

National Diabetes Services Scheme Evaluation 2021-2024

Acknowledgement of Country

The University of Technology Sydney acknowledges the Gadigal People of the Eora Nation upon whose ancestral lands our campuses stand. We would also like to pay respect to the Elders both past and present, acknowledging them as the traditional custodians of knowledge for these lands.

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List of Abbreviations

ACT	Australian Capital Territory
AIHW	Australian Institute of Health and Welfare
CALD	Culturally and Linguistically Diverse
CGM	Continuous Glucose Monitoring
DAFNE	Dose Adjustment for Normal Eating
DESMOND	Diabetes Education and Self-Management for Ongoing and Newly Diagnosed
DES-SF	Diabetes Empowerment Scale – Short Form
DSTAR	Diabetes Strengths and Resilience
FY	Financial Year
GP	General Practitioner
NDSS	National Diabetes Services Scheme
NPS	Net Promoter Score
NSW	New South Wales
NT	Northern Territory
PAM	Patient Activation Measure
PAID	Problem Areas in Diabetes
QLD	Queensland
SA	South Australia
TAS	Tasmania
WA	Western Australia
UTS	University of Technology Sydney

Executive Summary

This annual report presents both quantitative and qualitative findings of process evaluation, outcomes evaluation and economic evaluation of the NDSS evaluation. This report also presents the detailed results of 14 NDSS programs evaluated between 1 July 2021 and 30 June 2022.

Across the year a summary of the findings are as follows:

- Of the 14 NDSS programs evaluated, the average Net Promoter Score (NPS) was 78 per program (minimum: 63; maximum: 100), indicating participants found the NDSS programs valuable and were highly likely to recommend them to other people living with diabetes;
- Of all diabetes programs evaluated, the average age of evaluation respondents was 61 years old, with approximately 2% being Aboriginal and Torres Strait Islander peoples and one in four living in outer regional or remote areas. About 10% of respondents speak a language other than English at home;
- Among all evaluation respondents, on average, 14% were living with type 1 diabetes, three in four were living with type 2 diabetes, and one in five were newly diagnosed with diabetes;
- The DESMOND program was effective in significantly increasing people with diabetes' confidence in making informed decisions for diabetes self-management;
- Following OzDAFNE attendance, people with type 1 diabetes reported significantly reduced diabetes-related distress and increased diabetes empowerment;
- Topic-specific self-management programs for registrants were effective in increasing evaluation respondents' knowledge (an average 20% increase) and confidence (an average 23% increase) in diabetes management after the participation in programs;
- Of all other self-management programs, almost all evaluation respondents (90%) indicated those programs were helpful to increase their awareness of diabetes management after attending those programs;
- Qualitative written feedback on the evaluated programs highlighted the value of NDSS programs and services to people living with diabetes. Respondents felt that the programs were well structured and informative. After attending the programs, they found renewed confidence and motivation to look after their diabetes;
- Qualitative focus group and interview feedback from NDSS Agents revealed that:
 - The NDSS provides highly regarded programs and services;
 - The strong consumer focus was considered to be a key feature of NDSS programs and services;
 - The complementary nature of the NDSS and external organisations and services was advantageous.
- Economic analysis showed that:
 - A majority of people with diabetes, 87%, were living with type 2 diabetes ;
 - Blood/urine glucose monitoring strips account for 59% of the products supplied on the NDSS;
 - Over a five-year period, there was a 14% increase in registrant numbers on the NDSS.

1. Introduction

The National Diabetes Services Scheme (NDSS) is an initiative of the Australian Government that commenced in 1987 and is administered by Diabetes Australia. The University of Technology Sydney (UTS) has undertaken a three year evaluation of all NDSS programs, services and subsidised products over the period from 1 July 2021 to 30 June 2024. The UTS Evaluation team are working with and reporting to Diabetes Australia and the Department of Health and Aged Care.

The evaluation includes three elements: process evaluation; outcome evaluation; and economic evaluation of NDSS programs, services, and subsidised products. The key aims of this NDSS evaluation are to:

- Assess the NDSS and its implementation to inform ongoing practice development;
- Assess the effectiveness of the NDSS in improving intended outcomes for people with diabetes and other key NDSS stakeholders;
- Assess the economic benefits of the NDSS.

The focus during year one of the NDSS Agreement has been on completing the first national registrant survey, establishing evaluation activities for programs provided by Diabetes Australia and NDSS Agents to people living with diabetes and conducting focus groups to generate deeper insights to drive recommendations moving forward.

The body of this report presents the evaluation findings across the year of the NDSS programs, services, and products; demonstrates analyses of the qualitative feedback from NDSS Agents; and provides the key recommendations for future implementation. For the sake of length and clarity, evaluation methods, individual program overview and delivery information, and Quarter 3 and Quarter 4 cost data analyses can be found in the appendices.

Over the course of 2021-2022 Diabetes Australia worked towards implementing a core suite of nationally consistent programs for national delivery. As national consistency was not fully implemented until the beginning of 2022-2023 a number of programs evaluated in this report will cease from 2022-2023 or that will commence being provided nationally from 1 July 2022. This report will therefore have gaps in the evaluation of some NDSS programs and services.

In 2021-2022 UTS established modified evaluation tools and processes for the core suite of NDSS programs to be delivered from 2022-2023 and followed a digital by default approach to collecting evaluation data. UTS in consultation with Diabetes Australia is progressing toward the review and establishment of new evaluation methods across all NDSS activities including health professional programs, Foot Forward, Diabetes in Schools, and online programs.

The NDSS programs and services included in this annual evaluation report consist of comprehensive self-management programs for registrants; topic specific self-management programs for registrants; and other self-management programs for registrants. The Northern Territory NDSS Agent provided separate, targeted programs based on the differing needs of their population and local health services and these have also been included.

The full list of NDSS programs evaluated can be found in Appendix C. Please note, well-established research and clinical evidence has been published for the MyDesmond¹⁻³ and Beat It programs.⁴⁻⁶ These two programs will be evaluated by UTS as part of the nationally consistent suite of programs in 2022-2023.

2. Methods

From 1 July 2021 to 30 June 2022, non-identifiable data of NDSS programs was received quarterly by UTS from NDSS Agents via Diabetes Australia. The effectiveness of NDSS programs was assessed using pre-program and post-program comparisons. A number of assessment scales and measures (e.g. NPS and PAID) were used to inform the results. A full list and individual descriptions can be found in Appendix A.

Online focus groups and interviews were conducted during Quarter 4 of 2021-2022 with NDSS Agents. After having undergone transcription a qualitative analysis was conducted using both the traditional qualitative analysis approach and Leximancer to rank concepts and their relationships. Through the use of both traditional methods and Leximancer, triangulation was achieved.

An economic analysis was conducted on the cost data of programs provided over the year and product cost data provided for the last 5 years. The program cost was calculated as the cost per activity and per attendee, separately. The product cost data analyses cover costs of product supplies, registrants' contributions, and access points. The trend of changes in the number of people registered with the NDSS was also examined. A full breakdown of economic evaluation methods can be found in Appendix A.

3. Evaluation Findings of the Scheme

The evaluation of the NDSS falls into three broad categories: program and service evaluation; findings from focus groups and economic evaluation of programs and products.

Programs and Services:

The demographic and diabetes status profile of respondents of all evaluated programs with valid data (n=7700) is as follows, on average:

- The average age was 61 years old (range: 12-72 years);
- Almost one in four people (23.0%) were living in outer regional areas and 2.4% were living in remote or very remote areas;
- 1.9% were Aboriginal and Torres Strait Islander people;
- 10.6% speak a language other than English at home, excluding CALD education programs;
- Almost three in four people (73.5%) were living with type 2 diabetes and 14.5% were living with type 1 diabetes; and
- Almost one in four people (23.3%) were newly diagnosed with diabetes (i.e. ≤12 months).

Regarding the respondents of Topic-specific Self-Management Programs for registrants evaluated with valid data (n=4,777), the evaluation data shows, on average:

- A 19.6% (i.e. almost one in five people) increase in Diabetes-related knowledge levels after attending the related NDSS programs;
- A 23.1% (i.e. almost one in four people) increase in confidence levels in diabetes management after attending the related NDSS programs

Of the other self-management programs with valid data (n=1,112), such as Basic Registrant Education Sessions, Gestational Diabetes Group Education Session, and CALD Information Sessions, evaluation data shows an average 89.9% increase in diabetes awareness levels after attending the related NDSS programs.

In addition, the average annual Net Promoter Score (NPS)* was 78, with a minimum score of 63 (Basic Registrant Education Sessions) and a maximum score of 100 (OzDAFNE).

Focus Groups:

In 2021-2022 one focus group (n=7) and three one-on-one interviews were conducted with ten NDSS Agents from across Australia. Three key strengths and four areas of further development were identified.

Strengths of the NDSS:

- The NDSS provides highly regarded programs and services;
- The strong consumer focus was considered to be a positive feature of NDSS programs and service; and
- The complementary nature of the NDSS and external organisations and services was advantageous.

Areas for further development of the NDSS:

- Programs and services at an individual level;
- Programs and services at a community level;
- Fostering connections at an institutional level; and
- Enhanced use of technology.

Economic Findings:

The economic analysis of the NDSS incorporates two sections: program cost evaluation of the comprehensive self-management programs for registrants and topic specific self-management programs for registrants, as well as NDSS subsidised product cost evaluation.

An aggregated cost per participant was found across the evaluated program categories. OzDAFNE online had the highest cost per participant \$9,763. This is likely due to low awareness of the online program and high overheads to run and maintain the program.

A total of 87% of NDSS registrants (n=1,262,386) are living with type 2 diabetes with 25% requiring insulin. Over a five-year period, there was a 14% increase in NDSS registrant numbers and a 50% increase in registrants requiring insulin. Additionally, product cost analysis found that blood/urine glucose monitoring strips account for 59% of the products supplied on the NDSS.

*Net Promoter Score or NPS is a widely-used metric to provide the core measurement for participants' experience management programs worldwide.

4. Findings of Programs & Services

For 2021-2022, NDSS Agents were asked to provide evaluation data on a sample of nationally consistent programs. All NDSS Agents provided data in line with these requirements, as summarised in Table 1. Some NDSS Agents also voluntarily provided evaluation data for additional programs outside of these requirements (e.g. CALD Education Sessions) and where received in time, this has been analysed and reported herein.

Please note that COVID-19 lockdowns and restrictions heavily impacted many States and Territories' ability to provide face to face programs through Quarters 1-3.

	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Basic Registrant Education	N/A	N/A		N/A	✓	N/A	N/A	N/A
Culturally & Linguistically Diverse Education	N/A	✓		✓		N/A	✓	N/A
CarbSmart	✓	✓		✓	✓	T	✓	✓
FootSmart	✓	✓		✓	✓	✓	C	✓
MedSmart	✓	✓		✓	✓	T	✓	✓
ShopSmart	✓	✓		✓	✓	✓	✓	✓
MonitorSmart	✓	✓		✓	✓		C	✓
Living with Insulin	✓	✓		✓	✓	T	C	✓
Ready Set Go, Let's Move	✓	✓		✓	✓	T	C	✓
Camps					C	✓	C	✓
DESMOND	✓	✓		✓	✓	✓	✓	✓
OzDAFNE		✓			T	T	✓	✓
Gestational Diabetes Group Education			✓€					
Getting Started Group Education			✓€					

Table 1. NDSS program evaluation data received by State/Territory Agent and Quarter, 2021-2022

€ Northern Territory provided two targeted programs based on the differing needs of their population, those two programs are not delivered in any other jurisdiction
 C - Cancelled due to COVID-19 and lockdowns
 T - Not delivered by NDSS Agent as the same or similar program is offered by an alternate organisation and would represent a duplication in service delivery
 N/A - Not part of 2021-2022 evaluation requirements noting some Agents chose to voluntarily provide this data to UTS which has been recorded for reference.
 Blank cells indicate this program was not held in this jurisdiction in the reporting period or evaluation data was not included in this evaluation report.

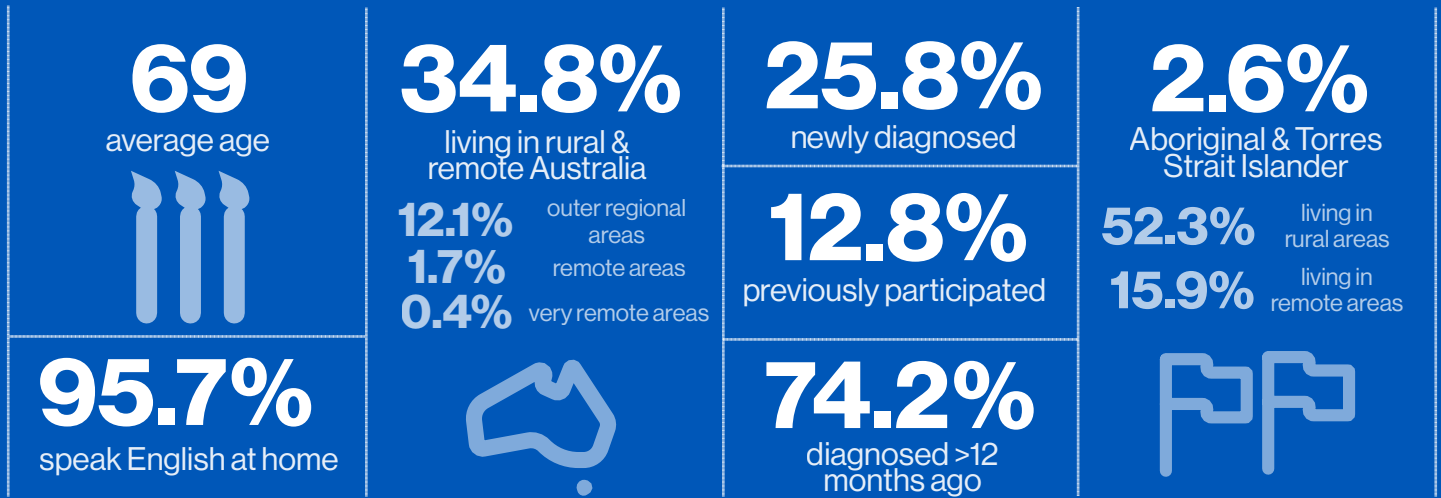
Based on the available data, the evaluation response counts and match rates of pre-program and post-program evaluation surveys for all NDSS programs are provided in Appendix C. Details of program mode, content, and NPS for each quarter and state/territory can also be found in Appendix C.

4.1 Comprehensive Self-Management Programs for Registrants

4.1.1 DESMOND

OF THE 1778 EVALUATION RESPONDENTS*:

NPS=77



Outcome Findings

Evaluation respondents were found to have significantly increased their knowledge and confidence in making informed decisions to self-manage diabetes after their participation in the DESMOND program (Figure 1). All the pre-program and post-program changes below are statistically significant ($p < 0.05$).

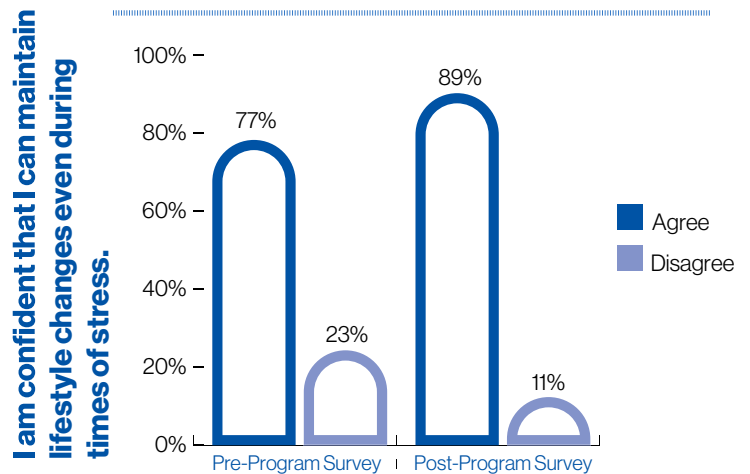
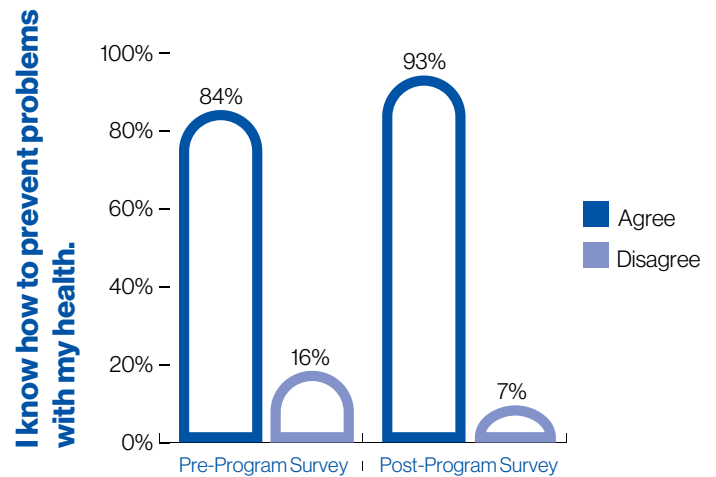
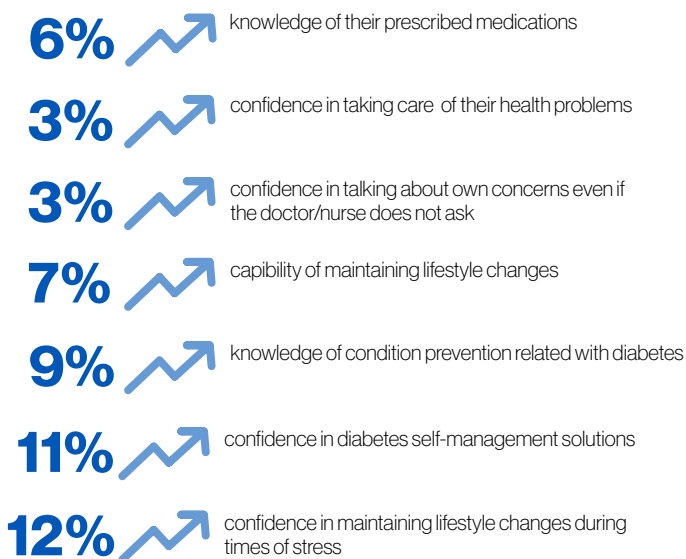


Figure 1. Patient activation change in the DESMOND program

Qualitative Feedback

Overall, Desmond is seen as being informative and motivational. It received very positive feedback about its presentation and the information provided.

“It was very informative, I think it covered all aspects of diabetic issues. I can’t be more appreciative. Well done Educators!”.

