

SURVEY OF PERSONS LIVING WITH DIABETES IN COUNTIES MANUKAU

RESEARCH REPORT FOR

**COUNTIES MANUKAU
DISTRICT HEALTH BOARD**

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CONTENTS

1	SUMMARY	4
1.1	INTRODUCTION	4
1.2	RESEARCH METHODS AND SAMPLE DESCRIPTION.....	4
1.3	KEY FINDINGS.....	5
1.4	SUMMARY OF KEY FINDINGS FOR MAAORI	9
1.5	SUMMARY OF KEY FINDINGS FOR PACIFIC PEOPLES	13
1.6	SUMMARY OF KEY FINDINGS FOR SOUTH ASIAN PEOPLE	17
1.7	SUMMARY OF KEY FINDINGS FOR PEOPLE OF OTHER ETHNICITIES.....	21
2	INTRODUCTION	25
3	OVERVIEW OF RESEARCH METHODS	26
4	RESEARCH FINDINGS	30
4.1	INTRODUCTION	30
4.2	NOTES ON REPORTING.....	31
4.3	PERSONAL HISTORY OF DIABETES	34
4.4	CLINICAL EXAMINATIONS AND TESTS	42
4.5	SELF-MANAGEMENT OF DIABETES	47
4.6	KNOWLEDGE AND EDUCATION ON DIABETES	60
4.7	EXPERIENCE WITH MEDICAL (PRIMARY AND SECONDARY) CARE	75
4.8	QUALITY OF LIFE	87
	APPENDIX A: RESEARCH METHODS	98
	APPENDIX B: DEMOGRAPHIC COMPOSITION OF SAMPLE	101
	APPENDIX C: QUESTIONNAIRE	104

LIST OF TABLES

Table 1:	Time since diabetes diagnosis	34
Table 2:	What led to diagnosis	35
Table 3:	Aware of risk prior to diabetes	36
Table 4:	How knew about being at risk	37
Table 5:	Description of weight by ethnicity.....	38
Table 6:	Description of weight	38
Table 7:	BMI	41
Table 8:	Description of weight	41
Table 9:	BMI – by LBD Tracking Survey	41
Table 10:	Had lab tests every three months	42
Table 11:	Blood pressure checked every 3 months	43
Table 12:	Eyes have been tested in last 2 years	43
Table 13:	Understanding of each of the tests	44
Table 14:	Had feet examined in the last 12 months	45
Table 15:	Weighed by a doctor or nurse in the last 12 months	46
Table 16:	Weighed by a doctor or nurse in the last 12 months – comparison with LBD Tracking Survey	46
Table 17:	How well diabetes is controlled	47
Table 18:	On pills to control sugar levels	48
Table 19:	Advised to be on pills	49
Table 20:	Reasons not on pills	49
Table 21:	On insulin to control sugar levels	50
Table 22:	Advised to be on insulin.....	51
Table 23:	Reasons not on insulin	51
Table 24:	Likelihood of going on insulin	52
Table 25:	Take insulin regularly	53
Table 26:	Reasons not take insulin regularly	54

Table 27: Regularly take pills	55
Table 28: Reasons not take pills regularly	56
Table 29: How often test own blood glucose levels	57
Table 30: Testing blood glucose as often as requested	58
Table 31: What blood glucose results are used for	59
Table 32: What people know about diabetes	61
Table 33: What people know – comparison with LBD Tracking Survey	61
Table 34: What can be done to prevent diabetes	64
Table 35: What can be done to prevent diabetes – comparison with LBD Tracking Survey	65
Table 36: Know enough to manage own diabetes	66
Table 37: Smoke cigarettes	67
Table 38: Smoke cigarettes – comparison with LBD Tracking Survey	67
Table 39: Been to an education/training course	68
Table 40: Type of training course	68
Table 41: Length of training	69
Table 42: Who conducted the training	69
Table 43: How found out about training	70
Table 44: Changes made as a result of training	71
Table 45: Offered training for diabetes management	73
Table 46: Reasons for not taking part in training	73
Table 47: Stayed in hospital during the last twelve months	75
Table 48: Recent hospital stay due to diabetes	76
Table 49: Improvements hospital could have made	76
Table 50: Hospital staff knowledge of diabetes	77
Table 51: Helpfulness of staff in managing diabetes	77
Table 52: Visited by a member of specialist diabetes team	78
Table 53: Who managed insulin during hospital stay	78
Table 54: Given suitable meals at hospital	79
Table 55: Reasons meals not suitable	79
Table 56: Did not see a GP or nurse when needed	80
Table 57: Main and all reasons not able to see GP/nurse	81
Table 58: Reason for last visit to GP	82
Table 59: Treatment discussion with GP service	83
Table 60: Could GP service improve care of your diabetes	84
Table 61: Ways that GP service could improve	84
Table 62: Sought advice from places other than hospital or GP service	85
Table 63: Where else go to for advice	85
Table 64: Comparison of importance of advice other sources/GP and hospital	86
Table 65: Summary of quality of life: rating of quality of life	88
Table 66: Summary of quality of life: rating of energy/money	88
Table 67: Summary of quality of life: Rating of satisfaction	88
Table 68: Quality of life	89
Table 69: Have enough energy for everyday life	90
Table 70: Have enough money to meet needs	91
Table 71: Satisfaction with own health	92
Table 72: Satisfaction with ability for daily living	93
Table 73: Satisfaction with self	94
Table 74: Satisfaction with personal relationships	95
Table 75: Satisfaction with living conditions	96
Table 76: Description of health priority	97
Table 77: Demographic composition – ethnic group	101
Table 78: Pacific groups	102
Table 79: Demographic composition – Gender and age	103

1 SUMMARY

1.1 INTRODUCTION

- This survey provides a measurement for the Let's Beat Diabetes (LBD) programme in the Counties Manukau DHB (CMDHB) region, of key behaviours and attitudes of people with diabetes living within the region.
- The specific aims of the survey were to:
 - (1) Describe the burden of diabetes and its complications in CMDHB;
 - (2) Identify the knowledge and beliefs about diabetes and its causes in this population;
 - (3) Review the quality of service provision and identified barriers to quality care;
 - (4) Identify possible causes for the disparities in rates of diabetes and rates of admissions for people with diabetes;
 - (5) Document the impact of diabetes on quality of life.
- The survey served both to provide data for Key Performance Indicators of LBD at a population level, as well as to inform the social marketing program, health promotion materials, and service provision needs in the CMDHB context.

1.2 RESEARCH METHODS AND SAMPLE DESCRIPTION

- A telephone survey was undertaken with 1200 persons randomly selected from CMDHB records of persons in the region known to have diabetes.
- This included 330 Maaori, 329 Pacific peoples, 247 South Asian, 65 Other Asian and 303 Other (people could be in more than one group).
- Computer-assisted telephone interviews (CATI) were conducted between 24 May and 5 June 2009, and the interview duration averaged 21.5 minutes.
- The sample was made up of 51% females and 49% males.
- Two response rates have been calculated using different methods, one being 68 percent and the other 54 percent.
- For the analysis, the sample was weighted to reflect the age within gender within ethnicity within deprivation (NZDep) composition of the CMDHB cohort of known people with diabetes.

1.3 KEY FINDINGS

PERSONAL HISTORY OF DIABETES

- Just under a third (31%) of people in CMDHB with diabetes have had it between two and five years, a further 26 percent had had it six to ten years, while 35 percent had been living with it for more than 10 years.
- There were three main ways for people to find out they had diabetes: going to a doctor with another health problem which lead to the diagnosis (35%), primary care screening (34%), or having symptoms such as tiredness or blurry vision (22%).
- Most (76%) were not aware of their risk prior to diagnosis. Those who were aware very largely cited family history as how they knew about their risk.
- Only nine percent of those in the current survey classified themselves as obese and a further 47% percent as overweight¹. The proportion who classified themselves as obese was a lot less than the proportion in the 2009 survey of the public, which may in part relate to different question wording².
- A BMI calculation (based on self-reported height and weight) classified 53 percent as obese, while a total of 84 percent were either overweight or obese.

CLINICAL EXAMINATIONS AND TESTS

- Three quarters said they get the standard diabetes lab tests done approximately every three months. A tenth simply did not get them done at all, and one-in-eight got them done but less than three monthly.
- A slightly higher proportion (84%) got regular checks for blood pressure with around one-in-twenty either having blood pressure checks less frequently or not at all.
- The proportion who had their eyes tested in the previous two years was marginally higher again, at just over 90 percent, again with one-in-twenty having not done this.
- Most (three-quarters) described understanding the tests and what their results meant, either 'Fully' or 'Mostly'.
- Two-thirds had their bare feet checked by a person caring for their diabetes within the 12 months prior to survey. Virtually all had been weighed by a doctor or nurse in the 12 months prior to survey.

SELF-MANAGEMENT OF DIABETES

- Over half considered their diabetes 'Well controlled' (56%). Over a third considered it 'Partly controlled' and just 6 percent said it was 'Not controlled'.
- Eight-in-ten were on pills to control their sugar levels. Those not on pills despite having been advised to be, made up 3 percent of the full survey sample, most often explaining either that they were on insulin or that the side effects and nausea put them off.
- Twenty-eight percent were on insulin to control their sugar levels. Those not on insulin despite having been advised to be, made up 7 percent of the full survey sample, most often explaining either that they were on pills or that their diabetes was controlled so they did not need insulin now.
- Among the majority not taking insulin and who had not been advised to do so, over half (57%) said they were either 'Likely' or 'Very likely' to go on insulin (including daily self-administered injections)

¹ The term "overweight" is used throughout this report to mean those who are overweight but not obese. That is, these two terms are discrete and mutually exclusive.

² The survey of the public asked people whether they thought a doctor would say they were overweight or obese whereas the current survey asked how respondents would describe their own weight

if they were advised to do so in the future. Thirty-five percent said they would be 'Unlikely' or 'Very unlikely'.

- Most of those on insulin (89%) said they took it regularly as prescribed by their doctor. Among those who did not take it regularly, the reasons most often given were forgetting or being too busy.
- As for insulin, most of those on pills (93%) said they took them regularly as prescribed by their doctor. Forgetting was the main reason given by those who did not do so.
- Forty-four percent tested their own blood glucose levels with a finger prick test at least once a day, while 35 percent did so less often and 21 percent not at all.
- Among those who performed their own tests, half said they did so at the frequency at which they had been asked, while 31 percent of these people did so less often than they had been requested.
- Those who tested their own blood glucose levels, most often used the tests to identify if they were 'hyper' or high on sugars (41%). Other common uses were to help decide what to eat or to tell if they were 'hypo'/ low on sugars (both 25%), or specifically to monitor blood sugar levels (19%).

KNOWLEDGE AND EDUCATION ON DIABETES

- Over 90 percent believed it is true that people can have diabetes and not realise it. A very similar proportion believed that having diabetes increases the risk of heart disease.
- Respondents were much more divided in their opinions as to whether it is mainly people who eat a lot of sugar who get diabetes (43% thought this was true compared with 52% thinking it was false).
- A majority (66%) of respondents thought it was false that 'There is nothing you can do to prevent getting diabetes', while a larger majority (80%) thought it was false that 'Diabetes does not affect young people'.
- Comparisons with the 2009 LBD general population survey identified that:
 - ♦ Those with diabetes in the general population survey were more likely to think that it is mainly people who eat a lot of sugar who get diabetes (53% in general population survey versus 43% in the current survey)
 - ♦ Those in the current survey were more likely to think that there is nothing people can do to prevent getting diabetes (25% versus 20% for people with diabetes in the population survey and 9% for the Total Sample in the population survey)
 - ♦ Those in the current survey were more likely to think that diabetes doesn't affect young people (16% versus 10% for people with diabetes in the population survey and 7% for the Total Sample in the population survey)
- When asked what can be done to prevent diabetes, two thirds mentioned something relating to diet³, just over half (51%) stated keeping fit or being active, while 15 percent mentioned reducing weight. Within the dietary grouping, most mentioned were, controlling or reducing sugar (38%), reducing fat (25%) or eating more vegetables (23%). Reducing portion size was mentioned by 12 percent.
- By far the majority of respondents in the current survey (85%) said they felt they knew enough to manage their diabetes.
- Sixteen percent said they smoked cigarettes, which compared with 20 percent for all persons in the LBD population survey.
- A third said they had been to a diabetes education or training course on how to help them manage their diabetes.
- Those who had been on such courses more often said this was as part of a group (55%), with a significant minority (35%) indicating their training had been one-on-one. Those who had done any one-on-one training were asked how long it had lasted for, and the median was 25 minutes.

³ This only included dietary things that are known to help prevent diabetes

- The main training providers cited were secondary care (most often Manukau Super Clinic), primary care/GP/GP practice, hospital, and a diabetes nurse.
- By far the main way people who had taken part in training had heard about it was from primary care referral/their GP practice (64%).
- Changes people said they had made as a result of the training focused on nutrition in general, eating less sugar, or getting more exercise, keeping fit and active.
- Only a small proportion (one-in-six) of those who had not taken part in any diabetes education or training courses had been offered training for diabetes management.
- Those who chose not to take part in any training most often said that this was because they thought it was unnecessary, or that it was difficult to fit into their schedules.

EXPERIENCE WITH MEDICAL CARE (PRIMARY AND SECONDARY)

- Just over a quarter had stayed overnight in hospital within the last twelve months for any reason (i.e. not necessarily related to diabetes).
- Among those who had stayed in hospital overnight within the last twelve months, just one-in-six said diabetes was the reason for their most recent stay.
- Just over half of these people (55%) could not identify any improvements that could have been made to help them manage their diabetes better while they were in hospital. Meals, education and use of medication were the only areas for improvement mentioned by more than a few people.
- Just over half (53%) of those who had an overnight stay in hospital in the last twelve months rated hospital staff as very knowledgeable about their diabetes. Eight percent rated staff as 'A little' or 'Not at all' knowledgeable about their diabetes.
- Hospital staff were rated as 'Very helpful' in managing peoples' diabetes by a somewhat higher percentage than rated them 'Very knowledgeable' (63% compared with 53% for knowledgeability).
- A third of those who had been in hospital in the previous twelve months (for any reason at all) said they had been visited by someone from the hospital diabetes specialist team.
- Those on insulin most often had staff manage their insulin while they were in hospital (60%), while 31 percent did this themselves.
- Although 80 percent said they were given meals that were suitable for their diabetes while in hospital, one-in-six said they were not (this includes those who answered 'Sometimes'). The main unsuitable meal experiences in hospital were being offered the wrong types of food for diabetics (largely sweet foods and desserts, or being offered food the person should not have), not getting any meals at all, or being offered unpalatable food.
- Seven percent of respondents reported that there had been a time in the last twelve months when they needed to see a GP or nurse about their diabetes, but they did not get to see them. The main reasons cited for this were scheduling (mostly not being able to get an appointment soon enough) and lack of transport.
- Regular diabetes check-ups were the main reason respondents last went to their GP service (62%). Needing a new prescription was the next most common reason (36%).
- Most respondents (seven-in-ten) rated their GP service as providing about as much discussion of the treatment of their diabetes as they wanted. The numbers considering the discussion provided was 'More' or 'Less' than they wanted were small and about equal, suggesting a reasonable balance has generally been achieved.
- One-in-six respondents thought there were ways their GP service could improve their care of the person's diabetes, while just on 80 percent did not think so. The main improvement suggested was to provide more information, although there were also a wide range of other suggestions, each made by relatively small numbers of people.
- One-in-eight respondents said that apart from GP and hospital services, they go elsewhere for health advice regarding their diabetes. The sources of advice these people most often cited were secondary care (most often the Manukau Super Clinic), the Internet, family and friends, and

diabetes organisations. The numbers using specific other sources of advice were too small to allow detailed analysis, but in general, people attached similar if not greater importance to the advice they received from these sources, compared with the advice from their GP service or hospital. Diabetes organisations and support groups were particularly favourably rated.

QUALITY OF LIFE

- Most respondents rated their quality of life as either 'Good' (49%) or 'Very good' (33%, combining to give 82%).
- Most also rated themselves as having 'Completely' (27%) or 'Mostly' (35%) enough energy for everyday life (62% in total). When those answering 'Moderately' (24%) are added, this accumulates to 86 percent with at least 'Moderately' enough energy.
- Eighteen percent said they had enough money to meet their needs 'Completely' and a further 24 percent said they had enough money to 'Mostly' meet their needs (42% in total). Fourteen percent said they did not have enough money to meet their needs 'At all', and a further 16 percent said they only had enough money to meet their needs 'A little'.
- Most respondents were either satisfied or very satisfied with the specific aspects of the quality of their lives that were asked about:
 - ♦ Satisfaction with their health (68% either 'Satisfied' or 'Very satisfied')
 - ♦ Satisfaction with their ability to perform daily living activities (76%)
 - ♦ Satisfaction with themselves (76%)
 - ♦ Satisfaction with their personal relationships (86%)
 - ♦ Satisfaction with the conditions of their living place (88%)
- Satisfaction with health was the lowest rated of these questions (with 21% either 'Dissatisfied' or 'Very dissatisfied').
- The last core question in the survey asked respondents to describe the priority they give to their own health, compared with other things like their job, money or children's health. Of the three answer options, 'My health is highest priority' was chosen by 56% of people, followed by 'My health is high priority but other things are higher' (33%). Less than one-in-ten chose the answer option 'My health is not a high priority'.

1.4 SUMMARY OF KEY FINDINGS FOR MAAORI

RESEARCH METHODS

- The survey included 330 Maaori with diabetes. This included those who identified themselves as belonging to more than one ethnic group.
- If they were not rung by a Maaori interviewer, Maaori were offered the opportunity be rung back by a Maaori interviewer.
- The data was weighted to reflect the age within gender within deprivation (NZDep) composition of all Maaori with diabetes living in the CMDHB region.
- This summary presents the findings for Maaori and how they differed from the Total Sample (at the 99% level of significance).

PERSONAL HISTORY OF DIABETES

- Most Maaori in CMDHB with diabetes have had it between two and twenty years, with a median of eight years.
- There were three main ways Maaori found out they had diabetes: going to a doctor with another health problem which lead to the diagnosis (notably ahead of the others), primary care screening, or having symptoms such as tiredness or blurry vision.
- Most (70%) were not aware of their risk prior to diagnosis. Those who were aware of their risk prior to diagnosis very largely cited family history as how they knew about their risk.
- Just over half the Maaori in the sample (54%) described their weight as overweight and a further (separate/discrete) 16 percent described themselves as obese. The latter figure is higher than for the Total Sample (9%). Just a quarter of Maaori described their weight as normal, less than for the Total Sample (39%).
- By the BMI standard of 30 or more being obese, 62 percent of Maaori respondents were obese based on self-reported height and weight, a higher incidence than for the Total Sample (46%).

CLINICAL EXAMINATIONS AND TESTS

- Three quarters of Maaori said they get the standard diabetes lab tests done approximately every three months. A tenth simply did not get them done at all, and another tenth got them done but less than three monthly.
- A slightly higher proportion (80%) got regular checks for blood pressure, with only around one-in-ten having blood pressure checks less frequently, and a few (4%) not at all.
- The proportion who had their eyes tested in the last two years was marginally higher again, at just under 90 percent. A total of 10 percent had not done this either in the last two years or not at all.
- Most (three-quarters) described understanding the tests and what their results meant, either 'Fully' or 'Mostly'.
- Two-thirds had had their bare feet checked by a person caring for their diabetes within the 12 months prior to survey. Virtually all had been weighed by a doctor or nurse in the 12 months prior to survey.

SELF-MANAGEMENT OF DIABETES

- Less than half (44%) considered their diabetes 'Well controlled'. This result for Maaori was lower than for the sample as a whole (56%). The difference from the Total Sample was mostly because Maaori more often described their diabetes as 'Partly controlled' (45%) rather than 'Well controlled'. Just under a tenth of Maaori considered it was 'Not controlled'.
- Eight-in-ten Maaori were on pills to control their sugar levels. Maaori not on pills despite having been advised to be, made up 5 percent of the full survey sample of Maaori, most often explaining that they were on insulin.
- Thirty-one percent were on insulin to control their sugar levels. Maaori not on insulin despite having been advised to be, made up 7 percent of the full survey sample of Maaori, most often explaining either that they could control it themselves/self manage, or that their diabetes was controlled so they did not need insulin now.
- Among the majority of Maaori not taking insulin and who had not been advised to do so, half said they were either 'Likely' or 'Very likely' to go on insulin (including daily self-administered injections) if they were advised to do so in the future.
- The very large majority (87%) of Maaori on insulin said they took it regularly as prescribed by their doctor. Among those who did not take it regularly, the reasons most often given were forgetting or being too busy.
- As for insulin, a very large majority (88%) of Maaori on pills said they took them regularly as prescribed by their doctor. Forgetting was the main reason given by those who did not do so.
- Just over 40 percent of Maaori respondents tested their own blood glucose levels with a finger prick test once a day or more, versus a third less than once a day and a quarter not at all.
- Among Maaori who performed their own tests, half said they did so at the frequency at which they had been asked, while 35 percent of these people did so less often than they had been requested.
- Maaori who tested their own blood glucose levels most often used the tests to identify if they were 'hyper' or high on sugars (46%). Other common uses were to help them decide what to eat (25%), simply to monitor their blood sugar levels (24%), or to tell if they were 'hypo'/ low on sugars (23%).

KNOWLEDGE AND EDUCATION ON DIABETES

- Almost all Maaori in the survey believed it is true that people can have diabetes and not realise it. Close to 90 percent believed that having diabetes increases the risk of heart disease.
- Maaori respondents were much more divided in their opinions as to whether it is mainly people who eat a lot of sugar who get diabetes (39% thought this was true compared with 53% thinking it was false).
- A majority (67%) of Maaori respondents thought it was false that 'There is nothing you can do to prevent getting diabetes', while a larger majority (81%) thought it was false that 'Diabetes does not affect young people'.
- When asked what can be done to prevent diabetes the most frequent answer given by Maaori was keeping fit or being active (47%), although in combination, all diet-related comments were more frequent (65%). The other answers most often given were all diet-related: controlling or reducing sugar in diet (34%), reducing fat in diet (29%) or eating more vegetables (25%).
- By far the majority of Maaori (86%) said they felt they knew enough to manage their diabetes.
- Thirty percent of Maaori said they smoked cigarettes. This was a higher proportion than among the Total Sample (16%).
- Close to 40 percent of Maaori said they had been to any diabetes education or training course on how to help them manage their diabetes. This was a higher proportion than for all respondents in the survey (31%).

- Maaori who had been on such courses more often said this was as part of a group (55%), with a significant minority (31%) indicating their training had been one-on-one. Those who had done any one-on-one training were asked how long it had lasted for, and the median for Maaori was 28 minutes.
- The main training providers cited were Secondary care (most often Manukau Super Clinic), primary care/GP/GP practice and the hospital.
- By far the main way Maaori who had taken part in training had heard about it was from primary care referral (61%).
- Changes Maaori said they had made as a result of the training focused on nutrition in general, eating less sugar, or getting more exercise, keeping fit and active.
- Close to a quarter of Maaori who had not taken part in any diabetes education or training courses had been offered training for diabetes management. This was a somewhat higher proportion than for the Total Sample.
- Those who chose not to take part in any training most often said that this was because they thought it was unnecessary, or that it was difficult to fit into their schedules.

EXPERIENCE WITH MEDICAL CARE (PRIMARY AND SECONDARY)

- Just under a third of Maaori respondents (32%) had stayed overnight in hospital within the last twelve months for any reason (i.e. not necessarily related to diabetes).
- Among this group, a quarter said diabetes was the reason for their most recent stay.
- A majority of Maaori (60%) could not identify any improvements that could have been made to help them manage their diabetes better while in hospital. Education, meals and use of medication were the only areas for improvement mentioned by more than a few Maaori.
- Over half of Maaori (59%) who had had an overnight stay in hospital in the last twelve months rated hospital staff as very knowledgeable about their diabetes. Less than one-in-ten Maaori rated staff as 'A little' or 'Not at all' knowledgeable about their diabetes.
- Maaori rated hospital staff as 'Very helpful' in managing their diabetes somewhat more than they rated staff 'Very knowledgeable' (71% compared with 59% for knowledgeability).
- Four-in-ten Maaori (42%) who had been in hospital in the previous twelve months (for any reason at all) said they had been visited by someone from the hospital diabetes specialist team.
- Maaori on insulin most often had staff manage their insulin while they were in hospital (64%), while 36 percent did this themselves.
- Although 83 percent of Maaori said they were given meals that were suitable for their diabetes while in hospital, one-in-eight said they were not, or not always. The main unsuitable meal experiences were being offered sweet foods and desserts, being offered food the person should not have, being given an 'ordinary' meal, or no meal at all.
- Ten percent of all Maaori reported that there had been a time in the last twelve months when they needed to see a GP or nurse about their diabetes, but they did not get to see them. The main reasons cited were scheduling (mostly not being able to get time off work) and lack of transport.
- Regular diabetes check-ups were the main reason Maaori respondents last went to their GP service (68%). Needing a new prescription was the next most common reason (29%).
- Most Maaori respondents (seven-in-ten) rated their GP service as providing about as much discussion of the treatment of their diabetes as they wanted. The numbers considering the discussion provided was 'More' or 'Less' than they wanted were small and about equal, suggesting a reasonable balance has generally been achieved.
- One-in-seven Maaori respondents thought there were ways their GP service could improve their care of the person's diabetes, compared with eight-in-ten who did not think so. The main improvement Maaori respondents suggested was to provide more information, although they also made a wide range of other suggestions, each made by relatively small numbers of people.

- One-in-seven Maaori respondents said that apart from GP and hospital services, they go elsewhere for health advice regarding their diabetes. Among the small number of Maaori respondents who had used these other sources of health advice, those most often cited were secondary care (most often the Manukau Super Clinic), family and friends.

QUALITY OF LIFE

- Most Maaori respondents rated their quality of life as either 'Good' (44%) or 'Very good' (36%, accumulating to 80%).
- Most also rated themselves as having 'Completely' (23%) or 'Mostly' (39%) enough energy for everyday life (this accumulates to 62%). When those answering 'Moderately' (28%) are added, this accumulates to 90 percent with at least moderately enough energy.
- Thirteen percent said they had enough money to meet their needs completely and a further 28 percent said they had enough money to mostly meet their needs. Seventeen percent said they did not have enough money at all to meet their needs, and a further 15 percent said they only had enough money to meet their needs a little.
- Most Maaori respondents were either satisfied or very satisfied with the specific aspects of the quality of their lives that were asked about:
 - ♦ Satisfaction with their health (66% either 'Satisfied' or 'Very satisfied')
 - ♦ Satisfaction with their ability to perform daily living activities (79%)
 - ♦ Satisfaction with themselves (79%)
 - ♦ Satisfaction with their personal relationships (87%)
 - ♦ Satisfaction with the conditions of their living place (82%)
- Satisfaction with health is the lowest rated of these questions (with 23% either 'Dissatisfied' or 'Very dissatisfied')
- Dissatisfaction with the conditions of their living place (12%) was higher than for the Total Sample (7%).
- The last core question in the survey asked respondents to describe the priority they give to their own health, compared with other things like their job, money or children's health. Of the three answer options, Maaori most often chose 'My health is high priority but other things are higher' (48%). This was followed by 'My health is highest priority' (40%). Just one-in-ten Maaori chose the answer option 'My health is not a high priority'. Results for Maaori differed from the Total Sample results in that the Total Sample results reversed the order of the first two of these statements, i.e. by putting much more emphasis on 'My health is highest priority' (56% for the Total Sample versus 40% for Maaori).

