

SAND abstract No. 148 from the BEACH program 2009–10

Subject: Type 2 diabetes, and blood glucose, lipid and blood pressure medication management

Organisation supporting this study: Merck Sharp and Dohme (Australia) Pty Ltd

Issues: The prevalence of diagnosed Type 2 diabetes in general practice patients; for these patients, the most recent levels of HbA1c, total cholesterol, low-density lipoprotein (LDL) cholesterol, high-density lipoprotein (HDL) cholesterol and blood pressure; proportion currently taking medication for management of blood glucose levels; proportion currently taking mono, dual, triple or quadruple medication therapy; proportion currently using insulin (alone or in combination with oral medication) for management of blood glucose levels; proportion who meet the Pharmaceutical Benefits Schedule (PBS) criteria for subsidy of lipid-lowering medications; proportion of eligible patients taking a lipid-lowering medication; proportion of patients with Type 2 diabetes taking a lipid-lowering medication, and those taking a medication for hypertension.

Sample: 3,021 respondents from 103 GPs; data collection period: 09/06/2009–13/07/2009.

Method: Detailed in the paper entitled *SAND method 2009–10* at:

www.fmrc.org.au/publications/SAND_abstracts.htm. **Methods for this study:** A card was supplied to participating GPs to assist in defining patient eligibility for the PBS subsidy.

Summary of results

The age–sex distribution of respondents did not differ from the distribution for all BEACH encounters, with 42.9% being male, and 26.5% of patients aged 45–64 years.

Of 3,021 respondents, 271 (9.0%) had diagnosed Type 2 diabetes. Of 3,000 patients for whom sex was known, prevalence of Type 2 diabetes was higher among male (11.5%, 95% CI: 9.2–13.8) than female patients (7.2%, 95% CI: 5.6–8.8). Of 3,006 patients for whom age was known, prevalence was higher among patients aged 45–64 years (12.6%) than among patients aged 25–44 years (2.6%).

Of 244 respondents, the average HbA1c level was 7.3%, 57.0% having a level <7.0%. For 255 respondents, the average total cholesterol level was 4.6, 38.8% having levels 4.0–4.99. For 228 respondents, the average LDL cholesterol level was 2.5, 44.3% having levels of 2.5 or higher. For 233 respondents, the average HDL cholesterol level was 1.3, 64.4% having levels greater than 1.0. Of 248 respondents for blood pressure, only 8.1% were in the normal range.

Of 263 Type 2 diabetes respondents to the medication question, 205 (78.0%) were taking at least one medication to manage their blood glucose. Monotherapy was recorded for 108 patients (52.7%), dual for 85 patients (41.5%), and triple therapy for 12 patients (5.9%). None were on quadruple therapy. Of 47 patients taking insulin, 40.4% were taking insulin only, and 59.6% were taking insulin with at least one other medication.

Of 258 Type 2 diabetes respondents to the lipid medication question, 179 (69.4%) were currently taking a lipid-lowering medication, and of 255 respondents to the hypertension medication question, 188 (73.7%) were currently on medication for hypertension. Of 241 Type 2 diabetes patients for whom a response to the question on PBS subsidy eligibility was recorded, 206 (85.5%) met the criteria for subsidy of lipid-lowering medications, and of these, 165 (80.5%) were currently taking a lipid-lowering medication.

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Pharmaceutical Benefits Schedule criteria for lipid-lowering medications

Patients in any of the following high risk groups may start statins or fibrates at any cholesterol level

- Symptomatic coronary heart disease (CHD)
- Symptomatic cerebrovascular disease
- Symptomatic peripheral vascular disease
- Diabetes mellitus with microalbuminuria
- Diabetes mellitus in Aboriginal or Torres Strait Islander patients
- Diabetes mellitus in patients aged ≥ 60 years
- Family Hx CHD, symptomatic < 55 years in two or more first degree relatives
- Family Hx CHD, symptomatic < 45 years in one or more first degree relatives

If none of the above apply, patients in the following categories are eligible for PBS criteria for subsidy

(following dietary therapy of at least 6 weeks duration)