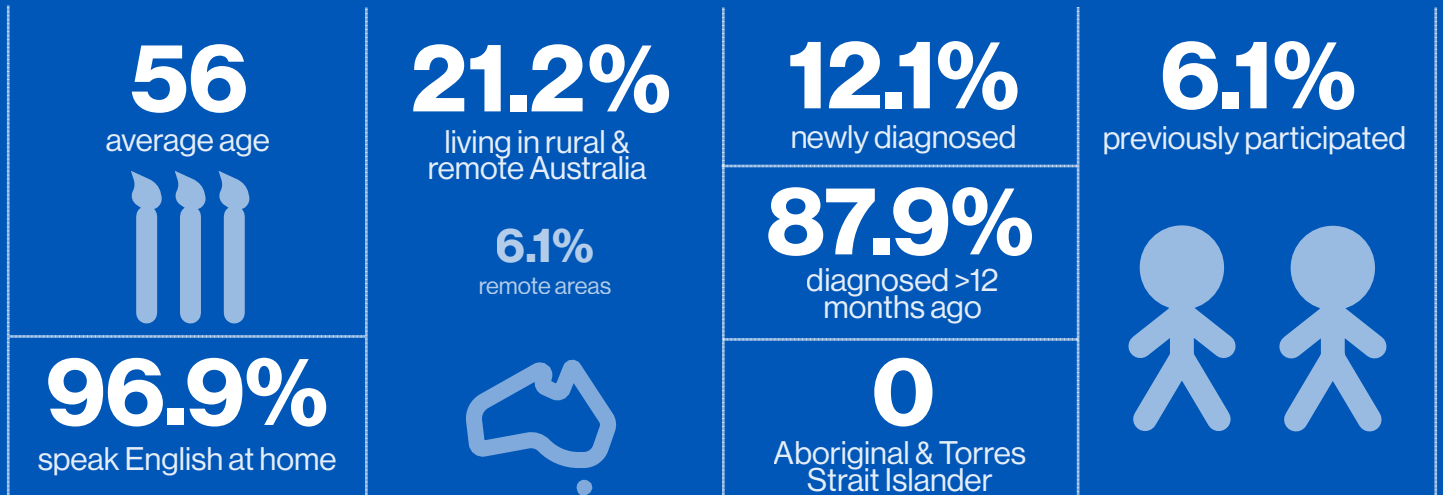
* number refers to the responses with valid pre-program evaluation survey data.

Based on the available data, the evaluation response counts and match rates of pre-program and post-program evaluation surveys for all NDSS programs are provided in Appendix C. Details of program mode, content, and NPS for each quarter and state/territory can also be found in Appendix C.

4.1.2 OzDAFNE

OF THE 33 EVALUATION RESPONDENTS*:

NPS=100



Outcome Findings

Although the evaluation respondent number of OzDAFNE is relative small to elicit a meaningful interpretation of changes in outcomes, the difference in diabetes-related distress levels between pre-program and post-program among respondents were statistically significant (the difference in the mean PAID score⁸: 14.9; $p=0.003$), indicating that respondents were significantly less distressed after attending the OzDAFNE program (Figure 2).

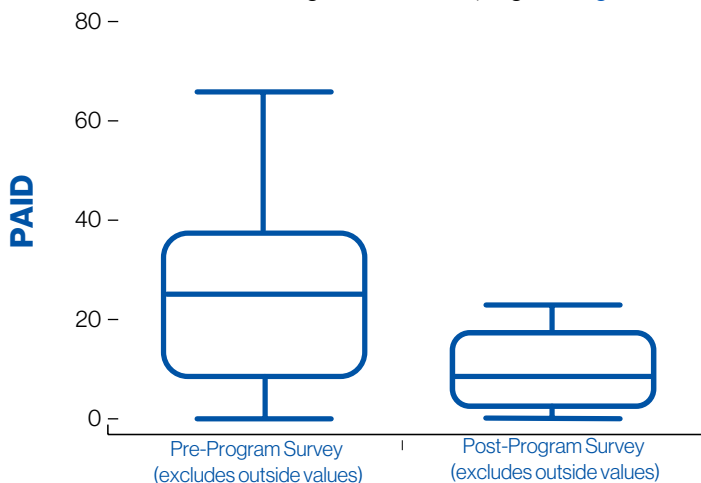


Figure 2. Diabetes-related distress change after attending OzDAFNE program, via Problem Areas in Diabetes (PAID) Scale
Note: Lower scores indicate lower levels of diabetes-related distress.

In addition, being assessed by the Diabetes Empowerment Scale Short Form (DES-SF), evaluation respondents were found to have statistically significantly increased their diabetes empowerment (the difference in the mean DES-SF score: 6.2; $p<0.001$) (Figure 3). It indicated that those respondents have improved their skills and increased confidence in behaviour change.

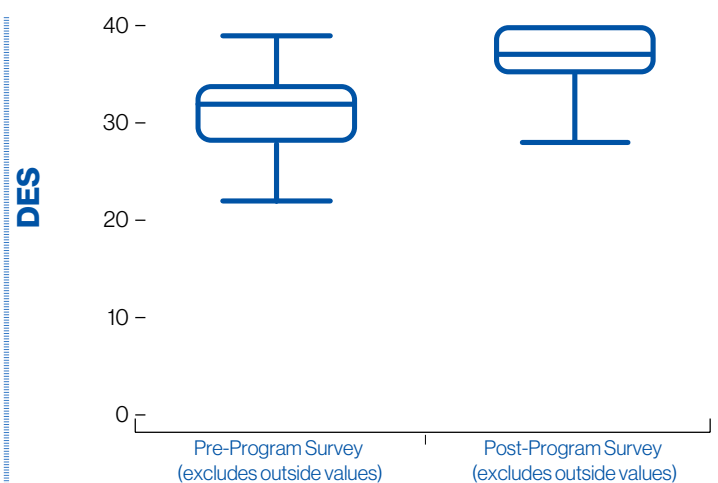


Figure 3. Diabetes Empowerment change after attending OzDAFNE program, via the Diabetes Empowerment Scale
Note: Higher scores indicate improves skills and confidence in diabetes self-management.

Qualitative Feedback

Overall, OzDAFNE is perceived to be very informative and intensive. When commenting on what they intent to change, respondents noted monitoring blood glucose levels and managing dietary intake as common responses.

“It has been extremely useful and I am looking forward to putting the info into practice”

* number refers to the responses with valid pre-program evaluation survey data.

Based on the available data, the evaluation response counts and match rates of pre-program and post-program evaluation surveys for all NDSS programs are provided in Appendix C. Details of program mode, content, and NPS for each quarter and state/territory can also be found in Appendix C.

4.2 Topic-Specific Self-Management Programs For Registrants

4.2.1 CarbSmart

NPS=74

OF THE 1250 EVALUATION RESPONDENTS*:

<p>70 average age</p>	<p>36% living in rural & remote Australia</p> <p>13.2% outer regional areas 2.5% remote areas 0.6% very remote areas</p>	<p>20% newly diagnosed</p> <p>93.7% type 2 3% type 1</p>	<p>1.6% Aboriginal & Torres Strait Islander</p> <p>85% living in rural areas 0 living in remote areas</p>
<p>95.4% speak English at home</p>		<p>80% diagnosed >12 months ago</p>	<p>10% previously participated</p>

Outcome Findings

Participant activation change:

Evaluation respondents were found to have significantly increased their knowledge and confidence in making informed decisions to self-manage diabetes after their participation in the CarbSmart program (Figure 4). The pre-program and post-program changes below are statistically significant (p<0.05).

- 5%** ↑ capability of maintaining lifestyle changes
- 5%** ↑ knowledge of condition prevention related with diabetes
- 8%** ↑ confidence in diabetes self-management solutions
- 9%** ↑ confidence in maintaining lifestyle changes during times of stress

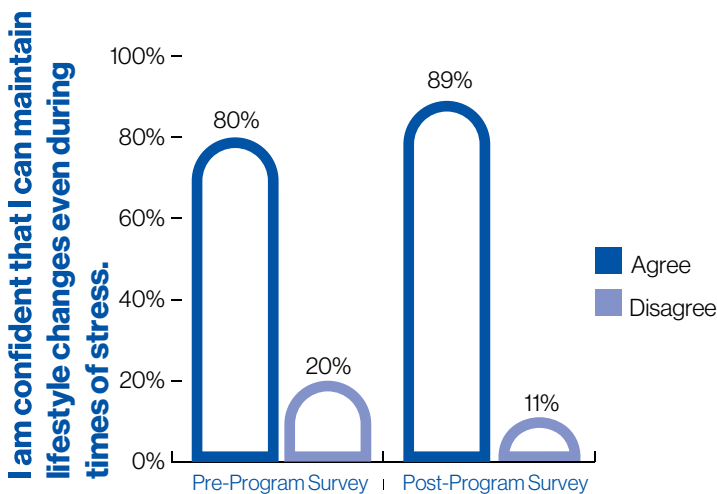


Figure 4. Patient activation change in the CarbSmart program

Diabetes-related knowledge improvement:

The majority of respondents showed significantly improved knowledge in food carbohydrates (all p<0.05). The changes in related knowledge are shown in Table 2.

Do these foods contain carbohydrates?	% correct (Pre)	% correct (Post)	% change
Lollies	58	80	22
Potato	96	98	2
Milk	51	86	35
Red Meat	57	84	27
Banana	70	91	21
Broccoli	62	80	18

Table 2. Knowledge improvement in the CarbSmart program

Confidence enhancement in diabetes management:

The evaluation respondents have also indicated substantial increase in their confidence in eating carbohydrates. All the pre-program and post-program confidence level changes below are statistically significant (p<0.05).

- 36%** ↑ confidence in identifying which foods contain carbohydrates
- 53%** ↑ confidence in the knowledge of carbohydrate levels in different foods
- 56%** ↑ confidence in the knowledge of the effect of different carbohydrates on blood glucose levels

Qualitative Feedback

Overall, CarbSmart is well regarded and described as being “fit for purpose”. Respondents noted in particular the opportunity to take part in group discussions and their interactions with other participants and the facilitators.

“I found this program was enlightening and discussing with people who are in the same situation was well worth being here”

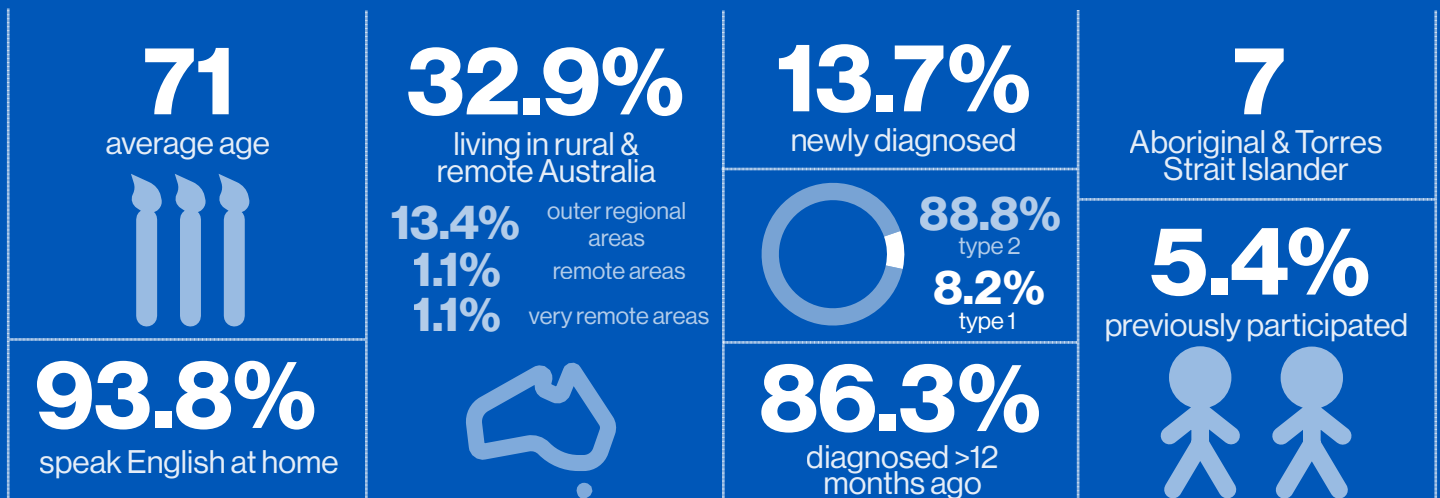
* number refers to the responses with valid pre-program evaluation survey data.

Based on the available data, the evaluation response counts and match rates of pre-program and post-program evaluation surveys for all NDSS programs are provided in Appendix C. Details of program mode, content, and NPS for each quarter and state/territory can also be found in Appendix C.

4.2.2 FootSmart

OF THE 848 EVALUATION RESPONDENTS*:

NPS=73



Outcome Findings

Participant activation change:

Evaluation respondents were found to have significantly increased their knowledge and confidence in making informed decisions to self-manage diabetes after their participation in the FootSmart program (Figure 5). The pre-program and post-program changes below are statistically significant ($p < 0.05$).

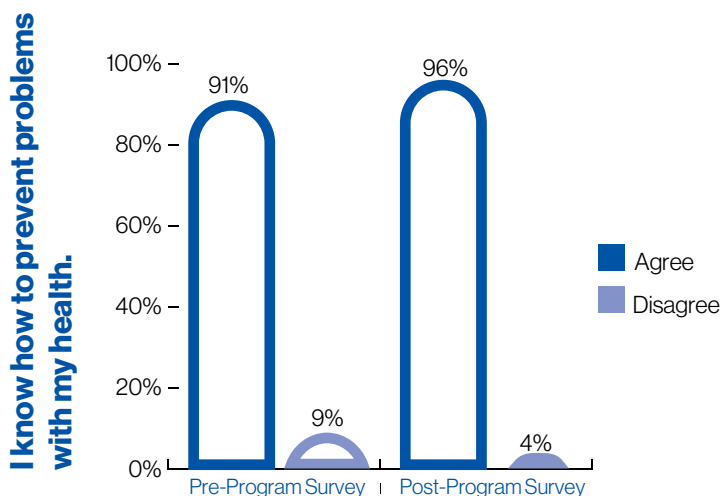
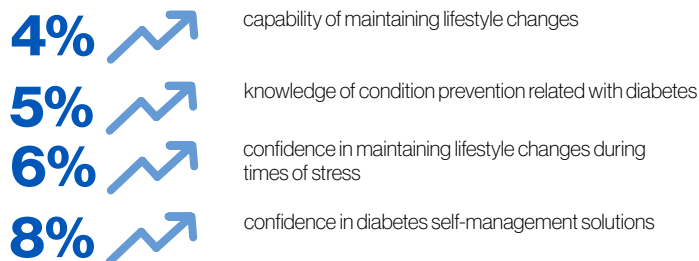


Figure 5 Patient activation change in the FootSmart program

“How important my feet are and how easily and small problem can escalate and become serious”

Diabetes-related knowledge improvement:

Evaluation respondents also showed improvement in the knowledge of diabetes-related foot problems. The percentage changes in choosing correct answers are shown in Table 3 below.

What foot problems are people with diabetes most at risk of?	% correct (Pre)	% correct (Post)	% change
Poor circulation	95	96	1
Loss of feeling in feet	94	95	1
Foot ulcers	88	94	6

Table 3. Knowledge improvement in the FootSmart program

Confidence enhancement in diabetes management:

The survey respondents of FootSmart showed statistically significant changes in confidence regarding what and how to look after their feet (all $p < 0.05$).



Qualitative Feedback

Respondents commented on becoming more knowledgeable about the effect of diabetes on nerves and blood vessels and how foot-related health problems may arise if their diabetes is not properly managed with good blood glucose control.

The course was highly regarded because of the information provided, its everyday usefulness, and the confidence it insured in participants to manage their own care.

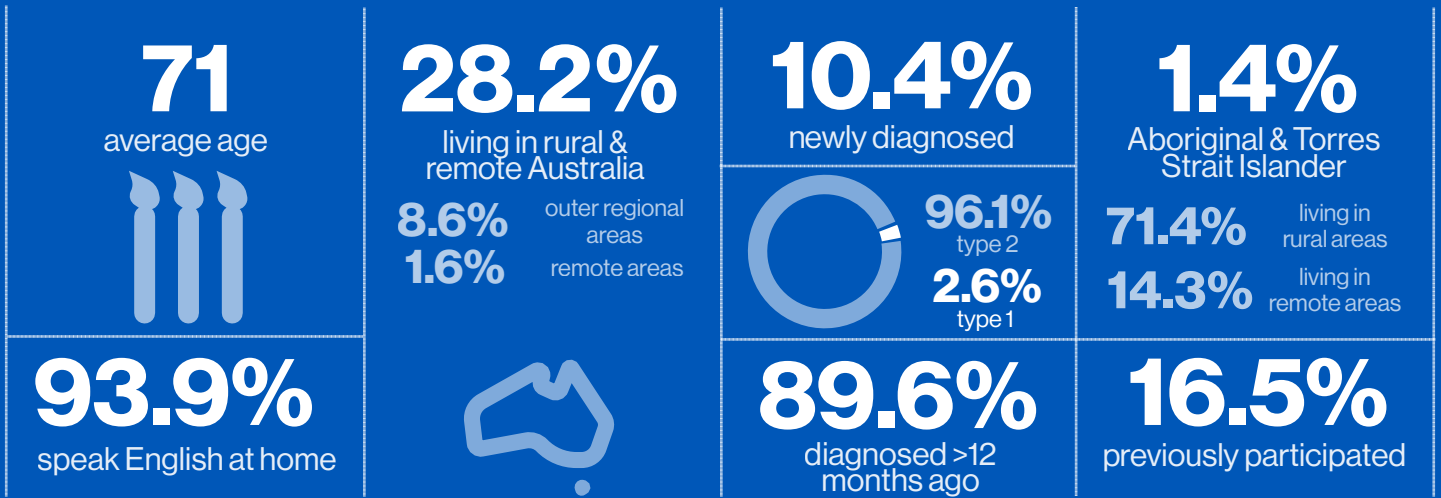
This program is seen as being very informative and full of information, with very little that could be changed. The main areas of interest that participants learnt were focused on how best to care of one's feet; understanding foot ware selection; knowing how diabetes affects the feet; and the importance of daily foot checks.

* number refers to the responses with valid pre-program evaluation survey data.

4.2.3 MedSmart

OF THE 518 EVALUATION RESPONDENTS*:

NPS=84



Outcome Findings

Participant activation change:

Evaluation respondents were found to have significantly increased their knowledge and confidence in making informed decisions to self-manage diabetes after their participation in the MedSmart program (Figure 6). The pre-program and post-program changes below are statistically significant ($p < 0.05$).