1.5 SUMMARY OF KEY FINDINGS FOR PACIFIC PEOPLES

RESEARCH METHODS

- The survey included 329 Pacific persons with diabetes. This number was made up of 154 people identifying themselves as Samoan, 78 Cook Island Maaori, 64 Tongan, 26 Niuean, 4 Fijian (does not include those identifying as Fijian Indian), 4 Tokelauan, and a total of 5 from other Pacific Islands.
- If they were not contacted by a Pacific interviewer, Pacific peoples were offered the opportunity be rung back by a Pacific interviewer. If they were Samoan or Tongan, they were offered the alternative of being interviewed in their own language.
- The data has been weighted to reflect the age within gender within deprivation (NZDep) composition of all Pacific peoples with diabetes living in the CMDHB region.
- This summary presents the findings for Pacific peoples and how they differed from the Total Sample.

PERSONAL HISTORY OF DIABETES

- Most Pacific peoples in CMDHB with diabetes have had it between two and twenty years, with a median of seven years.
- There were three main ways Pacific peoples found out they had diabetes: going to a doctor with another health problem which lead to the diagnosis (notably ahead of the others), primary care screening, or having symptoms such as tiredness or blurry vision.
- Most Pacific respondents (79%) were not aware of their risk prior to diagnosis. Those who were aware of their risk prior to diagnosis very largely cited family history as how they knew about this.
- Just over half the Pacific respondents described their weight as normal (52%), which was a higher incidence than for the Total Sample (39%). A third of the Pacific respondents described their weight as overweight (not including obese) and 8 percent as obese.
- By the BMI standard of 30 or more being obese, 53 percent of Pacific respondents were obese based on self-reported height and weight, and only 4 percent below the overweight BMI threshold of 25 (this is a lower result than for Total Sample at 14%).

CLINICAL EXAMINATIONS AND TESTS

- Five-out-of-six Pacific peoples said they got the standard diabetes lab tests done approximately every three months. Small proportions (one-in-fourteen) simply did not get them done at all, or got them done but less than three monthly.
- A similarly high proportion of Pacific peoples (83%) got regular checks for blood pressure, with only around one-in-twenty having blood pressure checks less frequently, though nine percent did not have them at all.
- Over 90 percent of Pacific peoples (92%) had had their eyes tested in the last two years, somewhat higher than the numbers having standard diabetes lab tests or blood pressure checks. One-in-fourteen had not done this either in the last two years or not at all.
- A majority of Pacific peoples (61%) described understanding the tests and what their results meant, either 'Fully' or 'Mostly'. However this was a lower proportion than for the Total Sample of all people with diabetes in the Counties Manukau DHB region (76%).
- Two-thirds of Pacific peoples had their bare feet checked by a person caring for their diabetes within the 12 months prior to survey. Virtually all (97%) had been weighed by a doctor or nurse in the 12 months prior to survey.

SELF-MANAGEMENT OF DIABETES

- Half of the Pacific respondents considered their diabetes 'Well controlled', with most others considering it 'Partly controlled' (43%). One-in-sixteen Pacific peoples considered their diabetes was 'Not controlled'.
- Nine-out-of-ten Pacific peoples were on pills to control their sugar levels. This was a higher proportion than for the Total Sample (81%). However among the Pacific peoples not on pills, a high proportion had been advised to take pills (43% of those not on pills, and significantly higher than for the Total Sample, at 18%). These people most often explained that they were on insulin.
- A third of Pacific respondents were on insulin to control their sugar levels. Among those not on insulin, one-in-six said they had been advised to be on insulin, a higher proportion than for the Total Sample. Those not on insulin despite having been advised to be, most often explained either that their diabetes was controlled so they did not need insulin now, or that they were on pills.
- Among the majority of Pacific peoples who were not taking insulin and who had not been advised to do so, 41 percent said they were either 'Likely' or 'Very likely' to go on insulin (including daily self-administered injections) if they were advised to do so in the future. This was a lesser percentage than among the Total Sample (56%). Forty-seven percent of Pacific peoples said they were either unlikely or very unlikely to go on insulin (again a significantly different percentage from the Total Sample, at 35%).
- The very large majority of Pacific peoples on insulin said they took it regularly as prescribed by their doctor (87%). Among those who did not take it regularly, the reasons most often given were forgetting or being too busy.
- As for insulin, a very large majority (91%) of Pacific peoples on pills said they took them regularly as prescribed by their doctor. Forgetting was the main reason given by those who did not do so.
- Nearly half (48%) of Pacific respondents tested their own blood glucose levels with a finger prick test once a day or more, versus a quarter less than once a day and a quarter not at all.
- Among Pacific peoples who performed their own tests, half said they did so at the frequency at which they had been asked, while 37 percent of these people did so less often than they had been requested.
- Pacific peoples who tested their own blood glucose levels most often used the tests to identify if they were 'hyper' or high on sugars (42%). Other common uses were to tell if they were 'hypo'/ low on sugars (29%), or to help them decide what to eat (27%).

KNOWLEDGE AND EDUCATION ON DIABETES

- Most Pacific peoples in the survey (87%) believed it is true that people can have diabetes and not realise it. However this proportion was lower than among the Total Sample for this survey (93%).
- Ninety percent of Pacific peoples believed that having diabetes increases the risk of heart disease.
- Pacific peoples were much more inclined to think it is mainly people who eat a lot of sugar who get diabetes, than were the Total Sample (63% compared with 43% for the Total Sample).
- Although a majority (59%) of Pacific peoples respondents thought it was false that 'There is nothing you can do to prevent getting diabetes', Pacific peoples were much more inclined than the Total Sample to think this statement is true (37% for Pacific peoples compared with 25% for Total Sample).
- There was a similar pattern with the results on the statement 'Diabetes does not affect young people'. A majority of Pacific peoples thought this statement was false (69%), but even so, Pacific peoples were much more inclined than the Total Sample to think this was true (26% for Pacific people compared with 16% for the Total Sample).
- When asked what can be done to prevent diabetes, the most frequent answer given by Pacific peoples was keeping fit or being active (45%), although in combination, all diet-related comments were more frequent (57%, a lower result than for the Total Sample, which was at 66%). The other

answers most often given were all diet-related: controlling or reducing sugar in diet (37%), reducing fat in diet (31%) or eating more vegetables (27%).

- By far the majority of Pacific peoples (83%) said they felt they knew enough to manage their diabetes.
- Eighteen percent of Pacific peoples with diabetes said they smoked cigarettes.
- A quarter of Pacific peoples said they had been to any diabetes education or training course on how to help them manage their diabetes. Pacific peoples who had been on such courses more often said this was as part of a group (54%), with a significant minority (37%) indicating their training had been one-on-one. Those who had done any one-on-one training were asked how long it had lasted for, and the median for Pacific peoples was 24 minutes.
- The main training providers Pacific respondents cited were Secondary care (most often the Manukau Super Clinic), and the primary care/GP/GP practice.
- By far the main way Pacific peoples who had taken part in training had heard about it was from primary care referral (66%).
- Changes Pacific peoples said they had made as a result of the training focused on nutrition in general, eating less sugar, or getting more exercise, keeping fit and active (the latter more so than the Total Sample). Other changes Pacific peoples often cited (also more so than the Total Sample) were eating more vegetables.
- One-in-seven Pacific peoples who had not taken part in any diabetes education or training courses had been offered training for diabetes management. Those who chose not to take part in any training most often said that this was because it was during work or school hours, or they were too busy and had no time.

EXPERIENCE WITH MEDICAL CARE (PRIMARY AND SECONDARY)

- Just under a third of Pacific respondents (31%) had stayed overnight in hospital within the last twelve months for any reason (i.e. not necessarily related to diabetes).
- Among Pacific peoples who had stayed in hospital overnight within the last twelve months, one-in-eight said diabetes was the reason for their most recent stay.
- Two thirds could not identify any improvements that could have been made to help them manage their diabetes better while in hospital. Meals, use of medication and education were the only areas for improvement mentioned by more than a few Pacific peoples.
- Over half (58%) rated hospital staff as very knowledgeable about their diabetes. One-in-five rated staff as only 'A little' knowledgeable about their diabetes, with a further one-in-twenty 'Not at all' knowledgeable.
- Pacific peoples rated hospital staff as very helpful in managing their diabetes somewhat more than they rated staff very knowledgeable (71% compared with 58% for knowledgeability).
- Four-in-ten Pacific peoples (42%) who had been in hospital in the previous twelve months (for any reason at all) said they had been visited by someone from the hospital diabetes specialist team.
- Pacific peoples most often had staff manage their insulin while they were in hospital (78%), with just one-in-five doing this themselves.
- Although 90 percent said they were given meals that were suitable for their diabetes while in hospital, one-in-twelve said they were not. The main unsuitable meal experiences in hospital were not getting any meals at all, or being offered sweet foods and desserts.
- Ten percent of all Pacific respondents reported that there had been a time in the last twelve months when they needed to see a GP or nurse about their diabetes, but they did not get to see them. The main reasons Pacific peoples cited for this were lack of transport and scheduling (mostly not being able to get an appointment soon enough).
- Regular diabetes check-ups were the main reason Pacific peoples respondents last went to their GP service (60%). Needing a new prescription was the next most common reason (41%).

- Pacific peoples were more likely than the Total Sample to say that their GP service provided more discussion of the treatment of their diabetes than they wanted (31% compared with 16% for the Total Sample). There were still 53 percent who said they got as much as they wanted, while 16 percent got less than they wanted.
- One-in-six Pacific peoples thought there were ways their GP service could improve the care of their diabetes, compared with three-quarters who did not think so. The main improvement suggested was to provide more information (mostly volunteered by different Pacific peoples from those who thought they were subjected to too much discussion of the treatment of their diabetes).
- One-in-twelve Pacific peoples said that apart from GP and hospital services, they go elsewhere for health advice regarding their diabetes. Among the small number of Pacific peoples respondents who had used these other sources of health advice, those most often cited were the Internet, secondary care (most often the Manukau Super Clinic), and family and friends.

QUALITY OF LIFE

- Most Pacific respondents rated their quality of life as either 'Good' (55%) or 'Very good' (30%, accumulating to 85%).
- Most also rated themselves as having 'Completely' (29%) or 'Mostly' (34%) enough energy for everyday life (this accumulates to 63%). When those answering 'Moderately' (24%) are added, this accumulates to 87 percent with at least moderately enough energy.
- Ten percent said they had enough money to meet their needs completely and a further 16 percent said they had enough money to mostly meet their needs. These results were both markedly lower than for the Total Sample (18% and 24% respectively).
- Just under a quarter (23%) said they did not have enough money at all to meet their needs, and a further 23 percent said they only had enough money to meet their needs a little.
- Most Pacific respondents were either satisfied or very satisfied with the specific aspects of the quality of their lives that were asked about:
 - ♦ Satisfaction with their health (74% either 'Satisfied' or 'Very satisfied')
 - ♦ Satisfaction with their ability to perform daily living activities (78%)
 - ♦ Satisfaction with themselves (80%)
 - ♦ Satisfaction with their personal relationships (86%)
 - ♦ Satisfaction with the conditions of their living place (83%, though markedly less Pacific respondents were 'Very satisfied' compared with the Total Sample: 32% compared with 45% for the Total Sample)
- Satisfaction with health was the lowest rated of these questions (with 18% either 'Dissatisfied' or 'Very dissatisfied')
- The last core question in the survey asked respondents to describe the priority they give to their own health, compared with other things like their job, money or children's health. Of the three answer options, Pacific peoples most often chose 'My health is highest priority' (66%, a higher result than for Total Sample, at 56%). Just one-in-five Pacific respondents chose 'My health is high priority but other things are higher', markedly less than among the Total Sample (one third). Just one-in-eight Pacific respondents chose the answer option 'My health is not a high priority'.

1.6 SUMMARY OF KEY FINDINGS FOR SOUTH ASIAN PEOPLE

RESEARCH METHODS

- The survey included 247 South Asian peoples with diabetes. This number included 154 people identifying themselves as Indian and 84 Fijian Indian. (Although these people were mostly Indian, this group includes 8 Sri Lankans, 3 Pakistanis, and others.)
- The data has been weighted to reflect the age within gender within deprivation composition of all Asian peoples with diabetes living in the CMDHB region (i.e. South Asian was not separated out at the weighting stage).
- This summary presents the findings for South Asian peoples and how they differed from the Total Sample.

PERSONAL HISTORY OF DIABETES

- Most South Asian people in CMDHB with diabetes have had it between two and twenty years, with a median of eight years.
- There were three main ways South Asian people found out they had diabetes: primary care screening, going to a doctor with another health problem which led to the diagnosis, or having symptoms such as tiredness or blurry vision.
- Most South Asian respondents (74%) were not aware of their risk prior to diagnosis. Those who were aware of their risk prior to diagnosis very largely cited family history as how they knew about it.
- Most South Asian respondents described their weight as normal (56%), a higher result than for the Total Sample (39%). A further third described themselves as overweight (not including obese). Relatively few described themselves as obese (2%, which was markedly less than the Total Sample result of 9%).
- By the BMI standard of 30 or more being obese, just 24 percent of South Asian respondents were obese based on self-reported height and weight, a lower incidence than for the Total Sample (46%). Most were in the overweight BMI range (42%), with a further 27 percent having a calculated BMI less than 25: these two results were higher than for the Total Sample (27% and 14% respectively).

CLINICAL EXAMINATIONS AND TESTS

- Five-out-of-six South Asian people said they got the standard diabetes lab tests done approximately every three months. One-in-ten got them done less than three monthly and one-in-fourteen simply did not get them done at all.
- A higher proportion of South Asian people (92%) got regular checks for blood pressure, with only around one-in-twenty having blood pressure checks less frequently, and very few not having them at all. The South Asian peoples' result for regular checks is higher than for Total Sample (84%).
- Over 90 percent of South Asian people (93%) had had their eyes tested in the last two years. Only very small numbers had either not done this in the last two years or not at all.
- A majority of South Asian people (79%) described understanding the tests and what their results meant, either 'Fully' or 'Mostly'. Full understanding of the tests was higher among South Asian respondents than among the Total Sample.
- Although over half (56%) of South Asian people had had their bare feet checked by a person caring for their diabetes within the 12 months prior to survey, this result was lower than for the Total Sample (66%).

- By far the majority (92%) had been weighed by a doctor or nurse in the 12 months prior to survey. One-in-twelve South Asian respondents had not been weighed in the last 12 months, this being twice the incidence among the Total Sample.

SELF-MANAGEMENT OF DIABETES

- Two-thirds of South Asian respondents considered their diabetes 'Well controlled', with most others considering it 'Partly controlled'. One-in-twenty South Asian people considered their diabetes was 'Not controlled'.
- Nine-out-of-ten South Asian people were on pills to control their sugar levels. This was a higher proportion than for the Total Sample (92% vs 81%). Very few South Asian people not on pills had been advised to be on them (7% of those not on pills).
- A quarter of South Asian respondents were on insulin to control their sugar levels. Among those not on insulin, one-in-ten said they had been advised to be on insulin.
- South Asian people not on insulin despite having been advised to be, most often explained either that they were on pills, or that their diabetes was controlled so they did not need insulin now.
- Among the majority of South Asian people who were not taking insulin and who had not been advised to do so, 49 percent said they were either 'Likely' or 'Very likely' to go on insulin (including daily self-administered injections) if they were advised to do so in the future. The proportion of South Asian people who said they would be 'Very likely' to go on insulin was lower than among the Total Sample (21% for South Asian respondents compared with 32% for the Total Sample).
- The very large majority of South Asian people on insulin said they took it regularly as prescribed by their doctor (85%).
- As for insulin, a very large majority (97%) of South Asian people on pills said they took them regularly as prescribed by their doctor.
- Half of South Asian respondents tested their own blood glucose levels with a finger prick test at least once a day. They were significantly less likely than the Total Sample to not test their own blood glucose levels at all (8% vs 21%).
- Among South Asian people who performed their own tests, half said they did so at the frequency at which they had been asked, while a third of these people did so less often than they had been requested.
- South Asian people who tested their own blood glucose levels most often used the tests to identify if they were 'hyper' or high on sugars (36%) or to monitor their blood sugar levels (26%).

KNOWLEDGE AND EDUCATION ON DIABETES

- Most South Asian people in the survey (91%) believed it is true that people can have diabetes and not realise it.
- Ninety-five percent of South Asian people believed that having diabetes increases the risk of heart disease. This was significantly higher than for the Total Sample (89%).
- Just over half of South Asian respondents (54%) said they thought it was true that it is mainly people who eat a lot of sugar who get diabetes. This was a higher percentage than for the Total Sample (43%).
- Two-thirds of South Asian respondents thought it was false that 'There is nothing you can do to prevent getting diabetes' and five-out-of-six thought it was false that 'Diabetes does not affect young people'.
- When asked what can be done to prevent diabetes the most frequent answer given by South Asian people was keeping fit or being active (52%), although when diet-related answers combined, in total they were more frequent (64%). The specific other answer most often given was diet-related: controlling or reducing sugar in diet (42%).

- By far the majority of South Asian people (83%) said they felt they knew enough to manage their diabetes.
- Just seven percent of South Asian people said they smoked cigarettes, a lower result than for the Total Sample (16%).
- A fifth of South Asian people said they had been to any diabetes education or training course on how to help them manage their diabetes. This was a lower incidence than among the Total Sample (31%).
- South Asian people who had been on such courses more often said this was as part of a group (62%), with a third indicating their training had been one-on-one. Those who had done any one-on-one training were asked how long it had lasted for, and the median for South Asian people was 20 minutes.
- The main training providers South Asian respondents cited were Secondary care (most often the Manukau Super Clinic), and the primary care/GP/GP practice.
- By far the main way South Asian people who had taken part in training had heard about it was from primary care referral (63%).
- Changes South Asian people said they had made as a result of the training focused on nutrition in general, eating less sugar, or getting more exercise, keeping fit and active.
- One-in-seven South Asian people who had not taken part in any diabetes education or training courses had been offered training for diabetes management. Those who chose not to take part in any training most often said that they felt they didn't need to, that they were too busy and had no time, or it was during work or school hours.

EXPERIENCE WITH MEDICAL CARE (PRIMARY AND SECONDARY)

- One-in-five South Asian respondents had stayed overnight in hospital within the last twelve months for any reason (i.e. not necessarily related to diabetes).
- Among South Asian people who had stayed in hospital overnight within the last twelve months, one-in-seven said diabetes was the reason for their most recent stay.
- A majority of South Asian people (62%) could not identify any improvements that could have been made to help them manage their diabetes better while in hospital. Meals, use of medication and education were the only areas for improvement mentioned by more than a few South Asian people.
- Over half of this group (54%), who had had an overnight stay in hospital in the last twelve months, rated hospital staff as very knowledgeable about their diabetes. One-in-ten South Asian people rated staff as only 'A little' knowledgeable about their diabetes, and a further one-in-ten 'Not at all' knowledgeable.
- South Asian people rated hospital staff as very helpful in managing their diabetes markedly more than they rated staff very knowledgeable (72% compared with 54% for knowledgeability).
- A quarter of South Asian people who had been in hospital in the previous twelve months (for any reason at all) said they had been visited by someone from the hospital diabetes specialist team.
- South Asian people on insulin most often managed their insulin themselves while they were in hospital (54%), with a third saying staff did this.
- Although three-quarters were given meals that were suitable for their diabetes while in hospital, one-in-six said they were not, or not always. The main unsuitable meal experiences were being offered sweet foods and desserts, or no halal meals as requested.
- Just 4 percent of all South Asian respondents reported that there had been a time in the last twelve months when they needed to see a GP or nurse about their diabetes, but they did not get to see them. The main reason for this cited by the few South Asian people who had experienced this, was lack of transport.
- Regular diabetes check-ups (58%) or needing a new prescription (47%) were the main reasons South Asian respondents last went to their GP service. South Asian respondents were much more

likely than others to last visit their GP because of needing a new prescription (47% compared with 36% for the Total Sample).

- Two-thirds of the South Asian respondents rated their GP service as providing about as much discussion of the treatment of their diabetes as they wanted. Small and similar proportions said their GP service provided more versus less discussion than they wanted, suggesting a reasonable balance has been achieved overall.
- A quarter of South Asian respondents thought there were ways their GP service could improve their care of the person's diabetes, a higher result than among the Total Sample (16%). Conversely two-thirds of South Asian respondents did not think their GP service could improve their care. The main improvement South Asian respondents suggested was to provide more information.
- One-in-twelve South Asian respondents said that apart from GP and hospital services, they go elsewhere for health advice regarding their diabetes. Among the small number of South Asian respondents who had used these other sources of health advice, those most often cited were the Internet, the Manukau Super Clinic, and diabetes organisations and diabetes nurses.

QUALITY OF LIFE

- Most South Asian respondents rated their quality of life as either 'Good' (53%) or 'Very good' (27%, accumulating to 80%).
- Most also rated themselves as having 'Completely' (34%) or 'Mostly' (28%) enough energy for everyday life (this accumulated to 62%). When those answering 'Moderately' (23%) are added, this accumulates to 85 percent with at least moderately enough energy.
- Twenty percent said they had enough money to meet their needs completely and a further 23 percent said they had enough money to mostly meet their needs. Eight percent said they did not have enough money at all to meet their needs, and a further 18 percent said they only had enough money to meet their needs a little.
- Most South Asian respondents were either satisfied or very satisfied with the specific aspects of the quality of their lives that were asked about:
 - ♦ Satisfaction with their health (72% either 'Satisfied' or 'Very satisfied')
 - ♦ Satisfaction with their ability to perform daily living activities (80%)
 - ♦ Satisfaction with themselves (77%)
 - ♦ Satisfaction with their personal relationships (90%)
 - ♦ Satisfaction with the conditions of their living place (92%)
- Satisfaction with health, with ability to perform daily living activities, and with self were the lowest rated of these questions (with 18%, 17% and 16% either 'Dissatisfied' or 'Very dissatisfied')
- The last core question in the survey asked respondents to describe the priority they give to their own health, compared with other things like their job, money or children's health. Of the three answer options, South Asian people most often chose 'My health is highest priority' (69%, a higher result than for Total Sample, at 56%). Just a quarter of South Asian respondents chose 'My health is high priority but other things are higher', markedly less than among the Total Sample (one third). Just one-in-twenty South Asian people chose the answer option 'My health is not a high priority'.

1.7 SUMMARY OF KEY FINDINGS FOR PEOPLE OF OTHER ETHNICITIES

RESEARCH METHODS

- The survey included 303 people belonging to Other ethnic groups. This number included 193 people who identified themselves as New Zealand European, 26 'New Zealander/Kiwi', 34 British (English, Irish, Scottish, Welsh), 31 other Europeans (Swiss, Dutch, French, etc), and 11 who described themselves as Caucasian.
- The data has been weighted to reflect the age within gender within deprivation composition of all people of Other ethnicities with diabetes living in the CMDHB region.
- This summary presents the findings for people of Other ethnicities and how they differed from the Total Sample.

PERSONAL HISTORY OF DIABETES

- Most people of Other ethnicities in CMDHB with diabetes have had it between two and twenty years, with a median of eight years.
- There were three main ways people of Other ethnicities found out they had diabetes: primary care screening, going to a doctor with another health problem which lead to the diagnosis, or having symptoms such as tiredness or blurry vision.
- Most Other ethnicities respondents (79%) were not aware of their risk prior to diagnosis. Those who were aware of their risk prior to diagnosis very largely cited family history as how they knew about their risk.
- Most respondents of Other ethnicities described their weight as overweight (not including obese - 61%, a higher incidence than for the Total Sample, 48%). Correspondingly, a relatively low proportion of these respondents described their weight as normal (27%, compared with 39% for the Total Sample).
- By the BMI standard of 30 or more being obese, 46 percent of respondents of Other ethnicities were obese based on self-reported height and weight. A further third were overweight.

CLINICAL EXAMINATIONS AND TESTS

- Two-thirds of people of Other ethnicities said they got the standard diabetes lab tests done approximately every three months. This proportion was lower than for the Total Sample (76%). One-in-six got them done less than three monthly and one-in-ten did not get them done at all.
- A higher proportion of people of Other ethnicities (84%) got regular checks for blood pressure, with only around one-in-fourteen having blood pressure checks less frequently, and one-in-twenty not having them at all.
- Just over 90 percent of people of Other ethnicities had their eyes tested in the last two years. Only very small numbers had either not done this in the last two years or not at all.
- A majority of people of Other ethnicities (85%) described understanding the tests and what their results meant, either 'Fully' or 'Mostly'.
- Seventy percent of people of Other ethnicities had had their bare feet checked by a person caring for their diabetes within the 12 months prior to survey. By far the majority (96%) had been weighed by a doctor or nurse in the 12 months prior to survey.

SELF-MANAGEMENT OF DIABETES

- Just over six-in-ten respondents of Other ethnicities considered their diabetes 'Well controlled', with most others considering it 'Partly controlled' and one-in-twenty considering it was 'Not controlled'.
- Sixty-nine percent of people of Other ethnicities were on pills to control their sugar levels. This was a lower proportion than for the Total Sample (81%). One-in-ten not on pills had been advised to be on them.
- A quarter of Other ethnicities respondents were on insulin to control their sugar levels. Among those not on insulin, just three percent said they had been advised to be, a lower result than for the Total Sample (10%).
- People of Other ethnicities not on insulin despite having been advised to be, most often explained either that they were on pills, or that their diabetes was controlled so they did not need insulin now.
- Among the majority of people of Other ethnicities who were not taking insulin and who had not been advised to do so, three-quarters said they were either 'Likely' or 'Very likely' to go on insulin (including daily self-administered injections) if they were advised to do so in the future. The proportion who said they would be 'Very likely' to go on insulin was higher than among the Total Sample (47% compared with 32%).
- Most of those on insulin said they took it regularly as prescribed by their doctor (92%), as did those on pills (95%).
- Two-thirds of Other ethnicities respondents tested their own blood glucose levels with a finger prick test once a day or more. They were significantly more likely than the Total Sample to test their own blood glucose levels four or more times a day (9% vs 5%).
- Among those who performed their own tests, half said they did so at the frequency at which they had been asked, while a quarter did so less often.
- People of Other ethnicities who tested their own blood glucose levels most often used the tests to identify if they were 'hyper' or high on sugars (38%), to help decide what to eat (25%) or to identify if they were 'hypo' or low sugar levels (23%).

KNOWLEDGE AND EDUCATION ON DIABETES

- This group was more likely than the Total Sample (98% compared with 93%) to believe it is true that people can have diabetes and not realise it.
- Eighty-six percent of people of Other ethnicities believed that having diabetes increases the risk of heart disease.
- A minority (25%) said they thought it was true that it is mainly people who eat a lot of sugar who get diabetes, which was a lower percentage than for the Total Sample (43%).
- Three quarters thought it was false that 'There is nothing you can do to prevent getting diabetes' and just under nine-in-ten thought it was false that 'Diabetes does not affect young people'. The latter result was higher for these people than for the Total Sample (80%).
- When asked what can be done to prevent diabetes they were more likely than the Total Sample to give a diet-related answer (75% compared with 66%). The main diet mention was controlling or reducing sugar in diet (37%). Keeping fit or being active was mentioned by 56 percent.
- By far the majority of people of Other ethnicities (87%) said they felt they knew enough to manage their diabetes.
- One-in-eight said they smoked cigarettes.
- A third said they had been to any diabetes education or training course on how to help them manage their diabetes.
- Those who had been on such courses more often said this was as part of a group (57%), with a third indicating their training had been one-on-one. For those who had done any one-on-one training the median duration was 25 minutes.

