# Cardiovascular Guidelines In Clinical Practice - A Survey Of Diabetes Health Professionals


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National Diabetes Collaborative

## Introduction

The Australian National Diabetes Collaborative (NDC) was formed in 2004 to focus on understanding and improving the quality of care in the participating centres. Reducing the risk of cardiovascular disease is of key importance as it is the leading cause of death in people with diabetes. While all areas of diabetes care are important to improving outcomes and quality of life, reducing the risk of CVD is of key importance for the following reasons:

- it is the major cause of premature mortality and a major contributor to morbidity and reduced quality of life[1]
- there is strong evidence for effective interventions for reducing CVD risk and preventing CVD[2,3]
- interventions are readily available, safe, and cost-effective
- implementing guideline recommendations is feasible within available resources[3,4]
- there are few practical barriers to adopting these interventions

Although effective interventions are available, compelling data support the failure of current clinical practice to implement this evidence and to translate it into better patient outcomes. NDC centres have collaborated to implement an evidenced-based care project in order to reduce the risk of heart disease in those with type 2 diabetes.

## Aim

An initial aim of this project was to survey participating health professional staff about diabetes guidelines.

## Method

The study design focused on an explanation of this study (Fig.1) to NDC staff and asking staff to anonymously complete a questionnaire. The questionnaire was developed to assess targets used in type 2 diabetes management, communicating these targets to patients, whether each NDC has a set of common targets, common barriers to patients achieving their targets and how could these barriers be addressed (Fig.2). Funding was provided by the National Institute of Clinical Studies.

Figure 1: Study Design

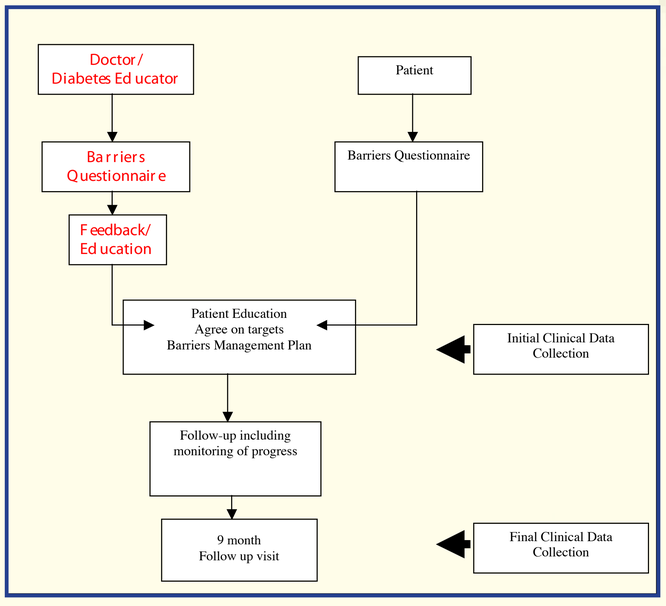
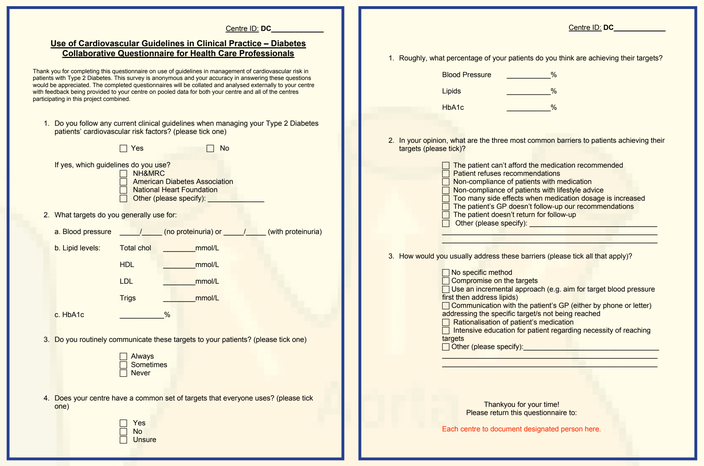