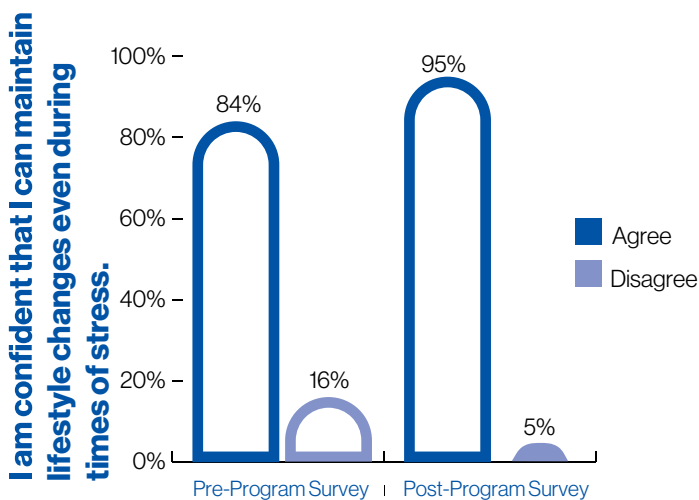
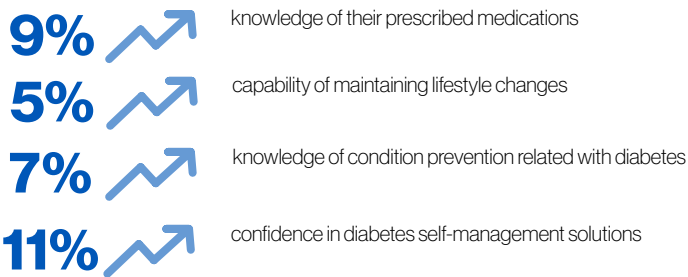


Figure 6. Patient activation change in the MedSmart program

Diabetes-related knowledge improvement:

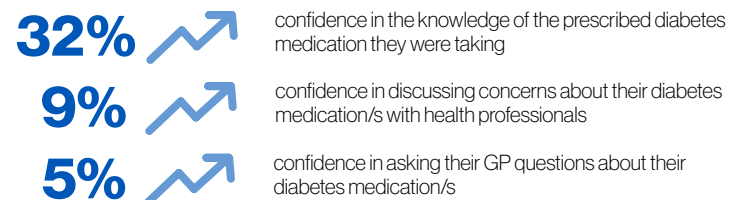
Evaluation respondents showed statistically significant improvement in knowledge of the rationale of diabetes tablets to help lower blood glucose. The changes in related knowledge are shown in Table 4.

Which parts of the body do diabetes tablets work on to help lower blood glucose?	% correct (Pre)	% correct (Post)	% change
Liver	87	98	11
Pancreas	98	99	1
Stomach	69	94	25
Kidney	84	95	11
Muscles	67	89	22

Table 4. Knowledge improvement in the MedSmart program

Confidence enhancement in diabetes management:

The survey respondents have indicated significant increase in their confidence in taking diabetes medications. All the pre-program and post-program confidence level changes below are statistically significant ($p < 0.05$).



Qualitative Feedback

Overall MedSmart participants commented on how the program helped to increase their knowledge of the medication they were taking including potential side effects. The use of visual aids and ensuring the information isn't too technical were potential improvements.

“It was very informative and gave participants taking medications the opportunity to talk about what meds they were on and the side effects they experience.”

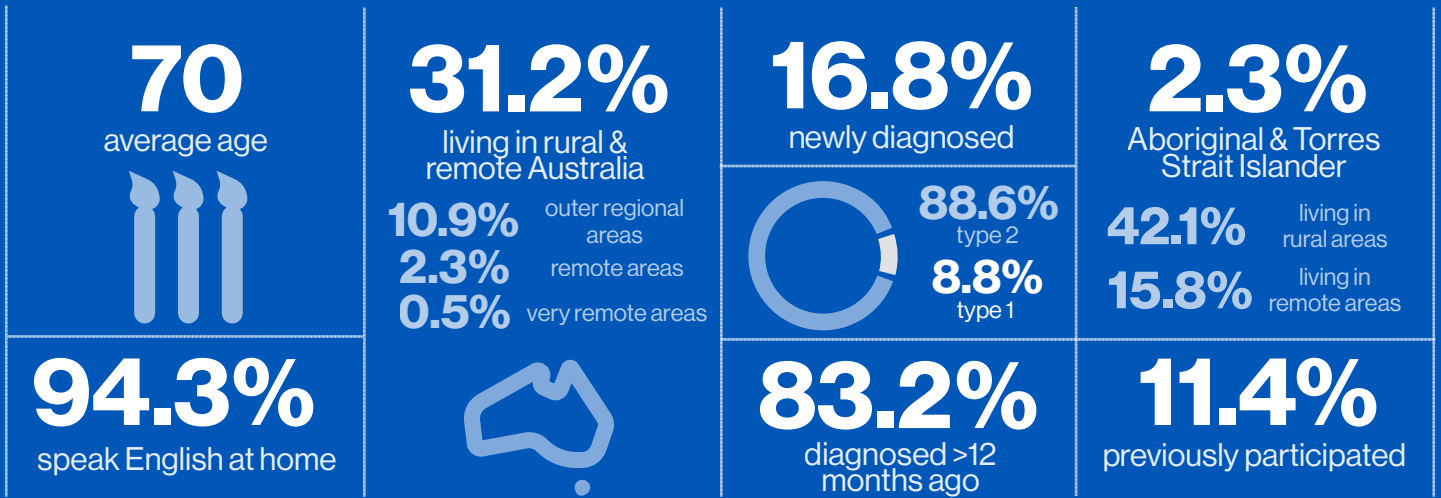
* number refers to the responses with valid pre-program evaluation survey data.

Based on the available data, the evaluation response counts and match rates of pre-program and post-program evaluation surveys for all NDSS programs are provided in Appendix C. Details of program mode, content, and NPS for each quarter and state/territory can also be found in Appendix C.

4.2.4 ShopSmart

OF THE 944 EVALUATION RESPONDENTS*:

NPS=76



Outcome Findings

Participant activation change:

Evaluation respondents were found to have significantly increased their knowledge and confidence in making informed decisions to self-manage diabetes after their participation in the MedSmart program (Figure 7). The pre-program and post-program changes below are statistically significant ($p < 0.05$).

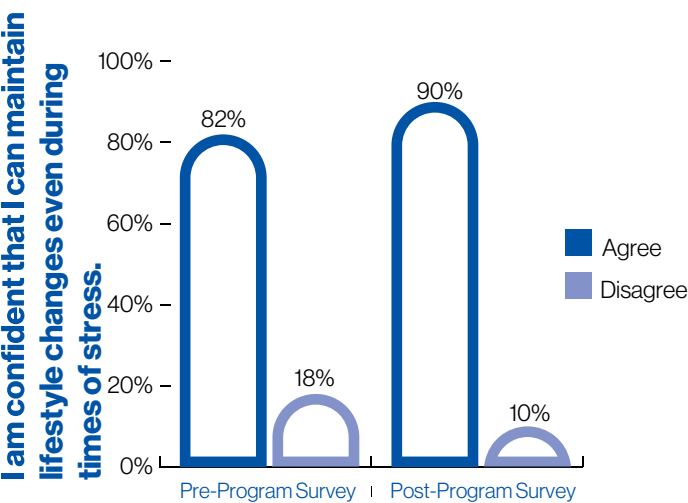
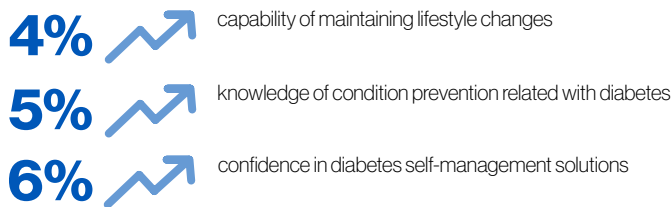


Figure 7. Patient activation change in the ShopSmart program

“How to better read nutritional tables and what to look for in making food choices”

Diabetes-related knowledge improvement:

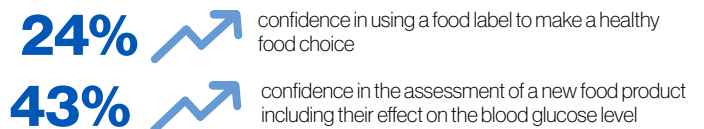
Evaluation respondents showed improved knowledge in making decisions about the product from the list of ingredients (all $p < 0.05$). The details are presented in Table 6.

Questions	% correct (Pre)	% correct (Post)	% change
If you were shopping for a breakfast cereal, which one of these would you choose?	58	81	23
How much fat per 100g is in this product?	68	87	19
How much saturated fat per 100g is in this product?	70	88	18
Would this product be a healthy food choice?	39	89	50

Table 5 Knowledge improvement in the ShopSmart program

Confidence enhancement in diabetes management:

The survey respondents have indicated significant increase in their confidence in assessing food products. The pre-program and post-program confidence level changes below are statistically significant ($p < 0.05$).



Qualitative Feedback

Overall ShopSmart respondents found the program to be informative, enjoyable and allowed them to update their knowledge. Key take-aways included understanding how to read food labels, the effects different foods have on the body and the use of the Supercard when shopping.

* number refers to the responses with valid pre-program evaluation survey data.

Based on the available data, the evaluation response counts and match rates of pre-program and post-program evaluation surveys for all NDSS programs are provided in Appendix C. Details of program mode, content, and NPS for each quarter and state/territory can also be found in Appendix C.

4.2.5 MonitorSmart

OF THE 384 EVALUATION RESPONDENTS*:

NPS=79

<p>70 average age</p>	<p>34.3% living in rural & remote Australia</p> <p>1.4% outer regional areas 1.6% remote areas 0.3% very remote areas</p>	<p>17.8% newly diagnosed</p> <p>95.3% type 2 2.4% type 1</p>	<p>1.3% Aboriginal & Torres Strait Islander</p>
<p>94% speak English at home</p>		<p>82.2% diagnosed >12 months ago</p>	<p>9.6% previously participated</p>

Outcome Findings

Participant activation change:

Evaluation respondents were found to have significantly increased their knowledge and confidence in making informed decisions to self-manage diabetes after their participation in the MonitorSmart program (Figure 8). The pre-program and post-program changes below are statistically significant (p<0.05).

- 4%** ↑ knowledge of their prescribed medications
- 6%** ↑ knowledge of condition prevention related with diabetes
- 7%** ↑ confidence in maintaining lifestyle changes during times of stress

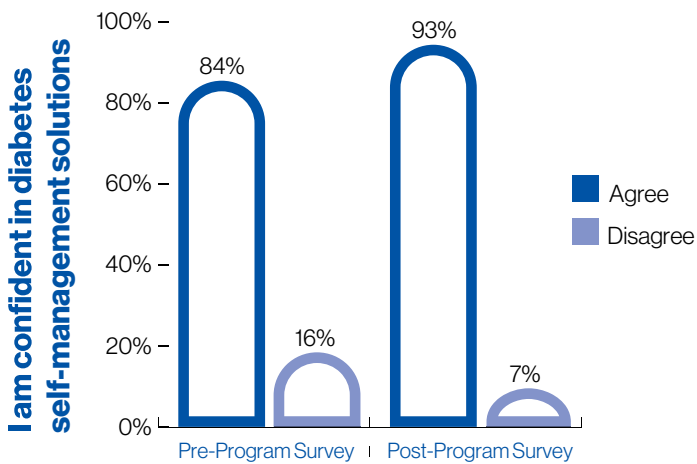


Figure 8. Patient activation change in the MonitorSmart program

“These programs are an excellent source of information. GPs do not have the time (and often knowledge) to go into such detail”

Diabetes-related knowledge improvement:

The majority of survey respondents showed improved knowledge in monitoring blood glucose levels in different contexts. The statistically significant changes in related knowledge are shown in Table 6.

Questions	% correct (Pre)	% correct (Post)	% change
What is the target blood glucose range before meals?	66	85	19
What is the ideal blood glucose level to aim for 2 hours after eating?	60	89	29
Which HbA1c level indicated a lower risk of developing diabetes complications?	25	69	44
Why are people with diabetes advised to check their own blood glucose?	78	82	4

Table 6 Knowledge improvement in the MonitorSmart program

Confidence enhancement in diabetes management:

The respondents indicated increased confidence in understanding blood glucose levels and monitoring them (all p<0.05).

- 9%** ↑ awareness of the importance of monitoring the blood glucose
- 15%** ↑ skill to monitor the blood glucose
- 19%** ↑ knowledge of disorders related with blood glucose levels
- 22%** ↑ knowledge of the management of disorders related with blood glucose

Qualitative Feedback

Overall Monitor Smart was viewed as informative and easy to understand. Participants noted how the course helped to reaffirm their practices or provide new up to date information and tips. It was also noted that the peer support and learning from others in the program was helpful.

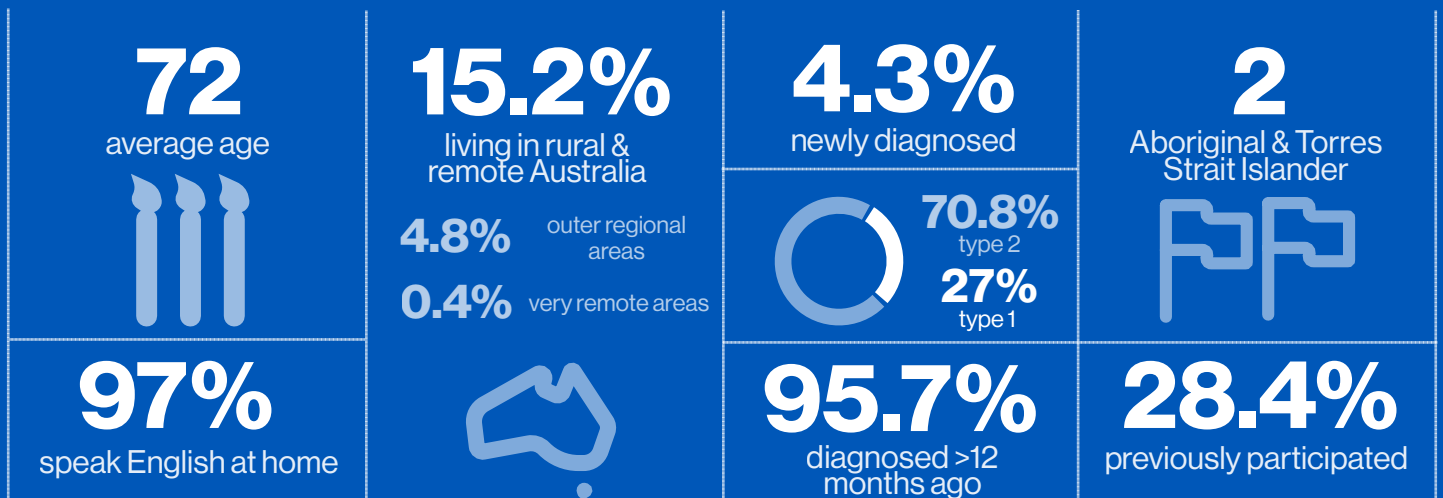
* number refers to the responses with valid pre-program evaluation survey data.

Based on the available data, the evaluation response counts and match rates of pre-program and post-program evaluation surveys for all NDSS programs are provided in Appendix C. Details of program mode, content, and NPS for each quarter and state/territory can also be found in Appendix C.

4.2.6 Living with Insulin

OF THE 234 EVALUATION RESPONDENTS*:

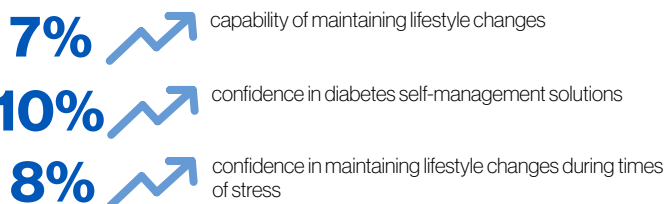
NPS=85



Outcome Findings

Participant activation change:

Evaluation respondents were found to have significantly increased their knowledge and confidence in making informed decisions to self-manage diabetes after their participation in the Living with Insulin program (Figure 9). The pre-program and post-program changes below are statistically significant ($p < 0.05$).



Diabetes-related knowledge improvement:

The majority of survey respondents showed considerably improved knowledge in managing low blood glucose level in different contexts. The statistically significant changes in related knowledge are shown in Table 7.

Questions	% correct (Pre)	% correct (Post)	% change
Appropriate way to manage symptoms of a low blood glucose	83	92	9
Cause for a low blood glucose level	61	64	3
Blood glucose level change without breakfast	18	82	54
Appropriate action to manage flu	1	66	65
The blood glucose level for safe driving	75	85	10
Location where insulin should be injected	77	86	9

Table 7. Knowledge improvement in the Living with Insulin program

* number refers to the responses with valid pre-program evaluation survey data.

Based on the available data, the evaluation response counts and match rates of pre-program and post-program evaluation surveys for all NDSS programs are provided in Appendix C. Details of program mode, content, and NPS for each quarter and state/territory can also be found in Appendix C.

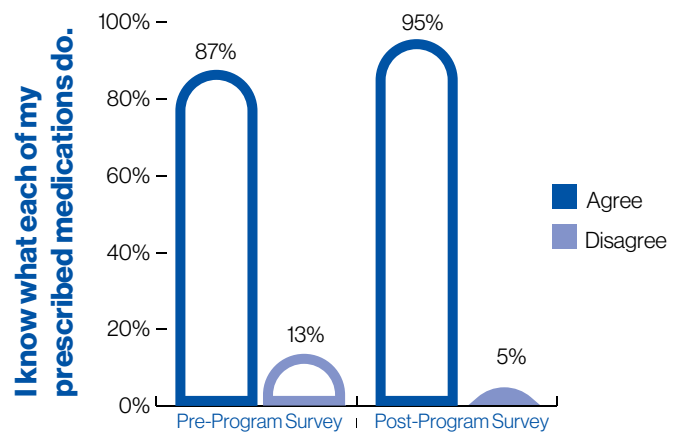
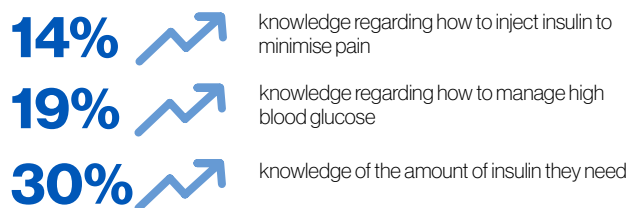


Figure 9. Patient activation change in the Living with Insulin program

Confidence enhancement in diabetes management:

The respondents indicated increased confidence in using insulin treatment and managing the management of abnormal blood glucose levels (all $p < 0.05$).