- The main training providers 'Other ethnicities' respondents cited were Secondary care (most often the Manukau Super Clinic), the hospital, and the primary care/GP/GP practice.
- By far the main way people who had taken part in training had heard about it was from primary care referral (66%).
- Changes they had made as a result of the training focused on nutrition in general, eating less sugar, or getting more exercise, keeping fit and active.
- One-in-six people of Other ethnicities who had not taken part in any diabetes education or training courses had been offered training for diabetes management. Those who chose not to take part in any training most often said that they felt they didn't need to.

EXPERIENCE WITH MEDICAL CARE (PRIMARY AND SECONDARY)

- A quarter of respondents of Other ethnicities had stayed overnight in hospital within the last twelve months for any reason (i.e. not necessarily related to diabetes).
- Among this group, one-in-seven said diabetes was the reason for their most recent stay.
- Seventy percent could not identify any improvements that could have been made to help them manage their diabetes better while in hospital. Meals, education and use of medication were the only areas for improvement mentioned by more than a few people of Other ethnicities.
- Over half (54%) rated hospital staff as very knowledgeable about their diabetes, while one-in-eight rated staff as only 'A little' knowledgeable and a further one-in-twenty 'Not at all' knowledgeable.
- People of Other ethnicities rated hospital staff as 'Very helpful' in managing their diabetes at a similar level to being 'Very knowledgeable' (53% compared with 54% for knowledgeable).
- A quarter of those who had been in hospital in the previous twelve months (for any reason at all) said they had been visited by someone from the hospital diabetes specialist team.
- Those on insulin most often had staff managing their insulin while they were in hospital (61%), with a third saying they managed this themselves.
- Although three-quarters said they were given meals that were suitable for their diabetes while in hospital, one-in-five said they were not or only sometimes suitable. The main unsuitable meal experiences in hospital for Other ethnicities respondents were being offered food they should not have been offered, and being offered sweet foods and desserts.
- Just five percent of all Other ethnicities respondents reported that there had been a time in the last twelve months when they needed to see a GP or nurse about their diabetes, but they did not get to see them. The main reason for this cited by the few people who had experienced this, were scheduling (that they could not get an appointment soon enough), it was difficult to contact their doctor, or lack of transport.
- Regular diabetes check-ups (64%) or needing a new prescription (31%) were the main reasons Other ethnicities respondents last went to their GP service.
- Most Other ethnicities respondents (85%) rated their GP service as providing about as much discussion of the treatment of their diabetes as they wanted. This was a higher percentage than for the Total Sample (69%). Small proportions said their GP service provided more and less discussion than they wanted, with a slight skew to people saying they got less than they wanted.
- Just one-in-eight people of Other ethnicities thought there were ways their GP service could improve their care of the person's diabetes. The main improvement suggested was to provide more information.
- One-in-six said they go elsewhere for health advice apart from GP and hospital services regarding their diabetes. Among the small number of Other ethnicities respondents who had used these other sources of health advice, those most often cited were the Manukau Super Clinic, the Internet, and diabetes organisations.

QUALITY OF LIFE

- Most Other ethnicities respondents rated their quality of life as either 'Good' (44%) or 'Very good' (37%, accumulating to 81%).
- Most also rated themselves as having 'Completely' (25%) or 'Mostly' (41%) enough energy for everyday life (this accumulated to 66%). When those answering 'Moderately' (20%) are added, this accumulates to 86 percent with at least moderately enough energy.
- Satisfaction among Other ethnicities respondents with having enough money to meet their needs was higher than for the Total Sample, with 27 percent saying they had 'Completely' enough money (compared with 18% among the Total Sample). A further 30 percent said they 'Mostly' had enough money to meet their needs.
- Eight percent said they did not have enough money at all to meet their needs, and a further nine percent said they only had enough money to meet their needs a little. These percentages were lower than for the Total Sample, i.e. indicating that people of Other ethnicities less often had too little money than the Total Sample.
- Most Other ethnicities respondents were either satisfied or very satisfied with the specific aspects of the quality of their lives that were asked about:
 - ♦ Satisfaction with their health (64% either 'Satisfied' or 'Very satisfied')
 - ♦ Satisfaction with their ability to perform daily living activities (72%)
 - ♦ Satisfaction with themselves (75%)
 - ♦ Satisfaction with their personal relationships (88%)
 - ♦ Satisfaction with the conditions of their living place (92%, with these people more often than for the Total Sample saying they were 'Very satisfied' with their living conditions: 58% vs 45%)
- Satisfaction with health was the lowest rated of these questions (with 24% either 'Dissatisfied' or 'Very dissatisfied')
- The last core question in the survey asked respondents to describe the priority they give to their own health, compared with other things like their job, money or children's health. Of the three answer options, people of Other ethnicities most often chose 'My health is highest priority' (47%, though this was a lower result than for the Total Sample, at 56%). A relatively high proportion chose 'My health is high priority but other things are higher' (43%, higher than among the Total Sample, at 33%). Less than one-in-ten chose the answer option 'My health is not a high priority'.

2 INTRODUCTION

This survey, using a large scale representative sample of people living with diabetes, was designed to provide a greater understanding of knowledge, beliefs, and quality of life of those with diabetes, and to provide insights to help overcome barriers and improve quality of services.

The specific aims of the survey were to:

- (1) Describe the burden of diabetes and its complications in CMDHB;
- (2) Identify the knowledge and beliefs about diabetes and its causes in this population;
- (3) Review the quality of service provision and identified barriers to quality care;
- (4) Identify possible causes for the disparities in rates of diabetes and rates of admissions for people with diabetes;
- (5) Document the impact of diabetes on quality of life.

This survey was undertaken as part of the 'Let's Beat Diabetes' (LBD) project in Counties Manukau DHB (CMDHB).

The survey served both to provide data for Key Performance Indicators of LBD at a population level, as well as to inform the social marketing program, health promotion materials, and service provision needs in the CMDHB context.

At the time of the survey CMDHB was estimated to have over 30,000 people living with diabetes, some 27,000 counted by use of encrypted diabetic encounters/ utilisation data (e.g. pharmaceuticals, lab testing, admissions, clinics etc) and 20,700 identifiable through collation of information from routine DHB diabetes services (retinal screening, hospital and clinical coding – see Jackson, Orr-Walker et al., 2008), referred to hereafter as the 'Known Diabetes Cohort'. Currently there is no national register of people with diabetes, but within CMDHB the Known Diabetes Cohort appears to be representative of the larger encrypted population, and is consistent with expected rates of diabetes for differing ethnicities from other information sources (i.e. New Zealand Health Survey (2002/03), Auckland Heart and Health Study (2007)).

The survey was intended to provide data that complemented and overlapped with the LBD survey of the general public, which was undertaken a few months later.

It is intended that additional insights will be gleaned from further qualitative focus groups and/or additional quantitative surveys with those participants who, at the end of the survey, indicated a willingness to partake in further research.

3 OVERVIEW OF RESEARCH METHODS

3.1 RESEARCH METHODS

This survey was conducted as a telephone survey of 1200 people with diabetes living in the Counties Manukau DHB region.

This chapter provides an overview of the research methods used in this survey. Further details of these methods are provided in Appendix A, while Appendix B contains details of the sample for this survey.

ETHICAL APPROVAL

The project received ethical approval from the Northern Y Regional Ethics Committee on 24 February, 2009 (NTY/09/02/014).

QUESTIONNAIRE DEVELOPMENT

The questionnaire for this survey was designed by the Counties Manukau Let's Beat Diabetes team, with Phoenix Research only involved in refining wording to ensure it was readily comprehended by the participants. The questionnaire is shown in Appendix C.

METHOD OF DATA COLLECTION

A CATI (computer assisted telephone interviewing) method was used because it was the most cost-effective approach. It does enable high levels of call backs and provides a high degree of monitoring of interviewer quality. It also provides a level of anonymity (compared with face to face interviewing) that is good for surveying sensitive topics.

The disadvantage of any phone-based method is that people without landline phones and those with unlisted numbers are not included. However, the sample supplied all had phone numbers, either land line or mobile, and mobile numbers were called if necessary⁴.

It is acknowledged that Maaori and Pacific peoples often have a preference for face-to-face interviews. However such interviewing is expensive and produces more variability in interviewing methods, which can affect the results.

Once the questionnaire had been finalised in English it was translated into Samoan and Tongan. People of these ethnicities were contacted using English at first, and offered the alternative of being interviewed in their own language if they preferred that. This offer was made based on the person's ethnicity as recorded by CMDHB in their records of people with diabetes. Forty-seven interviews were completed in Samoan and 23 in Tongan, using the translated questionnaires.

Also based on the person's ethnicity as recorded by CMDHB, people who were Maaori, other Pacific or Chinese were offered the opportunity to be interviewed (albeit it in English) by an interviewer from their own ethnic group.

⁴ Even among the general CMDHB population, the 2006 Census showed that only 2.4% did not have either landline or mobile access.

CONTACTING RESPONDENTS

A personalised letter was sent out from CMDHB to a randomly selected sample from the CMDHB cohort of known persons with diabetes. Of the 1200 who agreed to be interviewed, 721 (60%) recalled having received the letter and a further 45 (4%) were unsure. This letter advised people about the research and that CMDHB would like to provide their contact details to Phoenix Research, so they could be contacted for an interview. People were offered the chance to opt out of being contacted by the researchers, by sending back a form in a freepost envelope. Even if they did not opt out at that stage, they were still able to decline the interview when contacted by Phoenix interviewers, if they so wished.

An information sheet was attached to the letter from CMDHB, providing all the information necessary to make an informed decision as to whether to participate.

DATA COLLECTION/ SAMPLING

Interviews were completed with 1200 persons with diabetes living in the Counties Manukau District Health Board region. Interviewing was conducted between 24 April and 5 June 2009. The interviews averaged 21 minutes, but the Samoan translated questionnaires took 30 minutes and the Tongan 26.

The sample was randomly selected from the CMDHB cohort of known persons with diabetes.

ETHNIC COMPOSITION OF SAMPLE

Quotas were set by ethnicity (as recorded by CMDHB) to assist in achieving the intended 300 in each of Maaori, Pacific, Asian and Other ethnicities. This provided sufficiently large numbers in each ethnic group to provide confidence in their findings.

The survey sample included 300 people who on the CMDHB list were identified as Maaori. The CMDHB list identified a single ethnic group for each person. The questionnaire for the survey asked people to identify which ethnic group or groups they belonged to, i.e. allowing that a person may say they belong to more than one ethnic group. The number of Maaori in the sample, allowing each person to belong to more than one ethnic group if they chose this, was 330.

The survey sample included 305 Pacific peoples based on single ethnicity, which became 329 people when they specified their own ethnicities (allowing for multiple ethnic groups). The survey comprised 295 Asian peoples, equating to 312 when multiple ethnicities were included, and 300 Other (mostly New Zealand European), equating to 303 when multiple ethnicities were included.

Based on self-classification, the Pacific peoples grouping included 154 Samoan, 64 Tongan, 78 Cook Island Maaori, 26 Niuean, and 13 Other Pacific peoples.

Within the Asian peoples it was vital to distinguish those belonging to South Asian ethnic groups from Other Asian. Based on self-classification, the sample comprised 247 in this group, of whom 238 were Indian, including 84 Fijian Indians. The Other Asian grouping included 33 Chinese, 27 from South East Asian ethnic groups, and 6 other Asians.

RESPONSE RATES

If necessary, up to 15 calls were made to each number to try and obtain a completed interview. Participation was voluntary and no incentives were used to encourage participation.

The table on the following page shows the steps in selecting and obtaining the final sample who participated. Two different response rates are presented, as described following the table.

		TOTAL	MĀORI	PACIFIC	INDIAN/ FIJIAN INDIAN	OTHER ASIAN	OTHER
Know diabetes cohort		20723	2942	6466	1989	1124	8202
↓							
Random sample for mail out/ interviews		3331	745	859	735	334	658
↓							
	Less opt-offs	(367)	(61)	(54)	(72)	(79)	(101)
Sample after opt-offs taken out		2964	684	805	663	255	557
↓							
People where contact made or attempted		2877	682	782	603	255	555
↓							
Sample after removing non-qualifiers and disconnected number		2390	567	617	507	213	486
↓							
	Less unable to reach after 15 calls	(629)	(179)	(232)	(72)	(70)	(76)
↓							
	Less refusals	(207)	(59)	(30)	(60)	(15)	(43)
↓							
	Less language barrier/ too unwell	(256)	(25)	(28)	(99)	(74)	(30)
↓							
	Less quota full	(98)	(4)	(22)	(35)	(0)	(37)
Completed interviews		1200	300	305	241	54	300
RESPONSE RATE 1		68%	71%	78%	65%	36%	68%
RESPONSE RATE 2		54%	58%	63%	49%	24%	61%

Response rate 1 provided a response rate of 68% and was calculated as:

- $(\text{Number of completed interviews}) / (\text{number of completed interviews} + \text{number of refusals})$

Response rate 2 provided a response rate of 54% and was calculated in accord with Ministry of Health policy. This weighted response rate takes into account the fact that only some of those who could not be reached would have qualified for the interview.

The response rate was calculated as:

- $(\text{Number of completed interviews}) / (\text{number of completed interviews} + \text{number of eligible non-responding (refusals, language barrier/too unwell)} + \text{estimated eligibles from the unknowns})$

The 'estimated eligibles from the unknowns' was calculated as:

- $\text{Number of unknowns} * (\text{number of eligible responding} + \text{number of eligible non-responding}) / (\text{number of eligible responding} + \text{number of eligible non-responding} + \text{number of ineligible})$

Unknowns were those who were unable to be contacted after 15 calls. It should be noted that those classified as fax machines were where a fax was reached on five consecutive occasions and it was therefore deemed to be a dedicated fax line and was not included in the qualifying phone numbers.

WEIGHTING

For analysis purposes the data has been weighted with the intention of accurately reflecting the composition of the CMDHB cohort of known people with diabetes. The basis of the weighting was all combinations of the following variables: age (under 55 and 55 and over) within gender within ethnicity (Maori, Pacific, Indian, Other Asian, Other) within NZDep (NZDep quintiles 1-4 and 5). The combinations of these variables resulted in 40 different cells, all exactly matched by the weighting.

Having a weighting that covers so many variables has ensured that the data is as representative as possible of the Counties Manukau population of people with diabetes. As the weighting is based on the composition of the CMDHB cohort of known people with diabetes, any biases in the composition of this group compared with all persons with diabetes in CMDHB will be evident in the research findings. However as noted on page 25, the Known Diabetes Cohort does appear to be representative of the larger encrypted population and consistent with expected rates of diabetes for differing ethnicities from other information sources.

4 RESEARCH FINDINGS

4.1 INTRODUCTION

This chapter presents all the research findings, with sub-sections for each major area covered by the research. These are:

- Personal history of diabetes
- Clinical examination and testing
- Self-management
- Knowledge and education about diabetes
- Experience with primary care
- Quality of life

4.2 NOTES ON REPORTING

It is important that this section is read before reading the main findings, so that the reader understands what analyses have been undertaken and how the differences highlighted in the findings have been identified.

In general the topics are reported in the same order that they were covered in the questionnaire.

ANALYSES UNDERTAKEN

The level of analysis in this report is restricted to simple cross tabulations. These analyses are not able to address possible confounding effects, such as the impact of level of deprivation on the responses of different ethnic groups.

As part of the analyses, all questions were analysed for differences across the following variables, but only significant differences are documented in the report:

- Ethnic groups, based on all ethnicities mentioned (total response ethnicity: Maaori, Pacific, South Asian, Other Asian, Other) *
- Body Mass Index (BMI) rating (three groups of values: less than 25, 25-29.9 ('Overweight')⁵, and 30 or higher ('Obese')). Data is based on the respondent's own reporting of their height and weight)
- Description of own weight (one of the following: underweight, normal, overweight⁴ and obese)
- Level of control over diabetes, based on the respondent's own description (one of the following: well controlled, partly controlled or not controlled)
- Number of years since diagnosed with diabetes (less than 2, 2-5, 6-10, 11-20, 21 or more. Data either based on the respondent's reporting of their current age, and the age at which they were diagnosed, or by an estimate of the length of time they had had diabetes)
- Gender
- Age (grouped into the following: under 45, 45-54, 55-64, 65 and over)
- Level of deprivation (NZDep), which is an established rating of areas in which people live, based on a number of socio-economic variables (grouped into Quintiles 1-2, Quintiles 3-4 and Quintile 5)
- Type(s) of medication used to control diabetes (classified by one of the following combinations: on pills only, on insulin only, on both pills and insulin, on neither pills nor insulin)
- Use of insulin (the respondent was either taking on insulin, or not on insulin at all)
- Use of pills (the respondent was either taking on pills, or not on pills at all)
- Recent hospital experience (whether or not the respondent's most recent hospital stay was due to their diabetes. For 'Yes', this must have been within the previous twelve months)

* Consideration was also given to analysing all results not just by ethnicity based on total mentions (as described above) but also by the ethnicity respondents said they most identified with. Analysis showed that 94 percent of those identifying as Maaori in terms of total-mentions ethnicity most identified their ethnicity as Maaori. Similarly 97 percent of those identifying as Pacific in terms of total-mentions ethnicity most identified their ethnicity as Pacific. Consequently it is exceedingly unlikely that any ethnicity trends would have differed with this second type of ethnicity analysis, so it was not undertaken.

⁵ The term 'Overweight' does not include those who are 'Obese', for either the BMI-based measure (based on self-reported height and weight) or the self-reported description of own weight. That is, these categories have been defined to be mutually exclusive.

MARGINS OF ERROR

At the 99 percent confidence level, the margin of error for a reported proportion of 50 percent, based on the Total Sample of 1200, is plus or minus 3.7 percent. This means that, even though this was a sample of the population, one can be 99 percent confident that the real level is somewhere between 46.3 percent and 53.7 percent.

Sample size and variation in response both influence the size of the margin of error. For example, for a figure of 50 percent based on a smaller ethnic sub-sample of 300 interviews (as for the ethnic groups), the margin of error is plus or minus 7.4 percent.

SIGNIFICANCE TESTING

Significance testing is used to identify whether differences between figures are large enough to be likely to be showing real differences, as opposed to those that might have happened by chance. For example, one of the first results reported as significant is that people of South Asian ethnicity were less likely than the Total Sample, to have been diagnosed with diabetes within the last two years. This means that this difference is large enough for the statistical analyses to identify it as significant.

Results are reported in the text that are significantly different from the Total Sample at the 99 percent confidence level. All these significant differences have been reported, unless the analysis did not add sufficient value to understanding of the data to justify its inclusion.

Significant differences are shown in the tables at two confidence levels: 99 percent and 95 percent. Results that are significantly different from the Total Sample at the 99 percent confidence level are marked with double arrows, upwards for those figures that are significantly higher than Total Sample and downwards for those that are significantly lower. Results that are significantly different from the Total Sample at just the 95 percent confidence level are marked with a single arrow. However the reporting has focussed on the 99 percent level, because the analyses have not made any adjustments for design effects and the fact that large numbers of significance tests have been undertaken.

Colour versions of the report show figures in the tables that are significant at the 95 percent level (or higher) in red. Colour versions also show the 'Total' column in blue, signifying that it has been used as the reference column, i.e. against which to compare all other results.

When comparing the ethnic sub-samples with bases of approximately 300 respondents against the 1200 Total Sample, a figure of 50 percent needed to vary by 8.4 percent to be significant at the 99 percent confidence level. For example, 44 percent of the Total Sample said they fully understood each of the tests for diabetes (a result close enough to 50% to make a useful example). The level for Pacific peoples was 35 percent (i.e. 9% less), so it was a significant difference. However the level for Maaori was 40 percent, which was not a sufficiently large difference from the Total Sample result to be significant.

Most contrasts tested compared results for one sub-group with the Total Sample results. However when there were just two mutually exclusive sub-groups (such as with gender or whether people are on insulin or not), the contrasts tested are for one sub-group compared with the other. This distinction is noted in the analysis.

Where comparisons are made with data from similar questions in the 2009 LBD Tracking Survey of the general public no significance testing has been undertaken.

Bases reported in tables

The bases shown in the tables (the figures in brackets above the percentages) are the actual numbers of people interviewed (i.e. unweighted numbers), while all the percentages shown are based on weighted data.

4.3 PERSONAL HISTORY OF DIABETES

This section considers:

- The number of years since respondents had been diagnosed with diabetes
- What had led to their diagnosis
- Whether they were aware of being at risk of getting diabetes prior to the diagnosis, and, if so, how they knew about this risk.

NUMBER OF YEARS SINCE DIAGNOSED WITH DIABETES

Respondents were asked either to recall their age when they were first diagnosed with diabetes, or to state approximately how many years they had had diabetes for. All results were combined and grouped.

Most respondents (just under 80%) had been diagnosed with diabetes between two and twenty years ago, with the median time since diagnosis close to eight years.

Table 1: Time since diabetes diagnosis

NUMBER OF YEARS SINCE DIAGNOSED WITH DIABETES	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Less than 2 years	8	10	9	3↓	8	8
2 to 5 years	31	26	32	34	36	30
6 to 10 years	26	24	24	29	34	24
11 to 20 years	22	22	21	27	10↓	22
21 years or more	13	16	13	7↓	7	14

Respondents **more** likely to have been diagnosed **less than two years** prior were:

- Aged less than 45 years (18% vs 8% for Total Sample)
- Those who were not on insulin (10% vs 4% for those who were on insulin)

And respondents **less** likely were:

- South Asian peoples (3%)

Respondents **more** likely to have been diagnosed **two to five years** prior were:

- Those who were on neither pills nor insulin (52% vs 31% for Total Sample)
- Those who had *not* stayed in hospital recently because of their diabetes (32% vs 15% for those who had recently stayed in hospital for because of their diabetes)

Respondents **less** likely to have been diagnosed **six to ten years** prior were:

- Those who were on insulin only (11% vs 26% for Total Sample)

Respondents **more** likely to have been diagnosed **11 to 20 years** prior were:

- Those who were on insulin only (38%) as well as those who were on both insulin and pills (31%)

Respondents **more** likely to have been diagnosed **at least 21 years** prior were:

- Aged 65 years or older (19% vs 13% for Total Sample)
- Those who were on insulin only (35%) as well as those who were on both insulin and pills (25%)
- Those who had stayed in hospital recently because of their diabetes (23% vs 12% among those not hospitalised)

WHAT LED TO DIAGNOSIS

The following table shows the ways people found out they had diabetes.

The three ways people most often found out were:

- Going to a doctor with a health problem which lead to the diagnosis (35%)
- Primary care screening (34%)
- Having symptoms such as tiredness or blurry vision (22%)

Table 2: What led to diagnosis

WHAT LED TO DIAGNOSIS	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Went to doctor with health problem/ was diagnosed	35	41↑	38	31	30	31
Primary care screening	34	32	27↓	39	32	38
Symptoms/ side effects	22	15↓↓	21	27	28	25
Gestational diabetes	7	6	11↑	4	11	4
Hospitalisation	6	8	5	7	3	5
Screening outside of Primary Care	2	3	3	2	1	2
Other	6	6	5	4	3	6
Don't know	1	1	2	0	0	1

The grouped category "Primary care screening" includes:

- Doctor check risk (27%)
- Blood test (unclear what prompted) (4%)
- Family history (2%)
- Work check up (2%)

Respondents **more** likely to have been diagnosed by a doctor during **primary care screening** were:

- Those on neither insulin nor pills to control their blood sugar levels (50% vs 34% for Total Sample)
- Those who had been diagnosed between two and five years prior (42%)

And **less** likely were:

- Those who were on insulin only (17%), or on both pills and insulin to control their blood sugar levels (22%)

Respondents **more** likely to have been diagnosed following **symptoms or side effects** were:

- Those who were on insulin only (41% vs 22% for Total Sample), or on both pills and insulin to control their blood sugar levels (30%)

And **less** likely were:

- Maaori (15%)

Respondents **more** likely to have been diagnosed following **under the heading of 'other'** were:

- Those who were on insulin only (13% vs 6% for Total Sample)

More than one out of every ten female respondents (14%) were diagnosed during, or just after, a **pregnancy**. Women **more** likely to have been diagnosed in this way were:

- Those still aged less than 45 years (26% vs. 14% for all women)
- Those who were diagnosed at least 21 years prior to the survey (34%)

And **less** likely were:

- Those still aged 65 years and over (4%)
- Those diagnosed with diabetes 2 to 5 years ago (4%)

AWARENESS OF RISK PRIOR TO DIAGNOSIS

All respondents were asked: 'Did you know you were at risk of diabetes before you were diagnosed?' Just under one-quarter (23%) said '**Yes**'. That is, most were not aware of their risk prior to diagnosis.

Table 3: Aware of risk prior to diabetes

AWARE OF RISK PRIOR TO DIABETES	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Yes	23	29↑	19	24	31	21
No	76	70↓	79	74	64↓	79

People **more** likely to say 'Yes' were:

- Those who had described their weight as 'Obese' (43% vs 23% for Total Sample)
- Those who said they were not satisfied with their health (29% vs 20% for those who were satisfied)

And **less** likely to say 'Yes' were:

- Those who had described their weight as 'Normal' (16%)

People **more** likely to say 'No' were:

- Males (80% vs 73% for females)

HOW KNEW ABOUT THE RISK OF DIABETES

Those who said they had been aware of being at risk were then asked how they knew about this risk. Family history is clearly by far the main cue people used.

The most common answers are shown in the following table. Note that the answer of being overweight or obese was given relatively infrequently:

Table 4: How knew about being at risk

HOW KNEW ABOUT BEING AT RISK (Base: respondents who knew they were at risk before being diagnosed)	Total (295) %
Family history	69
Informed by doctor or nurse	14
Was overweight or obese	8
Symptoms diabetes/ tiredness etc	8
Had gestational diabetes	5
Media	5
Lifestyle	4
[Age – noted because markedly low	0.3]
Other	9
Don't know	1

Lifestyle includes:

- Poor diet/ junk food/ fizzy drinks (3%)

PERCEIVED WEIGHT

Only nine percent of those in the current survey classified themselves as obese and a further 47 percent as overweight. This was based on a question which asked them: 'How would you describe your weight? Would it be underweight, normal, overweight or obese?' The table below makes comparisons with the 2009 LBD Tracking Survey of the general public, but that survey asked: 'If a doctor was checking your body shape and weight today, do you think they would say you were overweight?' If they answered 'Yes' they were asked: 'And would the doctor be likely to say you were

obese?' As can be seen from the results below, the questions that referred to the doctor appear to have obtained more accurate responses in terms of being obese. However, when the obese and overweight figures were added, the levels were very similar for those with diabetes in both surveys (56% and 57%). These levels compared with 42 percent for the Total Sample in the survey of the public.

