communication and transfer of information between HealthCare providers and diabetes support organisations. • Increased monitoring of diagnosed diabetes patients in the community through Allied health staff (Nurse Educators, Dietitian, Psychologist, Podiatrist, Ophthalmologist, Social Worker). • The introduction of opportunistic screening at both primary and secondary care levels for Māori, Pacific Island, Cardiac patients and mainstream patients with multiple risk factors. • The promotion and delivery of free annual checks and subsidised resources. 		
Benefits of project (including measures of known benefits which relate to deliverables as well as less tangible benefits)	<ul style="list-style-type: none"> • Increased community awareness of health issues related to diabetes and of diabetes services. • Identifying the health needs of people with diabetes, their family/whanau, and their communities. • Identifying barriers to care that reduce the utilisation or effectiveness of services. • Provide feedback on diabetes services to HealthCare providers and the community. • Enable the DHB to collect and maintain reliable data on the population with diabetes in Southland. 		
Scope (areas affected by project)	This project is aimed at reducing the incidence of diabetes in Southland and creating a seamless service, which will improve health outcomes for people with diabetes.		
STAKEHOLDERS			
Key stakeholders	Southland District Health Board, Primary Health Organisations, Maori Health Providers, Public Health South, Sport Southland, Diabetes Southland, Diabetes Youth Southland		
Other stakeholders	South Link Health Inc., Local Runanga and Maori Community Groups, YMCA, Heart Foundation		
PROJECT MANAGEMENT APPROACH			
Project strategy (broad statement of how project will be approached)	The Diabetes Coordinator will report directly to the General Manager, Planning and Funding and provide regular updates on the projects implementation and progress.		
Project start date	October 04	Project completion date	On going
Milestones			Date
Review of Strategy by Local Diabetes Team			October 2004
Meetings with key stakeholders			November 2004
Analysis of key indicators			January 2005
LDT second report to the DHB Planning and Funding Team/CPHAC committee and Ministry of Health			February 2005
Implementation of Preventative strategies			February 2005
Data –Set up an electronic Diabetes Register for Southland			June 2005

<u>Implementation</u> Medium-Long-term: Increased public awareness of Diabetes and positive lifestyle changes Long-term: Earlier diagnosis of Type 2 Diabetes ensuring improved management and monitoring of these patients		
Improved coordination and delivery of programmes and treatment for clients		
RISKS	MITIGATION	
a) Buy in from all health sectors, public, primary and secondary b) Availability of funding c) Establishment of integrated patient administration system and clinical information system connecting to diabetes register d) Apathy of patients e) Recruitment of Māori health professionals who are clinically competent	a) Face to face meetings, and regular follow ups with all sectors involved, to raise awareness of the strategy b) Future funding gains with better preventative strategies and focussed care. Educating the community to ensure 'buy in' from community funders c) Making benefits known to primary and secondary sectors utilising options outlined in the Diabetes Strategy d) Proactive approach to raise awareness of the seriousness of diabetes complications by education of patients in their own environments and by identifying key people to spread the message in their communities (eg Māori community) e) Link with South Island Maori Workforce Development Strategy to identify existing Māori health professionals and provide training and support for potential professionals	