Qualitative Feedback

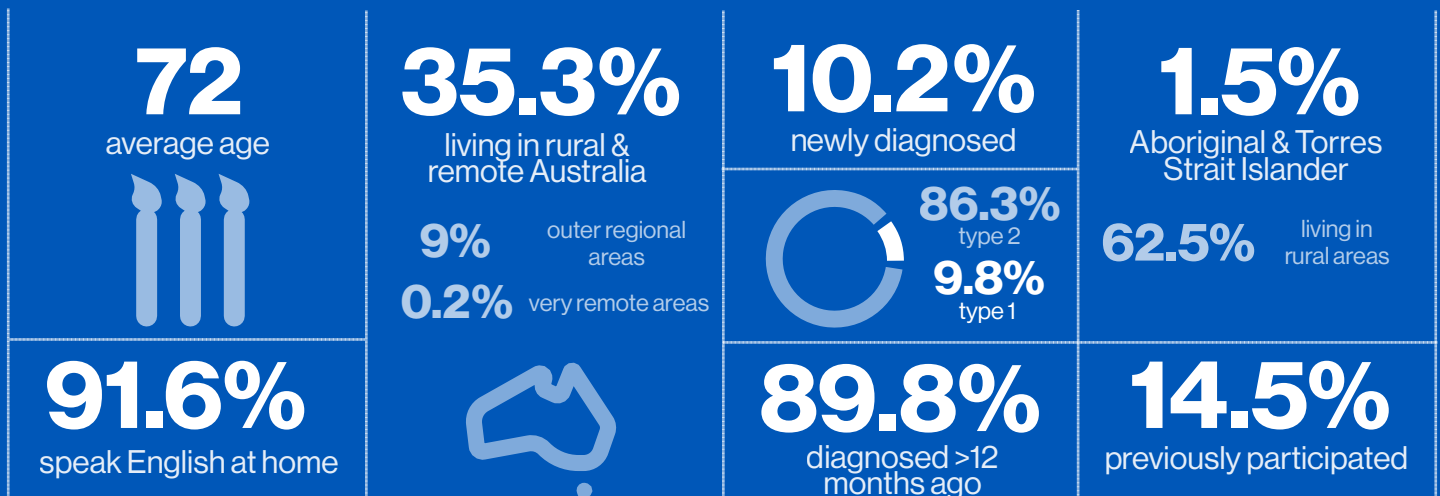
Overall Living with Insulin program was well received and regarded as very informative with the opportunity to update their knowledge of insulin and its bodily affects appreciated. The importance of correct injection techniques for insulin was noted.

“A great refresher- I’ve been diabetic for 24yrs and the latest updates were very excellent”

4.2.7 Ready Set Go, Let's Move

OF THE 599 EVALUATION RESPONDENTS*:

NPS=71



Outcome Findings

Participant activation change:

Evaluation respondents had significantly increased their knowledge and confidence in making informed decisions to self-manage diabetes after their participation in the Ready Set Go, Let's Move program (Figure 10). The pre-program and post-program changes below are statistically significant ($p < 0.05$).

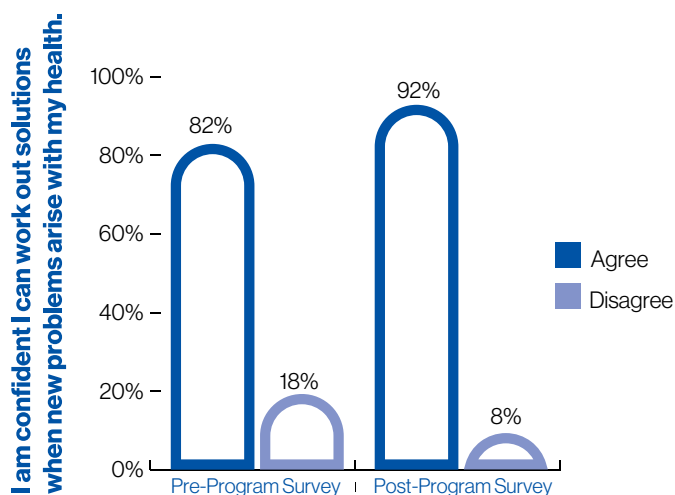
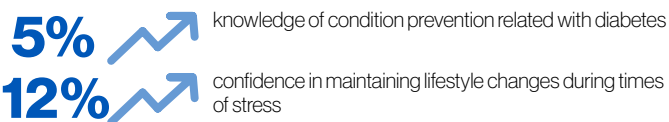


Figure 10. Patient activation change in the Ready Set Go, Let's Move program

“How to start and develop plans for motivating and implementing myself for exercise programs”

Diabetes-related knowledge improvement:

Survey respondents showed statistically significantly improved knowledge in conducting appropriate levels of physical activities. The pre-program and post-program knowledge competence changes in related knowledge are shown in Table 8.

Questions	% correct (Pre)	% correct (Post)	% change
The recommended amount of cardiovascular activities for adults with diabetes	51	71	20
The recommended amount of muscle strengthening/resistance-based activities for	21	44	23

Table 8 Knowledge improvement in the Ready Set Go, Let's Move program

Confidence enhancement in diabetes management:

Respondents also indicated significantly improved confidence in being physically active (all $p < 0.001$).



Qualitative Feedback

Overall, Ready Set Go, Let's Move was viewed as being very informative. The importance of regular exercise and maintaining the motivation to exercise were noted along with appreciating the relationship between blood glucose levels and exercise to achieve better control of their diabetes

* number refers to the responses with valid pre-program evaluation survey data.

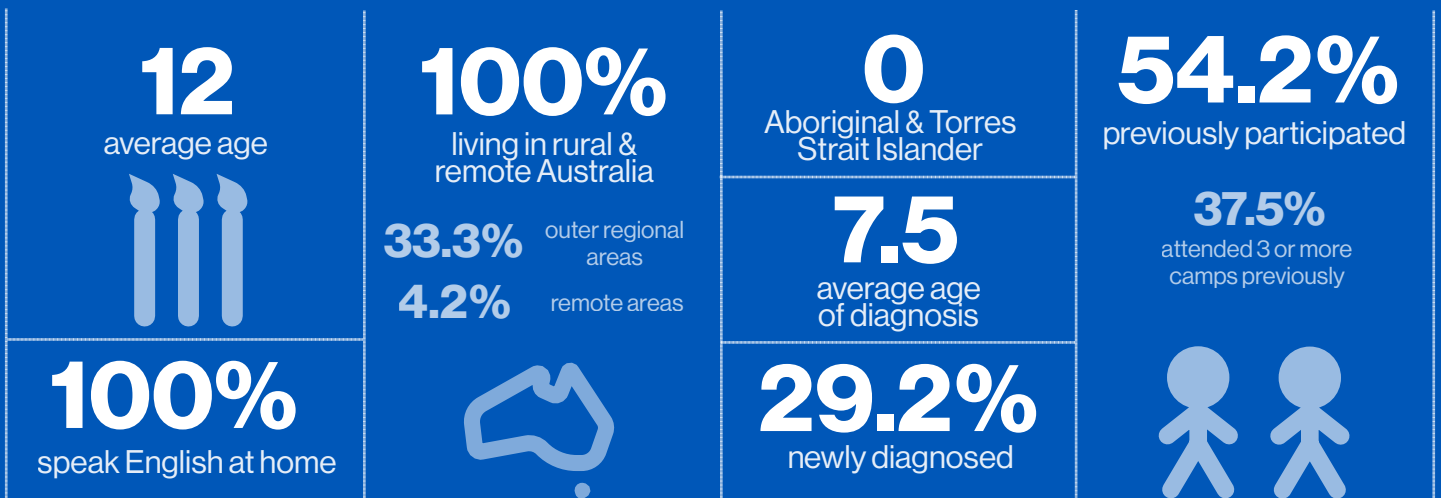
Based on the available data, the evaluation response counts and match rates of pre-program and post-program evaluation surveys for all NDSS programs are provided in Appendix C. Details of program mode, content, and NPS for each quarter and state/territory can also be found in Appendix C.

4.3 Other Self-Management Programs for Registrants

4.3.1 Camps

NPS=87

OF THE 24 CHILDREN EVALUATION RESPONDENTS:



Outcome Findings

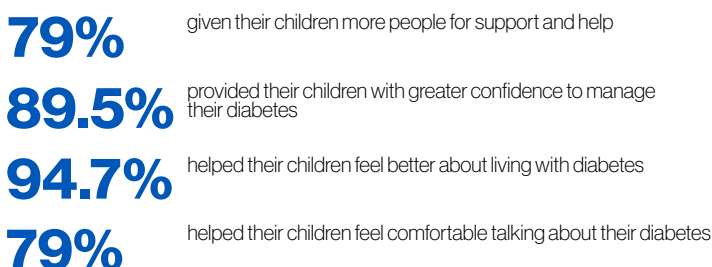
Participant activation change:

After attending the Camps program, among the children evaluation respondents:



Parents' feedback:

The parents of evaluation respondents (n=19) indicated 36.8% of them had children that used the skills they practiced at camp, the parents agreed attending camp had:



Qualitative Feedback

This program had 24 participants, who all appreciated meeting other people with diabetes and making new friends. Overall, from the participants perspective, the course could not be improved.

Diabetes resilience change:

According to the diabetes strengths and resilience measure (DSTAR) scale¹⁰, the campers had moderately high diabetes strengths and resilience scores prior to attending the camp (mean=51.7) and did not demonstrate a significant increase post-camp (mean=51.9, p=0.927) (Figure 11). This lack of difference may be explained by the moderately high pre-camp diabetes strengths/resilience status of children.

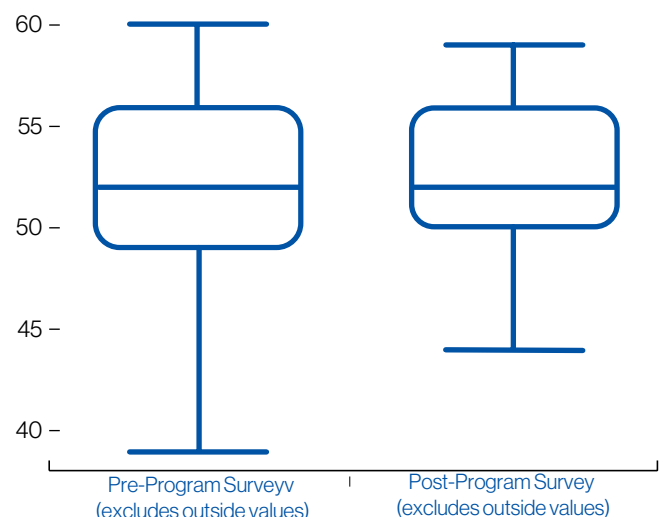
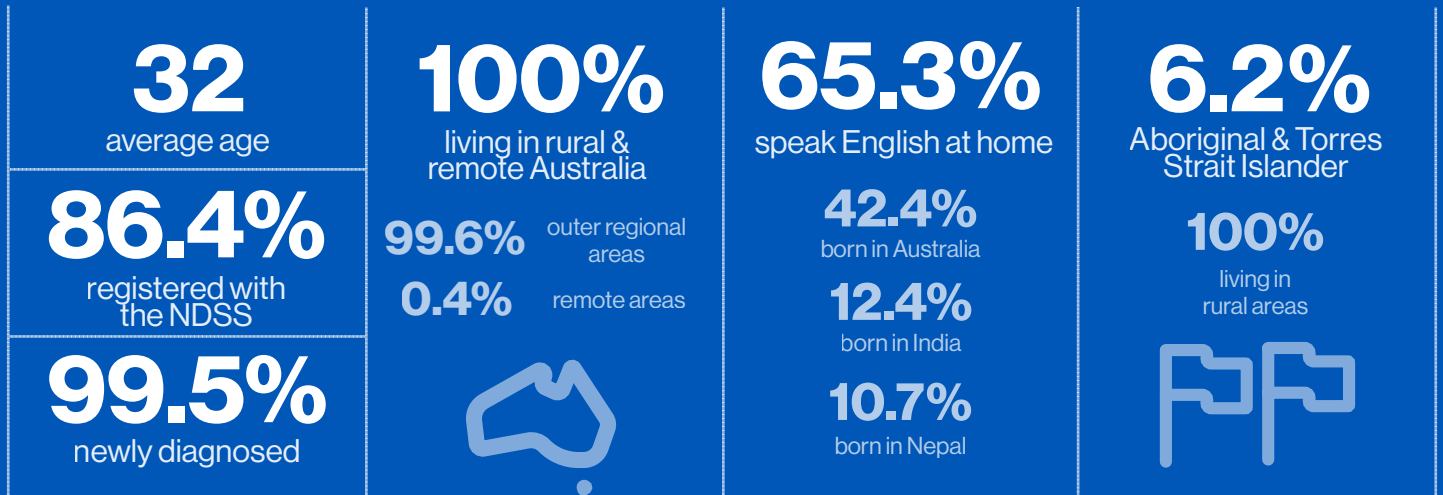


Figure 11. Diabetes resilience change after attending Camps program, via the Diabetes Strengths and Resilience Measure (DSTAR) scale

4.3.2 Gestational Diabetes Group Education Session

NPS=76

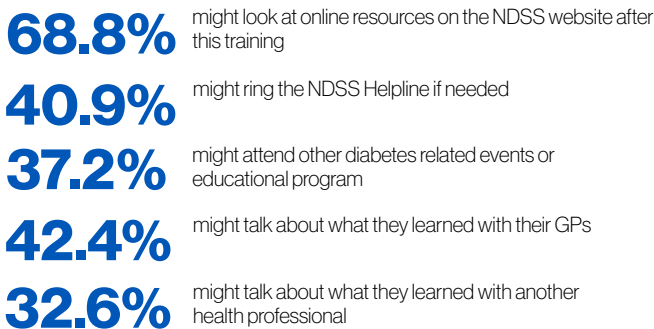
OF THE 484 EVALUATION RESPONDENTS:



Outcome Findings

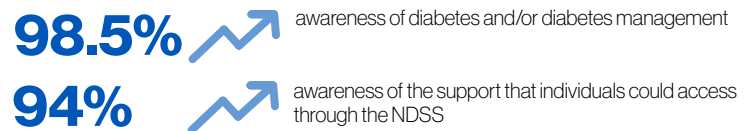
Participant activation change:

Among the evaluation respondents, 95.2% indicated they will “do anything” as a result of attending the Gestational Diabetes Group Education Session.



Diabetes-related knowledge improvement:

After attending the Gestational Diabetes Group Education Session, among the evaluation respondents:



Qualitative Feedback

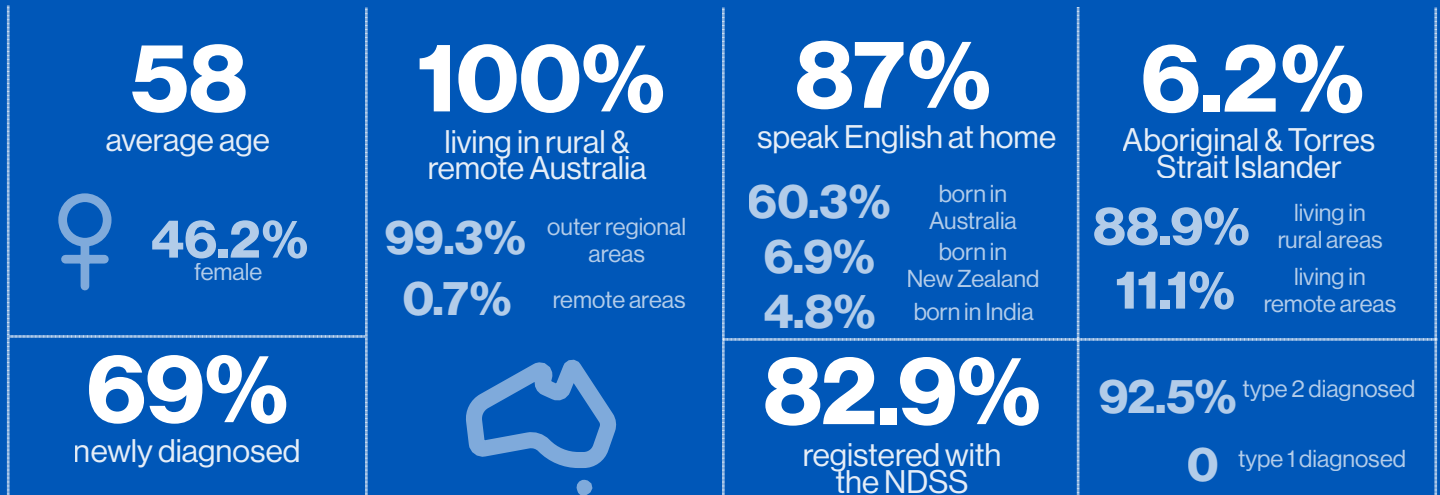
Overall, participants commented that all the parts of this program were valuable not just for the participant with diabetes but for others such as family members. Respondee noted that additional information could be provided about the risk of type 2 diabetes.

“How GDM affects the baby and healthy eating”

4.3.3 Getting Started Group Education Session

NPS=77

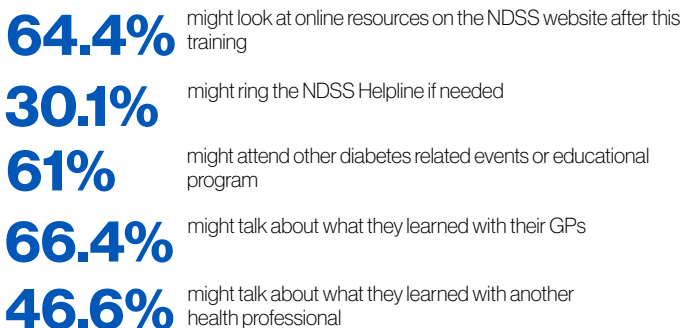
OF THE 146 EVALUATION RESPONDENTS:



Outcome Findings

Participant activation change:

Among the evaluation respondents, 95.8% indicated they will “do anything” as a result of attending the Getting Started Group Education Session.



Diabetes-related knowledge improvement:

After attending the Getting Started Group Education Session, among the evaluation respondents:



Qualitative Feedback

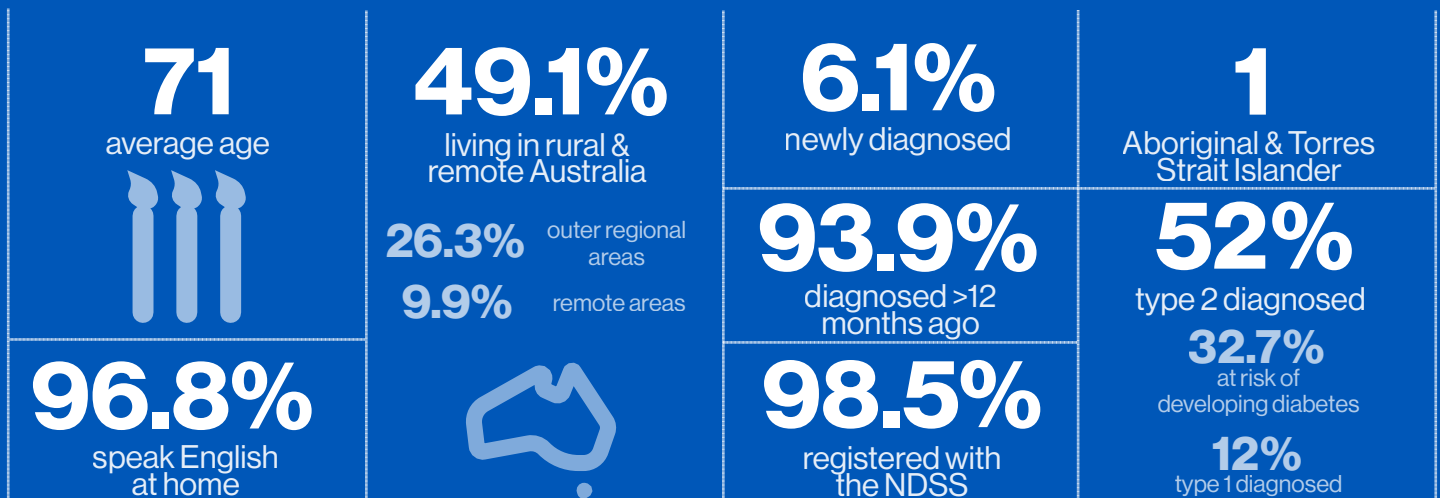
Overall, respondents noted that diet and diabetes was well explained as well as the importance of lifestyle changes.

