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Progression to diabetes: 5 year follow-up of the Northland Diabetes Screening and Cardiovascular risk assessment pilot

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Abstract

Aim: The primary aim was to determine the effect the Northland Diabetes Screening and Cardiovascular risk assessment pilot had on the progression from a normal glucose test (NGT) at baseline to diabetes.

Method: Patients from a single practice (Maori = 1509, Non-Maori = 619) who were invited onto the pilot with NGT at baseline were retrospectively followed up for 7 years. Results for Pilot (PG) (Maori = 336, Non-Maori 255) and Non-Pilot (NPG) groups (Maori = 537, Non-Maori = 204) were compared on progression to diabetes, impaired glucose tolerance (IGT), all-cause mortality.

Results for Maori: There were 10 incidence cases of diabetes, 20 IGT and 18 deaths from any-cause during a median duration of follow-up of 6.4 years in the PG compared with 22 incidence cases of diabetes, 23 IGT and 30 deaths from any-cause in the NPG followed for a median duration of 4.3 years. Participation in the pilot was associated with a statistically significant protective effect on progression to diabetes (Age-adjusted rate ratio 0.44 (95% CI 0.2156, 0.912) and all-cause mortality (Age-adjusted rate ratio 0.49 (95% CI 0.2771, 0.8626).

Results for Non-Maori: There were 12 incidence cases of diabetes, 13 IGT diagnoses and 19 deaths from any-cause during a median duration of follow-up of 6.2 years in the PG compared with 9/204 diabetes incidence cases, 11 IGT and 13 deaths from any-cause in the NPG followed for a median duration of 4.7 years. There was no statistically significant association with participation in the pilot on progression to diabetes, IGT or all-cause mortality.

Conclusion: The protective effect for Maori patients in the pilot on progression to diabetes was either because they had inherently lower risk than the non-pilot group or potentially because their baseline results were interpreted in the context of their CVD risk. The effectiveness of CVDRA programmes on reducing incidence diabetes should be formally assessed. Research focusing on risk reduction for Maori aged 35-49 years is recommended.
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Research presented from the pilot evaluation based on the work of the researcher, Bronwyn White, has been previously credited to meet research requirements for a Post-Graduate Diploma in Public Health at Massey University in 2008.

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Ethical approval was granted for this study by the Northern Y Regional Ethics Committee on August 2011 Reference NTY/11EXP/006 for this study.

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## Table of Contents

Abstract ..................................................................................................................... i  
Acknowledgements .............................................................................................. iii  
Table of contents .................................................................................................... v  
List of tables ........................................................................................................... vi  
List of figures ......................................................................................................... vi  
Chapter 1 Introduction .......................................................................................... 1  
1.1 Background ....................................................................................................... 1  
Chapter 2 Literature review ................................................................................. 7  
2.1 Defining the terms ........................................................................................... 7  
2.2 Diabetes in New Zealand .............................................................................. 19  
2.3 Cost of diabetes .............................................................................................. 25  
2.4 Disease control ................................................................................................ 27  
2.5 Limitations of screening studies .................................................................. 35  
2.6 Literature review summary .......................................................................... 44  
Chapter 3 Methods ............................................................................................... 46  
3.1 Northland, New Zealand .............................................................................. 46  
3.2 Type 2 Diabetes in Northland ...................................................................... 46  
3.3 The pilot study ................................................................................................ 47  
3.4 The Northland Diabetes Screening and Cardiovascular risk assessment pilot: 5 year follow-up study ......................................................................... 53  
Chapter 4 Results ................................................................................................. 67  
4.1 Baseline characteristics .................................................................................. 67  
4.2 Baseline results ............................................................................................... 71  
4.3 Progression to diabetes, IGT, and all-cause mortality from normal baseline test ...................................................................................................... 75  
4.4 Additional analyses- Pooled data ................................................................. 81  
Chapter 5 Discussion ........................................................................................... 84  
5.1 Summary of main findings ........................................................................... 84  
5.2 Comparisons with other studies .................................................................. 85  
5.3 Limitations ...................................................................................................... 89  
5.4 Implications .................................................................................................... 95  
5.5 Conclusion ...................................................................................................... 97  
5.6 Recommendations .......................................................................................... 99
List of Tables
Table 1. Interpreting screening tests for type 2 diabetes (NZGG, 2012) ................................................................................................................ 8
Table 2. Measures of disease occurrence and measures of effect ......11
Table 3. The stages of progression to diabetes ........................................... 40
Table 4. Inclusion criteria for the Northland Diabetes and Cardiovascular Risk Assessment pilot 2004 .................................................. 49
Table 5. Comparisons of distribution (in percent) of Maori by setting and age category ................................................................. 57
Table 6. Number and percentage of exclusions from the study by reason and ethnic group ................................................................. 58
Table 7. Complete list of data extracted from Medtech.......................... 60
Table 8. Baseline person characteristics for Maori ................................ 67
Table 9. Baseline characteristics for Non-Maori .................................... 69
Table 10. Proportion of abnormal screening test results for Maori using two cut-off points ................................................................. 72
Table 11. Characteristics of Maori patients categorised by baseline blood glucose result ................................................................. 73
Table 12. Proportion of abnormal screening test results for Non-Maori using two cut-off points ................................................................. 73
Table 13 Characteristics of Non-Maori patients categorised by baseline blood glucose result ................................................................. 74
Table 14. Outcome results for Maori from a normal baseline test ....... 76
Table 15. Outcome results for Non-Maori from a normal baseline test .............................................................................................................. 79
Table 16. Effectiveness and efficiency of diabetes screening using pooled data† .................................................................................. 83

List of Figures
Figure 1 Northland’s population distribution by Local Authority and proportion of Maori ................................................................. 46
Figure 2. Comparisons of distribution of age with groups for Maori....... 68
Figure 3. The distribution of age categories for Non-Maori by screening group compared with source population ................................... 70
Figure 4. Summary of baseline screening activity ........................................ 71
Figure 5. Distribution of rescreening for Maori comparing baseline time
periods perhaps include the periods............................................................ 81
Figure 6 Distribution of rescreening for Non-Maori comparing baseline
time periods ..................................................................................................... 81