Table 5: Description of weight by ethnicity

DESCRIPTION OF WEIGHT	Total (1200) %	Maori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %	Don't know/ refused (4) %
Underweight	3	4	3	4	3	3	0
Normal	39	26↓↓	52↑↑	56↑↑	51	27↓↓	25
Overweight	47	54	34↓↓	38↓	40	61↑↑	75
Obese	9	16↑↑	8	2↓↓	4	9	0
Don't know/ refused	1	1	4↑↑	0	0	0	0

Table 6: Description of weight

DESCRIPTION OF WEIGHT	Current survey (1200) %	People with diabetes in 2009 LBD Tracking Survey of general public (216) %	Total Sample from 2009 LBD Tracking Survey of general public (2363) %
Underweight	3	NA	NA
Normal	39	NA	NA
Overweight but not obese	47	27	29
Obese	9	30	13
Don't know	1	0	2
Refused	0	1	0

NB: The question wording differed across the surveys
NA = Not asked

Respondents *more* likely to say '**Underweight**' were:

- Those with a calculated BMI⁶ of less than 25 (12% vs 3%)
- Male (5% vs 2% for female respondents)

⁶ Based on self-reported height and weight

Respondents **more** likely to say '**Normal**' were:

- South Asian peoples (56% vs 39%) and Pacific peoples (51% vs 39%)
- Those with a calculated BMI of less than 25 (75%)
- Male (43% vs 35% for female respondents)
- Those who were satisfied with their health (44% vs 28% for those who were not satisfied)

And **less** likely were:

- Maaori (26%), and those Other ethnic groupings (27%)
- Those with a calculated BMI of 30 or higher (22%)
- Those who had described their diabetes as 'Partly controlled' (32%)
- Those aged less than 45 years (29%)

Respondents **more** likely to say '**Overweight**' were:

- Those of Other ethnic groupings (61% vs 47%)
- Those with a calculated BMI of 30 or higher (60%)

And **less** likely were:

- Pacific peoples (34%)
- Those with a calculated BMI of less than 25 (13%)

Respondents **more** likely to say '**Obese**' were:

- Maaori (16% vs 9%)
- Those with a calculated BMI of 30 or higher (16%)
- Those who had described their diabetes as 'Not controlled' (19%)
- Female (11% vs 6% for male respondents)
- Those aged less than 45 years (16%)
- Those who were not satisfied with their health (18% vs 5% for those who were satisfied)

And **less** likely were:

- South Asian peoples (2%)
- Those with a calculated BMI of either less than 25 (0%) or between 25 and 30 (2%)
- Those aged 65 years or older (4%)

BODY MASS INDEX (BMI)

Persons were asked their height and weight and this was used to calculate a BMI, which was then grouped into the three categories shown in the table below. On this basis 46 percent were classified as obese. There were also 14 percent who did not provide sufficient information for the calculation, so if they were removed, the proportion who were obese increased to 53 percent. The total for overweight and obese was 73 percent, which increased to 84 percent among those who had a BMI calculated.

As can be seen from the second table below, of those who were classified as obese based on the calculated BMI, only 16 percent self classified themselves as obese, while a further 60 percent

classified themselves as overweight. There were 24 percent of this group who classified themselves as normal or underweight. Among those classified as overweight (but not obese) based on the calculated BMI, 48 percent self classified themselves as normal or underweight. At the other extreme, there were 13 percent of those with a less than 25 calculated BMI who self-classified themselves as overweight.

The third table which follows compares the BMIs calculated in the current survey with those from the 2009 LBD Tracking Survey of the general public.

BMI ratings were approximated using personal height and weight measurements which respondents provided. Calculated BMIs for the Total Sample were distributed as follows:

- Less than 25 – normal or underweight (14%)
- 25 to 29.9 – overweight (27%)
- 30 or higher – obese (46%)

Respondents **more** likely have a calculated BMI of **less than 25** were:

- South Asian peoples (27% vs 14%) and Other Asian peoples (38% vs 14%)
- Those who described themselves as either 'Underweight' (48%) or 'Normal' (26%)
- Those who were on insulin only (30%)

And **less** likely were:

- Pacific peoples (4%) and Maori (5%)
- Those who described themselves as either 'Overweight' (4%) or 'Obese' (0%)
- People living in high deprivation areas (9%)

Respondents **more** likely have a calculated BMI of **between 25 and 29.9** were:

- South Asian peoples (42% vs 27%)
- Male (32% vs 22% for females)
- People living in low deprivation areas (40%)
- Those who were satisfied with their health (30% vs 21% for those who were not satisfied)

And **less** likely were:

- Pacific peoples (19%) and Maori (16%)
- Those who described themselves as 'Obese' (5%)
- Those who said that their diabetes was 'Not controlled' (13%)
- People living in high deprivation areas (19%)

Respondents **more** likely have a calculated BMI of **30 or higher** were:

- Maori (62% vs 46%)⁷
- Those who described themselves either as 'Obese' (83%) or 'Overweight' (58%)
- Those aged between 45 and 54 years old (55%)

⁷ On the basis of other work it is reasonable to expect Pacific peoples to be one of the groups of those more likely to have a calculated BMI of 30 or higher; the high Don't know/refused rate may be part of the reason they don't appear in this list.

And *less* likely were:

- South Asian peoples (24%) and Other Asian peoples (19%)
- Those who described themselves as 'Underweight' (23%) or 'Normal' (25%)
- Those aged 65 years or older (36%)
- People living in low deprivation areas (36%)

Table 7: Calculated BMI

BMI	Total (1200) %	Maori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %	Don't know/ refused (4) %
Less than 25	14	5↓↓	4↓↓	27↑↑	38↑↑	16	0
Overweight: 25 to 29.9	27	19↓↓	16↓↓	42↑↑	38	33	49
Obese: 30+	46	62↑↑	53↑	24↓↓	19↓↓	46	51
Don't know/ refused	14	15	27↑↑	7↓↓	9	6↓↓	0

Table 8: Description of weight

DESCRIPTION OF WEIGHT	Total (1200) %	BMI less than 25 (171) %	Overweight: 25 to 29.9 (315) %	Obese: 30+ (545) %	Don't know/ refused (169) %
Underweight	3	12↑↑	2	2	3
Normal	39	75↑↑	46↑	22↓↓	49↑
Overweight	48	13↑↑	50	60↑↑	36↓↓
Obese	9	0↓↓	2↓↓	16↑↑	8
Don't know	1	0	1	1	2
Refused	0	0	0	0	2

Table 9: Calculated BMI – by LBD Tracking Survey

BMI	Current survey (1200) %	People with diabetes in 2009 LBD Tracking Survey of general public (216) %	Total Sample from 2009 LBD Tracking Survey of general public (2363) %
Less than 25	14	10	39
Overweight: 25 to 29.9	27	29	28
Obese: 30+	46	47	25
Don't know/ refused	14	14	8

4.4 CLINICAL EXAMINATIONS AND TESTS

This section considers the extent to which respondents had been taking part in the following procedures:

- Lab tests for diabetes approximately every three months
- Blood pressure checked approximately every three months
- Eyes tested in the last two years
- Respondents' levels of understanding of the above tests and their results
- Feet examined in the last twelve months
- Weighed by a doctor or a nurse in the last twelve months

REGULAR LAB TESTS FOR DIABETES

Respondents were asked: 'Do you usually have lab tests done approximately every three months for your diabetes?' If necessary, the interviewer would clarify that these were blood or urine tests which people could get at a hospital or at medical testing centres. Answers were unprompted, and were either recorded straight into pre-coded categories, or were recorded verbatim then later coded into additional categories.

- Three-quarters (76%) said 'Yes' – they did get these tests approximately every three months
- One fifth of respondents either responded 'No' (9%), or said they had the tests done less frequently (12%)
- A very small proportion reported doing so more frequently (3%)

Table 10: Had lab tests every three months

HAD LAB TESTS EVERY THREE MONTHS	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Yes	76	76	83↑↑	83↑	73	69↑↑
Done less frequently	12	10	7↓	10	15	17↑
No	9	10	7	7	9	10
Done more frequently	3	4	1	0	4	4

'Yes' responses were *more* prevalent among:

- Pacific peoples (83% vs 76% for Total Sample)
- Those who were using *both* pills and insulin to control their sugar levels (89%)
- Those who were taking insulin (83% vs 74% for not taking insulin)

And *less* prevalent among:

- Those of Other ethnicities (69%)
- Those taking neither pills nor insulin (55%)

'No' responses were *more* prevalent among:

- Those who were taking neither pills nor insulin (26% vs 9% for Total Sample)
- Those who were not taking insulin (11% vs 4% for those taking insulin)

REGULAR CHECKS FOR BLOOD PRESSURE

Respondents were then asked a similar question regarding blood pressure testing. More than eight-in-ten people (84%) said they had been getting checks approximately every three months.

Table 11: Blood pressure checked every 3 months

BLOOD PRESSURE CHECKED EVERY THREE MONTHS	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Yes	84	80	83	92↑↑	78	84
Done less frequently	6	9↑	5	4	6	7
No	6	4	9	3	8	5
Done more frequently	4	7	3	1	4	4

'Yes' responses were *more* prevalent among:

- South Asian peoples (92% vs 84% for Total Sample)

'No' responses were *more* prevalent among:

- Those aged less than 45 years (11% vs 6% for Total Sample)
- Those taking neither pills nor insulin (14%)

EYES TESTED IN THE LAST TWO YEARS

Over nine-in-ten (92%) people surveyed said 'Yes' in response to the question: 'Have your eyes been tested in the last two years?'

Table 12: Eyes have been tested in last 2 years

EYES HAVE BEEN TESTED IN THE LAST TWO YEARS	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Yes	92	89	92	93	96	91
No	5	7	5	4	3	5
Done longer ago	3	3	2	3	2	3

UNDERSTANDING OF THE TESTS

Respondents were asked to give an overall rating for their level understanding about the tests and what the results mean. Pre-coded answers were read out by the interviewer.

- Three-quarters of respondents said they understood the tests either 'Fully' (44%) or 'Mostly' (32%)
- One-in-ten said they understood 'Somewhat' (10%)
- One-in-ten said they understood 'A little' (10%)
- A very small number said 'Not at all' or 'don't know' (4%)

Table 13: Understanding of each of the tests

UNDERSTANDING OF EACH OF THE TESTS	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Fully (5)	44	40	35↓↓	56↑↑	37	47
Mostly (4)	32	35	26↓	23↓↓	38↑	38
Somewhat (3)/ a little (2)	20	22	30↑↑	18	22	11↓↓
Not at all (1)/ Don't know	4	3	9↑↑	2	2	3
Average	4.0	4.0	3.7↓↓	4.3↑↑	4.1	4.3↑↑

People **more** likely to say '**Fully**' were:

- South Asian (56% vs 44% for Total Sample)

And **less** were:

- Pacific Peoples (35%)

People **more** likely to say '**Mostly**' were:

- Those who described themselves as 'Obese' (44% vs 32% for Total Sample)

And **less** were:

- South Asian (23%)

People **more** likely to say '**Somewhat**' or '**A little**' were:

- Pacific peoples (30% vs 20% for Total Sample)
- Those who describe themselves as underweight (39%)

And **less** were:

- Other ethnicities (11%)
- People who use insulin only to control their blood sugar levels (7%)

People **more** likely to say '**Not at all/ Don't know**' were:

- Pacific peoples (9% vs 4% for Total Sample)

The 'averages' in the table above are a convenient way to summarise results and examine which sub-groups were inclined to understand more or less about the tests overall. This measure is somewhat more sensitive to variations than individual percentage results because it takes account of all the answers on the scale. As can be seen in the table above, the averages confirm the trends noted above for Pacific peoples to say they have lesser levels of understanding, and South Asian peoples to have higher levels of understanding. This analysis also identifies that people of Other ethnicities (mostly New Zealand European) also have relatively high levels of understanding.

Analysis based on these averages also identifies that the following sub-group has higher levels of understanding of the tests:

- Those in the least deprived NZDep groups (quintiles 1 and 2 have an average of 4.3 compared with 4.0 for the Total Sample)

By the averages measure, the following sub-group has relatively low levels of understanding of the tests:

- Those who said their diabetes is not controlled (3.7)

HAD FEET EXAMINED IN THE LAST TWELVE MONTHS

Two-thirds of respondents (66%) said that in the last 12 months they had had their bare feet checked by a person caring for their diabetes.

Table 14: Had feet examined in the last 12 months

HAD FEET EXAMINED IN THE LAST 12 MONTHS	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Yes	66	67	68	56↓↓	63	70
No	31	30	30	42↑↑	35	26
Done longer ago	2	3	1	1	1	3

Respondents **more** likely to answer 'Yes' were:

- Those who had been diagnosed with diabetes for at least 21 years (81% vs 66% for Total Sample)
- Those aged 65 years or more (76%)
- Those who were taking *both* pills and insulin (77%)
- Those who were on insulin (75% vs 63% for not on insulin)

And respondents **less** likely to answer 'Yes' were:

- Those not satisfied with their health (60% vs 69% for those who were satisfied)

Respondents **more** likely to answer 'No' were:

- South Asian peoples (42% vs 31% for Total Sample)
- Those who had been diagnosed with diabetes less than two years prior (49%)

- Those who were taking neither pills nor insulin (45%)
- Those who were not taking insulin (34% vs 21% for those taking insulin)

WEIGHED BY A DOCTOR OR NURSE IN THE LAST TWELVE MONTHS

Nearly all respondents (96%) said they had been weighed by a doctor or a nurse in the last twelve months. As can be seen from the second table below, this was the same level that was identified for people with diabetes in the 2009 LBD Tracking Survey of the general public.

Table 15: Weighed by a doctor or nurse in the last 12 months

WEIGHED BY A DOCTOR OR NURSE IN THE LAST 12 MONTHS	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Yes	96	96	97	92↓	97	96
No	4	2	2	8↑	3	3
Done longer ago	0	1	0	0	0	0

Table 16: Weighed by a doctor or nurse in the last 12 months – comparison with LBD Tracking Survey

WEIGHED BY A DOCTOR OR NURSE IN THE LAST 12 MONTHS	Current survey (1200) %	People with diabetes in 2009 LBD Tracking Survey of general public (216) %	Total Sample from 2009 LBD Tracking Survey of general public (2363) %
Yes	96	96	58
No	4	4	42
Done longer ago	0	NA	NA

Respondents *more* likely to say 'No' were:

- South Asian peoples (8% vs 4% for Total Sample)
- Those who described their diabetes as 'Not controlled' (11%)
- Those who were not satisfied with their own health (6%)

4.5 SELF-MANAGEMENT OF DIABETES

This section examines respondents' self-reported methods of controlling their diabetes, and their reasons for doing so:

- Perceptions of how well their diabetes was kept under control
- The use of pills to control sugar levels
- The use of insulin to control sugar levels
- How often respondents tested their blood glucose levels (i.e. finger prick test), and how the results were used

LEVEL OF CONTROL OVER DIABETES

Respondents were asked how well controlled they considered their diabetes to be. Pre-coded answers were read out by the interviewer.

- Over half (56%) said their diabetes was 'Well controlled'
- Over a third (38%) said 'Partly controlled'
- Less than one-in-ten (6%) said 'Not controlled'

Table 17: How well diabetes is controlled

HOW WELL DIABETES IS CONTROLLED	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Well controlled	56	44↓↓	50	64↑	61	62
Partly controlled	38	45↑	43	31↓	33	33
Not controlled	6	9↑	6	5	5	4

The response '**Well controlled**' was *more* prevalent among:

- Those aged 65 years or over (71% vs 56% for Total Sample)
- Those with a BMI of less than 25 (68%)
- Those who described their weight as 'Normal' (64%)
- Those not taking any insulin (59% vs 49% for those taking insulin)
- Those who were satisfied with their own health (64% vs 38% for those not satisfied)

And was *less* prevalent among:

- Maaori (44%)

The response '**Partly controlled**' was *more* prevalent among:

- Those who described themselves as 'Obese' (52% vs 38% for Total Sample)
- Those aged less than 45 years (51%) and between 45 and 54 years (48%)
- Those not satisfied with their own health (49% vs 32% for those who were satisfied)

The response '**Not controlled**' was *more* prevalent among:

- Female respondents (7% vs 4% for males)
- Those aged less than 45 years (12% vs 6% for Total Sample)
- Those who were not satisfied with their own health (12% vs 3% for those who were satisfied)
- Those who described themselves as 'Obese' (12%)

ON PILLS TO CONTROL SUGAR LEVELS

Eight-in-ten respondents said they were on pills to control their sugar levels.

Table 18: On pills to control sugar levels

ON PILLS TO CONTROL SUGAR LEVELS	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Yes	81	80	90↑↑	92↑↑	84	69↓↓
No	19	19	10↓↓	8↓↓	16	30↑↑

Respondents who were *more* likely to be **taking pills** were:

- South Asian peoples (92% vs 81% for Total Sample) and Pacific peoples (90%)
- Those who were diagnosed with diabetes between approximately six and ten years ago (87%)
- People living in high deprivation areas (87%)
- Those who were *not* on insulin (85% vs 71% for those taking insulin)
- Those who had *not* recently stayed in hospital because of their diabetes (82% vs 60% for those recently stayed in hospital)
- Those who said they were satisfied with their health (83% vs 76% for those not satisfied)

Respondents who were *more* likely to **not** be taking pills were:

- Other ethnic groupings (30% vs 19% for Total Sample)
- Those with a BMI of less than 25 (31%)
- Those who described themselves as 'Underweight' (36%)
- People living in low deprivation areas (29%)
- Those aged less than 45 years (28%)
- Those not satisfied with their own health (24%)

NOT ON PILLS WHEN ADVISED TO BE

Respondents who said they were not on pills to control sugar levels were asked whether or not they had been advised to be on these pills. Of those who were not taking pills, just under a fifth (18%) said that they had been advised to take them: this equates to 3% of the entire survey sample.

Table 19: Advised to be on pills

ADVISED TO BE ON PILLS (Base: those who are NOT on pills)	Total (224) %	Maaori (73) %	Pacific Peoples (35) %	South Asian (24) %	Other Asian (12) %	Other (97) %
Yes	18	22	43↑↑	7	27	9
No	81	75	55↓↓	93	73	90

Out of respondents who were not taking pills, those *more* likely to say they **had been advised** to go on pills were:

- Pacific peoples (43% vs 18% for all those not on pills)
- People living in high deprivation areas (33%)
- Those who described their weight as 'Obese' (32%)

REASONS NOT ON PILLS

The following table shows the reasons given by respondents for not being on pills when they had been advised to do so. Each of the reasons below was given by at least two respondents.

The reason most often given is that the person thinks it is unnecessary. Other reasons often given are side effects or treatment not being effective, as well as choosing not to.

Table 20: Reasons not on pills

REASONS NOT ON PILLS	Total (43) %
Think it is unnecessary	65
Treatment failure/ side effects	35
Chose not to	11
Other	1
Don't know	7

Think it is unnecessary includes:

- Being on insulin (40%)
- Controlled/ don't need to know (14%)
- Control it myself (self-managed) (13%)

Treatment failure or side effects includes:

- Side effects/ nausea (22%)
- Not effective/ didn't work (8%)
- Not compatible with other medications/ conditions (5%)

Chose not to includes:

- Forget/ too busy (3%)
- Don't like taking pills (3%)

Respondents who were **more** likely to say **treatment failure or side effects** were:

- Females (56% vs 14% of males)

ON INSULIN TO CONTROL SUGAR LEVELS

Nearly three-in-ten respondents said they were taking insulin to control their sugar levels.

Table 21: On insulin to control sugar levels

ON INSULIN TO CONTROL SUGAR LEVELS	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Yes	28	31	33	24	20	27
No	72	70	66	76	80	73

Respondents who were **more** likely to be **on insulin** were:

- Those who said their diabetes was 'Not controlled' (45% vs 28% for Total Sample)
- Those who had been diagnosed with diabetes at least eleven years prior (43% for 11-20 years prior, 61% for 21 years or more)
- Those who had recently stayed in hospital because of their diabetes (60% vs 27% for those who had not)

NOT ON INSULIN WHEN ADVISED TO BE

Out of all respondents who were not on insulin, one-in-ten (10%) said they had been advised to be on insulin: this equates to 7% of the total survey sample.

Table 22: Advised to be on insulin

ADVISED TO BE ON INSULIN (Base: those who are NOT on insulin)	Total (852) %	Maaori (221) %	Pacific Peoples (221) %	South Asian (189) %	Other Asian (52) %	Other (215) %
Yes	10	10	16↑↑	11	4	3↓↓
No	90	89	82↓↓	90	96	97↑↑

Out of respondents who were not taking insulin, those **more** likely to say they had **been advised** to go on insulin were:

- Pacific peoples (16% vs 10% among all those not on insulin)
- Those who had described their diabetes as 'Not controlled' (28%)

Respondents **more** likely to say they had **not been advised** were:

- Other ethnic groupings (97% vs 90% among all those not on insulin)

REASONS NOT ON INSULIN

The following table shows the reasons given by respondents for not being on insulin when they had been advised to do so. Each of the reasons below was given by at least two respondents.

Two reasons that stand out are people explaining that they think it is unnecessary (74%) and that they choose not to be on insulin (27%).

Table 23: Reasons not on insulin

REASONS NOT ON INSULIN (Base: those who are NOT on insulin despite advice to be on it)	Total (82) %	Maaori (18) %	Pacific Peoples (37) %	South Asian (18) %	Other Asian (2) %	Other (7) %
Think it is unnecessary	74	78	67	83	100	86
Chose not to be	27	14	35	17	100	14
Don't like injections	14	0	20	18	0	14
Side effects/ nausea	4	0	5	7	0	0
Other	6	8	5	10	0	0
Don't know	3	0	2	0	0	0

Think it is unnecessary includes:

- On pills (40%)
- Controlled/ don't need to know (39%)
- Control it myself/ self-manage (12%)

Chose not to includes:

- Nuisance factor/ a lot of work (8%)
- Need help with injections (6%)
- Don't want to/ not interested (4%)
- [6 other reasons were given, each by just one or two people]

Respondents **more** likely to say they had **chose not to** were:

- Those who had said they were not satisfied with their health (49% vs 19% for those who were satisfied)

LIKELIHOOD OF GOING ON INSULIN

Over half (57%) of respondents who were not taking insulin and had not been advised to do so, said that they were either 'Likely' (24%) or 'Very likely' (32%) to go on insulin (including daily self-administered injections) if advised to do so in the future.

Table 24: Likelihood of going on insulin

LIKELIHOOD OF GOING ON INSULIN (Base: those who are not on insulin and have not been advised to be)	Total (765) %	Maaori (201) %	Pacific Peoples (182) %	South Asian (171) %	Other Asian (50) %	Other (207) %
Very unlikely (1)/ Unlikely (2)	35	39	47↑↑	45↑	44	21↓↓
Neither unlikely nor likely (3)/ Don't know	8	11	12	7	12	6
Very likely ((5)/ Likely (4)	57	50	41↓↓	49	44	73↑↑
Average	3.4	3.3	3↓↓	3↓↓	3	3.9↑↑

Respondents who were **more** likely to say they would be **very likely or likely** go on insulin were:

- Other ethnic groupings (73% vs 57% for all those not on insulin and not advised to be)
- Those who were on neither pills nor insulin (71%)

And respondents **less** likely were:

- People living in high deprivation areas (48%)
- People who described themselves as normal weight (47%)
- Pacific peoples (41%)

Respondents who were **more** likely to say they would be **very unlikely or unlikely** were:

- Pacific peoples (47% vs 35% for all those not on insulin and not advised to be)
- People aged 55 to 64 years olds (45%)

And respondents **less** likely were:

- People of other ethnicities (21%)

Analysis of the 'average' results above, or mean likelihood scores, show in the table that Pacific people and South Asian peoples were less likely to go on insulin than others. Other trends for sub-groups based on these averages were that the following sub-group is **less likely** than the Total Sample to go on insulin:

- Those living in the most deprived areas (quintile 5 of NZDep, with an average of 3.1 vs 3.4 for all those not on insulin and not advised to be)

TAKE INSULIN REGULARLY AS PRESCRIBED

Respondents who were on insulin were asked if they took it regularly as prescribed by their doctor. Nearly nine-in-ten of these people (89%) said 'Yes'.

Table 25: Take insulin regularly

TAKE INSULIN REGULARLY (Base: those who are on insulin)	Total (348)	Maaori (109)	Pacific Peoples (108)	South Asian (58)	Other Asian (13)	Other (88)
	%	%	%	%	%	%
Yes	89	87	87	85	85	92
Take but not regularly as prescribed	6	10	9	5	0	4
No	3	3	3	8	16	3
Take regularly but not prescribed dose	1	1	0	2	0	1

Respondents who were **more** likely to say '**Yes**' were:

- Those who had said their diabetes was 'Well controlled' (98% vs 89% for all those on insulin)
- Those who were satisfied with their own health (93% vs 82% among those not satisfied)

Respondents who were **more** likely to say they took insulin, but **not as regularly as prescribed** were:

- Those who had said their diabetes was 'Not controlled' (27% vs 6% for all those on insulin)
- Those aged less than 45 years (17%)

Respondents who were **more** likely to simply say 'No' were:

- Those who had said they were not satisfied with their health (9% vs 1% for those who were satisfied)

REASONS FOR NOT TAKING INSULIN REGULARLY AS PRESCRIBED

A large majority of those who did not take their insulin as prescribed said this is due to inconvenience or discipline factors.

Table 26: Reasons not take insulin regularly

REASONS DO NOT TAKE INSULIN REGULARLY (Base: those who do not take insulin or do not take it regularly)	Total (35) %
Inconvenience/ discipline factors	85
Lack access to medicine when needed	13
Side effects/ physically incapable	13
Fear of needles	12
Think unnecessary	2
Other	2

Inconvenience or discipline factors includes:

- Forget to take it (48%)
- Too busy to take it (31%)
- Too lazy or can't be bothered (20%)
- Not in the habit of taking it (13%)
- Don't eat meal at time need to take (7%)
- Lack of discipline/ responsibility (5%)
- Out of routine/ shift work (5%)

Lack of access to medicine when needed includes:

- Don't have medicine/ kit on me (19%)
- Run out of insulin/ needles/ medicine (3%)

TAKE PILLS REGULARLY AS PRESCRIBED

Respondents who were on pills for controlling sugar levels were asked if they took them regularly as prescribed by their doctor. More than nine-in-ten (93%) said 'Yes'.

Table 27: Regularly take pills

REGULARLY TAKE PILLS (Base: those on pills for controlling sugar levels)	Total (980) %	Maaori (260) %	Pacific Peoples (295) %	South Asian (223) %	Other Asian (53) %	Other (206) %
Yes	93	88↓	91	97↑	94	95
Take but not regularly as prescribed	5	9↑	7	3	3	4
No	2	3	2	1	3	2
Just started	0	0	0	0	0	0

Respondents who were **more** likely to say 'Yes' were:

- Those with a BMI of less than 25 (99% vs 93% for all those on pills)
- Those who described their weight as 'Normal' (97%)
- Those who said that their diabetes was 'Well controlled' (97%)
- Males (96% vs 90% for females on pills)
- Those who said they were satisfied with their own health (96% vs 85% for those not satisfied)

Respondents who were **more** likely to say they took pills, but **not as regularly as prescribed** were:

- Those who said that their diabetes was 'Not controlled' (18% vs 5% for all those on pills)
- Aged less than 45 years (12%)
- Those said they were not satisfied with their health (9% vs 4% for those who were satisfied)

Respondents who were **more** likely to say 'No' were:

- Those who described their diabetes as 'Not controlled' (13% vs 2% for all those on pills)
- Those aged less than 45 years (6%)
- Those said they were not satisfied with their health (5% vs 1% for those who were satisfied)

REASONS FOR NOT TAKING PILLS REGULARLY AS PRESCRIBED

By far the most commonly stated reason for not taking pills regularly as prescribed is people simply inconvenience or discipline factors (68% of those who do not take their pills regularly).

Table 28: Reasons not take pills regularly

REASONS NOT TAKE PILLS REGULARLY (Base: those who do not take pills or do not take them regularly)	Total (78) %
Inconvenience/ discipline factors	68
Unavailable when needed	25
Side effects/ fear of side effects	20
Think unnecessary	12
Don't know	2

Inconvenience or discipline factors includes:

- Forget to take them (46%)
- Too busy to take them (15%)
- Often don't take at prescribed time (12%)
- Don't eat meal at time need to take them (12%)
- Too lazy/ can't be bothered (8%)
- Out of routine/ shift work (8%)

Side effects or fear of side effects includes:

- Makes me feel nauseous (8%)
- Suffer dizziness/ fainting (4%)

Think unnecessary includes:

- Don't think need medicines now (4%)
- Control blood sugar with diet (4%)

FREQUENCY OF TESTING FOR BLOOD GLUCOSE LEVELS

Respondents were asked how often they tested their own blood glucose levels with a finger prick test.