“Learnt things I did not know”

4.3.4 Basic Registrant Education Sessions

OF THE 185 EVALUATION RESPONDENTS:

NPS=63



Outcome Findings

Participant activation change:

Among the evaluation respondents, 99.5% indicated they will “do anything” as a result of attending the Basic Education Group Education Sessions, including Country Seminars, Community Seminars, and Food and Health Seminars.

54.1% might look at online resources on the NDSS website after this training

34.8% might ring the NDSS Helpline if needed


57.8% might attend other diabetes related events or educational program


40% might talk about what they learned with their GPs

32.4% might talk about what they learned with another health professional

Diabetes-related knowledge improvement:

After attending the Basic Education Group Education Session, among the evaluation respondents:

90.7%  awareness of diabetes and/or diabetes management

93.3%  awareness of the support that individuals could access through the NDSS

Qualitative Feedback

Overall, respondents commented that the information presented was valuable and appreciated the ability to share their experiences with others.

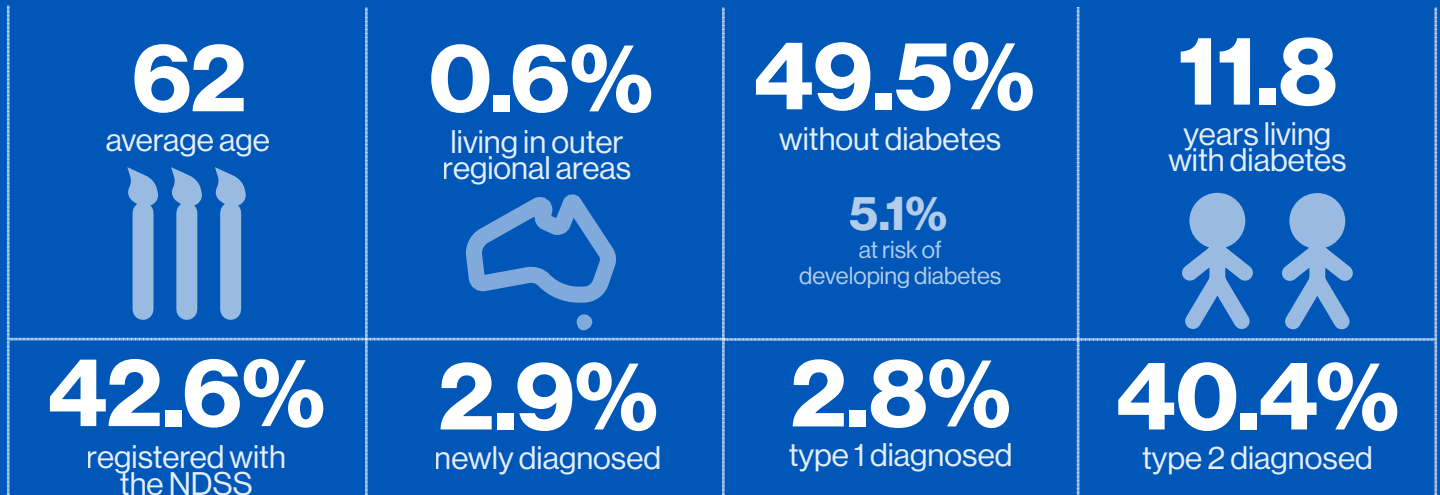
“Very good experience. Bought back healthy eating to the forefront of my mind, afternoon tea was a good lesson for me.”

4.3.5 Culturally & Linguistically Diverse (CALD) Information Sessions*

**CALD
NPS=69**

4.3.5.1 Education Session/Seminar/Information Day

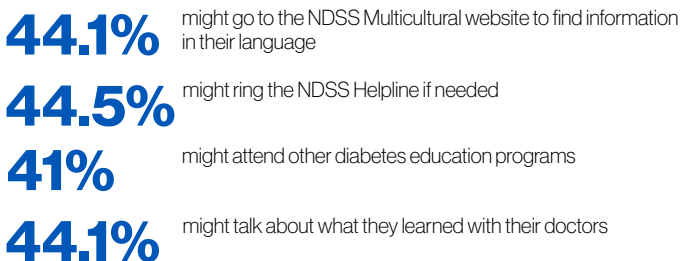
OF THE 229 EVALUATION RESPONDENTS:



Outcome Findings

Participant activation change:

After attending the CALD Education Sessions/Seminars/Information Days, among the evaluation respondents:



Diabetes-related knowledge improvement:

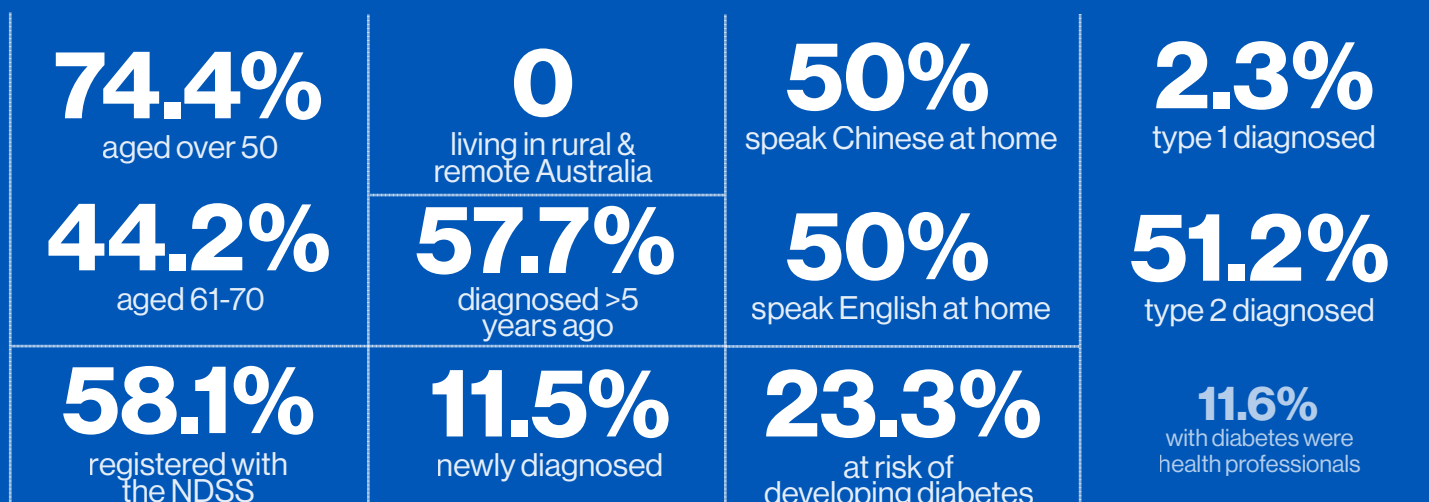
After attending the CALD Education Sessions/Seminars/Information Days, among the evaluation respondents:



* There are two types of CALD Information Sessions provided in FY 2021-2022 that UTS received evaluation data for these are: Education Session/Seminar/Information Day and Living Well with Diabetes Sessions.

4.3.5.2 Living Well with Diabetes Sessions

OF THE 44 EVALUATION RESPONDENTS:



Outcome Findings

Participant activation change:

Among the evaluation respondents, 88.6% indicated they will “do anything differently” as a result of attending the Living Well with Diabetes program.

61.4% might go to the NDSS Multicultural website to find information in their language

34.1% might ring the NDSS Helpline if needed

40.9% might contact the Diabetes Victoria Multilingual Infoline

56.8% might talk about what they learned with their doctors

Diabetes-related knowledge improvement:

After attending the Living Well with Diabetes Sessions, among the evaluation respondents:

93.2%  knowledge about how diabetes can affect their kidney health

93.2%  knowledge about how diabetes can affect their eye health

93.2%  knowledge about the latest science on diabetes and diet

77.3%  awareness of the NDSS

5. Findings of Economic Analysis

The economic analysis of the NDSS incorporates two sections: program cost evaluation of the comprehensive diabetes self-management and topic-specific programs and, product cost evaluation.

Methods for both analyses can be found in Appendix A.

5.1 Program Cost Evaluation

This section presents the economic analyses of the Comprehensive Diabetes Self-Management and Topic-Specific Programs for the Financial Year 2021 – 2022 (FY21-22).

5.1.1 Comprehensive Self-Management Programs for Registrants

5.1.1.1 DESMOND

For the DESMOND (face-to-face) programs provided during the FY21-22 (Table 9):

- There were 325 activities with a total of 2537 attendees;
- The total cost of conducting these activities was \$2,424,238
- The per program cost of running DESMOND (face-to-face) was \$7,459; and
- The per person cost for DESMOND was \$956

5.1.1.2 OzDAFNE

For the OzDAFNE programs, during the reporting period of FY21-22 (Table 9):

For the OzDAFNE programs (face-to-face) provided during the reporting period:

- There were 34 activities with a total of 172 attendees;
- The total cost of conducting these activities was \$941,150
- The aggregate cost per activity was \$27,681; and
- The aggregate cost per attendee was \$5,472

For the OzDAFNE programs (online) provided during the reporting period:

- There were 4 activities with a total of 23 attendees;
- The total cost of \$224,547;
- The aggregate cost per activity was \$56,137; and
- The aggregate cost per attendee was \$9,763

5.1.2 Topic-Specific Self-Management Programs for Registrants

Costs for Topic-Specific Programs are reported at an aggregate level as the data was not available at the individual program level.

At the aggregate level for Topic-Specific Programs (face-to-face) during the reporting period of FY 2021-2022 (Table 10):

- There were 1,218 activities with a total of 9,743 attendees;
- The total cost of conducting these activities was \$5,156,713
- The aggregate cost per activity was \$4,234; and
- The aggregate cost per attendee was \$529

At the aggregate level for Topic-Specific Programs (online) during the reporting period of FY 2021-2022 (Table 10):

- There were 518 activities with a total of 8,039 attendees;
- The total cost of conducting these activities was \$1,344,409

The aggregate cost per activity and attendee was not able to be found due to data availability e.g. Topic-Specific Programs (online) and Webinars were provided in the same line item.

Note that although Camps are considered a Topic-Specific Program (face-to-face and online) they were provided their own line item. For the Camps programs provided during the reporting period of FY 2021-2022 (Table 10):

- There were 7 activities with a total of 262 attendees;
- The total cost of conducting these activities was \$951,699;
- The cost per activity was \$135,957; and
- The cost per attendee was \$3,632.

Program	Delivery Mode	Activities	Attendees	Cost	Cost per activity	Cost per attendee
DESMOND	Face-to-face	325	2,537	\$2,424,238	\$7,459	\$956
OzDAFNE	Face-to-face	34	172	\$941,150	\$27,681	\$5,472
OzDAFNE	Online	4	23	\$224,547	\$56,137	\$9,763

Table 9. Costing for NDSS Comprehensive Self-Management programs (financial year 2021 – 2022)

Program	Delivery Mode	Activities	Attendees	Cost	Cost per activity	Cost per attendee
Topic-Specific	Face-to-face	1,218	9,743	\$5,156,713	\$4,234	\$529
Topic-Specific	Online	518	8,039	\$1,344,409	\$2,595*	\$162*
Camps (attendees & parents)	Face-to-face & Online	7	262	\$951,699	\$135,957	\$3,632

Topic-Specific refers to Topic-Specific Self-Management Programs for Registrants

* As Topic-Specific Self-Management Programs were not delivered virtually until 1 July 2022 the aggregate cost per attendee predominantly refers to Webinars

Table 10. Costing for NDSS Topic-Specific Self-Management programs (financial year 2021 – 2022)

5.2 Product Cost Evaluation

This section provides an overview of the NDSS registrants, Diabetes type, the products supplied by NDSS to aid people within the management of their Diabetes for the FY 2021 – 2022.

5.2.1 NDSS Registrants

For the reporting period FY 21-22 (Table 11):

- There was a total of 1,629,645 people recorded with NDSS, 1,454,169 (90%) of which are recorded as having diabetes. The remaining 175,476 (10%) people are registered on the Gestational Diabetes Reminder System.
- Of the NDSS registrants with diabetes 9% (n=131,489) have Type 1 diabetes, 87% (n=1,262,386) have Type 2 diabetes, 3% (n=11,227) have gestational diabetes and 1% were classed as 'other'.

Registrants with diabetes by type	Number	%
Type 1 Diabetes	131,489	9
Type 2 Diabetes	1,262,386	87
Gestational Diabetes	49,067	3
Other types of Diabetes	11,227	1
Subtotal registrants with Diabetes	1,454,169	90
Registrants on Gestational Diabetes Reminder System	175,476	10
Total number of registrants	1,629,645	100

Table 11. NDSS Registrants, by diabetes type.

5.2.2 NDSS Registrants Diabetes Management Options

Diabetes may broadly have one of three management paths, these are people requiring insulin, people using non-insulin management methods, or injectable (non-insulin) pharmacological options.

For the reporting period FY21-22, (Table 12):

- Insulin was the treatment for 466,014 (32%) of the registrants with diabetes;
- Injectable (non-insulin) pharmaceutical options was the treatment for 25,660 (2%) of the registrants with diabetes;
- Non-insulin requiring management was used by 962,495 (66%) of the registrants with diabetes.

Treatment	Number	%
Insulin	466,014	32
Non-insulin	962,495	66
Non-insulin injectable	25,660	2
Total registrants with Diabetes	1,454,169	100

Table 12. NDSS Registrants with diabetes, by treatment type.

5.2.3 NDSS Registrants Diabetes Type with Management Options

This section provides a breakdown of diabetes type by management method for the FY21-22 (Table 13):

- A total of 131,489 registrants with NDSS with Type 1 Diabetes required insulin;
- Of the 1,262,386 registrants with Type 2 Diabetes, 309,971 (25%) required insulin, 926,755 (73%) did not require insulin and 25,660 (2%) required injectable non-insulin pharmaceuticals;
- Of the 49,067 registrants with gestational diabetes 17,633 (36%) required insulin and 64% used non-insulin management methods; and
- Of the 11,227 registrants classified as 'other' 6,921 (62%) required insulin and 38% used non-insulin management methods. 1% were classed as 'other'.

Registrants with Diabetes by type	FY 2021-22	%
Type 1 Diabetes	131,489	100
Type 2 Diabetes	1,262,386	
Type 2 Diabetes (Insulin Requiring)	309,971	25
Type 2 Diabetes (Non-Insulin Requiring)	926,755	73
Type 2 Diabetes (Non-Insulin Injectable Requiring)	25,660	2
Gestational Diabetes	49,067	
Gestational Diabetes (Insulin Requiring)	17,633	36
Gestational Diabetes (Non-Insulin Requiring)	31,434	64
Other types of Diabetes	11,227	
Other types of Diabetes (Insulin Requiring)	6,921	62
Other types of Diabetes (Non-Insulin Requiring)	4,306	38
Registrants with Diabetes	1,454,169	

Table 13. Registrants by diabetes type and management method.

5.2.4 Five-Year Trend

Changes in the number of NDSS registrants over the past 5 years shows an increasing trend for all types of diabetes and all treatment methods (Table 14). The five year trend shows an increase in the total number of registrants with the NDSS by 14.8%.

The following percentage increases in the number of registrants by diabetes type and management method from FY 17-18 to FY 21-22:

- The number of registrants with Type 1 diabetes increased 10.9%;
- The number of registrants with Type 2 diabetes requiring insulin increased 16.1%;
- The number of registrants with Type 2 diabetes using non-insulin management methods increased by 13.4%;
- The number of registrants with Type 2 diabetes using injectable non-insulin pharmaceuticals increased by 0.5%;
- The number of registrants with gestational diabetes

- requiring insulin increased by 34.4%;
- The number of registrants with gestational diabetes using non-insulin management methods increased 14.7%;
- The number of registrants with diabetes categorized as 'other' requiring insulin increased by 49.9%;
- The number of registrants with diabetes categorized as 'other' using non-insulin management methods increased by 19.8%; and
- The number of registrants on the Gestational Diabetes reminder systems increased by 23.2%.

Registrants with Diabetes by type	Y1 2017-18	Y2 2018-19	Y3 2019-20	Y4 2020-21	Y5 2021-22	5Y %Change
Type 1 Diabetes	118,567	120,014	124,652	126,746	131,489	10.9
Type 2 Diabetes (Insulin Requiring)	267,000	276,369	294,135	293,998	309,971	16.09
Type 2 Diabetes (Non-Insulin Requiring)	817,110	837,619	872,337	887,150	926,755	13.42
Type 2 Diabetes (Non-Insulin Injectable Requiring)	25,524	25,482	25,447	25,372	25,660	0.53
Gestational Diabetes (Insulin Requiring)	13,124	14,773	13,809	16,766	17,633	34.36
Gestational Diabetes (Non-Insulin Requiring)	27,403	26,026	26,795	29,354	31,434	14.71
Other types of Diabetes (Insulin Requiring)	4,616	5,113	5,769	6,062	6,921	49.94
Other types of Diabetes (Non-Insulin Requiring)	3,595	3,674	3,913	4,027	4,306	19.78
Subtotal	1,276,939	1,309,070	1,366,857	1,389,475	1,454,169	13.88
Registrants on the Gestational Diabetes Reminder System	142,385	174,176	206,145	168,177	175,476	23.24
Grand Total	1,419,324	1,483,246	1,573,002	1,557,652	1,629,645	14.82

Table 14. Five year trends of NDSS registrant numbers.

5.2.5 NDSS Product Supplies

NDSS supplied products are categorised into 6 broad groups: blood/urine glucose monitoring strips, sharps, reservoirs, insulin pump consumable, and continuous glucose monitoring device (CGM) or flash glucose monitoring.

During the reporting period FY 21-22 there were 6,035,343 total products distributed through 5,672 access points (99.8% are community pharmacies). The total value of the NDSS product supplies was \$196,849,567.

Of the total number of NDSS products supplied for the reporting period FY 21-22 (Table 15):

- 3,542,527 (59%) were blood/urine glucose monitoring strips with a value of \$86,962,423 (44%);
- 1,434,485 (24%) were sharps with a value of \$18,566,428 (9%);
- 214,494 (4% of the total NDSS products supplied) were Reservoirs with a value of \$6,041,182 (3%);
- 248,428 (4%) Insulin Pump Consumables with a value of \$22,626,887 (11% of the total value of product supplied); and
- 595,409 (10%) were CGM / Flash Glucose Monitoring's with a value of \$62,652,645 (32%).