PATIENT CATEGORY	LIPID LEVEL
• Diabetes mellitus (not otherwise included)	TC > 5.5 mmol/L
• Aboriginal or Torres Strait Islander patients • Hypertension	TC > 6.5 mmol/L or TC > 5.5 mmol/L and HDL- C < 1 mmol/L
• HDL-C < 1 mmol/L	TC > 6.5 mmol/L
• Familial hypercholesterolaemia • Family Hx CHD, symptomatic < 60 years in one or more 1° relatives • Family Hx CHD, symptomatic < 50 years in two or more 2° relatives	Aged < 18 yrs at Rx initiation: LDL-C > 4 mmol/L Aged ≥ 18 yrs at Rx initiation: LDL-C > 5 mmol/L or TC > 6.5 mmol/L or TC > 5.5 mmol/L and HDL- C < 1 mmol/L
• Men aged 35-75 years (not included elsewhere) • Post-menopausal women < 75 years	TC > 7.5 mmol/L or Trig > 4 mmol/L
• Patients not otherwise included	TC > 9 mmol/L or Trig > 8 mmol/L

Source: 'General statement for lipid-lowering drugs prescribed as pharmaceutical benefits'
Available at: www.pbs.gov.au, accessed 2/4/09

PLEASE READ CAREFULLY

The shaded section of the following forms asks questions about **TYPE 2 DIABETES**.
 You may tear out this page as a guide to completing the following section of forms.

INSTRUCTIONS

Please answer the following questions for **ALL** of the **next 30 PATIENTS** in the order in which the patients are seen.

Please **DO NOT** select patients to suit the topic being investigated.

Test levels

Please advise the patient's **levels** at the **most recent testing**, of **HbA1c; total cholesterol; LDL cholesterol; HDL cholesterol**. Please also advise the most recent **blood pressure** reading.

If you **do not know** one of these levels, or if the patient has **never had** one or more of these **levels measured**, please tick the box labelled 'don't know / never tested'.

PBS criteria for lipid-lowering medications

Please advise whether this patient meets the **PBS criteria** as set out in the 'General statement for lipid-lowering drugs' for **PBS subsidised lipid-lowering medication(s)**.

The **PBS criteria are provided on a separate card in your research pack**.

Hypertension medication

Please write the **name and form** of the **current medication(s)** taken by the patient for **management of their blood pressure**.

Please indicate the regimen (i.e. **strength, dose and frequency**) of the medication(s).

If the patient is **not** currently taking a blood pressure medication please tick the box labelled 'no hypertension medication'.

Type 2 diabetes

Please advise whether this patient has been diagnosed with **Type 2 diabetes**.

If the patient **does not have** Type 2 diabetes please **end the questions here for this patient**.

Glucose-lowering medication

Please write the **name and form** of the **current medication(s)** taken by the patient for **management of their blood glucose levels**. Please include both oral medications and insulin.

Please indicate the regimen (i.e. **strength, dose and frequency**) of the medication(s).

If the patient is **not currently taking a medication** for blood glucose management please tick the box labelled 'no glucose-lowering medication'.

Lipid-lowering medication

Please write the **name and form** of the **current medication(s)** taken by the patient for **management of their lipid levels**.

Please indicate the regimen (i.e. **strength, dose and frequency**) of the medication(s).

If the patient is **not** currently taking a lipid-lowering medication please tick the box labelled 'no lipid-lowering medication'.

Does this patient have Type 2 diabetes? <input type="checkbox"/> Yes <input type="checkbox"/> No → End questions	What are the patient's most recent levels of: HbA1c _____ %	Don't know/ never tested <input type="checkbox"/>	Current med(s) for BLOOD GLUCOSE levels: Name & Form Strength Dose Freq _____ _____ _____ _____	Does the patient meet PBS criteria for subsidy of lipid-lowering medications? See card <input type="checkbox"/> Yes <input type="checkbox"/> No	Current LIPID-LOWERING med(s): Name & Form Strength Dose Freq _____ _____ _____ _____	Current HYPERTENSION med(s): Name & Form Strength Dose Freq _____ _____ _____ _____
	Total chol _____ mmol/L	<input type="checkbox"/>	_____	<input type="checkbox"/>	<input type="checkbox"/> No lipid-lowering medication	<input type="checkbox"/> No hypertension medication
	LDL-C _____ mmol/L	<input type="checkbox"/>	_____	<input type="checkbox"/>		
	HDL-C _____ mmol/L	<input type="checkbox"/>	_____	<input type="checkbox"/>		
	BP _____ / _____ mm/Hg	<input type="checkbox"/>	<input type="checkbox"/> No glucose-lowering medication			