Table 29: How often test own blood glucose levels

HOW OFTEN TEST OWN BLOOD GLUCOSE LEVELS	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Not at all	21	24	25	8↓↓	18	22
Less than once a day	35	34	27↓	42↑	33	41
Once a day	18	14	17	31↑↑	25	13
Two to three times a day	21	25	29↑↑	17	19	15↓
Four or more times a day	5	3	2↓	2	5	9↑↑

Respondents **more** likely to say '**Not at all**' were:

- Those who had been diagnosed with diabetes less than two years prior (44% vs 21% for Total Sample)
- Less than 45 years old (29%)
- Those who were taking neither pills nor insulin (59%)
- Those who were not on insulin at all (27% vs 8% for those on insulin)

Respondents **more** likely to say '**Less than once per day**' were:

- Those who were on pills only (44% vs 35% for Total Sample)
- Those who were *not* on insulin at all (42% vs 18% for those on insulin)
- Those who had *not* recently stayed in hospital because of their diabetes (36% vs 16% for those who had)

Respondents **more** likely to say '**Once per day**' were:

- South Asian peoples (31% vs 18% for Total Sample)

Respondents **more** likely to say '**Two to three times per day**' were:

- Pacific peoples (29% vs 21% for Total Sample)
- Those who had been diagnosed with diabetes at least 21 years prior (32%)
- Those who were on both pills and insulin (47%)
- Those who were on insulin at all (42% vs 13% for those not on insulin)
- Those who had recently stayed in hospital because of their diabetes (42% vs 20% for those who had not)

Respondents **more** likely to say '**Four or more times per day**' were:

- Other ethnic groupings (9% vs 5% for Total Sample)
- Those who had been diagnosed with diabetes at least 21 years prior (11%)
- Those who were on insulin only (36%)
- Those who were on insulin (14% vs 1% for those not on insulin)

BLOOD TESTING MORE OR LESS THAN REQUESTED

Half (51%) of respondents who performed their own blood tests said that they did so at the frequency at which they had been asked. Just under a third (31%) said they did this less often than had been requested.

Table 30: Testing blood glucose as often as requested

TESTING BLOOD GLUCOSE AS OFTEN AS REQUESTED (Base: respondents who test their own blood glucose levels)	Total (948) %	Maaori (248) %	Pacific Peoples (244) %	South Asian (224) %	Other Asian (54) %	Other (236) %
The same	51	49	49	49	59	52
More	12	10	10	13	6	14
Less	31	35	37	32	36	24↓
Don't know	6	5	5	5	0	10

Respondents **more** likely to say they tested their blood glucose **less often** than advised were:

- Those who described their diabetes as 'Not controlled' (58% vs 31% for all those who test their own blood sugar levels)
- Those who were not satisfied with their health (38% vs 28% for those who were satisfied)

USING BLOOD GLUCOSE RESULTS

Respondents were asked what they used the results of their blood glucose tests for. The most common responses are listed below.

The most common use respondents described is to tell if they are 'hyper', i.e. whether their sugar levels have become high.

Table 31: What blood glucose results are used for

WHAT BLOOD GLUCOSE RESULTS ARE USED FOR (Base: respondents who test their own blood glucose levels)	Total (945) %
To tell if 'hyper'/ high sugar	41
Recording/ monitoring	41
Management decision	36
To tell if 'hypo'/ low sugar	25
Other	1
Don't know/ no reason	9

Recording or monitoring includes:

- Monitor blood sugar levels (19%)
- Record for doctor/ nurse (13%)
- Monitor my diabetes (7%)
- Record it for me/ personal records (4%)

Management decision includes:

- Help decide what to eat (25%)
- To check/ alter my insulin levels (9%)
- To help decide exercise levels (5%)
- To decide whether to contact doctor (3%)

Respondents **less** likely to say they tested their blood glucose for **recording or monitoring** were:

- Females (36% vs 46% for males)
- People not on insulin or pills to control their blood sugar (62% vs 41% for Total Sample)

Respondents **more** likely to say they tested their blood glucose for **management decisions** were:

- People on insulin only to control their blood sugar (64% vs 36% of those who test their own blood glucose levels)

Respondents **more** likely to say they tested their blood glucose for **no reason or they don't know** were:

- Pacific peoples (16% vs 9% of those who test their own blood glucose levels)

And **less** likely were:

- Maaori (3%)

4.6 KNOWLEDGE AND EDUCATION ON DIABETES

This section considers respondents' knowledge about ways to prevent diabetes as well as manage diabetes, and the amount of organised education on diabetes that respondents had taken part in:

- Beliefs about causes of diabetes and what diabetes can lead to
- Whether respondents felt they knew enough to manage their health well
- Whether respondents were smoking cigarettes
- Whether respondents had taken part in any form of education or training for diabetes management

WHAT PEOPLE KNOW: CAUSES, PREVENTION AND RISKS

The interviewer read out five statements about what may cause or prevent diabetes, who is more at risk, and what diabetes can lead to. Respondents were asked to say whether they believed each statement was true or false.

Of the five statements read out, two statements were believed to be true by a strong majority of respondents:

- You can have diabetes and not realise it (93%)
- Having diabetes increases your risk of developing heart disease (89%)

Respondents were more divided on their opinions as to whether it is mainly people who eat a lot of sugar who get diabetes (43% believed this is true compared with 52% false).

Most believed the following statements were false:

- There is nothing people can do to prevent diabetes (66% false)
- Doesn't affect young people (80% false)

The same questioning was used in the benchmark survey of the full Counties Manukau population in 2009, and the second table below shows the results compared. Although no significance testing has been undertaken, the main differences were as follows:

- Those with diabetes in the general population survey were more likely than those in the current survey to think that it is mainly people who eat a lot of sugar who get diabetes (53% in general population survey versus 43% in the current survey)
- Those in the current survey were more likely to think that there is nothing people can do to prevent getting diabetes (25% versus 20% for people with diabetes in the population survey and 9% for the Total Sample in the population survey)
- Those in the current survey were more likely to think that diabetes doesn't affect young people (16% versus 10% for people with diabetes in the population survey and 7% for the Total Sample in the population survey)

Table 32: What people know about diabetes

WHAT PEOPLE KNOW ABOUT DIABETES (True and false statements)	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Can have diabetes and not realise it						
True	93	99↑↑	87↓↓	91	90	98↑↑
False	5	1↓↓	9↑↑	6	9	1
Having diabetes increases the risk of developing heart disease						
True	89	88	90	95↑↑	86	86
False	4	5	5	2	2	5
It is mainly people who eat a lot of sugar who get diabetes						
True	43	39	63↑↑	54↑↑	43	25↓↓
False	52	53	32↓↓	42↓↓	56	71↑↑
There is nothing people can do to prevent getting diabetes						
True	25	22	37↑↑	30	20	15↓↓
False	66	67	59↓	63	74	73↑
Diabetes doesn't affect young people						
True	16	14	26↑↑	15	14	8↓↓
False	80	81	69↓↓	83	74	89↑↑

Table 33: What people know – comparison with LBD Tracking Survey

WHAT PEOPLE KNOW (True and false statements)	Current survey (1200) %	People with diabetes in 2009 LBD Tracking Survey of general public (216) %	Total Sample from 2009 survey of general public (2363) %
Can have it and not realise			
True	93	96	91
False	5	3	4
Diabetes increases risk of heart disease			
True	89	90	82
False	4	3	2
Mainly people who eat a lot of sugar get diabetes			
True	43	53	44
False	52	40	46
Nothing can prevent diabetes			
True	25	20	9
False	66	75	85
Doesn't affect young people			
True	16	10	7
False	80	88	89

Respondents **more** likely to believe that **'You can have diabetes and not realise it'** were:

- Maaori (99% vs 93 for Total Sample) and Other ethnic groupings (98%)
- Those who described themselves as being 'Overweight' (97%)

And **more** likely to believe this is *false*:

- Pacific peoples (9% vs 5% for Total Sample)
- Those who described their weight as 'Normal' (9%)

Respondents **more** likely to believe **'Having diabetes increases your risk of getting heart disease'** were:

- South Asian peoples (95% vs 89% for Total Sample)

Respondents **more** likely to believe **'It is mainly people who eat a lot of sugar that get diabetes'** were:

- Pacific peoples (63% vs 43% for Total Sample) and South Asian peoples (54%)
- Those who had described their weight as 'Normal' (52%)
- Males (49% vs 37% for females)
- People living in high deprivation areas (52%)
- Those who say they are satisfied with their health (45% vs 37% for not satisfied)

And respondents **more** likely to believe this is *false*:

- Other ethnic groupings (71% vs 52% for Total Sample)
- Females (59% vs 45% for males)
- People living in low deprivation areas (65%)
- Those who were on insulin only (69%)
- Those who describe their weight as 'Obese' (66%)

Respondents **more** likely to believe that **'There is nothing you can do to prevent getting diabetes'** were:

- Pacific peoples (37% vs 25% for Total Sample)
- Those who had described their weight as 'Normal' (33%)
- People living in high deprivation areas (31%)
- Those who were on both pills and insulin (34%)
- Those who were on insulin at all (31% vs 22% for those not on insulin)

And **more** likely to believe this is *false*:

- Those who had described their weight as 'Obese' (83%)
- Those who were not on insulin (69% vs 59% for those on insulin)

Respondents **more** likely to believe that **'Diabetes doesn't affect young people'** were:

- Pacific peoples (26% vs 16% for Total Sample)

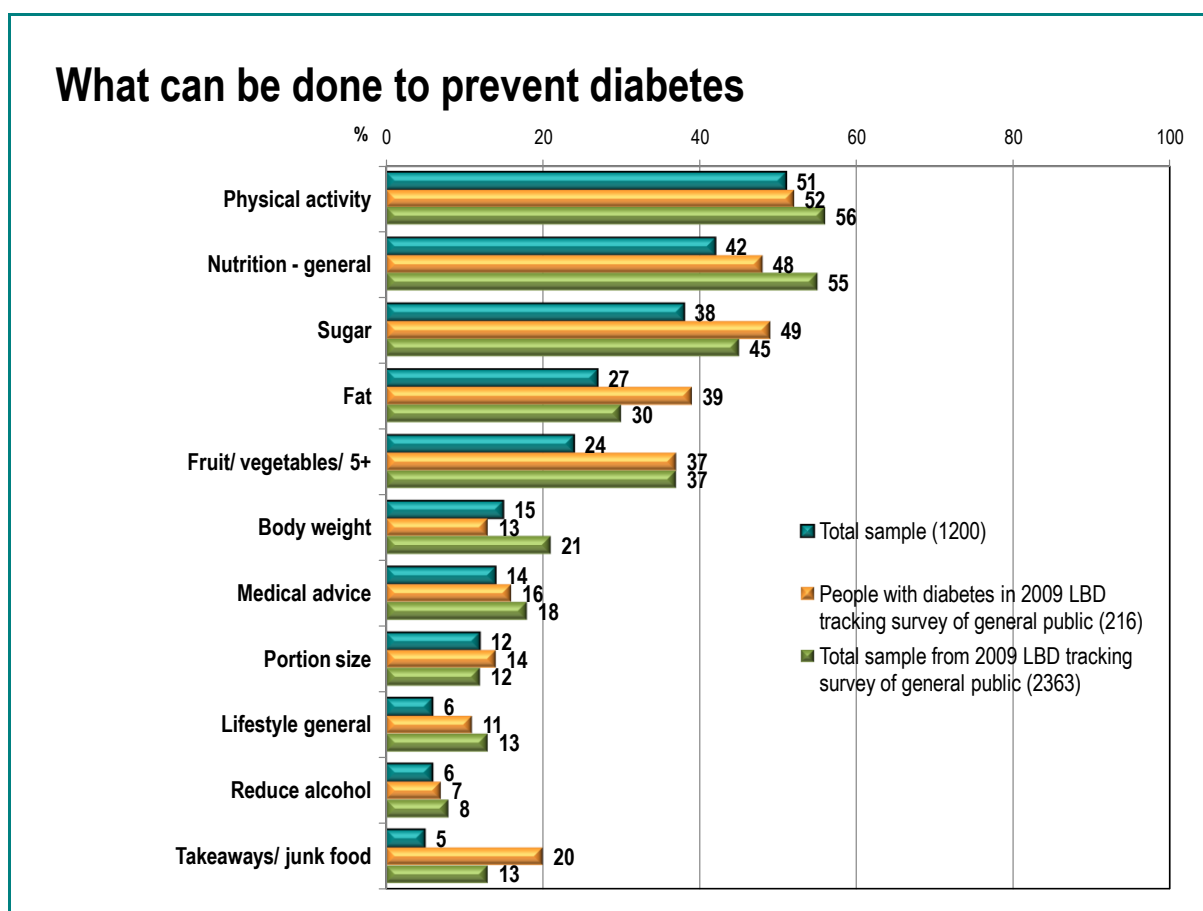
- Those who had described their weight as 'Normal' (23%)

And **more** likely to believe this is *false*:

- Other ethnic groupings (89% vs 80% for Total Sample)
- People living in low deprivation areas (88%)
- Those who had described themselves as 'Overweight' (86%)

KNOWLEDGE OF HOW TO PREVENT DIABETES

Respondents were asked what can be done to prevent diabetes. Everyone was asked this question except those who had indicated that there is nothing people can do to prevent getting diabetes, who were included in a category to that effect at the end of the table which follows, so all the results are presented on a Total Sample base. Answers were recorded verbatim and coded later.



The answers most often given to this question were:

- Physical activity (51%)
- Nutrition (42%)
- Controlling or reducing sugar in diet (38%)
- Reducing fat/ junk food/ takeaways (27%)
- Eating more vegetables/ fruit/ 5 or more servings a day (24%)

Reducing weight was mentioned by 15 percent and reducing portion size by 12 percent. In total, two thirds mentioned something related to improving diet (only dietary things that are known to help prevent diabetes were included in this category).

The same questioning was used in the benchmark survey of the full Counties Manukau population in 2009, and the second table below shows the results compared. Those with diabetes in the population survey often had higher levels of mentions than those in the current survey. This may in part reflect the differences in the preceding questions; in the general population survey there were preceding questions asking about consumption of fizzy drinks, fast foods and such like, which may have influenced the answers to the current question (which was late in the survey).

Table 34: What can be done to prevent diabetes

WHAT CAN BE DONE TO PREVENT DIABETES	Total (1200) %	Maori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Physical activity	51	47	45	52	72↑↑	56
Nutrition – general	42	42	38	43	44	47
Control/ reduce sugar in diet (including fizzy drinks)	38	34	37	42	45	37
Reduce fat/ junk food/ takeaways	27	31	32	23	24	23
Eat vegetables/ fruit/ 5+	24	26	28	27	24	20
Reduce body weight	15	13	6↓↓	9↓	11	26↑↑
Medical advice	14	19↑	13	16	18	12
Reduce amount eat/ portion size	12	11	10	12	18	12
Reduce alcohol	6	6	6	4	6	6
Lifestyle – general	6	7	6	6	12	7
Reduce takeaways/Junk food	5	6	3	4	6	8
Follow advice of doctor/ dietician	3	5	3	4	2	2
Other	9	12	11	8	11	9
Don't know	4	4	3	3	2	6

Nutrition – general includes:

- Watch what you eat/ your diet (16%)
- Less carbohydrates (7%)
- Eat healthy foods (16%)
- Have a balanced diet (6%)
- Drink plenty of water (4%)
- Eat fibre/ grains/ cereal (4%)
- Eat less starch (3%)
- Have regular meals (3%)
- Eat less meat (3%)

Medical advice includes:

- Have regular health checks (4%)
- Take you medication/ insulin (3%)
- Follow doctor's advice (3%)

Table 35: What can be done to prevent diabetes – comparison with LBD Tracking Survey

WHAT CAN BE DONE TO PREVENT DIABETES	Total (1200) %	People with diabetes in 2009 LBD Tracking Survey of general public (216) %	Total Sample from 2009 LBD Tracking Survey of general public (2363) %
Physical activity	51	52	56
Nutrition-general	42	48	55
Sugar	38	49	45
Fat	27	39	30
Fruit/vegetables/5+	24	37	37
Body weight	15	13	21
Medical advice	14	16	18
Portion size	12	14	12
Lifestyle general	6	11	13
Reduce alcohol	6	7	8
Takeaways/junk food	5	20	13
Don't know	4	9	11

Comments such as **physical activity** were *more* prevalent among:

- 'Other Asian' peoples (72% vs 51% for Total Sample)
- Respondents who had described their weight as 'Obese' (64%)
- People living in low deprivation areas (64%)

And *less* prevalent among:

- Respondents who were on both insulin and pills (40%)

Comments such as **nutrition - general** were *more* prevalent among:

- People self-described as overweight (49% vs 42% for Total Sample)
- Those under the age of 45 years (54%)

And *less* prevalent among:

- People self-described as normal body weight (33%)
- Those over the age of 65 years (34%)

Comments such as eating more **fruit or vegetables** were *more* prevalent among:

- Those under the age of 45 years (34% vs 24% for Total Sample)

And **less** prevalent among:

- Those over the age of 65 years (16%)

Comments such as **reduce body weight** were **more** prevalent among:

- Other ethnic groupings (26% vs 15% for Total Sample)
- Those who had described their weight as 'Obese' (31%)
- People living in low deprivation areas (24%)

And **less** prevalent among:

- Pacific peoples (6%)
- People living in high deprivation areas (9%)
- People with a self-described normal body weight (8%)

Comments such as **reduce alcohol** were **more** prevalent among:

- Males (8% vs 3% for females)

Comments classified under '**other**' were **more** prevalent among:

- Females (12% vs 6% for males)

ENOUGH KNOWLEDGE TO MANAGE OWN DIABETES

A large majority (85%) of respondents said they felt they knew enough to manage their diabetes.

It is useful to compare this result with the percentages identified earlier who said their diabetes was 'Well controlled' (56%) or 'Partly controlled' (38% - total 94%). The contrast suggests there are a number of people with diabetes who felt they knew enough to manage their diabetes, but for whom it is only partly controlled or not controlled at all. (From the figures quoted these percentages could be estimated at 29% and 9% respectively, although analysis of the survey database shows the figures are actually 30% and 4% - the difference is because some of those who do not feel they know enough to manage their diabetes, even so report their diabetes as well or partially controlled.)

Table 36: Know enough to manage own diabetes

KNOW ENOUGH TO MANAGE OWN DIABETES	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Yes	85	86	83	83	74↓	87
No/ Don't know	15	14	17	17	26↑	13

Respondents **more** likely to say that they **did know** enough to manage their diabetes were:

- Those who had said that their diabetes was 'Well controlled' (89% vs 85% for Total Sample)

Respondents **more** likely to say that they **do not know** enough to manage their diabetes were:

- Those who had said that their diabetes was 'Not controlled' (30% vs 15% for Total Sample)

SMOKING BEHAVIOUR

Respondents were asked 'Do you smoke cigarettes at all nowadays?' More than eight-in-ten said **'No'**.

Table 37: Smoke cigarettes

SMOKE CIGARETTES	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Yes	16	30↑↑	18	7↓↓	9	13
No	84	70↓↓	82	93↑↑	92	87

Table 38: Smoke cigarettes – comparison with LBD Tracking Survey

SMOKE CIGARETTES	Total (1200) %	People who smoke cigarettes in 2009 LBD Tracking Survey of general public (216) %	Total Sample from 2009 LBD Tracking Survey (2363) %
Yes	16	13	20
No	84	87	80

Respondents **more** likely to say **'Yes'** were:

- Maaori (30% vs 16% for Total Sample)
- Aged less than 45 years (28%)
- Those who had recently stayed in hospital because of their diabetes (30% vs 15% for those who had not)

Respondents **more** likely to say **'No'** were:

- South Asian peoples (93% vs 84% for Total Sample)
- Aged 65 years of more (93%)

EVER BEEN TO A DIABETES EDUCATION OR TRAINING COURSE

Respondents were asked 'Have you ever been to a diabetes education or training course on how to help you manage your diabetes?' Just under a third said **'Yes'**.

Table 39: Been to an education/training course

BEEN TO AN EDUCATION/ TRAINING COURSE	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Yes	31	39↑↑	27	20↓↓	28	35
No	69	61↓↓	73	80↑↑	72	65

Respondents **more** likely to say **'Yes'** were:

- Maaori (39% vs 31% for Total Sample)
- Those who had been diagnosed with diabetes at least 21 years prior (42%)
- Those who were on insulin (39% vs 28% for those not on insulin)
- Those who had recently stayed in hospital because of their diabetes (49% vs 30% for those who had not)

Respondents **more** likely to say **'No'** were:

- Those who had been diagnosed with diabetes less than two years prior (84% vs 69% for Total Sample)
- South Asian peoples (80% vs 69% for Total Sample)

TYPE OF TRAINING TAKEN PART IN

Those who had taken part in education or training were asked if they had done so as part of a group, or if the learning was one-on-one. This was done more often as part of a group (55%) than one-to-one (35%), although some respondents had done both.

Table 40: Type of training course

TYPE OF TRAINING COURSE (Base: respondents who had taken part in education or training)	Total (386) %	Maaori (134) %	Pacific Peoples (92) %	South Asian (53) %	Other Asian (20) %	Other (109) %
Part of group	55	55	54	62	38	57
One-on-one	35	31	37	35	56	31
Both one-on-one and group	10	14	9	3	6	12

Those **more** likely to have taken part in **group** learning were:

- Females (62% vs 48% for males)

LENGTH OF TRAINING SESSION

Those who had taken part in one-to-one training were asked how long it had lasted for; pre-coded categories were read out by the interviewer. The median amount of time in training was 25 minutes, with a considerable spread of times being answered.

Table 41: Length of training

LENGTH OF TRAINING (Base: respondents who had done any one-to-one training)	Total (131) %
15 minutes or less	23
16 to 30 minutes	36
Over 30 minutes	33
Don't know	8

Those **more** likely to say they **don't know** were:

- People on insulin only (33% vs 8% of Total Sample)

WHO CONDUCTED THE TRAINING

Those who had taken part in training were also asked who had conducted it. The most common mentions were secondary care (46%) and primary care (20%).

Table 42: Who conducted the training

WHO CONDUCTED THE TRAINING (Base: respondents who had taken part in education or training)	Total (380) %
Secondary care	46
Primary care	20
Dietician/ nurse (no venue)	17
Community group	13
Green prescription	2
Other	14
Don't know	6

Secondary care includes:

- Manukau Super Clinic (23%)
- Hospital (14%)
- Whitiara Diabetic Support Unit (6%)
- Diabetes clinic (3%)
- Diabetes specialist (3%)

Community groups includes:

- Diabetes Auckland (5%)
- Community Group (3%)

Respondents **more** likely to have had training through **secondary care** were:

- Other ethnicity (61% vs 46% for those who had taken part in education or training)

And **less** likely were:

- Pacific peoples (31%)

HOW FOUND OUT ABOUT TRAINING

Nearly two-thirds (64%) of those who took part in training were referred to it by a primary care referrer, by far the most common way people found out about training.

Table 43: How found out about training

HOW FOUND OUT ABOUT TRAINING (Base: respondents who had taken part in education or training)	Total (380) %	Maaori (133) %	Pacific Peoples (90) %	South Asian (51) %	Other Asian (19) %	Other (109) %
Primary care referral	64	61	66	63	75	66
Family/ community	15	15	15	16	3	15
Secondary care referral	11	12	8	18	10	12
Referral Unspecified	10	11	7	18	19	6
Other	11	11	10	7	6	13
Don't know	2	1	2	1	0	1

Family/community includes:

- Family/ friends (5%)
- Church/ marae/ community group (4%)
- Word of mouth (3%)

Secondary referral includes:

- Hospital (6%)
- Manukau Super Clinic (3%)

Referral unspecified includes:

- Sent a letter (6%)
- Diabetes nurse (4%)

Respondents **more** likely to have been referred by **an unspecified source** about training were:

- Males (15% vs 5% for females)
- People on both pills and insulin to control their blood sugar levels (20% vs 10% of Total Sample)

And **less** were:

- People who were not on insulin (6% vs 10% of Total Sample)

CHANGES MADE AS A RESULT OF TRAINING

Respondents were asked 'What changes, if any, did you make as a result of the training?'. General nutrition (56%) and keeping fit and active (37%) were the most frequent answers, as well as reduction in sugar consumption (36%).

Table 44: Changes made as a result of training

CHANGES MADE AS A RESULT OF TRAINING (Base: respondents who had taken part in education or training)	Total (380) %	Maaori (133) %	Pacific Peoples (90) %	South Asian (51) %	Other Asian (19) %	Other (109) %
Nutrition general	56	53	65	58	50	56
More exercise/ keep fit/ active	37	28	56↑	51	27	28
Less sugar	36	28	42	38	17	38
Advice/ treatment compliance	25	21	26	29	48↑	22
Portion control	17	21	26	21	9	12
More vegetables/ fruit	17	18	30↑	14	5	13
Reduce fat	15	17	23	10	3	11
Weight	8	7	11	8	5	6
Home preparation/ less takeaways	5	4	8	4	3	4
Less alcohol	5	11↑	3	14↑	0	2
General lifestyle	4	6	7	1	5	2
Less smoking	2	6↑	1	0	0	1
Less taro	2	1	7↑	0	0	0
Other	18	17	24	15	30	16
None/ no changes/ Don't know	20	29↑	11	13	22	24

Nutrition general includes:

- Eat right type of food (21%)
- Change of diet (18%)
- Healthy eating (5%)
- Read food labels/ nutritional panel (6%)
- Regular meals (5%)
- Drink water (4%)
- Eat more grains/ cereals (4%)
- Less salt (3%)

Less sugar includes:

- Less sugar/ sweets (24%)
- Less carbohydrates/ count carbs (10%)
- No fizzy drinks (7%)

Advice/treatment compliance includes:

- Importance taking medicine regularly (6%)
- Awareness diabetes and associated ills (5%)
- Diabetes education (5%)
- Follow medical advice (4%)

Comments such as **more exercise or keep fit or active** were *more* prevalent among:

- Pacific peoples (56% vs 37% among all those who had taken part in education or training)

Comments such as **more vegetables or fruit** were *more* prevalent among:

- Pacific peoples (30% vs 17% among all those who had taken part in education or training)

Comments such as **reduce fat** were *more* prevalent among:

- Males (21% vs 10% for females)

Comments such as **less alcohol** were *more* prevalent among:

- Males (10% vs 1% of females who had taken part in education or training)

Comments such as **none, no change, or don't know** were *more* prevalent among:

- People who say their diabetes is not controlled (48% vs 20% of those who had taken part in education or training)

Comments classified as **other** were *less* prevalent among:

- People using insulin only to control blood sugar levels (2% vs 18% among all those who had taken part in education or training)

HOW MANY OTHERS HAVE BEEN OFFERED DIABETES EDUCATION OR TRAINING COURSE

Those who had not taken part in any diabetes education or training courses were asked 'Have you ever been offered the opportunity to attend a diabetes education or training course about how to help manage your diabetes?'. Most of these people had not been offered that opportunity (83%).

Table 45: Offered training for diabetes management

OFFERED TRAINING FOR DIABETES MANAGEMENT (Base: respondents who had not taken part in education or training)	Total (828)	Maaori (199)	Pacific Peoples (241)	South Asian (197)	Other Asian (48)	Other (196)
	%	%	%	%	%	%
Yes	17	23↑	14	15	16	16
No/ don't know	83	77↓	86	85	84	84

REASONS FOR NOT TAKING PART IN TRAINING

Those who chose not to take part in any training most often said that this was because they thought it was unnecessary, or that it was difficult to fit into their schedules.