The average unit cost for each NDSS supplied product, by category, for the reporting period FY 21-22 is as follows (Table 15):

- Blood/urine glucose strip was \$24.55;
- Sharps was \$12.94;
- Reservoirs was \$28.16;
- Insulin Pump Consumables was \$91.08; and
- CGM/Flash Glucose Monitoring was \$105.23.

Product Category	Volume	Value \$	Volume %	Value %	Average cost per unit
Blood/urine Glucose Monitoring Strips	3,542,527	86,962,423	59	44	\$24.55
Sharps	1,434,485	18,566,428	24	9	\$12.94
Reservoirs	214,494	6,041,183	4	3	\$28.16
Insulin Pump Consumables	248,428	22,626,887	4	11	\$91.08
CGM/Flash Glucose Monitoring	595,409	62,652,645	10	32	\$105.23
Total	6,035,343	196,849,567	100	100	\$32.62

Table 15. Volume and value of NDSS product supplies.

5.3 Contributions

NDSS receives contributions from registrants, State and Territory governments and Veteran Affairs for the NDSS products supplied to people living with diabetes (Table 16).

The total contributions for the FY 21-22 was \$32,583,041, including:

- \$32,470,001 was remitted to the government;
- \$1,124,110 was received but not remitted;
- \$917,182 was the contribution outstanding; and
- \$1,928,252 was the contribution opening balance.

	Products distributed	Contributions-Opening Balance	Contributions due by registrant	Remitted to government	Received by not remitted	Contribution outstanding
Total	\$6,035,343	\$1,928,252	\$32,583,041	\$32,470,000	\$1,124,110	\$917,183
Registrants	\$4,512,936	\$561,614	\$23,924,651	\$23,915,032	\$433,512	\$137,721
State & Territory Government	\$1,434,377	\$1,359,273	\$8,594,509	\$8,491,641	\$687,233	\$774,908
Veteran Affairs	\$88,030	\$7,365	\$63,881	\$63,327	\$3,365	\$4,554

Table 16. NDSS Contribution breakdown for the Financial Year 2021-2022.

5.4 Access Points

Access points are used by NDSS to aid with the distribution of NDSS supplied products. The number of access points and the cost of distribution through the access points as critical considerations for the NDSS.

5.4.1 Number of Access Points

There are currently 5,672 NDSS access points across Australia. Of these access points 5,661 (99%) are community pharmacies, 11 are non-community pharmacies. Of the access points which are non-community pharmacies, 3 are NDSS agent outlets, 2 are General Practices and 6 are hospitals (Table 17).

Access point	Number	% of total
Community Pharmacy access point	5661	99.8
Non-Community Pharmacy access point	11	<0.2
NDSS Agent Outlets	3	<0.1
Aboriginal Health Services	-	
Allied Health Services	-	
Community Health Services	-	
General Practice	2	<0.1
Hospitals	6	<0.2
Non-Government Primary Healthcare Providers	-	
Total	5672	100

Table 17. NDSS Registrants with diabetes, by treatment type.

5.4.2 Cost of Distribution Through Access Points

Access points are used by the NDSS to distribute 5,990,055 NDSS supplied products to people living with diabetes.

The total fee paid to NDSS Access points for the FY 21-22 was \$6,598,260, of the which \$65,960 were for handling fees (Table 18).

Total Access Point Fee Paid	\$6,598,260
Number of Access Point Handling Fee Transactions Paid	65,960
Number of products supplied	5,990,055

Table 18. Cost and distribution of NDSS supplied products through access points.

6. Findings of Focus Groups

This section presents the qualitative analysis one focus group and three interviews conducted with ten agents from across Australia up to 30 June 2022.

Seven agents participated in a focus group and three agents participated in individual interviews. Selected quotations from the transcripts are used to give weight to the three key strengths and four areas of further development that were identified across all four sessions.

The full NDSS Agent Focus Group report can be found in the Quarter 4 Report.

6.1 Strengths of the NDSS

Highly regarded programs and services:

Participants strongly endorsed the current NDSS programs as comprehensive, evidence-based and successful. Participants highlighted the flexibility of the NDSS in regards to meeting both local requirements and the different learning styles needed to reach different program participants.

Strong consumer focus:

The NDSS has a strong consumer focus which is seen by participants as fundamental to its successful organisation of programs and services.

"They're the consumers with the lived experience. They have to be core to being involved in anything that's developed."

Complementary nature of NDSS and external organisations and services:

Participants highlighted that organisations beyond the NDSS also initiate and maintain programs for registrants and health professionals. The participants identified that NDSS and external organisations compliment each other well and perceived this feature as a strengthening benefit for the local communities served by the NDSS.

"...the NDSS doesn't own diabetes. Tertiary care, primary care, all of those other organizations are also playing in that space, as they should"

6.2 Areas for Further Development of the NDSS

Programs and services at an individual level:

Programs and services could be further tailored to meet the needs of the individual. Digital programs and services should be widely available alongside other locally based programs and services where possible.

"[programs and services] need to be developed and informed by the consumer need"

Programs and services at a community level:

Participants emphasised that programs need to suit community needs. Participants also noted the importance of flexibility within programs and services to better suit individual communities and their differing circumstances, suggesting equity of access across communities (e.g. remote versus city) should be ensured.

"Equity is a huge thing. And we're hoping that with this new funding that we will be able to do more activities in those remote areas and more engagement, more upskilling, all of those things."

Fostering connections at an institutional level:

Participants acknowledged NDSS and non-NDSS programs complement each other. Participants also suggested that any attempts to further enhance the complementary nature of the NDSS with other institutions and information could be desirable.

"We've got the NDSS registration - people who are on Medicare. Where's the linking across?... That would be very useful and worthwhile.... And be creative with it, and actually use it."

Enhanced use of technology:

Participants highlighted the use of technology as an area that could be further strengthened to help extend the reach of the NDSS and meet community healthcare needs and consumer expectations. Improved use of technology would help alleviate the pressure on equity and reach at the community-level.

"...we can recognize that people with in the cities have much better access to healthcare than people who are in rural or in remote areas. And how can we use technology in order to be able to help that problem?"

7. Discussion & Recommendations

7.1 Strengths

There are three significant strengths of this evaluation.

Evaluation data scope enabling rigorous statistical analyses

As the NDSS programs are delivered across all State and Territory agents, there is a large data set available each quarter for the evaluator to perform the comprehensive, holistic and consistent process, outcome, and economic evaluation of the NDSS nationally. This strength ensures the broad coverage for the NDSS evaluation and aggregation of evaluation data across NDSS programs and services.

Validated scales generating reliable evaluation results

Validated scales are precision measurement instruments to collect data for all types of evaluation. The evaluation surveys of the NDSS programs, including both pre-program and post-program surveys, consist of one or more validated scales within both diabetes and the health sphere. As such, this strength gives more weight to the responses and enables the evaluator to be able to rely on the results of valid survey data collected and eliminate bias.

Open-ended survey data gaining deep understanding of evaluation respondents

Open text questions are widely used to understand participants' experiences and perspectives in the healthcare field. The inclusion of open text questions in the NDSS program evaluation surveys allows the evaluator to identify issues not captured in the closed response questions and supplement the quantitative data collection via validated scales. This strength also allows the evaluator to employ triangulation of both quantitative and qualitative data to better understand the people with diabetes' experiences of the NDSS programs and services.

7.2 Limitations

This report has a number of limitations to be considered when interpreting the evaluation findings. Six limitations regarding the evaluation data capture and collection process have been reported in the quarterly reports presented in 2021-2022. These can be found in Appendix E.

The evaluation of the NDSS program, service, and product data across 2021-22 has been largely limited by COVID-19. COVID-19 has been a dominant issue for every Australian and the pandemic has impacted the provision of most NDSS services and evaluation numbers.

- The lockdowns due to COVID-19 resulted in the cancellation of face-to-face delivery and/or lower booking numbers in the weeks and months post lockdowns due to reluctance to attend face-to-face events, such as those in Tasmania in Quarter 3, 2021-2022. The NDSS programs that ran in Victoria were most heavily impacted by lockdowns in particular from Quarter 1 to Quarter 3, 2021-2022.
- COVID-19 restrictions have prevented overnight and multi-day camps from proceeding (i.e. the Camps program). Where this occurred, daily activities or other online events were provided instead. As these temporary services are vastly different from the multi-day events, the standard evaluation forms were not required or used. Additionally, as Camps are intensive events that only run a few times each year, so we would not expect to see evaluation data across all quarters for all Agents.
- NDSS Agents provided online webinars and education sessions during COVID-19 in place of cancelled programs. There was no requirement during the transition of the evaluation to UTS to collect data for these online education sessions. These have been standardised and will be consistently evaluated in the financial year 2022-2023.
- The OzDAFNE program is another intensive event that only runs a few times each year. In the financial year 2021-2022, there was no requirement for all NDSS Agents to provide OzDAFNE as its national consistency implementation will commence in the financial year 2022-2023. In some additional jurisdictions OzDAFNE was being provided by tertiary centres so Agents did not provide as this would be a duplication of existing service delivery.

7.3 Discussion & Recommendations

This report summarises the results of the first year of the 2021-2024 NDSS Evaluation findings. The findings demonstrate that the full scope of NDSS programs, services, and subsidised products has provided high-value support for people living with diabetes across the country, as assessed by outcome measures highlighted in the NDSS evaluation framework.

The discussion below incorporates several recommendations that would enhance the NDSS. Additional scheme-related recommendations have been provided at the end of this section.

1. Evaluation respondents' demographic profile

The average age of respondents of all NDSS programs evaluated was 61 years which is in line with the findings reported in the Australian National Health Survey 2020-21.¹¹ Geographical dispersion among evaluation respondents is worth noting however. There were almost 1.3 million people with diabetes in Australia and approximately 5.5% of them were living in remote or very remote areas in 2020.¹² Although people living in remote or very remote areas were more likely to have diabetes than those living in major cities,^{12,13} only 2.4% of the NDSS evaluation respondents were living in remote or very remote areas.

Aboriginal and Torres Strait Islander peoples are also more likely to have diabetes compared to non-Indigenous Australians.¹² According to the ABS 2018-19 National Aboriginal and Torres Strait Islander Health Survey¹⁴ around 8% of Indigenous Australians (i.e. 64,100 people) were living with diabetes. Of the evaluation sample, only 2% of respondents were Aboriginal and Torres Strait Islander people. Indigenous people may also experience significant geographic barriers, which further limit their access to diabetes-related services. Similarly, research shows people from CALD backgrounds are also at increased risk of developing diabetes.¹⁵ Among evaluation respondents who attended non-CALD NDSS programs, about 11% were from CALD backgrounds.

Recommendation:

The following recommendations align with the Australian National Diabetes Strategy 2021-2030.¹⁶

- Ongoing geographical surveillance of NDSS program participants is required to address the disproportionate burden of diabetes in rural Australia, especially for the evaluation of diabetes management services that are being offered and accessed in underserved areas in Australia.
- Culturally relevant marketing programs are needed to increase awareness about the seriousness of diabetes in the Indigenous and CALD communities.
- Ensuring Indigenous and CALD communities have access to diabetes education and services and those services are culturally appropriate.

2. Net Promoter Score (NPS) of the NDSS programs

Excellent NPS scores were observed across all NDSS programs for people with diabetes evaluated between 1 July 2021 and 30 June 2022 and exceeded the international benchmark for the health industry.¹⁷ This indicates that evaluation respondents were highly satisfied and likely to promote NDSS programs and services

to others. There is significant potential for healthcare and economic benefits from increasing the reach and uptake of NDSS self-management programs.

Recommendation:

It is important to promote the evidence of the efficacy of NDSS programs to non-NDSS registrants who are in high-risk groups. This is also an opportunity to enhance the utility of the NDSS by supporting people to better self-manage their diabetes through accessing programs tailored to their specific needs.

As NPS is a sufficient measure to evaluate the satisfaction of NDSS participants who attend an NDSS program, no other Key Performance Indicators regarding consumer satisfaction are required. In addition, NDSS registrants' satisfaction status with the other NDSS services, including those newly registered with the NDSS, will be assessed annually by the national registrant survey conducted by UTS.

3. NDSS programs evaluated and related costs OzDAFNE

After the completion of the OzDAFNE program, adults with type 1 diabetes reported less diabetes distress and greater diabetes empowerment. These outcomes are in line with previous research and evidence indicating the substantial healthcare and psychological effectiveness of this program^{18,19} It has long been indicated that OzDAFNE is an expensive program both in terms of initial outlay and cost per participant, with the costs of maintaining the integrity and quality of this program account for a large proportion of its cost.²⁰ It is worth noting that in 2021-2022 the aggregate cost per program attendee for virtual delivery of OzDAFNE was significantly higher than for face-to-face delivery. This may have been influenced by the fact that virtual delivery was only piloted and introduced late in 2021-2022 and as such only a few programs had been delivered by 30 June 2022. The total number of attendees were 23 online compared to 172 face-to-face.

Recommendation:

Increasing awareness and attendee numbers for online OzDAFNE may decrease the overall per person cost. As the online version of OzDAFNE was only available from 2020 due to COVID-19, it is expected that with greater awareness of the online OzDAFNE program there will be an overall decreased cost of this program at the attendee-level.

Topic-specific Self-management programs for registrants

The Topic-specific Self-Management Programs for Registrants (e.g. CarbSmart and Living with Insulin) were successful in improving people with diabetes' knowledge and confidence levels. Diabetes-related knowledge increased on average 20% (i.e. about one in five people) and confidence in diabetes management increased on average 23% (i.e. about one in four people).

Recommendation:

COVID-19 has demonstrated opportunities to increase service delivery to people living with diabetes through online engagement platforms. Supporting online Topic-specific Self-Management programs for registrants may be a cost-effective strategy to assist with the optimal usage of the NDSS.

Camps

In 2021-2022, all evaluation data were from Junior Camps. Due to COVID-19 this program ran as a one-day event. There were a total of 262 attendees of Junior camps with an average cost per attendee of \$3,632. Qualitative feedback from children and parents indicated that camps provided a socially supportive setting for children with diabetes to build confidence and skills for self-management. However, the Junior Camp programs did not show statistically significant change in diabetes strengths and resilience, which is a primary objective of this program. It is worth noting that a US study with a larger sample size of campers (i.e. 44 diabetes camps) also reported that children did not show significant changes in perceived diabetes-specific strengths/resilience, although they reported significant improvements in distress and self-management skills.²¹

Recommendation:

To effectively evaluate the NDSS camps program at a national level, it is necessary to identify underlying constructs regarding a child's perception of their own diabetes-specific strengths and resilience throughout the program. It would also be important to identify how specific the current evaluation tool (i.e. DSTAR scale) is in measuring the outcomes of the programs and if it is sensitive enough to gather the necessary data. Hosting focus groups with campers and their parents may also be useful to garner insights into the effectiveness of this program.

4. NDSS access and product supply

During the reporting period of Financial Year 2021-2022, there are a total of 1,454,169 people recorded on the NDSS as having diabetes. The number of registrants with type 1 diabetes and type 2 diabetes using non-insulin management methods increased 11% and 12%, respectively between 2017-2018 and 2021-2022. All these evaluation findings are consistent with the statistics and predictions reported by the Australian Institute of Health and Welfare (AIHW).¹² In the last five years, the number of NDSS registrants on the gestational diabetes reminder systems has increased by 23%. This may be associated with the increased awareness of this service due to the marketing activities and related NDSS services.²² In 2021-2022, 32% of NDSS registrants were using insulin and 2% were using injectable (non-insulin) pharmaceutical options. Understanding the usage patterns and trends of the injectable non-insulin options will be conducted later in this evaluation.

In addition to the recommendations directly relating to the evaluation findings above, the following recommendations are within the scope of the National Diabetes Services Scheme Grant Agreement 2021-2024. Recommendations from state and territory NDSS Agents via a focus group and interviews have also been integrated where possible and feasible.

Please note, four additional recommendations regarding the NDSS evaluation, including evaluation process improvement and annual consolidation of data, have been reported in the quarterly reports presented in 2021-2022. These can be found in Appendix F.

To maintain and develop the national evaluation database

- The long-term NDSS registrant database, especially for the details portal of health and clinical data, should be updated on a regular basis to ensure efficient evaluation operation of NDSS. The up-to-date data related to NDSS registrants such as key demographic characteristics and diabetes status can be used to link with their NDSS program/service/product data. This will allow for a better understanding of the demographic shift of the population. For example, due to COVID-19 there may have been a migration of NDSS registrants from major cities to rural or remote areas that is not yet captured.

Digital delivery methods

- Diabetes management is costly as the Australian health system spends almost \$3.0 billion a year on all types of diabetes.¹² Enhancing NDSS programs and services through digital modes of delivery may be a cost-effective strategy to assist people to self-manage their diabetes. This recommendation is particularly pertinent given the COVID-19 pandemic and the increased vulnerability of people with diabetes-related health problems. However, any NDSS event offered online is required to be assessed to ensure program components are appropriate and optimised for digital delivery.

Tailoring of programs and services

- There were a number of areas identified by NDSS Agents via a focus group. The recommendations are to further NDSS development, including programs and services tailored at an individual and community level, fostering connections at an institutional level, and the enhanced use of technology for program delivery. By tailoring programs and services at different levels, higher engagement may be achieved.

8. Conclusion

The NDSS evaluation to date has revealed that there was a high level of satisfaction with the NDSS programs and services. Evaluation respondents found programs and services valuable and were highly likely to recommend them to others living with diabetes. Over a five-year period, there was a 14% increase in the number of people registered on the NDSS. In addition, the NDSS Agents provided overwhelming support for the NDSS programs and services, considering them to be highly regarded, endorsing the strong consumer focus of programs and services and the use of technology to enhance the reach of the NDSS programs. The recommendations proposed in this report would help to further enhance the NDSS and the outcomes of people living with diabetes.

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10. Appendices

Appendix A- Methods

During the period of 1 July 2021 and 30 June 2022 (Quarter 1 to Quarter 4 of 2021-2022), non-identifiable data of NDSS programs was received quarterly by the University of Technology Sydney Team (Evaluator) from NDSS Agents via Diabetes Australia. The effectiveness of NDSS programs was assessed using pre-program and post-program comparisons.

Online focus groups and interviews were conducted during Quarter 4 of 2021-2022 with NDSS Agents.

The economic analysis has been conducted on cost data of programs evaluated in Quarter 1 to Quarter 4 relating to the period of 1 July 2021 to 30 June 2022 and product cost data relating to both the last five years and the period of 1 July 2021 to 30 June 2022.

A.1 Measurement of Programs

In addition to the general demographic characteristics of evaluation respondents, several assessment scales and measures were used in NDSS programs to inform the evaluation.