A strategy to reduce the incidence and impact of diabetes in Southland



Appendix 1 Project Aim: Reduce the incidence and impact of Diabetes

Objectives	Strategy	Deliverable	Outcome	Financial	Evaluation
To reorientate providers and service users towards a community based preventative model for the delivery of service and to instil a sense of ownership in community providers and stakeholders.	To encourage primary prevention of type 2 diabetes through programmes aimed at reducing risk factors for Type 2 diabetes	a) Implementation of Healthy Eating Healthy Action (HEHA) strategy at local level is public health approach to reducing obesity and therefore Type 2 diabetes. Intersectoral collaboration of health and education sectors, workplaces, and Territorial Local Authorities.	a) Reduce incidence of Type 2 Diabetes (Medium to Long term)	a) Existing programmes within current budget. New programmes will require additional funding but this will lead to long term savings from reduced treatment costs (Appendix 2, Table 2)	a) Incidence of Type 2 diabetes reduced by 2 % in 5 years, 5 % in 10 years (Appendix 2, Figure 1, Table 1)
		b) Opportunistic screening in primary care to provide an effective system for earlier detection of diabetes. Diagnostic testing to be offered to people with hypertension, lipid abnormalities or possible diabetes symptom	b) Earlier lifestyle advice and treatment given and delay onset of complications from diabetes	b) Within current budget	b) Impact of complications such as CVD, retinopathy and amputations reduced (Appendix 2 – Table 3 for current secondary related diabetes admissions)
		c) At Secondary care ensure that all people admitted with potentially diabetes related diseases such as Cardio Vascular Disease (CVD) and leg amputations are screened for diabetes	c) Better management of health outcomes for patients	c) Within current budget	c) Number of new diabetes cases diagnosed in secondary care
	To ensure good care of people with diabetes	d) Monitoring of the health of people with diabetes through free annual checks (South Link Health)	d) Information from these checks for quality improvement and service planning.	d) Within current budget	d) Diabetes control improved by reducing numbers of patients with poorly controlled glycosated haemoglobin (HbA1c) by 10% in 3 years. (Appendix 2, Table 4)
		e) Maintain all existing services and fill gaps such as providing nutrition education programmes for people with diabetes in community	e) Southlanders with diabetes and CVD have access to a community dietitian. Short term (1 –2 years)	e) \$50K community dietitian.	e) Measure Key performance indicators (KPIs) such as HbA1c and Body Mass Index, for those people using community dietitian's service
		f) Management of Type 1 diabetes by specialist and allied health services by education of children and young people with Type 1 diabetes, and their supportive networks	f) Increased education of all involved supporting people with Type 1 diabetes	f) Hours pro rata \$55K	

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Objectives	Strategy	Deliverable	Outcome	Financial	Evaluation
<p>To equip primary & secondary service providers with a sustainable and integrated information base allowing informed decision making and seamless care.</p> <p>Ensure increased collaboration between primary and secondary care diabetes service providers resulting in improved coordination and integration across diabetes services</p>	<p>Provide an Integrated Patient Management System</p> <p>Develop and maintain effective communication links among providers of diabetes care from primary to secondary level, and the consumer population to provide best practice services</p>	<p>g) Purchase an Integrated management system</p> <p>h) Links developed and expanded by using Local Diabetes Team, South Link Health, and PHOs</p> <p>i) On diagnosis –Patients are entered onto a diabetes register - Primary care practitioners follow Evidence Based Best Practice Guideline, Management of Type 2 Diabetes (Ministry of Health, 2003) -Referred to allied health professionals (dietitian, diabetes educator, Maori health providers, podiatrist, green prescription) - Referred for retinol screening - Refer to Secondary Care for Type 1 patients and Type 2 patients with complications using clinical criteria to identify those at highest risk</p> <p>j) Devolution of diabetes patients without secondary complications from Secondary care to Primary care</p> <p>k) Update training for Health Professionals - General Practitioners, Practice Nurses Maori Health Nurses, Diabetes educators, Dietitians, Podiatrists</p>	<p>g) Seamless service</p> <p>h) A disease management approach to diabetes is followed</p> <p>i) Patients with diabetes enter health system which ensures care following best practice guidelines</p> <p>j) Patients with complications seen more frequently in secondary care. Under PHOs practice nurses have more responsibility for people with diabetes</p> <p>k) Workforce kept up to date with latest developments and best practice recommended for diabetes care</p>	<p>g) Within current budget</p> <p>h) Within current budget</p> <p>i) Within current budget</p> <p>j) Funding within PHO budgets</p> <p>k) \$10 K</p>	<p>g) An evaluation has already occurred regarding the PMS which is being purchased by SDHB</p> <p>h) Check duplication of services and survey diabetes health personal to see that there is awareness of all other services provided for diabetes</p> <p>i) Reducing mortality and morbidity figures for diabetes</p> <p>j) Annual Review of key performance indicators for measuring diabetes control</p> <p>k) The Health Practitioners Competency Assurance (HPCA) Act (September 2004) will assess competency of Health Professionals</p>