Figure 2: Diabetes Collaborative Questionnaire for Diabetes Health Care Professionals



Centre ID: DC_____

**Use of Cardiovascular Guidelines in Clinical Practice – Diabetes Collaborative Questionnaire for Health Care Professionals**

Thank you for completing this questionnaire on use of guidelines in management of cardiovascular risk in patients with Type 2 Diabetes. This survey is anonymous and your accuracy in answering these questions would be appreciated. The completed questionnaires will be collated and analysed externally to your centre with feedback being provided to your centre on pooled data for both your centre and all of the centres participating in this project combined.

1. Do you follow any current clinical guidelines when managing your Type 2 Diabetes patients' cardiovascular risk factors? (please tick one)

☐ Yes ☐ No

If yes, which guidelines do you use?
☐ NH&MRC
☐ American Diabetes Association
☐ National Heart Foundation
☐ Other (please specify): _____

2. What targets do you generally use for:

a. Blood pressure _____/_____ (no proteinuria) or _____/_____ (with proteinuria)

b. Lipid levels: Total chol _____mmol/L
HDL _____mmol/L
LDL _____mmol/L
Trigs _____mmol/L

c. HbA1c _____%

3. Do you routinely communicate these targets to your patients? (please tick one)

☐ Always
☐ Sometimes
☐ Never

4. Does your centre have a common set of targets that everyone uses? (please tick one)

☐ Yes
☐ No
☐ Unsure

Centre ID: DC_____

1. Roughly, what percentage of your patients do you think are achieving their targets?

Blood Pressure _____%
Lipids _____%
HbA1c _____%

2. In your opinion, what are the three most common barriers to patients achieving their targets (please tick)?

☐ The patient can't afford the medication recommended
☐ Patient refuses recommendations
☐ Non-compliance of patients with medication
☐ Non-compliance of patients with lifestyle advice
☐ Too many side effects when medication dosage is increased
☐ The patient's GP doesn't follow-up our recommendations
☐ The patient doesn't return for follow-up
☐ Other (please specify): _____

3. How would you usually address these barriers (please tick all that apply)?

☐ No specific method
☐ Compromise on the targets
☐ Use an incremental approach (e.g. aim for target blood pressure first then address lipids)
☐ Communication with the patient's GP (either by phone or letter) addressing the specific target/s not being reached
☐ Rationalisation of patient's medication
☐ Intensive education for patient regarding necessity of reaching targets
☐ Other (please specify): _____

Thankyou for your time!
Please return this questionnaire to:

Each centre to document designated person here.

## Results

The 9 participating NDC centres are:

**Austin Health** - Endocrine Centre of Excellence & Diabetes Education Services, VIC
**Barwon Health** - The Geelong Hospital Diabetes Referral Centre, VIC
**Mater Health Services** - Queensland Diabetes Centre, QLD
**Monash Medical Centre** - Diabetes Centre VIC
**Prince of Wales Hospital** - Diabetes Centre, NSW
**Royal Hobart Hospital** - Diabetes Centre, TAS
**Royal Melbourne** - Department of Diabetes & Endocrinology, VIC
**The Canberra Hospital** - Department of Diabetes and Endocrinology ACT
**Western Hospital** - Department of Endocrinology, VIC.

Participating clinic staff included endocrinologists, diabetes nurse educators and registrars who completed all 7 questions. A total of 93 completed questionnaires were returned to the central project office in NSW for collation and analysis. Feedback on the results was provided to each centre as pooled analysis of responses from all centres and individually to each centre.

The pooled analysis showed that 86% of participants follow clinical guidelines when managing their type 2 Diabetes patients' cardiovascular risk factors and 55% most commonly use the NH&MRC Guidelines (Fig. 3A and 3B). Of the responses, 62% use a target BP of 130/80 mmHg, 24% use a target BP with proteinuria of 125/75 mmHg, 66% use a target cholesterol of 4mmol/L, 79% use a target HDL of 1.0 mmol/L, 58% use a LDL target of 2.5mmol/L, 62% use target triglycerides of 2.0 mmol/L and 86% a HbA1c target of 7% (Table 1).