A.1.1 Demographic Characteristics

De-identified demographic characteristics collected from evaluation respondents were postcode, country of birth, Aboriginal or Torres Strait Islander status, diabetes type, and time since diabetes diagnosis. The Australian Standard Geographical Classification-Remoteness Areas (ASGC-RA) system was used to assess the location of evaluation respondents.²³ There are five categories of the ASGC-RA system, including major cities of Australia, inner regional Australia, outer regional Australia, remote Australia, and very remote Australia. Rural and remote areas refer to all areas outside the major cities.²⁴

Program characteristics were also collected including the State or Territory Agent, the suburb where the program was provided and the session date. Please note, to protect the privacy of participants, no identifiable data was provided to the evaluator.

A.1.2 Participant Satisfaction Metrics

The Net Promoter Score (NPS) is a validated measure of how likely a person is to recommend a program to others. NPS is measured on an 11-point scale (0=not at all likely to recommend; 10=extremely likely to recommend). Higher NPS scores indicate a greater proportion of participants would recommend the program.

For the NDSS evaluation, NPS results are reported for all programs via post-program survey data, irrespective of whether the respondent also provided pre-program survey data. Based on the international benchmark for healthcare, scores above 0 are considered 'good' and scores above 58 are considered 'excellent'.

A.1.3 Patient Activation Measure

Patient activation was assessed via the Patient Activation Measure (PAM).²⁵ PAM is a reliable and valid scale used with many chronic conditions, including diabetes. This scale comprises 10 items that assess people's knowledge, beliefs, skills and confidence for self-management. Each item has four response options: "disagree strongly," "disagree," "agree" and "agree strongly."

A.1.4 Diabetes Resilience Status

The Diabetes Strengths and Resilience Measure for Adolescents (DSTAR) is used to assess diabetes-related strengths. The DSTAR is a self-report measure of adaptive attitudes and behaviours related to living with type 1 diabetes. Items are rated on a 5-point Likert scale (1=Never; 5=Almost always). The total score for the 12 items of the DSTAR ranges from 12-60 points, with higher scores indicating greater resilience.

A.1.5 Diabetes-Related Distress Status

The Problem Areas in Diabetes (PAID) scale is a validated tool for examining diabetes-related distress. This scale includes 20 items. Item scores can be combined to create a score out of 100, with higher scores indicating higher levels of diabetes-related distress. Scores of 40 and above indicate severe diabetes distress.

The Problem Areas in Diabetes Scale for Children (PAID-C) is similar to the adult version of the scale but is validated for children older than 8 years. A modified version of the PAID-C was used in the Camps program, which includes seven items shown to be of most relevance to youth. The total score ranges from 0 to 28, with higher scores indicating higher distress.

A.1.6 Diabetes Empowerment Status

The diabetes empowerment status of people with diabetes was measured by Diabetes Empowerment Scale – Short Form (DES-SF), which consists of eight items using a 5-point Likert scale (1= Strongly disagree; 5= Strongly agree). Increases in diabetes empowerment indicate that people living with diabetes improve their skills and confidence in diabetes self-management.

A.1.7 Confidence in Diabetes Self-Management

A number of questions relating to the program-specific aims and outcomes have been included in most NDSS programs' pre-program and post-program surveys. For example, in the CarbSmart program, confidence in managing carbohydrates was assessed using questions such as "I am confident that I am able to identify which foods contain carbohydrates". Responses were collected on a 5-point Likert scale (1= Strongly disagree; 5= Strongly agree).

A.2 Data Analysis Methods

A.2.1 Quantitative Analyses

A.2.1.1 Process Evaluation & Outcome Evaluation

Program data was collected for pre-program and post-program participation unless otherwise specified. All data was cleaned prior to analysis. Evaluation respondents were excluded from analysis if they failed to provide pre-program evaluation survey data. Statistical analysis was then conducted using standard methods including descriptive statistics (e.g. mean, frequencies, and percentages), which provide an overview of the participants' diabetes-related characteristics. Missing data was excluded from reported percentages.

Pair-wise statistical analyses were conducted on pre- and post-program evaluation surveys using paired t-test, Wilcoxon test, chi-square test, and Fisher's Exact test. Please see the glossary of statistical terms in Appendix B. These tests were used to identify any changes in people with diabetes after attending the programs. All data analyses were performed using the statistical software package STATA version 16 (Statacorp, College Station, TX). Statistical significance was set at $p < 0.05$.

A.2.1.2 Economic Evaluation

Economic evaluation was conducted on both NDSS programs and product cost data provided to UTS through financial spreadsheets.

Diabetes Australia provided data sets for economic analyses each quarter for the Financial Year 2021 – 2022. Four files are provided within each data set. The data within each file includes information on:

- Access points and Products;
- Registrant Contributions;
- Main Budget Tables (including actual cost, activity and attendee data for each program; and
- KPI Summary file

Program Cost Analysis Methods

Financial input data was used to source data: financial by cost centre worksheet and metric by activity worksheet. In terms of the financial by cost centre worksheet, filters were applied against the cost centre column to isolate the actual Year to Date (YTD) costing for the NDSS programs. Similarly, filters were applied to the metric by activity worksheet to isolate the year-to-date number of activities and number of attendees by service category, cost centre and program.

The economic analyses of NDSS programs included calculation of the cost per activity and cost per attendee. The per head costs were calculated including the percentage of responses, cost per activity, and cost per attendee:

- The percentage of responses is calculated by dividing the number of respondents to the survey by the total number of people attending the event;
- Cost per activity is calculated by dividing the YTD

actual cost to run the programs by the YTD actual number of programs reported with the aim of providing a per program cost for each of the program categories;

- Cost per attendee is calculated by dividing the YTD actual cost of the program by the YTD actual number of attendees to provide per person cost for attending each of the program categories.

Please note, there are three assumptions for the cost efficiency analysis:

- All attendees are homogenous;
- Staffing cost to run the program is included in the financial cost worksheet – no other employee costs were incurred in the running of the workshops; and
- The results for the respondents apply equally to all attendees.

Registrants Analysis Methods

The analysis for section 5.2.1 Registrants is sourced from each of the four files mentioned above. The data in section 5.2.2 NDSS Registrants diabetes management option to show the number of people with diabetes using which management option. Section 5.2.3 is sourced directly from the registrant data showing the breakdown of registrations by diabetes type and management option. Section 5.2.4 five year trend is sourced directly from the registrant data excluding 2016-2017 data to limit the data to five years. The percentage change is a calculated. Section 5.2.5 NDSS product supplies is reformed data from the product work tab. Table 11 shows the volume and value data in separate columns rather than separate rows and percentage volume, percentage value and average cost of unit are calculated fields.

The registrants are then categorised by the type of diabetes and the management options used, that is whether their diabetes is management using insulin, non-insulin (non-injectable) or non-insulin injectable options.

Contributions Analysis Methods

The analysis for 5.4 Contributions is sourced from the Registrant Contributions file. This file provides data as quarter 4 and as a culminative year to date total. The year to date total has been used for the analysis.

There are six concessional categories including Pension, Health Care, Department of Veterans' Affairs, Department of Veterans' Affairs pension, Safety Net concession card, and Safety Net entitlement card. The actuals for each of the categories is summarised and presented according to each of the registrant concessional categories.

The data provided is categorised by:

- The number of products distributed by registrant concessional status;
- Registrant opening balance by registrant concessional status;
- Registrant contributions due by registrant concessional status; Registrant's contributions remitted to the Commonwealth by registrant concessional status;
- Contributions received by registrant concessional status; and
- Contributions outstanding by concessional status

Access Points Analysis Methods

The analysis for 5.5 Access Points is sourced from Access Points and Products file. The data is summarized to show the access point type, total number of access points for each type of access point and the percentage of access points by access point type.

Cost of distribution through access points is sourced from the Access Points and Product 21-22 file. The fees show the total fee paid to access points and the amount paid for the handling fee (that is the cost of distribution). The total number of products supplied through access points for the fee provided is also shown.

Quarter 3 data was used as the source of for the number of access points with the cost and distribution of NDSS products supplied through access points sourced from Quarter 4 data as the breakdown of access points was not provided in Q4 data. The small variations across quarters for number of access points is immaterial given most access points are community pharmacies.

A.2.2 Qualitative Analyses

The responses to open text questions in the post-program evaluation surveys were analysed using the traditional qualitative approach whereby the evaluators review each of the responses and identify themes or narrative threads within and between the responses. Two aspects of each program are reported:

- What was the most significant thing learned, or the most valuable aspect of the program; and
- Comments about their experience of participating in each program, and what it has meant to attend.

These qualitative responses were also analysed using Leximancer software which examines the data and identifies key concepts. Leximancer is able to rank concepts in terms of importance, with the concepts then clustered into higher-level themes. The importance of concepts is determined by their relationship to all other concepts in the data.

The online focus groups and interviews recordings have undergone human transcription. The transcription of the focus groups and interviews has also undergone qualitative analysis using both the traditional qualitative analysis and Leximancer to rank concepts and their relationships. Through the use of both traditional methods and Leximancer, triangulation can be achieved.

This report includes selected quotations from transcripts. The focus group participants are labelled numerically in this report (e.g., AFG1); interview participants are labelled similarly (e.g., AI1). To ensure the length and clarity of this report only the most relevant themes and concepts from the open text question are reported in Appendix C.

Appendix B- Glossary of statistical terms

Bivariate analysis

The statistical analysis of bivariate data. Bivariate data are data with two measurements of each individual. Bivariate analysis is used to examine if there is a relationship between two sets of values.

Chi-square test

A statistical hypothesis test that is valid to perform when the test statistic is chi-squared distributed under the null hypothesis. It is used to determine whether there is a statistically significant difference between two categorical variables.

Data matching

The process of comparing two different datasets and matching them. The purpose of the process is to find the data that refer to the same entity.

Descriptive statistics

To describe or summarize the characteristics of a sample or dataset, such as a variable's mean, standard deviation, or frequency.

Fisher's Exact test

A statistical test used to determine if there are non-random associations between two categorical variables.

Frequency

The number of times the observation occurred in an experiment or study.

Wilcoxon test

A non-parametric test equivalent to the dependent t-test, which is used to compare two sets of scores that come from the same participants.

Mean

The average value in a collection of numbers.

Ordinal data

A statistical type of quantitative data in which variables exist in naturally occurring ordered categories.

P-value

The probability of obtaining results at least as extreme as the observed results of a statistical hypothesis test, assuming that the null hypothesis is correct.

Paired t-test

A method to compare two means where you have two samples in which observations in one sample can be paired with observations in the other sample.

Percentage

A number or ratio expressed as a fraction of 100.

Standard deviation

A measure of the amount of variation or dispersion of a set of data.

Statistically significance

Determines the results in the data that is not explicable by chance alone. This test provides a p-value. A p-value of 5% or lower is often considered to be statistically significant.

Appendix C- Program Overview & Outcomes

The programs and services included in the annual report consist of comprehensive self-management; Topic-specific self-management program(s); and Other self-management programs for registrants.

NDSS programs evaluated for the annual report are:

Comprehensive Self-Management Programs for Registrants

- DESMOND (Diabetes Education and Self-Management for Ongoing and Newly Diagnosed) program
- OzDAFNE (Dose Adjustment For Normal Eating)

Topic-Specific Self-Management Programs for Registrants:

- CarbSmart
- FootSmart
- MedSmart
- MonitorSmart
- ShopSmart
- Living with Insulin
- Ready Set Go, Let's Move

Other Self-Management Programs for Registrants

- Gestational Diabetes Group Education Session
- Getting Started Group Education Session
- Basic Registrant Education Sessions
- Camps
- Culturally and Linguistically Diverse (CALD) Education sessions

This section includes descriptions and delivery formats for individual programs. It also includes the evaluation match rates per quarter per state/territory and the NPS per quarter per state and territory

C.1 Comprehensive Self-Management Programs for Registrants

C.1.1 DESMOND

DESMOND (Diabetes Education and Self-Management for Ongoing and Newly Diagnosed) is a comprehensive six-hour workshop focused on providing practical self-management skills for people living with type 2 diabetes.

The DESMOND program covers:

- Healthy food choices;
- Physical activity;
- Blood glucose monitoring;
- Risk factors and complications
- Medication management; and
- Personal goal setting.

DESMOND can be delivered in one day or split into two x three hour sessions.

Evaluation Respondent Details

Out of 2537 attendees who has participated in the DESMOND program between July 1, 2021 and June 30, 2022, the total evaluation survey response number is 1960 (i.e. all pre-program and post-program survey responses). The evaluation match rates of DESMOND per quarter per state/territory are shown below.

Note: n* represents the total number of evaluation survey respondents, not the number of program attendees.

n** refers to the number of respondents who completed both pre-program and post-program surveys matched by their date of birth, resident postcode, and program date.

*** Match rate refers to the percentage of matches between pre-program and post-program survey responses, using the pre-program survey respondent count as the denominator

DESMOND	Evaluation Response Count		Matched Respondent Count	Match Rate***
	Pre-Program	Post-Program		
	n*	n*	n**	
ACT				
Q1	-	-	-	-
Q2	4	4	4	100%
Q3	-	-	-	-
Q4	-	-	-	-
Annual	4	4	4	100%
NSW				
Q1	2	0	0	0
Q2	44	42	41	93%
Q3	94	83	76	81%
Q4	264	265	214	81%
Annual	404	390	331	82%
VIC				
Q1	12	4	3	25%
Q2	1	2	0	0
Q3	9	6	2	22%
Q4	1	3	0	0
Annual	23	15	5	22%
QLD				
Q1	90	83	80	89%
Q2	183	164	148	81%
Q3	114	111	107	94%
Q4	303	303	278	92%
Annual	690	661	613	89%
SA				
Q1	22	20	16	73%
Q2	42	35	35	83%
Q3	21	21	20	95%
Q4	27	26	25	93%
Annual	112	102	96	86%
TAS				
Q1	27	25	23	85%
Q2	19	15	14	74%
Q3	-	-	-	-
Q4	13	13	13	100%
Annual	59	53	50	85%
WA				
Q1	221	225	200	90%
Q2	166	170	153	92%
Q3	75	66	62	83%
Q4	31	29	26	84%
Annual	493	490	441	89%

Table 19. Program Match Rate of DESMOND

Net Promoter Score by State/Territory by Quarters

ACT	NSW	VIC	QLD	SA	TAS	WA
-----	-----	-----	-----	----	-----	----

Q1			100(n=4)	78(n=82)	83(n=18)	87(n=23)	83(n=225)
Q2	75(n=4)	74(n=42)	0(n=2)	73(n=160)	74(n=35)	50(n=14)	84(n=167)
Q3		77(n=83)	67(n=6)	77(n=110)	85(n=20)		68(n=65)
Q4		73(n=261)	67(n=3)	78(n=296)	72(n=25)	83(n=12)	82(n=28)
Annual Average NPS Value	75(n=4)	75(n=386)	59(n=15)	77(n=648)	79(n=98)	73(n=49)	79(n=485)

(n=response number)
Table 20. NPS of DESMOND

C.1.2 OzDAFNE

OzDAFNE (Dose Adjustment for Normal Eating) is a comprehensive five-day face-to-face program for adults with type 1 diabetes who manage their diabetes through multiple daily injections. OzDAFNE aims to support improved management of type 1 diabetes by teaching attendees how to adjust their insulin dosage based on the amount of carbohydrate eaten. This supports a more flexible approach to 'normal' eating whilst focussing on improving blood glucose levels.

The OzDAFNE program covers:

- Carbohydrate counting;
- Insulin dose adjustment to normal eating;
- Other topics like managing hypoglycaemia, exercise, illness, diabetes complications and goal setting.

Evaluation Respondent Details

Out of 195 attendees who has participated in the OzDAFNE program between July 1, 2021 and June 30, 2022, the total evaluation survey response number is 40. The evaluation match rates of OzDAFNE per quarter per state/territory are shown below.

OzDAFNE	Evaluation Response Count		Matched Respondent Count	Match Rate***
	Pre-Program	Post-Program		
	n*	n*	n**	
ACT				
Q1	-	-	-	-
Q2	-	-	-	-
Q3	-	-	-	-
Q4	-	-	-	-
Annual	-	-	-	-
NSW				
Q1	-	-	-	-
Q2	-	-	-	-
Q3	8	7	7	88%
Q4	5	5	5	100%
Annual	13	12	12	92%
VIC				
Q1	0	5	0	0
Q2	6	4	4	67%
Q3	7	7	7	100%
Q4	2	0	0	0
Annual	15	16	11	73%
QLD				
Q1	-	-	-	-
Q2	-	-	-	-
Q3	-	-	-	-
Q4	-	-	-	-
Annual	-	-	-	-
SA				
Q1	-	-	-	-
Q2	-	-	-	-
Q3	-	-	-	-
Q4	-	-	-	-
Annual	-	-	-	-
TAS				
Q1	-	-	-	-
Q2	-	-	-	-
Q3	-	-	-	-
Q4	-	-	-	-
Annual	-	-	-	-
WA				
Q1	-	-	-	-
Q2	7	7	7	100%
Q3	-	-	-	-
Q4	-	-	-	-
Annual	7	7	7	100%

Table 21. Program Match Rate of OzDAFNE

Net Promoter Score by State/Territory by Quarters

	ACT	NSW	VIC	QLD	SA	TAS	WA
Q1			100(n=5)				
Q2			100(n=4)				100(n=7)
Q3		100(n=7)	100(n=7)				
Q4		100(n=5)					
Annual Average NPS Value		100(n=12)	100(n=16)				100(n=7)

Note: n* represents the total number of evaluation survey respondents, not the number of program attendees.

n** refers to the number of respondents who completed both pre-program and post-program surveys matched by their date of birth, resident postcode, and program date.

*** Match rate refers to the percentage of matches between pre-program and post-program survey responses, using the pre-program survey respondent count as the denominator

C.2 Topic-Specific Self-Management for Registrants

C.2.1 CarbSmart

CarbSmart is a three-hour short course for people living with type 2 diabetes or gestational diabetes designed to increase confidence to make decisions on how to safely incorporate carbohydrates into your diet.

The CarbSmart program covers:

- Where carbohydrates come from and which foods have them;
- Why some carbohydrates can be more useful than others;
- Recommended amounts of carbohydrates as per the Australian Dietary Guidelines;
- What the glycaemic index means and how to use it to choose quality carbohydrates; and
- The concept of carbohydrate 'exchanges'.

Evaluation Respondent Details

Out of 1784 attendees who has participated in the CarbSmart program between July 1, 2021 and June 30, 2022, the total evaluation survey response number is 1359. The evaluation match rates of CarbSmart per quarter per state/territory are shown below.