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Objectives	Strategy	Deliverable	Outcome	Financial impact	Evaluation
Ensure that accessible and appropriate programmes are available for Māori and Pacific Island people in collaboration with the community	Work in collaboration with Māori Manager SDHB, Māori Health Providers, and Pacific Island Specialist nurses. Provide services at venues that are appropriate to maximise access by Maori and Pacific people	l) Current health services to develop and build on strong community links in the Maori and Pacific communities. m) To increase the uptake of free annual checks by Māori and Pacific Island people.	l) Linkages established between Health providers who work in diabetes and Maori groups. (Short term). m) Increased numbers of Māori and Pacific People taking advantage of the free annual check programme leading to improved control of their diabetes. (Short to medium term).	l) \$1K for initial hui with Providers and Community m)\$2K	l) Number of people with diabetes accessing services in the following year. m) To ascertain if number of Māori and Pacific Island patients accessing free annual checks has increased from previous reporting period
To increase the number and range of programmes offered in Southland for both patients diagnosed with diabetes and those identified to be "at risk" of developing Type 2 diabetes	Provide specific education programmes for both Maori and Pacific Island people focused on lifestyle change	n) Targeted programmes developed for Māori people who have impaired glucose tolerance and diabetes o) Programmes, which screen for diabetes and cardiovascular disease together as Maori and Pacific peoples at greater risk of developing both these diseases than the rest of the population. p) Work force development which includes clinical and cultural competence for Maori, Pacific and mainstream health personal	n) Will have impact on wider incidence of diabetes. (Medium to long term). o) Earlier diagnosis leading to better management. (Short to medium term). p) Will keep workforce clinically competent and lessen the barriers that prevent Māori and Pacific Island people accessing health services. (On going).	n) \$60 K -Immediate negative financial impact leading to positive impact with reduced at risk people going on to develop diabetes o) Within current budget p) Within current budget	n) Reduced incidence in 5 years, 10 years. o) South Link Health collects data in primary care which will be monitored on an ongoing basis to modify programmes if necessary. (Appendix 2, Table 4) p) Competencies required under the HPCA act.

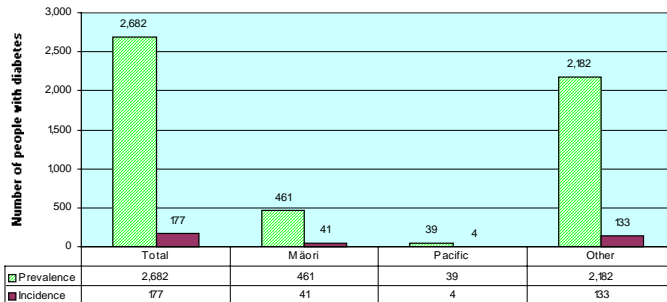
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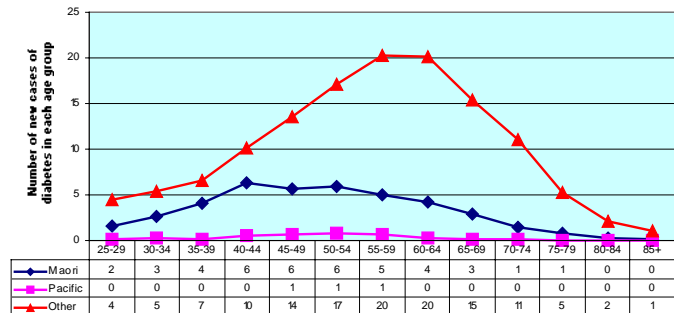
Appendix 2