From the responses, 56% always communicate targets to patients (Fig.4) and 38% of centres have a common set of targets (Fig.5). Participants perceived that the percentage of patients achieving their targets for BP was 28%, lipids 24% and HbA1c 20% (Fig 6).

The most common 3 perceived barriers to patients achieving targets were non-compliance with lifestyle advice, non-compliance with medication and patient's GP not following up advice (Table 2). Suggested ways given to address these barriers included intensive patient education regarding necessity of reaching goals, better communication with a patient's GP, addressing risk factors not at target and using an incremental approach e.g. blood pressure first then address lipids, and rationalisation of patient's medication (Table 3).

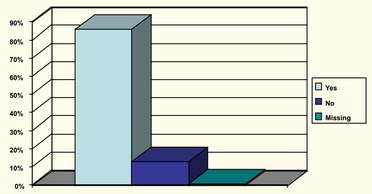



Figure 3A: The % of participants who follow current clinical guidelines when managing type 2 Diabetes patients' cardiovascular risk factors

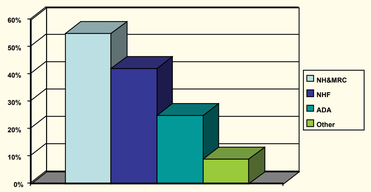



Figure 3B: The guidelines most commonly used

| Most Common Targets Used | Participants using Targets |
|---|---|
| BP target 130/80 | 62% |
| BP target 125/75 with proteinuria | 24% |
| Cholesterol target of 4 | 66% |
| HDL target of 1 | 79% |
| LDL target of 2.5 | 58% |
| Triglycerides target of 2 | 62% |
| HbA1c target of 7 | 86% |

Table 1: The targets most commonly used

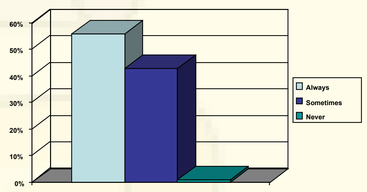



Figure 4: The % of participants who routinely communicate these targets to their patients

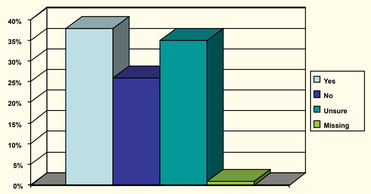



Figure 5: The % of NDC participating centres who have a common set of targets that everyone uses

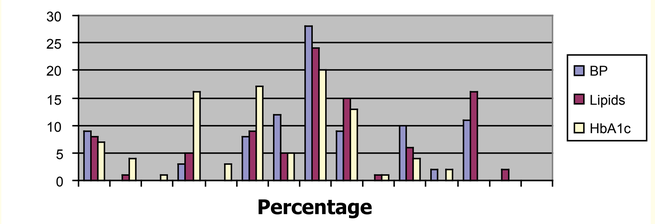



Figure 6: Perceived Number of Patients Achieving Targets

| | |
|---|---|
| Non-compliance of patients with lifestyle advice | 90% |
| Non-compliance of patients with medication | 54% |
| The patient's GP doesn't follow-up our recommendations | 34% |

Table 2: The 3 Most Common Barriers to Patients Achieving their Targets

| | |
|---|---|
| Intensive education for patient regarding necessity of reaching targets | 77% |
| Communication with the patient's GP (either by phone or letter) addressing the specific target/s not being reached | 74% |
| Use an incremental approach (e.g. aim for target blood pressure first then address lipids) | 55% |
| Rationalisation of patient's medication | 45% |

Table 3: Ways to Address these Barriers

## Conclusion

Despite national guidelines, only 38% of participating NDC centres have a common set of targets and just 56% always communicate targets to patients. From this survey, there appears to be no uniform approach to the management of diabetes.


Acknowledgement
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