Table 46: Reasons for not taking part in training

REASONS FOR NOT TAKING PART IN TRAINING (Base: respondents who had not taken part in education or training but had been offered this)	Total (134)
	%
Think unnecessary	44
Scheduling	28
Too busy	26
Location/ transport	14
Cost	2
No reason	0
Other	10

Think unnecessary includes:

- Didn't need to (30%)
- Didn't want to (7%)
- Didn't offer anything new (4%)
- Don't know (3%)

Scheduling includes:

- During work/ school hours (25%)
- Course at inconvenient times (4%)

Too busy includes:

- Too busy/ no time (18%)
- Due to illness 4%)
- Managing family (3%)

Location or transport includes:

- Transportation (12%)
- Location of course/ not local (3%)

4.7 EXPERIENCE WITH MEDICAL (PRIMARY AND SECONDARY) CARE

This section examines the reported availability and quality of treatment received by people with diabetes from hospitals as well as GP services:

- How many respondents had stayed in hospital recently because of their diabetes
- Overall improvements that could have been made by hospitals to help with diabetes management
- Knowledge and helpfulness of hospital staff in providing care for people with diabetes
- Whether people with diabetes have been receiving specialist diabetes care while in hospital
- Respondents' abilities to access a GP service
- How well respondents felt their GP service was helping with the treatment of their diabetes
- What alternative forms of treatment were used by people with diabetes

STAYED IN HOSPITAL IN THE LAST TWELVE MONTHS

Over a quarter (28%) of respondents had stayed overnight in hospital within the last twelve months for any reason (i.e. not necessarily related to diabetes).

Table 47: Stayed in hospital during the last twelve months

STAYED IN HOSPITAL DURING LAST TWELVE MONTHS	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Yes	28	32	31	22	31	26
No	72	68	69	78	70	74

Respondents **more** likely to have stayed in hospital were:

- Those who were on insulin (37% vs 25% for those not on insulin)
- Those who were not satisfied with their health (36% vs 25% for those who were satisfied)

HOSPITAL STAY DUE TO DIABETES

Those who had stayed in hospital during the last twelve months were asked if diabetes was the reason for their most recent stay. For over eight out of ten of these people (82%), their last hospital stay was due to something other than their diabetes.

Table 48: Recent hospital stay due to diabetes

RECENT HOSPITAL STAY DUE TO DIABETES (Base: respondents who had stayed in hospital in the last 12 months)	Total (353) %	Maaori (117) %	Pacific Peoples (102) %	South Asian (56) %	Other Asian (20) %	Other (82) %
Yes	16	26↑	13	15	8	14
No	82	71↓	84	81	92	85
Diabetes first diagnosed last stay	0	1	0	0	0	0
Didn't have diabetes last stay	1	2	0	3	0	0

Respondents **more** likely to have stayed in hospital recently because of their diabetes were:

- Those who were on insulin *only* (45% vs 16% of all those who had stayed in hospital)

HOSPITAL STAY: IMPROVEMENTS THAT COULD HAVE BEEN MADE

Over half (55%) of those who had stayed in hospital within the last twelve months said there were no improvements that could have been made that would have helped them to manage their diabetes better. The areas others mentioned for improvement are listed below.

Table 49: Improvements hospital could have made

IMPROVEMENTS HOSPITAL COULD HAVE MADE (Base: respondents who had stayed in hospital in last 12 months)	Total (352) %
None/ no improvements needed	55
Food provision	10
Education	10
Use of medication	9
Ability to exercise while in hospital	2
Other	10
Don't know	16

Education includes:

- Provide more information on diabetes (3%)
- More education on diet (3%)

HOSPITAL STAY: STAFF KNOWLEDGE ABOUT PATIENTS' DIABETES

Respondents were asked to rate how knowledgeable they found staff to be about their diabetes. Over a half (53%) said that staff were 'Very' knowledgeable, with just under a third saying staff were either 'Somewhat' (16%) or 'A little' knowledgeable (13%).

Table 50: Hospital staff knowledge of diabetes

HOSPITAL STAFF KNOWLEDGE OF DIABETES (Base: respondents who had stayed in hospital in the last 12 months)	Total (347)	Maaori (114)	Pacific Peoples (102)	South Asian (54)	Other Asian (19)	Other (82)
	%	%	%	%	%	%
Very (4)	53	59	58	54	28↓	54
Somewhat (3)/ A little (2)	29	25	27	23	56↑	28
Not at all (1)	5	3	5	11	6	4
Their help wasn't needed/ Don't know	12	12	10	12	10	13

HOSPITAL STAY: HELPFULNESS OF STAFF IN MANAGING DIABETES

Respondents were also asked to rate the helpfulness of staff in managing their diabetes. Well over half (63%) said that staff were 'Very' helpful, with just under a quarter saying staff were either 'Somewhat' (13%) or 'A little' helpful (10%). Staff were clearly rated somewhat higher for their helpfulness in managing diabetes than for their knowledge.

Table 51: Helpfulness of staff in managing diabetes

HELPFULNESS OF STAFF IN MANAGING DIABETES (Base: respondents who had stayed in hospital in last 12 months)	Total (334)	Maaori (109)	Pacific Peoples (101)	South Asian (50)	Other Asian (18)	Other (78)
	%	%	%	%	%	%
Very (4)	63	71	71	72	53	53
Somewhat (3)/ A little (2)	23	21	22	22	33	26
Not at all (1)	5	4	1	7	6	7
Their help wasn't needed	7	4	4	0	6	11

HOSPITAL STAY: VISITED BY A DIABETES SPECIALIST?

Just over a third of respondents (34%) who had stayed in hospital in the last twelve months (for any reason) said that they had been visited by someone from the hospital diabetes specialist team (e.g. specialist nurse, consultant or dietician) during their stay.

Table 52: Visited by a member of specialist diabetes team

VISITED BY A MEMBER OF SPECIALIST DIABETES TEAM (Base: respondents who had stayed in hospital in last 12 months)	Total (347)	Maaori (114)	Pacific Peoples (102)	South Asian (54)	Other Asian (19)	Other (82)
	%	%	%	%	%	%
Yes	34	42	41	25	31	26
No	61	56	53	66	69	69
Don't know	5	3	6	9	0	5

Respondents *more* likely to have been visited by a diabetes specialist were:

- Those who were on insulin *only* (67% vs 34% for Total Sample)
- Those who were on insulin at all (48% vs 25% for those not on insulin)
- Those who stayed at a hospital specifically because of their diabetes (62% vs 28% for those who had stayed in hospital for some other reason)

HOSPITAL STAY: WHO MANAGED INSULIN?

While in hospital, for more than half of relevant cases (66%), respondents had their insulin managed by hospital staff, while just under a third (31%) managed their own insulin.

Table 53: Who managed insulin during hospital stay

WHO MANAGED INSULIN DURING HOSPITAL STAY (Base: respondents on insulin and had hospital stay in last 12 months)	Total (131)	Maaori (45)	Pacific Peoples (42)	South Asian (19)	Other Asian (6)	Other (35)
	%	%	%	%	%	%
Nursing/ medical staff	66	64	78	33	63	61
Self	31	36	20	54	37	36
Not on insulin in hospital	5	11	3	13	0	4
Transplant coordinator	0	0	0	4	0	0
Other	1	0	2	0	0	0

HOSPITAL STAY: SUITABILITY OF MEALS

Respondents were asked if they were given meals that were suitable for their diabetes during their last hospital stay. Eight-in-ten (80%) of those who had stayed in hospital said 'Yes'. The incidence of being given meals unsuitable for their diabetes, combining 'No' and 'Sometimes' answers, accumulates to one-in-six.

Table 54: Given suitable meals at hospital

GIVEN SUITABLE MEALS AT HOSPITAL (Base: respondents who stayed in hospital in last 12 months)	Total (344) %	Maaori (114) %	Pacific Peoples (101) %	South Asian (53) %	Other Asian (19) %	Other (81) %
Yes	80	83	90↑	75	72	75
No/ not always	16	13	9	17	18	21
Don't know	4	4	1	8	11	4

Respondents *more* likely to say 'Yes' were:

- Males (87% vs 74% for females)

HOSPITAL STAY: REASONS MEALS NOT SUITABLE

Respondents who considered their hospital meals unsuitable gave the reasons shown in the following table. Being given or offered sweet foods, desserts or other food they should not have been offered were the main reasons meals were seen to be unsuitable, with these experiences, although rare, even so being significantly frequent.

Table 55: Reasons meals not suitable

REASONS MEALS NOT SUITABLE (Base: respondents who stayed in hospital in last 12 months and had been given or offered unsuitable foods)	Total (54) %
Wrong types of food for diabetics	56
Didn't get any/ NA	23
Not palatable	19
Portion size	8
Special requirement	8
Other	7

Wrong types of food for diabetics includes:

- Offered sweet food/ desserts (28%)
- Offered food I shouldn't have (19%)
- Offered high carb food (15%)
- Gave me an ordinary meal (11%)
- Offered food high in fat/butter (8%)
- Short stay/ not offered diabetic food (4%)

Not palatable includes:

- Suitable but poor quality (6%)
- Have to eat what you're given (4%)

Portion sizes includes:

- Meal too small (5%)
- Meal too big (3%)

UNABLE TO SEE A GP OR NURSE IN THE LAST TWELVE MONTHS

The following question was asked of all respondents: 'In the last twelve months, has there been any time when you needed to see a GP or nurse about your diabetes, but didn't get to see them?' Less than one-in-ten (7%) said that they had been in this situation.

Table 56: Did not see a GP or nurse when needed

DID NOT SEE A GP OR NURSE WHEN NEEDED	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Yes	7	10	10	4	5	5
No	92	90	89	95	95	94

Respondents **more** likely to say 'Yes' (i.e. that they had been in the situation of not seeing a GP or nurse) were:

- Those who had said that their diabetes was 'Not controlled' (23% vs 7% for Total Sample)
- Aged less than 45 years old (14% vs 7%)
- Those who had said that they were not satisfied with their health (12% vs 5% for those satisfied)

REASONS NOT ABLE TO SEE GP OR NURSE

Respondents were asked to give one main reason for not being able to see a GP or nurse when needed, then as a follow-up question, also to identify any other reasons. Scheduling issues and transport or location were the most commonly given reasons, both as the main reason and when all reasons were combined.

Table 57: Main and all reasons not able to see GP/nurse

MAIN REASON NOT ABLE TO SEE GP/ NURSE (Base: Respondents who did not see a GP or nurse when needed)	Main reason (93) %	Total reasons (93) %
Scheduling	42	50
Transport/ location	24	26
Costs	6	12
Other	27	40
Don't know	2	2

Scheduling (Total Reasons) includes:

- Couldn't get appointment soon enough (23%)
- Couldn't get spare time (9%)
- Couldn't get time off work (10%)
- It was after hours (3%)
- Doctor on holiday/ away (4%)

Costs (Total Reasons) includes:

- Costs too much (12%)
- Didn't have money/ transport (6%)

GP SERVICE FOR DIABETES: REASON FOR LAST VISIT

All respondents were asked: 'The last time you went to your GP service for your diabetes, what was the reason?'

By far the most common reason for the last visit was for a regular diabetes check-up (62%). Next most common was needing a new prescription (36%).

Table 58: Reason for last visit to GP

REASONS FOR LAST VISIT TO GP	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Regular check-up/ review management	62	68	60	58	63	64
Needed a new prescription	36	29↓	41	47↑↑	35	31
To have tests	10	7	9	10	12	11
Unwell/ poor control	6	7	7	6	7	4
Not been to GP since diagnosed	3	3	1	4	2	3
Other	9	7	10	8	6	10
Don't know	2	1	2	0	3	2

Regular check-up/ review management includes:

- Regular checking (57%)
- Recalled (4%)

Respondents **more** likely to give the reason that they **needed a new prescription** were:

- South Asian (47% vs 36% for Total Sample)

And respondents **less** likely to say this:

- Those who stayed in hospital in the last 12 months (27%)
- Those who were neither on pills nor insulin to control their blood sugar (8%)

Respondents **more** likely to give the reason that they **were having tests** were:

- Those who were neither on pills nor insulin to control their blood sugar (22% vs 10% for Total Sample)

Respondents **more** likely to give the reason that they **had not been to a GP for diabetes** were:

- Those who were neither on pills nor insulin to control their blood sugar (9% vs 6% for Total Sample)

Respondents **more** likely to give the reason that they were **unwell or had poor control** were:

- Those who have had diabetes diagnosed for 21 years or more (12% vs 6% for Total Sample)
- People who say that their diabetes is not controlled (22%)
- Females (8% vs 4% of males)

Respondents **more** likely to give a reason classified as **'Other'** were:

- People who have been diagnosed with diabetes in the last 2 years (21% vs 9% for Total Sample)
- Those who are neither on pills nor insulin to control their blood sugar levels (19%)

GP SERVICE FOR DIABETES: TREATMENT DISCUSSED ENOUGH?

Respondents were asked to choose from pre-coded options to describe whether their GP service discusses treatment of their diabetes as much as they wanted, or more or less. Over two thirds (69%) said that their treatment was discussed as much as they wanted, with about half of the remaining respondents (16%) saying that there was too much discussion, and slightly less (13%) saying there was too little.

Table 59: Treatment discussion with GP service

TREATMENT DISCUSSION WITH GP SERVICE	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Less than you want	13	12	16	14	12	10
As much as you want	69	69	53↓↓	68	68	85↑↑
More than you want	16	17	31↑↑	16	16	5↓↓
Don't know	2	2	1	2	3	1

The response '**Less than you want**' was more prevalent among:

- Respondents who had described their diabetes as 'Not controlled' (31% vs 13% for Total Sample)
- Respondents who had said that they were not satisfied with their health (17% vs 11% for those who were satisfied)

The response '**As much as you want**' was *more* prevalent among:

- Other ethnic groupings (85% vs 69% for Total Sample)
- Respondents aged 65 years or older (78%)
- People living in low deprivation areas (81%)

The response '**More than you want**' was *more* prevalent among:

- Pacific peoples (31% vs 16% for Total Sample)
- Respondents aged less than 45 years (24%)
- People living in high deprivation areas (22%)
- Respondents who were on both pills and insulin (24%)

GP SERVICE FOR DIABETES: THINGS TO BE IMPROVED

Respondents were asked: 'Are there any ways your GP service could improve their care of your diabetes?'

Over three-quarters showed satisfaction with their GP service by answering 'No' (78%).

Table 60: Could GP service improve care of your diabetes

COULD GP SERVICE IMPROVE CARE OF YOUR DIABETES	Total (1200)	Maaori (330)	Pacific Peoples (329)	South Asian (247)	Other Asian (65)	Other (303)
	%	%	%	%	%	%
Yes	16	14	17	25↑	22	12
No	78	81	75	68↓	73	83↑
Don't know	6	5	8	7	5	5

Respondents more likely to say their GP service could be improved were:

- South Asian peoples (25% vs 16% for Total Sample)
- Those not satisfied with their health (23%)

The following table shows the ways that respondents thought their GP service could be improved. By far the most common of these was providing more information (33%).

Table 61: Ways that GP service could improve

WAYS THAT GP SERVICE COULD IMPROVE (Base: respondents who felt their GP service could be improved)	Total (215) %
Provide more information	33
Advice on diet/ nutrition	11
Have regular exams/ visits/ tests	9
Explain medication/ side effects	8
More discussion with patient	8
Discuss test results asap	6
Advice on exercise	6
GP needs more diabetes knowledge	6
Reminders sent tests/ checkups	5
Longer consultation/ too rushed	5
Need more support when first diagnosed	4
Regular monitoring of medication	4
Talk about risks associated with diabetes	4
Referral to a specialist/ clinic	4
Change medication if not working	3
More discussion about other health problems	3
Information about support groups/ services	3
Diabetes nurse available at all times	3
Consistent information from doctors	3
Don't know	3

OTHER PLACES GONE TO FOR HEALTH ADVICE

Just over one-in-ten respondents (12%) said that they sought health advice regarding their diabetes at places other than GP and hospital services.

Table 62: Sought advice from places other than hospital or GP service

SOUGHT ADVICE FROM OTHER PLACES	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Yes	12	15	8	8	3↓	16↑
No	88	85	91	92	97↑	84↓

Respondents **more** likely to say 'Yes' were:

- Those who were not satisfied with their health (17% vs 9% for those who were satisfied)

Respondents **more** likely to say 'No' were:

- Those who were satisfied with their health (91% vs 83% for those who were not satisfied)
- Those who were not on insulin (90% vs 84% for those who were on insulin)

Among the respondents who had sought health advice elsewhere, the most commonly mentioned places were the Manukau Super Clinic (used by 20% of these people) and the Internet (16%). In addition to the places shown in the table below a wide range of other places were mentioned (55 other places), though each by only 1% of respondents or less.

Table 63: Where else go to for advice

WHERE ELSE GO TO FOR ADVICE (Base: respondents sought advice from places other than GP and hospital services)	Total (146) %
Manukau Super Clinic	20
Internet	16
Family/ friends	10
Diabetes organization	10
Diabetes nurse	7
Library/ books/ magazines	6
Diabetes clinic	5
Diabetes support group	4
Pharmacy	4
East Care Botany	4
Eye clinic	3
Optometrist	3
Traditional healers	2
Dietician	2
Diabetes specialist	2

IMPORTANCE OF ADVICE FROM OTHER SOURCES

Respondents who had used a range of other sources of advice about their diabetes were asked to rate the importance of each of these sources of advice to them compared with the advice they got from the GP and hospital.

The numbers of respondents who had used other sources of health advice for their diabetes were very small, so these results cannot be reported with any accuracy. The following table shows the importance results for the other sources of advice most often used, with other specific sources also asked about in the questionnaire grouped in a single Other column.

It can be seen that about half of the respondents who had used other sources of information rated them about as important as their GP and the hospital, with the balance for most other sources of information about equally split between more versus less important. The exceptions are diabetes organisations and support groups (the latter were rated by very few people, though very highly – this result is not shown in the table), and sources other than those listed in the questionnaire, which tended to be rated as more important than their GP or the hospital.

Table 64: Comparison of importance of advice other sources/GP and hospital

COMPARISON OF IMPORTANCE OF ADVICE FROM OTHER SOURCES, WITH ADVICE FROM GP AND HOSPITAL	IMPORTANCE OF ADVICE FROM...				
	Family/ friends (14) %	Diabetes organisations (11) %	Internet (21) %	Average for other specific sources asked about in questionnaire* (19) %	Other sources** (92) %
More importance than advice from GP/ hospital	22	56	26	10	38
Same	56	45	52	61	49
Less	22	0	22	20	11
Don't know	0	0	0	9	2

* These were made up of traditional healer (2), naturopath (1), homeopath (2), diabetes support group (5), church (2), marae (2), and pharmacy (5)

** These are the places respondents went for health advice, other than those identified in the other columns in this table

4.8 QUALITY OF LIFE

Respondents were asked to rate the following aspects of their day-to-day life, as it had been over the two weeks prior to interview:

- Quality of life
- Whether they had enough money to meet their needs
- Satisfaction with their health
- Satisfaction with their ability to perform daily living activities
- Satisfaction with themselves, and with their personal relationships
- Satisfaction with the conditions of their living place
- The level of priority they were giving to their own health

OVERVIEW

The following table summarises results from all these questions that involved the use of similar answer scales.

Most respondents rated their quality of life as either 'Good' (49%) or 'Very good' (33%, accumulating to 82%).

Most also rated themselves as having 'Completely' (27%) or 'Mostly' (35%) enough energy for everyday life (this accumulates to 62%). When those answering 'Moderately' (24%) are added, this accumulates to 86% with at least moderately enough energy.

Satisfaction with having enough money to meet their needs was lower than with having enough energy: just 18 percent said they had enough money to meet their needs completely and a further 24 percent said they had enough money to mostly meet their needs. Fourteen percent said they did not have enough money at all to meet their needs, and a further 16 percent said they only had enough money to meet their needs a little.

Most respondents were either satisfied or very satisfied with the specific aspects of the quality of their lives that were asked about:

- Satisfaction with their health (68% either 'Satisfied' or 'Very satisfied')
- Satisfaction with their ability to perform daily living activities (76%)
- Satisfaction with themselves (76%)
- Satisfaction with their personal relationships (86%)
- Satisfaction with the conditions of their living place (88%)

Satisfaction with health is the lowest rated of these questions (with 21% either 'Dissatisfied' or 'Very dissatisfied').

Table 65: Summary of quality of life: rating of quality of life

RATING OF QUALITY OF LIFE	Quality of life
	(1200)
	%
Very poor (1)/ Poor (2)	11
Neither good nor poor (3)/ Don't know	8
Very good (5)/ Good (4)	81
Average	4.0

Table 66: Summary of quality of life: rating of enough energy/money

ENOUGH ENERGY/MONEY FOR EVERYDAY LIFE	Enough energy for everyday life	Enough money to meet needs
	(1200)	(1200)
	%	%
Not at all (1)	3	14
Moderately (3)/ A little (2)	35	43
Mostly (4)/ Completely (5)	62	42
Average	3.7	3.2

Table 67: Summary of quality of life: Rating of satisfaction

SATISFACTION WITH ASPECTS OF QUALITY OF LIFE	SATISFACTION WITH...				
	Health	Ability to do daily things	Self	Relationships	Living conditions
	(1200)	(1200)	(1200)	(1200)	(1200)
	%	%	%	%	%
Very dissatisfied (1)/ Dissatisfied (2)	21	16	13	8	7
Neither dissatisfied nor satisfied (3)/ Don't know	10	8	10	5	5
Very satisfied (5)/ Satisfied (4)	68	76	76	86	88
Average	3.6	3.8	3.9	4.2	4.2

HOW RESPONDENTS RATED THEIR QUALITY OF LIFE

In response to the question: 'How would you rate your quality of life?':

- Over eight-in-ten respondents rated their quality of life as either 'Good' (49%) or 'Very good' (33%)
- Just over one-on-ten chose either 'Poor' (8%) or 'Very poor' (3%)

Table 68: Quality of life

QUALITY OF LIFE	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Very poor (1)/ Poor (2)	11	10	9	11	17	12
Neither good nor poor (3)/ Don't know	8	10	6	8	9	8
Very good (5)/ Good (4)	81	79	85	80	74	80

Ratings of **very good or good** quality of life were **less** prevalent among:

- Respondents who had said that their diabetes was not controlled (60% vs 81% for Total Sample)
- People who are self-described as obese (69%)
- Those who are on insulin only to control their blood sugar levels (68%)
- Those who have been diagnosed with diabetes for 21 years or more (71%)
- Those who were not satisfied with their health (58%)

Ratings of **very poor or poor** quality of life were **more** prevalent among:

- Respondents who had said that their diabetes was not controlled (26% vs 11% for Total Sample)

Ratings of **neither good nor poor or don't know** quality of life were **more** prevalent among:

- Respondents who are self-described as underweight (21% vs 8% for Total Sample)

ENOUGH ENERGY FOR EVERYDAY LIFE

In response to the question: 'Do you have enough energy for everyday life?':

- More than six-in-ten respondents chose either 'Mostly' (35%) or 'Completely' (27%)
- More than one-in-three chose either 'Moderately' (24%) or 'A little' (11%)

Table 69: Have enough energy for everyday life

HAVE ENOUGH ENERGY FOR EVERY DAY LIFE	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Not at all (1)	3	3	2	3	1	3
Moderately (3)/ A little (2)	35	35	34	34	52↑↑	32
Mostly (4)/ Completely (5)	62	62	63	62	47↓	65

Ratings of **mostly or completely** enough energy for everyday life were **more** prevalent among:

- Respondents who had said that their diabetes was well controlled (70% vs. 62% for Total Sample)
- Respondents who were on both insulin and pills to control blood sugar levels (52%)
- Those who are overweight according to their BMI (71%)
- Males (66% vs 58% of females)

And **less** were:

- Respondents who had said that their diabetes was partially controlled (54%) or not controlled (41%)
- Those who are self-described as obese (49%)
- Those who have had diabetes diagnosed for 21 years or more (50%)
- Those who have NOT been in hospital in the last 12 months (68% vs. 48% of those who have had a hospital stay)

Ratings of **moderately or a little** enough energy for everyday life were **more** prevalent among:

- Respondents who said that their diabetes was partly controlled (43% vs 35% for Total Sample) or not controlled (50%)
- Other Asian (52%)
- Those who have had diabetes diagnosed for 21 years or more (47%)
- Those who have been in hospital in the last 12 months (48% vs. 29% of those who have not had a hospital stay)
- Those who were not satisfied with their health (55%)

And **less** were:

- People who are overweight according to their BMI (25%)
- Those who say their diabetes is well controlled (28%)

Ratings of **not at all** enough energy for everyday life were **more** prevalent among:

- Those who say their diabetes is not controlled (9% vs 3% of Total Sample)
- Those who were not satisfied with their health (8%)

ENOUGH MONEY FOR NEEDS

In response to the question: 'Do you have enough money to meet your needs?':

- More than four-in-ten respondents chose either 'Mostly' (24%) or 'Completely' (18%)
- More than four-in-ten chose either 'Moderately' (27%) or 'A little' (16%)

Table 70: Have enough money to meet needs

HAVE ENOUGH MONEY TO MEET NEEDS	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Not at all (1)	14	16	23↑↑	8↓	12	8↓↓
Moderately (3)/ A little (2)	43	42	49	47	51	34↓↓
Mostly (4)/ Completely (5)	42	41	26↓↓	43	34	57↑↑

Ratings of having **mostly or completely** enough money were **more** prevalent among:

- Respondents from Other ethnic groupings (57% vs 42% for Total Sample)
- People living in low deprivation areas (59%)
- Those who are on neither insulin nor pills (55%)
- Respondents who are overweight with a BMI of between 25 and 29.9 (53%)
- Respondents aged 65 years or older (51%)

And **less** prevalent among:

- Pacific peoples (26%)
- Respondents who had said that their diabetes was not controlled (23%)
- People living in high deprivation areas (33%)
- People who take both pills and insulin to control their blood sugar levels (33%)
- People who had been hospitalised in the last 12 months (24%)

Ratings of having enough money **moderately or a little** were **less** prevalent among:

- Those of Other ethnicities (34% vs. 43% for Total Sample)
- People living in low deprivation areas (34%)

Ratings of having enough money **not at all** were **more** prevalent among:

- Pacific peoples (23% vs 14% for Total Sample)
- Respondents who had described their weight as obese (24%)
- Respondents who had said that their diabetes was not controlled (29%)
- People who are on both pills and insulin to control their blood sugar levels (22%)

And **less** prevalent among:

- Those of Other ethnicities (8%)
- Respondents with a BMI rating of between 25 and 29.9 (overweight but not obese) (7%)
- People living in low deprivation areas (6%)

SATISFACTION WITH OWN HEALTH

In response to the question: 'How satisfied are you with your health?':

- Over two-thirds of respondents chose either 'Satisfied' (54%) or 'Very satisfied' (14%)
- More than two-in-ten chose either 'Very dissatisfied' (4%) or 'Dissatisfied' (17%)

Table 71: Satisfaction with own health

SATISFACTION WITH OWN HEALTH	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Very dissatisfied (1)/ Dissatisfied (2)	21	23	18	18	22	24
Neither/nor (3)/ Don't know	10	11	8	10	11	11
Very satisfied (5)/ Satisfied (4)	68	66	74	72	67	64

Ratings of **very satisfied or satisfied** were **more** prevalent among:

- Respondents who had said that their diabetes was well controlled (78% vs 68% for Total Sample)
- Those who described themselves as normal weight (76%)
- Females (24% vs. 18% of males)

And **less** prevalent among:

- Those who have been to hospital in the last 12 months (60%)
- Those who say their diabetes was partly controlled (59%) or not controlled (36%)
- Respondents aged under 45 years (54%)
- Those who are on insulin only (54%)
- Those who are self-described as obese (37%)

Ratings of **neither satisfied nor dissatisfied** were **more** prevalent among:

- Respondents who were not on pills or on insulin (19% vs 10% for Total Sample)

Ratings of **very dissatisfied or dissatisfied** were **more** prevalent among:

- Respondents who had described their weight as obese (48% vs 21% for Total Sample)

- Respondents who had said that their diabetes was not controlled (51%) or partly controlled (29%)
- Respondents aged less than 45 years (32%)
- Those who have been to hospital in the last 12 months (29%)

And **less** prevalent among:

- Respondents who had described their weight as normal (15%)
- People who said that their diabetes was well controlled (13%)

SATISFACTION WITH ABILITY TO DO DAILY LIVING ACTIVITIES

In response to the question: 'How satisfied are you with your ability to perform your daily living activities?':

- Over three-quarters of respondents chose either 'Satisfied' (52%) or 'Very satisfied' (24%)
- Less than two-in-ten chose either 'Very dissatisfied' (4%) or 'Dissatisfied' (12%)

Table 72: Satisfaction with ability to do daily living activities

SATISFACTION WITH ABILITY TO DO DAILY LIVING ACTIVITIES	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Very dissatisfied (1)/ Dissatisfied (2)	16	14	13	17	14	18
Neither/nor (3)/ Don't know	8	8	9	3↓↓	10	9
Very satisfied (5)/ Satisfied (4)	76	78	78	80	76	72

Ratings of '**Very Satisfied/ satisfied**' were **more** prevalent among:

- Respondents who had said that their diabetes was well controlled (83% vs 76% for Total Sample)

And **less** prevalent among:

- Respondents who had described their weight as obese (51%)
- Respondents who had said that their diabetes was partly controlled (69%) or not controlled (56%)
- Those who are on insulin only to control their blood sugar levels (62%)
- People who have been to hospital in the last 12 months (67%)
- Those who have been diagnosed with diabetes with 21 years or more (65%)

Ratings of **neither satisfied nor dissatisfied or don't know** were more prevalent among:

- Respondents who had described their weight as obese (17% vs 8% for Total Sample)

And **less** prevalent among:

- South Asians (3%)

Ratings of **'Very dissatisfied/ dissatisfied'** were **more** prevalent among:

- Respondents who had described their weight as obese (32% vs 16% for Total Sample)
- Those who are on insulin only to control their blood sugar levels (29%)
- Respondents who have had their diabetes diagnosed for 21 years or more (26%)
- Respondents who had said that their diabetes was not controlled (36%)

SATISFACTION WITH ONESELF

In response to the question: 'How satisfied are you with yourself?':

- Over three-quarters of respondents chose either 'Satisfied' (48%) or 'Very satisfied' (28%)
- More than one-in-ten chose either 'Very dissatisfied' (3%) or 'Dissatisfied' (10%)

Table 73: Satisfaction with self

SATISFACTION WITH SELF	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Very dissatisfied (1)/ Dissatisfied (2)	13	14	11	17	19	12
Neither/nor (3)/ Don't know	10	8	10	6↓	10	13
Very satisfied (5)/ Satisfied (4)	76	78	80	77	70	75

Ratings of **very satisfied or satisfied** were **more** prevalent among:

- Respondents who had described their weight as normal (83% vs 76% for Total Sample)
- Respondents who had said that their diabetes was well controlled (85%)
- Males (81% vs. 72% of females)

And **less** prevalent among:

- Respondents who had described their weight as obese (54%)
- Respondents who had said that their diabetes was partly controlled (66%) and not controlled (51%)

Ratings of **neither satisfied nor dissatisfied or don't know** were **more** prevalent among:

- Respondents who had described their weight as obese (20% vs 10% for Total Sample)
- Those who are obese (20%)
- Those who said their diabetes was partly controlled (16%) and well controlled (6%)

Ratings of **dissatisfied or very dissatisfied** were **more** prevalent among:

- Respondents who had described their weight as obese (27% vs 13% for Total Sample)
- Respondents who had said that their diabetes was not controlled (35%)
- Females (16% vs. 10% of males)

And **less** prevalent among:

- Respondents who had said that their diabetes was well controlled (8%)

SATISFACTION WITH PERSONAL RELATIONSHIPS

In response to the question: 'How satisfied are you with your personal relationships?':

- A little less than nine-in-ten respondents chose either 'Satisfied' (45%) or 'Very satisfied' (41%)
- Almost one-in-ten chose either 'Very dissatisfied' (2%) or 'Dissatisfied' (7%)

Table 74: Satisfaction with personal relationships

SATISFACTION WITH PERSONAL RELATIONSHIPS	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Very dissatisfied (1)/ Dissatisfied (2)	8	7	9	7	14	6
Neither/nor (3)/ Don't know	5	6	5	4	6	5
Very satisfied (5)/ Satisfied (4)	86	87	85	89	80	87
Refused	1	1	1	0	0	2

Ratings of **very satisfied or satisfied** were **more** prevalent among:

- People who were satisfied with their health (91% vs 86% for Total Sample)

And **less** prevalent among:

- Respondents who had said that their diabetes was not controlled (69%)

Ratings of **very dissatisfied or dissatisfied** were **more** prevalent among:

- Respondents aged less than 45 years (15% vs 8% for Total Sample)
- Respondents who had said that their diabetes was not controlled (22%)

SATISFACTION WITH LIVING CONDITIONS

In response to the question: 'How satisfied are you with the conditions of your living place?':

- Nearly nine-in-ten respondents chose either 'Satisfied' (43%) or 'Very satisfied' (45%)
- Less than one-in-ten chose either 'Very dissatisfied' (2%) or 'Dissatisfied' (5%)

Table 75: Satisfaction with living conditions

SATISFACTION WITH LIVING CONDITIONS	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
Very dissatisfied (1)/ Dissatisfied (2)	7	12↑↑	12↑↑	4	3	3↓
Neither/nor (3)/ Don't know	5	6	5	4	5	4
Very satisfied (5)/ Satisfied (4)	88	82↓↓	83↓	92	89	92

Ratings of **very satisfied or satisfied** were **more** prevalent among:

- Respondents aged 65 years and over (94% vs. 88% Total Sample)
- People living in low deprivation areas (94%)
- Those who are overweight with a BMI between 25 – 29.9 (94%)
- People who were satisfied with their health (92%)

And **less** prevalent among:

- Maaori (82%)
- Those under 45 years old (79%)

Ratings of **very dissatisfied or dissatisfied** were **more** prevalent among:

- Maaori (12% vs 7% of Total Sample)
- Pacific peoples (12%)
- Those who live in low deprivation areas (3%)

PRIORITY OF OWN HEALTH

In response to the question: 'Which of the following best describes the priority you give to your own health compared with things like your job, money or your children's' health?':

- Over half of respondents said their health was highest priority (56%)
- One third said their health was high-priority, but other things were higher (33%)
- Less than one-in-ten said their health was not high-priority (9%)

Table 76: Description of health priority

DESCRIPTION OF HEALTH PRIORITY	Total (1200) %	Maaori (330) %	Pacific Peoples (329) %	South Asian (247) %	Other Asian (65) %	Other (303) %
My health is highest priority	56	40↓↓	66↑↑	69↑↑	66	47↓↓
My health high/ other things higher	33	48↑↑	19↓↓	24↓↓	25	43↑↑
My health is not high priority	9	11	12	5↓	6	8

Respondents **more** likely to choose **'My health is highest priority'** were:

- South Asian peoples (69%) and Pacific peoples (66%, vs 56% for Total Sample)
- Those who had described their weight as 'Normal' (67%)
- Those who had said that their diabetes was 'Well controlled' (62%)
- Those who had said that they were satisfied with their health (60% vs 46% for those who were not satisfied)

Respondents **less** likely to choose **'My health is highest priority'** were:

- Maaori (40%)
- Those of Other ethnicities, i.e. including New Zealand European (47%)

Respondents **more** likely to choose **'My health is high priority but other things are higher'** were:

- Maaori (48%) and Other ethnic groupings (43%, vs 33% for Total Sample)
- Those who had described their weight as 'Obese' (55%)
- Those with a BMI of 30 or higher (40%)

Respondents **more** likely to choose **'My health is not high priority'** were:

- Aged less than 45 years (18% vs 9% for Total Sample)
- Those who had said that their diabetes was 'Not controlled' (26%) or 'Partly controlled' (14%)
- Those who had said that they were not satisfied with their health (14% vs 7% for those who were satisfied)

APPENDIX A: RESEARCH METHODS

This appendix provides additional and more detailed information on the research methods, to support the Overview of Research Methods chapter of the report.

SAMPLE

The sample was randomly selected from the CMDHB cohort of known persons with diabetes.

The target sample size was 1200, with 300 each for Maaori, Pacific peoples, Asian peoples and Other ethnicities based on the ethnicity specified in the CMDHB data base. These proportions were designed to provide larger sub-samples for analysis purposes.

Apart from the targets for each ethnic group, there were no quotas and there was no stratification by region.

At the end of the interview, the interviewers were asked to rate how accurate they thought the participant responses were, based on cues they got during the interviewing. None of the interviews were rated as 'Probably mostly inaccurate', so the entire data base was retained for the analysis.

DATA COLLECTION

Fieldwork was between 24 April and 5 June 2009. Interviews were undertaken in the evenings, from 5pm to 9pm and weekends from 10am to 5pm, extending to 7pm if necessary. There was also some day time interviewing Monday to Friday.

Where possible, based on CATI staff on duty, the ethnicity of the interviewers was matched with that of the participants. Where this was not possible, participants were offered the opportunity of being interviewed at a later date by someone from their ethnic group if they wished.

People were also advised that interviews were able to be done in Samoan and Tongan. There were 47 Samoan and 23 Tongan interviews completed.

CONTACTING RESPONDENTS

A personalised letter was sent out from CMDHB (drafted by Phoenix Research), to a randomly selected sample. The sample size was designed to provide enough people to cover refusals and people unable to be contacted. This letter advised people about the research and that CMDHB would like to provide their contact details to Phoenix Research, so they could be contacted for an interview. People were offered the chance to opt out of being contacted by the researchers, by sending back a form in a freepost envelope. Even if they did not opt out at that stage, they were still able to decline the interview when contacted by Phoenix interviewers, if they so wished.

The opt off forms were returned to the Phoenix Research freepost address, but labelled as 'Counties Manukau DHB Living with Diabetes Survey', with no reference to Phoenix Research. Phoenix staff forwarded the unopened letters to CMDHB who removed these people from their data base prior to supplying the data base to Phoenix Research, to contact people to see if they wished to take part in an interview.

An information sheet was attached to the letter from CMDHB, providing all the information necessary to make an informed decision as to whether to participate.

RESPONSE RATES

Because particularly high response rates were required, a minimum of 15 calls was made to each number if necessary to try and obtain an interview.

To enhance the response rate, people were given the option of being rung on mobile phones to schedule or conduct the interview, if the household contact identified that this would be the best way of obtaining an interview with the qualifying person.

The final status of the calls and the weighted response rates are detailed in the Methods section at the beginning of the report.

QUALITY ASSURANCE PROCEDURES

Pre-testing

The survey was pre-tested by interviewers from the different ethnic groups to ensure the questions were understood and working as intended. Once changes were made in response to the pre-testing feedback, further pre-testing was undertaken, until there was confidence that the questions were all working as intended.

IQS Accredited

The Phoenix Research CATI centre is IQS accredited, this being the recognised industry quality standard.

Interviewer briefing and debriefing

Interviewers received a detailed briefing. The Let's Beat Diabetes Manager and Clinical Director both attended the initial briefing and provided background information on the project, which was appreciated by the interviewers. This session was video-taped and shown at the subsequent briefings for those who were unable to attend the initial one.

The briefings included going through each question, using a data projector to show the questions on a large screen. Interviewers were also given typed briefing notes. Following the briefing, interviewers undertook practice interviews among themselves and with friends, until they felt sufficiently familiar and confident with the survey to go live.

Interviewers received coaching on improving response rates, especially any who were getting higher rates of refusals. If an interviewer had three refusals on a shift they had to advise their supervisor who would put them on to another project or give them more training.

Monitoring of interviewing

One of the main benefits of the CATI system is the ability to monitor all the calls, as they are being undertaken from a central location. The shift supervisor(s) monitored calls during the shift. In addition to this, two 'call catchers' recorded all interviews and these could be monitored at any time following the interview. This allowed for more thorough and systematic monitoring than was possible during interviewing. It also meant that if there were any problems identified with any interviewer, all their interviews could be checked. A minimum of one-in-ten (10%) of each interviewer's work was checked via listening back to parts of the interview.

WEIGHTING

Post-stratification to obtain a representative sample

It was also necessary to weight the data to ensure that the final sample was as representative as possible to the known Counties Manukau DHB cohort of persons with diabetes. The weighting variables were:

- Ethnicity from the CMDHB data base (Maaori, Pacific peoples, Indian/ Fijian Indian, Other Asian, Other)
- Age (Under 55 years, 55 years and over)
- Gender (male, female)
- NZDep (quintiles 1-4 and 5)

Weighting method

The weights were calculated using the formula below.

The weight assigned to the i th respondent in the h th stratum (or weighting cells) was equal to

$$w_{hi} = \frac{W_h}{\sum_{\substack{\text{respondents in} \\ \text{stratum } h}} 1/\pi_{hj}} \cdot \frac{1}{\pi_{hi}}, \text{ where } \pi_{hi} \text{ denoted the selection probability of that respondent and}$$

W_h denoted the proportion of respondents in the h th stratum from the Statistics New Zealand 2001 Census data.

ETHICAL ISSUES

This study received approval from the Northern Region ethics committee.

APPENDIX B: DEMOGRAPHIC COMPOSITION OF SAMPLE

This section provides information on the demographic composition of the sample, including information on ethnicity, age and gender.

The tables which follow present the key demographics and how these varied between the actual percentages interviewed and the percentages after the weighting.

ETHNICITY

It is important to remember that persons were included in all ethnic groups to which they belonged. The data shown in the table which follows reflects the fact that Maaori and Pacific were deliberately over-represented in the interviews that were undertaken. For example, it shows that 330 interviews were undertaken with Maaori (as shown in the first column of data), which formed 28 percent of the interviews (as shown in the second column). The third column shows that after weighting the data to represent the best known representation of age within gender within ethnicity composition for known people with diabetes within the CMDHB region, Maaori accounted for 19 percent.

The fourth column in the table below compares the ethnic composition of this sample (representing the CMDHB diabetes cohort) with the ethnic composition of those people who reported having diabetes in the separate 2009 LBD Tracking Survey of the general public. This gives different figures for Pacific peoples and those of Other ethnic groups (largely New Zealand European); it is unclear what this might relate to. The lower 'Other Asian' level in the LBD Tracking Survey is likely to reflect the reluctance of Other Asians to participate in surveys.

Table 77: Demographic composition – ethnic group

DEMOGRAPHIC COMPOSITION	Number interviewed (1200) N	Percent interviewed (1200) %	Percent After Weighting (1200) %	Percentages Among People with Diabetes in LBD Tracking Survey 09 After Weighting (216) %
Ethnic group				
Maaori	330	28	19	20
Pacific	329	27	30	36
South Asian	247	21	14	15
Other Asian	65	5	7	3
Other ethnic groupings	303	25	37	33

In terms of **specific Pacific ethnic groups**, CMDHB were able to provide a breakdown of the diabetes cohort into the groups identified in the table below. The first column of this table is the numbers of people in the cohort, while the second column shows this same data as percentages.

The third and fourth columns in this table show the percentages of the Pacific sample interviewed that were in each of the specific Pacific ethnic groups, before weighting (i.e. based on the actual numbers

interviewed), and after weighting. These columns are based on ethnicity as recorded on the CMDHB cohort listing. These data show that the achieved sample was a close match to the sampling frame (i.e. the CHDHB cohort).

The fifth and sixth columns show results that are almost identical to those in the two columns before, although columns five and six are based on ethnicity as provided by the respondents themselves in the survey (based on the question 'Which ethnic group do you most identify with?'). This shows that the self-reported ethnicity in the survey and the CMDHB classification were very close matches.

Table 78: Pacific groups

PACIFIC GROUPS	CMDHB COHORT DATABASE		CONTAINED IN PHOENIX RESEARCH SURVEY BASED ON CLASSIFICATION IN CMDHB COHORT DATABASE		CONTAINED IN PHOENIX RESEARCH SURVEY BASED ON SELF-DESCRIPTION: WHICH ETHNIC GROUP DO YOU MOST IDENTIFY WITH?	
	Actual numbers	As a fraction of all Pacific	Unweighted	Weighted	Unweighted	Weighted
		%	%	%	%	%
Tongan	1265	21	20	20	20	20
Samoan	3133	51	47	47	47	48
Tokelauan	36	1	1	1	1	1
Niuean	414	7	8	8	8	7
Cook Island Māori	1085	18	22	22	22	23
Other Pacific Island	186	3	2	3	2	1
Total	6119	100	100	100	100	100

The survey included 247 South Asian people with diabetes. This number included 154 people identifying themselves as Indian and 84 Fijian Indian. (Although these people were mostly Indian, this group included 8 Sri Lankans, 3 Pakistanis, 3 who identified themselves as Malaysians of Indian origin, and others.)

GENDER AND AGE

Overall 49 percent of those interviewed were males.

As shown in the table which follows, the sample marginally over-represented people with diabetes up to 54 years and under-represented those aged 55 years and over. The sample weighting redressed these small imbalances.

The table also shows, when contrasting the demographic profile of those in the CMDHB diabetes cohort with those who reported having diabetes in the separate 2009 LBD Tracking Survey of the general public, that the cohort contains less people with diabetes and aged 65 years or over (31% versus 36%).

Table 79: Demographic composition – Gender and age

DEMOGRAPHIC COMPOSITION	Number interviewed	Percent interviewed	Percent After Weighting	Percentages Among People with Diabetes in LBD Tracking Survey 09 After Weighting
	(1200)	(1200)	(1200)	(216)
	N	%	%	%
Gender				
Male	586	49	50	53
Female	614	51	50	47
Age				
16 to 44 years	212	18	15	10
45 to 54 years	321	27	22	21
55 to 64 years	362	30	32	33
65 years or over	305	25	31	36

APPENDIX C: QUESTIONNAIRE

DISK

Q99LOC

1. Maori
2. Samoan
3. Tongan
4. Other Pacific Island
5. Indian
6. Chinese
7. Other Asian
8. Other

USE Q0LOC

AUTO

CHECK

GO Q99ABRT

GO Q99PRE

Q99ABRT

"Q99ABRT. Interviewer note: Quota is full for this number. Hit enter to carry on."

BLANK

ABORT "Abort: Quota full"

Q99PRE

"LIVING WITH DIABETES SURVEY"

"PHONE: [Q0PH] [Q0REC[2]] ID/PROJECT NO: 4619

[Q0DAT] [Q0TIM] [Q0HIS]

CALL NUMBER: [Q0CAL]

[Q0COM]"

" Good morning/afternoon/evening, I'm _[Q0IV]_
calling on behalf of Counties Manukau DHB and
I'm from Phoenix Research.

Can I please speak to _[Q0REC[3]]_?

" _Re-introduce if necessary, make appointment if necessary_

"

PAUSE

=0

START

Q99PRE2 RECEIVE LETTER

"Q99PRE2. Did you receive the letter from Counties Manukau DHB
about the survey of people with diabetes?

"

WIDTH=1

1. Yes
2. No
3. **Don't know**

Q99PRE3 INVITATION TO TAKE PART IN SURVEY

IF 2-3 IN Q99PRE2

"Q99PRE3. Have you got a few minutes now so that I can tell you about the survey?

This survey is being done by Counties Manukau DHB to find out how well the current services are meeting the needs of people with diabetes or at risk of diabetes. They also want to know how people get on managing their diabetes, so that changes can be made to improve services if need be.

You have been randomly selected from the Counties Manukau DHB directory of people who use diabetes services and we would like to invite you to take part in this telephone survey. The interview should take about 12 to 15 minutes.

We can make a time to call back if now does not suit you.

Make appointment if necessary

"

IF 1 IN Q99PRE2

"Q99PRE3. Would you be willing to take part in this survey? The interview should take about 12 to 15 minutes.

We can make a time to call back if now does not suit you.

Make appointment if necessary

"

WIDTH=1

1. Continue
2. Respondent requires more information about the survey

NOT 2 IF 2-3 IN Q99PRE2

IF 1 IN Q99PRE3 GO Q99REQ

Q99PRE4 FURTHER DETAILS ABOUT SURVEY

"Q99PRE4. This survey is being done by Counties Manukau DHB to find out how well the current services are meeting the needs of people with diabetes or at risk of diabetes. They also want to know how people get on managing their diabetes, so that changes can be made to improve services if need be.

You have been randomly selected from the Counties Manukau DHB directory of people who use diabetes services.

Would you be willing to take part in this survey?

"

PAUSE

=0

Q99REQ

IF 2 IN Q99LOC

"Q99REQ. If you would prefer, we can get someone to interview you in Samoan.

If own language interview requested, set for Samoan
call back and explain there may be some delay
in getting back to them for this interview

```

"
IF 3 IN Q99LOC
"Q99REQ. If you would prefer, we can get someone to interview you
  in Tongan.

  _If own language interview requested, set for Tongan_
  _call back and explain there may be some delay_
  _in getting back to them for this interview_
"
IF 1 OR 4 OR 5 OR 6 OR 7 OR 8 IN Q99LOC
"Q99REQ. _Interviewer note: If you are from same ethnic group_
  _as respondent, hit enter to continue. Otherwise read_
  _below to respondent_

  If you are Maori, Pacific, Chinese or Indian,
  we can arrange for you to talk to an interviewer
  from your ethnic group if you would prefer.

  _If necessary set call-back for appropriate type of_
  _interviewer and language. If Pacific, set for Samoan,_
  _Tongan or Any Pacific._
"
PAUSE
=0

Q99CONF CONFIDENTIALTY
"Q99CONF. I'd like to reassure you that all your answers are
  completely confidential. You answers will be combined
  with those of other people who take part and there will
  be nothing reported that could identify you.

  For quality control purposes some of my calls may be
  monitored by my supervisor.
"
PAUSE
=0

Q99CHK CHECK HAVE DIABETES
"Q99CHK. Before we begin can I please check that you do have
  diabetes?
"
WIDTH=1
1. Yes
2. No
3. **Don't know**
4. **Refused**

IF 1 IN Q99CHK GO Q1

Q100ABRT
" Sorry but we need to interview people with diabetes,
  thanks for your time anyway."
BLANK
ABORT "Abort: Doesn't have diabetes or DK or Ref"

Q1 ETHNIC GROUPS BELONG TO
"Q1. Firstly we have some questions about yourself.
  Which ethnic group or groups do you belong to?

  _Code all mentions - read only if necessary_

```

```

"
MR
WIDTH=13
1. NZ European
2. Maori
3. Samoan
4. Cook Island Maori
5. Tongan
6. Niuean
7. Other Pacific Island (specify Q1PAC)
8. Chinese
9. Indian
10. Fijian Indian
11. Korean
12. Other Asian (specify Q1AS)
13. Other (specify Q1OTH)
-----
14. **Don't know**
15. **Refused**

GO Q1ANS

Q1PAC
Q1AS
Q1OTH

Q1ANS
=ANSWERS(Q1)

Q2 ETHNIC GROUP MOST IDENTIFY WITH
"Q2. Which ethnic group do you MOST identify with?

    _Read only if necessary_
"
WIDTH=1
1. NZ European
2. Maori
3. Samoan
4. Cook Island Maori
5. Tongan
6. Niuean
7. Other Pacific Island (specify Q1PAC)
8. Chinese
9. Indian
10. Fijian Indian
11. Korean
12. Other Asian (specify Q1AS)
13. Other (specify Q1OTH)
-----
14. **Don't know**
15. **Refused**
16. **Don't know/Can't choose one**

USE Q1
USE 15-16

IF 1 IN Q1ANS
LOAD Q1 NEXT

Q3A HEIGHT

```

```

EDIT
"Q3A.      What is your height?

    _Record either metres OR feet and inches_

    _E.g. 180cm or 1.8 metres would be entered as 1.8 in the metres
box_

    _5 foot 11 inches would be entered as 5 in the Feet box and 11 in
the_
    _inches box_

    _Enter Don't know or Refused as D or R respectively in metres box_

    _Hit enter on any box not being used to move on_

    Metres:      [Q3AM....]
    Feet: [Q3AF....]
    Inches:      [Q3AI..]
"
BLANK

1. NUM 1.00-2.25
2. NUM 4.00-7.00
3. NUM 0-12

GO Q3B

Q3AM METRES
Q3AF FEET
Q3AI INCHES

Q3B WEIGHT
EDIT
"Q3B. And what is your weight?

    _Record either kilograms or stone and pounds_

    _E.g. 70kg would be entered as 70 in the kilograms box_

    _10 stone 6 pounds would be entered as 10 in the Stone box and_
    _6 in the pounds box_

    _Enter Don't know or Refused as D or R respectively in kilograms
box_

    _Hit enter on any box not being used to move on_

    Kilograms: [Q3BK.....]
    Stone:      [Q3BS.....]
    Pounds:     [Q3BP.....]
"
BLANK

1. NUM 40.00-250.00
2. NUM 6.00-40.00
3. NUM 0.00-500.00

GO Q4

```

Q3BK KILOGRAMS
Q3BS STONE
Q3BP POUNDS

Q4 DESCRIPTION OF WEIGHT

"Q4. How would you describe your weight?
Would it be...

Read
"

WIDTH=1

1. Underweight
2. Normal
3. Overweight
4. Obese
5. **Don't know**
6. **Refused**

Q5A AGE

"Q5A. How old are you?

Record 2 digits
"

If Refused - code R to go to age groupings
version of question
"

NUM 15.00-99.99

WIDTH=5

IF ("D" OR "N" OR "R") IN Q5A GO Q5B

GO Q6A

Q5B AGE GROUPING

"Q5B. Would you be willing to say which of the following age
groups you come into?

Read
"

WIDTH=1

1. Under 25 years
2. 26-34 years
3. 35-44 years
4. 45-54 years
5. 55-64 years
6. 65 years and over
7. **Don't know**
8. **Refused**

GO Q6B

Q6A AGE OF FIRST DIABETES DIAGNOSIS

"Q6A. How old were you when you were first diagnosed with
diabetes?

Record age in years - 2 digits
"

NUM 0.00-(Q5A)

WIDTH=5

IF ("D" OR "N" OR "R") IN Q6A GO Q6B
GO Q7

Q6B APPROXIMATE YEARS HAD DIABETES

"Q6B. Approximately how many years have you had diabetes?

Record number of years
"

NUM 0.00-99.99

WIDTH=5

Q7 WHAT LED TO DIAGNOSIS

"Q7. How did you find out you had diabetes?