Incidence and prevalence of Diabetes in Southland

Diabetes Model - Diabetes for Year 2004
Southland DHB

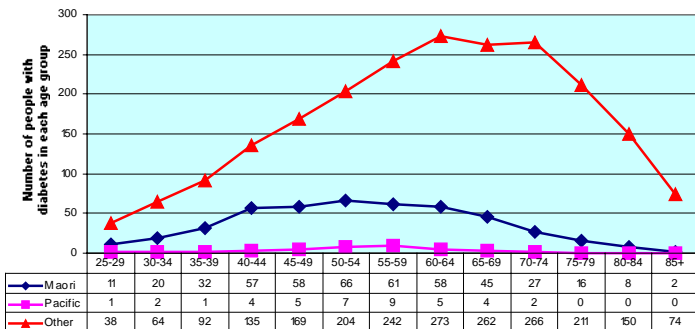


Type 2 Diabetes New Cases



The prevalence and incidence rates shown below are based the model described in the Public Health Intelligence Occasional Bulletin Series¹. A 20% increase is assumed annually for the years 2001 through to 2006. The numbers presented are estimates, and should be applied with particular caution to DHBs or Primary Care Organisations with small populations.

Type 2 Diabetes Prevalence



Type 2 Diabetes-Attributable Mortality

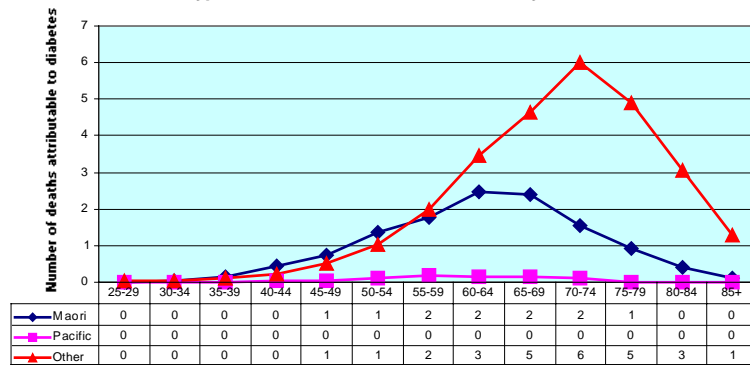


Figure 1: Incidence and prevalence data for Southland

¹ Bulletin Number 9: Modelling Diabetes: A multi-state life table model; Bulletin Number 11: Modelling Diabetes: A summary