Do not read - code all mentions
"

MR

WIDTH=6

1. Symptoms - tiredness, blurry vision, etc
2. Hospitalisation
3. Doctor check for risks/medical check-up - had NOT gone to doctor with health problem
9. Went to doctor with health problem and was diagnosed with diabetes
4. Follow-up to pregnancy/diagnosed during pregnancy
5. Work checkup
6. Other (specify)

7. **Don't know**
8. **Refused**

Q8 AWARENESS OF RISK BEFORE DIAGNOSIS

"Q8. Did you know you were AT RISK of diabetes before you were diagnosed?
"

WIDTH=1

1. Yes
2. No
3. **Don't know**
4. **Refused**

IF 2-4 IN Q8 GO Q10A

Q9 HOW KNEW ABOUT RISK

"Q9. How did you know you were at risk?

Do not read - code all mentions
"

MR

WIDTH=4

1. Informed by doctor or nurse
2. Was overweight or obese
3. Family history
4. Other (specify)

5. **Don't know**
6. **Refused**

Q10A HAVE LAB TESTS EVERY 3 MONTHS

"Q10A. The next set of questions are about testing.

Do you usually have lab tests done approximately every 3 months for your diabetes?

Interviewer note: If necessary, add:
These are blood or urine tests which you get done at a hospital or the medical testing centres.

"

WIDTH=1

1. Yes
2. Done less frequently
3. Other (specify)
4. No
5. **Don't know**
6. **Refused**

Q10B BLOOD PRESSURE CHECKED EVERY 3 MONTHS

"Q10B. Do you usually have your blood pressure checked approximately every 3 months?

"

WIDTH=1

1. Yes
2. Done less frequently
3. Other (specify)
4. No
5. **Don't know**
6. **Refused**

Q10C EYES BEEN TESTED IN LAST 2 YEARS

"Q10C. Have you had your eyes tested in the last 2 years?

"

WIDTH=1

1. Yes
2. Done longer ago
3. Other (specify)
4. No
5. **Don't know**
6. **Refused**

Q11 UNDERSTANDING OF EACH OF THE TESTS

"Q11. How much do you understand about these tests and what the results mean?

Do you understand ...

Read

"

WIDTH=1

1. Fully
2. Mostly
3. Somewhat
4. A little
5. Not at all
6. **Don't know**
7. **Refused**

Q12 HAD FEET EXAMINED IN LAST 12 MONTHS

"Q12. In the last 12 months have you had your bare feet examined by a person caring for your diabetes?

"

WIDTH=1

1. Yes
2. Done longer ago
3. Other (specify)
4. No
5. **Don't know**
6. **Refused**

Q13 WEIGHED BY DR/NURSE IN LAST 12 MONTHS

"Q13. In the last 12 months have you been weighed by a doctor or nurse?

"

WIDTH=1

1. Yes
2. Done longer ago
3. Other (specify)
4. No
5. **Don't know**
6. **Refused**

Q14 HOW CONTROLLED DIABETES IS

"Q14. The next questions are about the management of your diabetes.

How well controlled do you think your diabetes is?
Is it ...

Read

"

WIDTH=1

1. Well controlled
2. Partly controlled
3. Not controlled
4. **Don't know**
5. **Refused**

Q15 ON PILLS TO CONTROL SUGAR LEVELS

"Q15. Are you on pills to control your sugar levels?

"

WIDTH=1

1. Yes
2. No
3. **Don't know**
4. **Refused**

IF 1 IN Q15 GO Q18

IF 4 IN Q15 GO Q18

Q16 BEEN ADVISED TO BE ON PILLS

"Q16. Have you been advised to be on pills?

"

WIDTH=1

1. Yes
2. No
3. **Don't know**
4. **Refused**

IF 1 IN Q16 GO Q17

GO Q18

Q17 REASONS NOT ON PILLS

"Q17. What are the reasons you are not on pills?

Do not read

Probe fully _Code all mentions_

"

MR

WIDTH=2

1. On insulin
2. Other (specify)

3. **Don't know**
4. **Refused**

Q18 ON INSULIN TO CONTROL SUGAR LEVELS

"Q18. Are you on insulin to control your sugar levels?

Interviewer note: If R unsure what insulin is,
tell them it is injections some people use

"

WIDTH=1

1. Yes
2. No
3. **Don't know**
4. **Refused**

IF 1 IN Q17
LOAD "1" NEXT

IF 1 IN Q18 GO Q22JMP
IF 4 IN Q18 GO Q23JMP

Q19 BEEN ADVISED TO BE ON INSULIN

"Q19. Have you been advised to be on insulin?

"

WIDTH=1

1. Yes
2. No
3. **Don't know**
4. **Refused**

IF 1 IN Q19 GO Q20
GO Q21JMP

Q20 REASONS NOT ON INSULIN

"Q20. What are the reasons you are not on insulin?

Do not read

Probe fully _Code all mentions_

"

MR

WIDTH=2

1. On pills/medication
2. Other (specify)

3. **Don't know**
4. **Refused**

Q21JMP

=0

IF 2 IN Q19 GO Q21
GO Q22JMP

Q21 LIKELIHOOD OF GOING ON INSULIN

"Q21. Often when a person's diabetes condition worsens, they
are ADVISED to go on insulin, which requires injections.

If you WERE ADVISED to do this, how likely would you be
to go on insulin and give yourself injections?

Read

"

WIDTH=1

1. Very unlikely
2. Unlikely
3. Neither unlikely nor likely
4. Likely
5. Very likely
6. **Don't know**
7. **Refused**

Q22JMP

=0

IF 1 IN Q18 GO Q22A
GO Q23JMP

Q22A REGULARLY TAKE INSULIN

"Q22A. Do you take your insulin regularly, as prescribed by
your doctor?

"

WIDTH=1

1. Yes
2. Take it, but not as regularly as prescribed
3. Other (specify)
4. No
5. **Don't know**
6. **Refused**

IF 2 IN Q22A GO Q22B
IF 4 IN Q22A GO Q22B
GO Q23JMP

Q22B REASONS DON'T TAKE INSULIN REGULARLY AS PRESCRIBED

"Q22B. What are the reasons you don't take it as regularly as
prescribed?

Probe fully

"

WIDTH=1000

Q23JMP

=0

IF 1 IN Q15 GO Q23A
GO Q24

Q23A TAKE PILLS REGULARLY AS PRESCRIBED

"Q23A. Do you take your pills regularly, as prescribed by your doctor?

"

1. Yes
2. Take them, but not as regularly as prescribed
3. Other (specify)
4. No
5. **Don't know**
6. **Refused**

IF 2 IN Q23A GO Q23B

IF 4 IN Q23A GO Q23B

GO Q24

Q23B REASONS DON'T TAKE PILLS AS PRESCRIBED

"Q23B. What are the reasons you don't take your pills as regularly as prescribed?

Probe fully

"

WIDTH=1000

Q24 FREQUENCY TEST OWN BLOOD GLUCOSE LEVELS

"Q24. How often do YOU test your OWN blood glucose levels with a finger prick test?

Is it ...

Read

"

WIDTH=1

1. Not at all
2. Less than once a day
3. Once a day
4. 2-3 times a day
5. 4 or more times a day
6. **Don't know**
7. **Refused**

IF 6-7 IN Q24 GO Q26

IF 1 IN Q24 GO Q27G

Q25 BLOOD TEST MORE OR LESS THAN REQUESTED

"Q25. Is this the same, more, or less often than you have been asked to do it?

"

WIDTH=1

1. The same
2. More
3. Less
4. **Don't know**
5. **Refused**

Q26 HOW USE RESULTS OF BLOOD GLUCOSE TESTS

"Q26. What do you use the results of your blood glucose tests for?

If need be, ask: What do the results of your blood sugar tests tell you?

```

    _Do not read_

    _Probe fully_   _Code all mentions_
"
MR
WIDTH=7
1. To check or alter my insulin
2. To check or alter my tablets
3. To help decide what to eat
4. To tell me if I am 'hypo'/low blood sugar
5. To tell me if I am 'hyper'/high blood sugar
6. To decide whether to contact my doctor or nurse
10. Don't use them for anything
7. Other (specify)
-----
8. **Don't know**
9. **Refused**

Q27G  GRID FOR Q27
"Q27G.      The District Health Board wants to find out which topics
           people know a lot about and which ones need more public
           education.

           I am going to read you some statements about diabetes
           and for each I would like you to tell me whether it is
           TRUE or FALSE, or if you DON'T KNOW.
"
1. It is mainly people who eat a lot of sugar who get diabetes
2. Diabetes doesn't affect young people
3. You can have diabetes and not realise it
4. Having diabetes increases your risk of developing heart disease
5. There is nothing you can do to prevent getting diabetes

FOR Q27

Q27  TRUE/FALSE STATEMENTS
"Q27.  _[Q27G]_?

           (Is this true or false?)
"
WIDTH=1
1. True
2. False
3. **Don't know**
4. **Refused**

Q28JMP
=0

IF 5 IN Q27G AND 1 IN Q27 GO Q29

Q28  DIABETES PREVENTION
"Q28. What can be done to prevent diabetes?

    _Do not read_

    _Probe fully_   _Code all mentions_
"
MR
WIDTH=8

```

1. Keep fit/active
2. Reduce weight/not get overweight or obese
3. Reduce amount eat/portion size
4. Reduce fat in diet
5. Control/reduce sugar
6. Eat vegetables
7. Eat fruit
8. Other (specify)

-
9. **Don't know**
 10. **Refused**

Q29 ENOUGH KNOWLEDGE TO MANAGE OWN DIABETES

"Q29. Do you feel you know enough to manage your diabetes?

"

WIDTH=1

1. Yes
2. No
3. **Don't know**
4. **Refused**

Q30 SMOKE CIGARETTES

"Q30. Do you smoke cigarettes at all nowadays?

"

WIDTH=1

1. Yes
2. No
3. **Don't know**
4. **Refused**

Q31A EVER BEEN TO DIABETES EDUCATION/TRAINING COURSE

"Q31A. We now have some questions about education and courses about diabetes. Have you ever been to a diabetes education or training course on how to help you manage your diabetes?

Interviewer note: This includes information provided
one-on-one by their doctor or nurse.

"

WIDTH=1

1. Yes
2. No
3. **Don't know**
4. **Refused**

IF 2-4 IN Q31A GO Q35

Q31B WAS TRAINING PART OF GROUP

"Q31B. Did you receive this education as part of a group, or was it one-on-one?

"

WIDTH=1

1. Part of group
2. One-on-one
5. Both one-on-one and as part of a group
3. **Don't know**
4. **Refused**

IF 2 IN Q31B GO Q31C

GO Q32

Q31C HOW LONG DID TRAINING LAST

"Q31C. How long did this education or training last?
Was it ...

Read

"

WIDTH=1

1. 5 minutes or less
2. 6 to 15 minutes
3. 16 to 30 minutes
4. 31 to 60 minutes
5. Longer than one hour
6. **Don't know**
7. **Refused**

Q32 TRAINING PROVIDED BY

"Q32. Who conducted the training?

Do not read - code all mentions

"

MR

WIDTH=11

1. Primary care - GP/others in GP practice
2. Hospital
3. Pharmacy
4. Church
5. Marae
6. Community group
7. Diabetes Projects Trust
8. Diabetes Auckland
9. Other Diabetes organisation
10. Manukau Super Clinic
11. Other (specify)

12. **Don't know**

13. **Refused**

Q33 HOW FOUND OUT ABOUT TRAINING

"Q33. How did you find out about the training?

Do not read _Probe to no_

"

MR

WIDTH=6

1. GP practice referral
2. Family/friends
3. Church, marae, or community group
4. Pharmacy
5. Word of mouth
6. Other (specify)

7. **Don't know**

8. **Refused**

Q34 CHANGES MADE AS A RESULT OF TRAINING

"Q34. What changes, if any, did you make as a result of the
training?

Probe fully

"

WIDTH=1000

GO Q37

Q35 EVER OFFERED OPPORTUNITY TO ATTEND EDUCATION COURSE

"Q35. Have you ever been offered the opportunity to attend a diabetes education or training course about how to help manage your diabetes?

"

WIDTH=1

1. Yes
2. No
3. **Don't know**
4. **Refused**

IF 2-4 IN Q35 GO Q37

Q36 REASONS DECIDED NOT TO DO COURSE

"Q36. What were the reasons you have not done this course?

Do not read

Probe fully _Code all mentions_

"

MR

WIDTH=6

1. Cost
 2. Transportation
 3. Didn't want to
 4. Didn't need to
 5. Course has not yet started
 6. Other (specify)
-
7. **Don't know**
 8. **Refused**

Q37 HOSPITAL STAY IN LAST 12 MONTHS

"Q37. Now we have some questions about stays in hospital.

In the last 12 months have you stayed in the hospital overnight FOR ANY REASON?

Interviewer note: this can be for reasons unrelated to _diabetes_

"

WIDTH=1

1. Yes
2. No
3. **Don't know**
4. **Refused**

IF 2-4 IN Q37 GO Q46

Q38 DIABETES REASONS FOR MOST RECENT HOSPITAL STAY

"Q38. Was your diabetes the reason for your MOST RECENT stay in hospital overnight?

"

WIDTH=1

1. Yes
2. No

3. Diabetes first diagnosed on this last hospital stay
4. Did not have diabetes on last hospital visit
5. **Don't know**
6. **Refused**

IF 4 IN Q38 GO Q46

Q39 HOSPITAL IMPROVEMENTS TO BETTER MANAGE DIABETES

"Q39. During your MOST RECENT stay in hospital, what improvements could have been made to help you better manage your diabetes?

Do not read

Probe fully _Code all mentions_

Interviewer note: This most recent stay might have
been for reasons unrelated to diabetes

"

MR

WIDTH=6

1. Staff knowledge
2. Be provided with more information about my diabetes/how to manage it
3. Use of medication
4. Testing of blood glucose meter
5. Meals
6. Other (specify)

-
7. **Diabetes first diagnosed on this last hospital stay**
 8. **Been diagnosed since last hospital visit**
 9. **None/ no improvements needed**
 10. **Don't know**
 11. **Refused**

IF 7-8 IN Q39 GO Q46

Q40A HOSPITAL STAFF KNOWLEDGE ABOUT DIABETES

"Q40A. (During your most recent stay in hospital overnight,) how KNOWLEDGEABLE were the staff about your diabetes?

Read

"

WIDTH=1

1. Very
2. Somewhat
3. A little
4. Not at all
5. **Their help wasn't needed**
6. **Don't know**
7. **Refused**

IF 5 IN Q40A GO Q41

Q40B HOSPITAL STAFF HELPFUL

"Q40B. (During your most recent stay in hospital overnight,) how HELPFUL were the staff with managing your diabetes?

Read

"

WIDTH=1

1. Very
2. Somewhat
3. A little
4. Not at all
5. **Their help wasn't needed**
6. **Don't know**
7. **Refused**

Q41 VISITED BY DIABETES TEAM LAST HOSPITAL STAY

"Q41. (During your most recent stay in hospital overnight,) were you visited by someone from the hospital diabetes specialist team, such as a diabetes specialist nurse, diabetic consultant or dietician?

"

WIDTH=1

1. Yes
2. No
3. **Don't know**
4. **Refused**

Q42JMP

=0

IF 1 IN Q18 GO Q42

GO Q44

Q42 WHO MANAGED INSULIN DURING LAST HOSPITAL STAY

"Q42. (During your most recent stay in hospital overnight,) who managed and administered your insulin?

Do not read _Code all mentions_

"

MR

WIDTH=3

1. I did
2. Staff did
3. Other (specify)

4. Not on insulin whilst in hospital
5. **Don't know**
6. **Refused**

Q44 SUITABLE DIABETIC MEALS DURING LAST HOSPITAL STAY

"Q44. (During your most recent stay in hospital overnight,) were you given meals that were suitable for your diabetes?

"

WIDTH=1

1. Yes
2. Sometimes
3. No
4. **Don't know**
5. **Refused**

IF 2-3 IN Q44 GO Q45

GO Q46

Q45 REASONS MEALS NOT SUITABLE

"Q45. In what ways were the meals not suitable?

Probe fully

```

"
WIDTH=1000

Q46 DID NOT GET TO SEE GP/NURSE WHEN NEEDED
"Q46. Now we have some questions about using GP services.
  In the last 12 months, has there been any time when you
  needed to see a GP or nurse about your diabetes, but
  DIDN'T get to see them?

  _Interviewer note: GP services are the services provided_
  _by doctors and those who work with them in your LOCAL_
  _community. They do NOT include people who work in hospitals._
"
WIDTH=1
1. Yes
2. No
3. **Don't know**
4. **Refused**

IF 2-4 IN Q46 GO Q49

Q47 MAIN REASON NOT ABLE TO SEE GP/NURSE WHEN NEEDED
"Q47. What was the one main reason you were NOT able to see a
  GP or nurse for your diabetes the last time you needed
  to?

  _Do not read_ _Probe clear answer_
"
WIDTH=1
1. Costs too much
2. Had no transport to get there
3. Lack of childcare
4. It was after hours
5. Couldn't get an appointment soon enough/ at a suitable time
6. Couldn't spare the time
7. Didn't want to make a fuss
8. Other (specify)
9. **Don't know**
10. **Refused**

IF 9-10 IN Q47 GO Q49

Q48 ANY OTHER REASONS NOT ABLE TO SEE GP/NURSE
"Q48. Were there any other reasons you weren't able to?

  _Do not read_

  _Probe fully_ _Code all mentions_
"
MR
WIDTH=8
1. Costs too much
2. Had no transport to get there
3. Lack of childcare
4. It was after hours
5. Couldn't get an appointment soon enough/ at a suitable time
6. Couldn't spare the time
7. Didn't want to make a fuss
8. Other (specify)
-----

```

9. **Don't know**
10. **Refused**
11. **No other reason**

NOT Q47
USE 8-11

Q49 REASON FOR MOST RECENT VISIT TO GP FOR DIABETES

"Q49. The last time you went to your GP service FOR YOUR DIABETES,
what was the reason?

Do not read

Probe fully _Code all mentions_

"

MR

WIDTH=6

1. They asked to see me (recalled)
2. I was unwell
3. Needed a new prescription
4. To have tests
5. Regular diabetes check-up
6. Other (specify)

7. **Last visit was when got diagnosed**
8. **Not been to GP since got diagnosed**
9. **Don't know**
10. **Refused**

Q50 GP'S PRACTICE DISCUSSES DIABETES TREATMENT

"Q50. Does your GP service discuss the treatment of
your diabetes with you ...

Read

"

WIDTH=1

1. Less than you want
2. As much as you want
3. More than you want
4. **Don't know**
5. **Refused**

Q51A WAYS GP SERVICE COULD IMPROVE CARE OF DIABETES

"Q51A. Are there any ways your GP service could improve their
care of your diabetes?

"

WIDTH=1

1. Yes
2. No
3. **Don't know**
4. **Refused**

IF 1 IN Q51A GO Q51B
GO Q52A

Q51B WAYS GP SERVICE COULD IMPROVE

"Q51B. In what ways?

Probe fully

"

WIDTH=1000

Q52A OTHER PLACES GO FOR ADVICE REGARDING DIABETES

"Q52A. Other than GP and Hospital services, do you go
anywhere else for health advice regarding your diabetes?

"

WIDTH=1

1. Yes
2. No
3. **Don't know**
4. **Refused**

IF 1 IN Q52A GO Q52B
GO Q54

Q52B WHERE ELSE GO FOR ADVICE

"Q52B. Where else do you go (for health advice regarding your
diabetes)?

Do not read

Probe fully _Code all mentions_

"

MR

WIDTH=12

1. Traditional healers
2. Naturopath
3. Homeopath
4. Diabetes support group
5. Church
6. Marae
7. Helpline
8. Pharmacy
9. Family/friends
10. Diabetes organization
11. Internet
12. Other (specify Q52C)
-
13. None
14. **Don't know**
15. **Refused**

IF 13-15 IN Q52B GO Q54
GO Q53G

Q52C OTHER SPECIFY FOR Q52B

Q53G GRID FOR Q53

1. Traditional healers
2. Naturopath
3. Homeopath
4. Diabetes support group
5. Church
6. Marae
7. Helpline
8. Pharmacy
9. Family/friends
10. Diabetes organization
11. Internet
12. Other (specify Q52C)

USE Q52B

FOR Q53

Q53 IMPORTANCE OF ADVICE FROM OTHER SOURCES

"Q53. Do you think the advice you get from the
_ [Q53G] _ is of more, less or
the same importance as the advice
you get from your GP and the hospital?

First time answered, read answer coded so you
can check they have understood the question

"

WIDTH=1

1. More importance than advice from GP and hospital
2. Same
3. Less
4. **Don't know**
5. **Refused**

Q54 RATING OF QUALITY OF LIFE

"Q54. The next several questions are about how you feel about
your quality of life, health, and other areas of your
life.

We ask that you think about your life in the last two
weeks.

How would you rate your quality of life?

Read

"

WIDTH=1

1. Very poor
2. Poor
3. Neither good nor poor
4. Good
5. Very good
6. **Don't know**
7. **Refused**

Q55 ENOUGH ENERGY FOR EVERYDAY LIFE

"Q55. Do you have enough energy for everyday life?

Read

"

WIDTH=1

1. Not at all
2. A little
3. Moderately
4. Mostly
5. Completely
6. **Don't know**
7. **Refused**

Q56 ENOUGH MONEY FOR NEEDS

"Q56. Do you have enough money to meet your needs?

Read

"
WIDTH=1
1. Not at all
2. A little
3. Moderately
4. Mostly
5. Completely
6. **Don't know**
7. **Refused**

Q57 SATISFACTION WITH OWN HEALTH
"Q57. How satisfied are you with your health?

Read
"
WIDTH=1
1. Very dissatisfied
2. Dissatisfied
3. Neither dissatisfied nor satisfied
4. Satisfied
5. Very satisfied
6. **Don't know**
7. **Refused**

Q58 SATISFACTION WITH ABILITY TO DO DAILY LIVING ACTIVITIES
"Q58. How satisfied are you with your ability to perform your
daily living activities?

Read
"
WIDTH=1
1. Very dissatisfied
2. Dissatisfied
3. Neither dissatisfied nor satisfied
4. Satisfied
5. Very satisfied
6. **Don't know**
7. **Refused**

Q59 SATISFACTION WITH SELF
"Q59. How satisfied are you with yourself?

Read
"
WIDTH=1
1. Very dissatisfied
2. Dissatisfied
3. Neither dissatisfied nor satisfied
4. Satisfied
5. Very satisfied
6. **Don't know**
7. **Refused**

Q60 SATISFACTION WITH PERSONAL RELATIONSHIPS
"Q60. How satisfied are you with your personal relationships?

If asked: This includes relationships with any spouse
or partner, plus other family members and friends.

Read
"

"

WIDTH=1

1. Very dissatisfied
2. Dissatisfied
3. Neither dissatisfied nor satisfied
4. Satisfied
5. Very satisfied
6. **Don't know**
7. **Refused**

Q61 SATISFACTION WITH LIVING CONDITIONS

"Q61. How satisfied are you with the conditions of your living place?

Read

"

WIDTH=1

1. Very dissatisfied
2. Dissatisfied
3. Neither dissatisfied nor satisfied
4. Satisfied
5. Very satisfied
6. **Don't know**
7. **Refused**

Q62 DESCRIPTION OF HEALTH PRIORITY

"Q62. Which of the following best describes the priority you give to your own health compared with things like your job, money or your childrens' health?

Read

"

WIDTH=1

1. My health is highest priority
2. My health is high priority but other things are higher
3. My health is not high priority
4. **Don't know**
5. **Refused**

Q63 FINDINGS AVAILABLE ON THE WEBSITE

"Q63. That is the end of the questions. A summary of the findings will be available on the website www.letsbeatdiabetes.org.nz before the end of this year, but if you would like us to send you a copy, we will collect your contact details now.

"

WIDTH=1

1. Want a copy
2. Don't need a copy

IF 2 IN Q63 GO Q64

Q63A DETAILS FOR THOSE WHO WANT INFORMATION

EDIT

"Q63A. Can you please give me your FULL NAME and MAILING ADDRESS so we can send you the information?
Do you have an email address we could send the results to?

Interviewer: Record full name and address details in
appropriate space, ask for email address also

Interviewer: Please enter name and address accurately and
spell back to the respondent

Please enter name and address details as you would see
them on an envelope

First Name: [Q63FNAM]
Last Name: [Q63LNAM]
Street/P.O. Box: [Q63STR]
Suburb: [Q63ADR]
Town/City: [Q63CITY]
Email address: [Q63EMAIL]

"

GO Q64

Q63FNAM FIRST NAME
Q63LNAM LAST NAME
Q63STR STREET
Q63ADR SUBURB
Q63CITY TOWN OR CITY
Q63EMAIL EMAIL ADDRESS

Q64 WILLING TO RE-CONTACT

"Q64. We may want to find out more about some of the issues we
have asked you about today.

Would you be willing to be called again in the future?

"

WIDTH=1

1. Yes
2. No
3. **Don't know**
4. **Refused**

IF 1 IN Q64 AND 1 IN Q63 GO Q64B
IF 1 IN Q64 AND 2 IN Q63 GO Q64A
GO Q64C

Q64A CONTACT DETAILS FOR RE-CONTACT
EDIT

"Q64A. So that we can contact you, can I please get your name
and double check your telephone number?

Name: [Q64NM]
Phone number: [Q64PH]
Mobile number: [Q64MOB]

"

GO Q64C

Q64NM NAME
Q64PH PHONE NUMBER
Q64MOB MOBILE NUMBER

Q64B CONTACT DETAILS FOR RE-CONTACT
EDIT

"Q64B. So that we can contact you, can I please double check
your telephone number?

Phone number: [Q64PH]
Mobile number: [Q64MOB]

"

Q64C THANK AND CLOSE

"Q64C.

Read to respondent to thank them for their time

Thank you for taking part in the survey today.

We very much appreciate your help.

"

PAUSE

=0

Q99END

"

Finally, I'd just like to remind you that I'm _[Q0IV]_
from PHOENIX Research.

If you have any queries at all about this survey, please feel
free to phone PHOENIX Research during office hours on
0800 2 PHOENIX. That is the same as 0800 274 636.

If you or anyone in your household have anything you want to
find out or discuss about diabetes, I can provide you with a
contact organisation and phone number. Do you want this?

If Yes, provide information from list

Thanks again for your time.

"

PAUSE

=0

Q65 INTERVIEWER ASSISTED INTERVIEW

"Q65. Respondent assistance because of difficulties with
English language?

"

WIDTH=1

1. Assisted in own language
2. Assisted in English
3. Assisted in both English and own language
4. Not assisted

Q66 PERCEPTION OF RESPONDENT DIFFICULTY UNDERSTANDING QUESTIONS

"Q66. Your perception of respondent difficulty understanding
questions?

"

WIDTH=1

1. None
2. A little
3. Some
4. A lot

Q67 ACCURACY OF RESPONDENT ANSWERS

"Q67. Your perception of accuracy of respondent answers?

"

WIDTH=1

1. Probably all accurate
2. Probably mostly accurate
3. Probably mostly inaccurate
4. Somewhere in between

Q99IQS IQS STATEMENT

"Q99IQS.

Interviewer note: Please answer Yes if you agree
with the statement below regarding this interview
or No if you do not.

I hereby certify that this interview I administered was conducted
in
accordance with the Market Research Society's Code of Practice.

"

WIDTH=1

1. Yes
2. No

IF 1 IN Q99IQS GO Q99END2

Q99IQSR

"Q99IQSR. _Interviewer note: Please state why you don't feel the
interview_
was carried out according to the Code of Practice and what was
_the difficulty/problem with the interview"

WIDTH=500

Q99END2

"Q99END2. _Hit enter to send interview through_
"

BLANK

Q0QUO

1. 300 Maori
2. 150 Samoan
3. 100 Tongan
4. 100 Other Pacific Island
5. 150 Indian
6. 50 Chinese
7. 150 Other Asian
8. 300 Other

USE Q99LOC