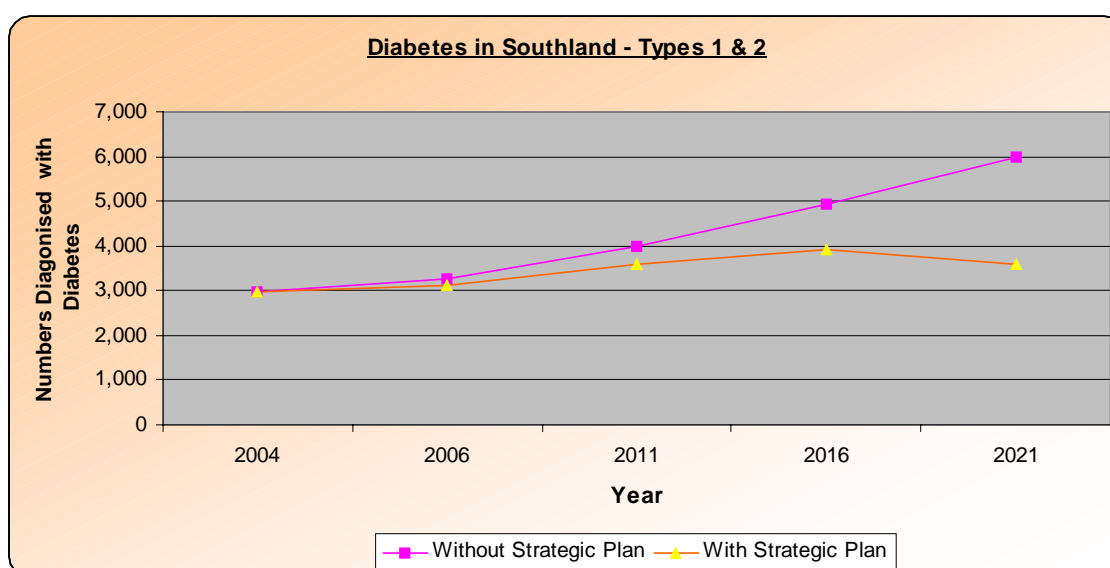
Appendix 2 contd

Prevalence in Ethnic groups

Prevalence	2004	2006	2011
Total	2978	3,277	3,990
Māori	485	585	801
Pacific	41	52	64
Other	2451	2,641	3125

Table 1

Predicted Prevalence					
	2004	2006	2011	2016	2021
Projected prevalence without strategy	2,978	3277	3,990	4915	5985
Projected Prevalence with strategy implemented	2,978	3113	3591	3932	3591



Note:

- i. The numbers presented are estimates. It is difficult to give accurate forecasts because of multiple variables such as population increase; age, sex and ethnicity structure of the population; and trends in risk factors. With the strategy in place it is expected that the reduction in prevalence should decrease exponentially every five years, starting with 5% in 2006.
- ii. Undetected cases are estimated almost equivalent to those cases that are detected (MOH 2002)

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Table 2

Costs per person with type 2 diabetes, Price Waterhouse Coopers, 2003 (cost in year 2000 dollars)			
	Year 2000	Projected cost using current systems Year 2010	Projected costs implementing strategy Year 2010
Total publicly funded health care costs	\$3230	\$3980	\$3240- \$3370
Total (disease related) cost to government	\$4350	\$5130	\$4150- \$ 4300

Table 3

Diabetes admissions to Secondary care				
	Inpatients July 2002– June 2003	Inpatients July 2003 – June 2004	Outpatients July 2002-June 2003	Outpatients July 2003- June 2004
Primary diagnosis of Diabetes	141 (incl. 9 amputations)	153 (incl.10 amputations)		
Diabetes as secondary diagnosis	952	874		
Total	1093	1027	4749	6420

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Appendix 2 contd.

Table 4: Key Indicators

The Ministry of Health Key Performance Indicators enable each DHB to access how successful they are at achieving their desired targets. These targets are modified each calendar year to account for any progress made over the previous 12 months.

Free Annual Checks								
Percentages of numbers expected to have free annual checks	2002 Target	2002 Achieved	2003 Target	2003 Achieved	2004 Target	2003 Achieved	2006 Forecast	2011 Forecast
	%	%	%	%	%	January - July %	%	%
Māori	50	18.1	50	21	50	12	65	80
Pacific	50	43.4	55	34	60	32	70	80
All others	70	64.8	75	66	80	31	90	93
Total	66	56.5	71	58	75	17	85	90

Diabetes Control								
Percentages of people with free annual checks with poor diabetes control (HBA1c equal to or more than 8%).	2002 Target	2002 Achieved	2003 Target	2003 Achieved	2004 Target	2006 Forecast	2011 Forecast	
	%	%	%	%	%	%	%	
Māori	40	47.1	42	40.2	35	22	15	
Pacific	40	47.1	42	42.9	37	22	15	
All others	24	27.5	22	22	18	14	8	
Total	26	28.8	25	23.2	20	15	10	

This assumes 30% of people with HBA1c between 7% and 8% last year will develop an HBA1c greater than 8% this year, and that the extra people with diabetes getting free annual checks this year are similar in their diabetes control to the people getting checks

Eye Screening								
Percentages of people with free annual checks who had their eyes screened in the last two years:	2002 Target	2002 Achieved	2003 Target	2003 Achieved	2004 Target	2006 Forecast	2011 Forecast	
	%	%	%	%	%	%	%	
Māori	80	77.8	80	69	85	90	95	
Pacific	80	88.2	88	57	90	90	95	
All others	80	77.5	80	78	85	90	95	
Total	80	77.8	80	77.3	85	90	95	

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