CarbSmart	Evaluation Response Count			
	Pre-Program	Post-Program	Matched Respondent Count	Match Rate***
	n*	n*	n**	
ACT				
Q1	-	-	-	-
Q2	-	-	-	-
Q3	10	9	8	80%
Q4	11	20	11	100%
Annual	21	29	19	90%
NSW				
Q1	-	-	-	-
Q2	-	-	-	-
Q3	56	54	51	91%
Q4	237	233	215	91%
Annual	293	287	266	91%
VIC				
Q1	6	5	0	0
Q2	-	4	4	67%
Q3	2	7	7	100%
Q4	5	0	0	0
Annual	13	16	11	73%
QLD				
Q1	66	64	60	91%
Q2	179	160	150	84%
Q3	71	76	66	93%
Q4	268	257	235	88%
Annual	584	557	511	88%
SA				
Q1	12	12	8	67%
Q2	29	23	22	76%
Q3	23	22	22	96%
Q4	43	43	41	95%
Annual	107	100	93	87%
TAS				
Q1	-	-	-	-
Q2	-	-	-	-
Q3	-	-	-	-
Q4	-	-	-	-
Annual	-	-	-	-
WA				
Q1	121	119	112	93%
Q2	79	77	74	94%
Q3	27	28	27	100%
Q4	11	11	10	91%
Annual	238	235	223	94%

Table 23. Program Match Rate of CarbSmart

Net Promoter Score by State/Territory by Quarters

ACT	NSW	VIC	QLD	SA	TAS	WA
-----	-----	-----	-----	----	-----	----

Q1			100(n=5)	76(n=62)	70(n=10)		78 (n=117)
Q2				77(n=149)	62(n=21)		57 (n=75)
Q3	75 (n=8)	89(n=54)	100(n=2)	68(n=72)	90(n=21)		56 (n=27)
Q4	86 (n=21)	75(n=224)	86(n=7)	72(n=252)	80(n=41)		55 (n=11)
Annual Average NPS Value	81(n=29)	82(n=278)	95(n=14)	73(n=535)	76(n=93)		62 (n=230)

Note: n* represents the total number of evaluation survey respondents, not the number of program attendees.

n** refers to the number of respondents who completed both pre-program and post-program surveys matched by their date of birth, resident postcode, and program date.

*** Match rate refers to the percentage of matches between pre-program and post-program survey responses, using the pre-program survey respondent count as the denominator

(n=response number)

Table 24. NPS of CarbSmart

C.2.2 FootSmart

FootSmart is a two hour short course for people living with type 1 diabetes or type 2 diabetes which provides hands on, practical information and skills to support people living with diabetes to develop good foot care routines that will help to avoid future foot problems.

The FootSmart program covers:

- How high blood glucose levels can damage your feet;
- The importance of a daily foot care routine and what to look for;
- How to select the right shoe (and sock) for the job;
- How to manage an injury or infection and when to seek medical attention; and
- The importance of finding a podiatrist and having regular foot checks

Evaluation Respondent Details

Out of 1459 attendees who has participated in the FootSmart program between July 1, 2021 and June 30, 2022, the total evaluation survey response number is 926. The evaluation match rates of FootSmart per quarter per state/territory are shown below.

FootSmart	Evaluation Response Count			
	Pre-Program	Post-Program	Matched Respondent Count	Match Rate***
	n*	n*	n**	
ACT				
Q1	7	7	7	100%
Q2	-	-	-	-
Q3	-	-	-	-
Q4	17	18	16	94%
Annual	24	25	23	96%
NSW				
Q1	2	2	2	100%
Q2	-	-	-	-
Q3	88	87	81	92%
Q4	135	127	118	87%
Annual	225	216	201	89%
VIC				
Q1	-	-	-	-
Q2	-	-	-	-
Q3	-	-	-	-
Q4	-	-	-	-
Annual	-	-	-	-
QLD				
Q1	37	68	35	95%
Q2	88	79	78	89%
Q3	41	41	38	93%
Q4	245	248	234	96%
Annual	411	436	385	94%
SA				
Q1	8	8	8	100%
Q2	12	11	10	83%
Q3	6	6	6	100%
Q4	19	19	19	100%
Annual	45	44	43	96%
TAS				
Q1	-	-	-	-
Q2	10	10	10	100%
Q3	-	-	-	-
Q4	-	-	-	-
Annual	10	10	10	100%
WA				
Q1	55	50	45	82%
Q2	44	44	40	91%
Q3	32	31	31	97%
Q4	2	2	2	100%
Annual	133	127	118	89%

Table 25. Program Match Rate of FootSmart

Net Promoter Score by State/Territory by Quarters

	ACT	NSW	VIC	QLD	SA	TAS	WA
Q1	71 (n=7)	100 (n=2)		66 (n=67)	83 (n=6)		82 (n=50)
Q2				65 (n=74)	100 (n=10)	50 (n=10)	75 (n=44)
Q3		78 (n=86)		72 (n=39)	50 (n=6)		63 (n=30)
Q4	94 (n=18)	74 (n=122)		78 (n=229)	72 (n=18)		100 (n=2)
Annual Average NPS Value	83 (n=25)	84 (n=210)		70 (n=409)	76 (n=40)	50 (n=10)	80 (n=126)

Note: n* represents the total number of evaluation survey respondents, not the number of program attendees.

n** refers to the number of respondents who completed both pre-program and post-program surveys matched by their date of birth, resident postcode, and program date.

*** Match rate refers to the percentage of matches between pre-program and post-program survey responses, using the pre-program survey respondent count as the denominator

(n=response number)

Table 26. NPS of FootSmart

C.2.3 MedSmart

MedSmart is a two hour short course in medication self-management for people living with type 2 diabetes which provides information on medication, how it works, how to take it and how it can help in the management of diabetes.

The MedSmart program covers:

- What is happening in the body in someone living with diabetes;
- Types of diabetes medications and why they are used;
- How to identify key information on medication boxes;
- Common side effects of medication and how to manage them;
- Obstacles that may prevent medications from being taken as prescribed and how to manage this; and
- How to work with healthcare professionals to develop a medication plan you are comfortable with.

Evaluation Respondent Details

Out of 1459 attendees who has participated in the MedSmart program between July 1, 2021 and June 30, 2022, the total evaluation survey response number is 552. The evaluation match rates of MedSmart per quarter per state/territory are shown below.

MedSmart	Evaluation Response Count			
	Pre-Program	Post-Program	Matched Respondent Count	Match Rate***
	n*	n*	n**	
ACT				
Q1	7	7	7	100%
Q2	-	-	-	-
Q3	7	7	7	100%
Q4	16	15	12	75%
Annual	30	29	26	87%
NSW				
Q1	-	-	-	-
Q2	-	-	-	-
Q3	31	30	28	90%
Q4	168	170	155	92%
Annual	199	200	183	92%
VIC				
Q1	-	-	-	-
Q2	-	-	-	-
Q3	-	-	-	-
Q4	0	1	0	0
Annual	0	1	0	0
QLD				
Q1	33	33	29	88%
Q2	7	9	7	100%
Q3	30	30	28	93%
Q4	147	137	134	91%
Annual	217	209	198	91%
SA				
Q1	5	4	4	80%
Q2	8	8	8	100%
Q3	4	6	4	100%
Q4	4	4	4	100%
Annual	21	22	20	95%
TAS				
Q1	-	-	-	-
Q2	-	-	-	-
Q3	-	-	-	-
Q4	-	-	-	-
Annual	-	-	-	-
WA				
Q1	35	33	33	94%
Q2	11	11	11	100%
Q3	-	-	-	-
Q4	5	5	5	100%
Annual	51	49	49	96%

Table 27. Program Match Rate of MedSmart

Net Promoter Score by State/Territory by Quarters

	ACT	NSW	VIC	QLD	SA	TAS	WA
Q1	100 (n=7)			73 (n=33)	75 (n=4)		91 (n=33)
Q2				100 (n=9)	100 (n=8)		91 (n=11)
Q3	57 (n=7)	90 (n=29)		79 (n=28)	67 (n=6)		
Q4	67 (n=15)	78 (n=171)		81 (n=129)	25 (n=4)		60 (n=5)
Annual Average NPS Value	75 (n=29)	84 (n=200)		83 (n=199)	67 (n=22)		81 (n=49)

Note: n* represents the total number of evaluation survey respondents, not the number of program attendees.

n** refers to the number of respondents who completed both pre-program and post-program surveys matched by their date of birth, resident postcode, and program date.

*** Match rate refers to the percentage of matches between pre-program and post-program survey responses, using the pre-program survey respondent count as the denominator

(n=response number)

Table 28. NPS of MedSmart

C.2.4 ShopSmart

ShopSmart is a two-hour short course for people living with type 1 diabetes, type 2 diabetes, or gestational diabetes which provides participants with the knowledge, skills and opportunity to assess food products and apply recommended dietary practices, with the intention of assisting in the maintenance of a healthy lifestyle and therefore enhancing diabetes management.

The ShopSmart program covers:

- Healthy eating, as recommended by the Australian Dietary Guidelines;
- How to make decisions about the product, from the list of ingredients;
- How to make sense of the numbers in the nutrition information pane;
- How to choose foods suitable for you, based on a product's nutrition information panel; and
- What the glycaemic index is and how to use it.

Evaluation Respondent Details

Out of 1527 attendees who has participated in the ShopSmart program between July 1, 2021 and June 30, 2022, the total evaluation survey response number is 1006. The evaluation match rates of ShopSmart per quarter per state/territory are shown below.

ShopSmart	Evaluation Response Count			
	Pre-Program	Post-Program	Matched Respondent Count	Match Rate***
	n*	n*	n**	
ACT				
Q1	16	17	15	94%
Q2	-	-	-	-
Q3	21	21	20	95%
Q4	27	30	24	89%
Annual	64	68	59	92%
NSW				
Q1	-	-	-	-
Q2	-	-	-	-
Q3	85	83	77	91%
Q4	210	202	188	90%
Annual	295	285	265	90%
VIC				
Q1	-	-	-	-
Q2	-	-	-	-
Q3	-	-	-	-
Q4	1	0	0	0
Annual	1	0	0	0
QLD				
Q1	52	54	45	87%
Q2	16	16	16	100%
Q3	91	91	86	95%
Q4	222	222	211	95%
Annual	381	383	358	94%
SA				
Q1	-	-	-	-
Q2	18	12	11	61%
Q3	9	9	9	100%
Q4	31	32	31	100%
Annual	58	53	51	88%
TAS				
Q1	24	22	22	92%
Q2	16	16	16	100%
Q3	-	-	-	-
Q4	9	9	9	100%
Annual	49	47	47	96%
WA				
Q1	41	33	31	76%
Q2	49	48	48	98%
Q3	8	9	8	100%
Q4	1	0	0	0
Annual	99	90	87	88%

Table 29. Program Match Rate of ShopSmart

Net Promoter Score by State/Territory by Quarters

	ACT	NSW	VIC	QLD	SA	TAS	WA
Q1	88 (n=17)			64 (n=50)		80 (n=20)	83 (n=30)
Q2				67 (n=15)	70 (n=10)	81 (n=16)	83 (n=47)
Q3	75 (n=20)	75 (n=77)		70 (n=86)	100 (n=8)		63 (n=8)
Q4	63 (n=30)	83 (n=188)		72 (n=207)	84 (n=31)	100 (n=9)	
Annual Average NPS Value	75 (n=67)	79 (n=265)		68 (n=358)	85 (n=49)	87 (n=45)	76 (n=85)

(n=response number)

Table 30. NPS of ShopSmart

Note: n* represents the total number of evaluation survey respondents, not the number of program attendees.

n** refers to the number of respondents who completed both pre-program and post-program surveys matched by their date of birth, resident postcode, and program date.

*** Match rate refers to the percentage of matches between pre-program and post-program survey responses, using the pre-program survey respondent count as the denominator

C.2.5 MonitorSmart

Monitor Smart is a two hour short course for people with type 2 diabetes. It is designed to build participants knowledge and confidence to do an accurate blood glucose check and know how to interpret the results to make the best lifestyle decisions.

The Monitor Smart program covers:

- How and when to perform a blood glucose check and how to use the results;
- How to get meaningful results from a blood glucose check;
- How to make finger pricking as painless as possible;
- What target blood glucose levels are and why they are important; and
- Other important health checks for managing diabetes

Evaluation Respondent Details

Out of 588 attendees who has participated in the MonitorSmart program between July 1, 2021 and June 30, 2022, the total evaluation survey response number is 405. The evaluation match rates of MonitorSmart per quarter per state/territory are shown below.

MonitorSmart	Evaluation Response Count		Matched Respondent Count	Match Rate***
	Pre-Program	Post-Program		
	n*	n*	n**	
ACT				
Q1	-	-	-	-
Q2	-	-	-	-
Q3	-	-	-	-
Q4	10	14	10	100%
Annual	10	14	10	100%
NSW				
Q1	-	-	-	-
Q2	-	-	-	-
Q3	23	22	21	91%
Q4	111	105	100	90%
Annual	134	127	121	90%
VIC				
Q1	-	-	-	-
Q2	-	-	-	-
Q3	-	-	-	-
Q4	-	-	-	-
Annual	-	-	-	-
QLD				
Q1	22	24	22	100%
Q2	36	26	26	72%
Q3	31	32	30	97%
Q4	87	84	80	92%
Annual	176	166	158	90%
SA				
Q1	-	-	-	-
Q2	2	2	2	100%
Q3	4	4	4	100%
Q4	4	4	4	100%
Annual	10	10	10	100%
TAS				
Q1	-	-	-	-
Q2	-	-	-	-
Q3	-	-	-	-
Q4	-	-	-	-
Annual	-	-	-	-
WA				
Q1	29	29	26	90%
Q2	25	25	25	100%
Q3	-	-	-	-
Q4	-	-	-	-
Annual	54	54	51	94%

Table 31. Program Match Rate of MonitorSmart

Net Promoter Score by State/Territory by Quarters

ACT	NSW	VIC	QLD	SA	TAS	WA
-----	-----	-----	-----	----	-----	----

Q1			92 (n=24)			90 (n=29)
Q2			68 (n=25)	50 (n=2)		68 (n=25)
Q3		86 (n=22)	90 (n=30)	25 (n=4)		
Q4	77 (n=13)	66 (n=102)	85 (n=79)	75 (n=4)		
Annual Average NPS Value	77 (n=13)	76 (n=124)	84 (n=158)	50 (n=10)		79 (n=54)

Note: n* represents the total number of evaluation survey respondents, not the number of program attendees.

n** refers to the number of respondents who completed both pre-program and post-program surveys matched by their date of birth, resident postcode, and program date.

*** Match rate refers to the percentage of matches between pre-program and post-program survey responses, using the pre-program survey respondent count as the denominator

(n=response number)

Table 32. NPS of MonitorSmart

C.2.6 Living with Insulin

Living with Insulin is a three-hour short course which aims to improve knowledge, self-management, coping skills and self-efficacy of people living with type 1 diabetes or type 2 diabetes requiring insulin therapy. The program discusses and identifies ongoing barriers to optimal insulin use, attitudes toward intensification of insulin therapy, and explores ongoing positive or negative consequences of insulin use and how this might impact on self-management of diabetes.

The Living with Insulin program covers:

- What insulin does in the body and why it is needed;
- Products, supplies, and storage;
- Injection techniques;
- Blood glucose monitoring and hypo/hyperglycaemia;
- Diabetes and driving

Evaluation Respondent Details

Out of 391 attendees who has participated in the Living with Insulin program between July 1, 2021 and June 30, 2022, the total evaluation survey response number is 262. The evaluation match rates of Living with Insulin per quarter per state/territory are shown below.

Living with Insulin	Evaluation Response Count		Matched Respondent Count	Match Rate***
	Pre-Program	Post-Program		
	n*	n*	n**	
ACT				
Q1	-	-	-	-
Q2	-	-	-	-
Q3	11	6	4	36%
Q4	4	4	0	0
Annual	15	10	4	27%
NSW				
Q1	-	-	-	-
Q2	-	-	-	-
Q3	36	36	33	92%
Q4	57	53	48	84%
Annual	93	89	81	87%
VIC				
Q1	-	-	-	-
Q2	-	-	-	-
Q3	-	-	-	-
Q4	-	-	-	-
Annual	-	-	-	-
QLD				
Q1	19	20	19	100%
Q2	22	19	16	73%
Q3	11	11	11	100%
Q4	48	46	43	90%
Annual	100	96	89	89%
SA				
Q1	5	5	5	100%
Q2	-	-	-	-
Q3	6	6	6	100%
Q4	8	8	8	100%
Annual	19	19	19	100%
TAS				
Q1	-	-	-	-
Q2	-	-	-	-
Q3	-	-	-	-
Q4	-	-	-	-
Annual	-	-	-	-
WA				
Q1	11	12	9	82%
Q2	-	-	-	-
Q3	-	-	-	-
Q4	-	-	-	-
Annual	11	12	9	82%

Table 33. Program Match Rate of Living with Insulin

Net Promoter Score by State/Territory by Quarters

ACT	NSW	VIC	QLD	SA	TAS	WA
-----	-----	-----	-----	----	-----	----

Q1			85 (n=20)	100 (n=5)		90 (n=10)
Q2			79 (n=19)			
Q3	83 (n=6)	89 (n=36)	91 (n=11)	100 (n=6)		
Q4	100 (n=4)	84 (n=49)	84 (n=45)	63 (n=8)		
Annual Average NPS Value	92 (n=10)	87 (n=85)	85 (n=95)	88 (n=19)		90 (n=10)

Note: n* represents the total number of evaluation survey respondents, not the number of program attendees.

n** refers to the number of respondents who completed both pre-program and post-program surveys matched by their date of birth, resident postcode, and program date.

*** Match rate refers to the percentage of matches between pre-program and post-program survey responses, using the pre-program survey respondent count as the denominator

(n=response number)

Table 34. NPS of Living with Insulin

C.2.7 Ready Set Go, Let's Move

Ready Set Go, Let's Move is a three-hour workshop for people living with type 1 diabetes or type 2 diabetes which aims to give participants the skills and knowledge on how to identify, tackle and break down their exercise-related barriers so that they can become more active.

The Ready Set Go, Let's Move program covers:

- The positive effects exercise can have on blood glucose levels
- The role physical activity has on health and wellbeing;
- Strategies to minimise barriers to physical activity
- Development of a personal step-by-step plan of action

Evaluation Respondent Details

Out of 1110 attendees who has participated in the Ready Set Go, Let's Move program between July 1, 2021 and June 30, 2022, the total evaluation survey response number is 621. The evaluation match rates of Ready Set Go, Let's Move per quarter per state/territory are shown below.

Ready Set Go, Let's Move	Evaluation Response Count		Matched Respondent Count	Match Rate***
	Pre-Program	Post-Program		
	n*	n*	n**	
ACT				
Q1	-	-	-	-
Q2	-	-	-	-
Q3	19	22	18	95%
Q4	21	22	21	100%
Annual	40	44	39	98%
NSW				
Q1	-	-	-	-
Q2	-	-	-	-
Q3	125	118	115	92%
Q4	228	212	205	90%
Annual	353	330	320	91%
VIC				
Q1	-	-	-	-
Q2	-	-	-	-
Q3	-	-	-	-
Q4	-	-	-	-
Annual	-	-	-	-
QLD				
Q1	35	32	31	89%
Q2	22	22	21	95%
Q3	12	12	12	100%
Q4	99	100	96	97%
Annual	168	166	160	95%
SA				
Q1	-	-	-	-
Q2	-	-	-	-
Q3	-	-	-	-
Q4	5	5	5	100%
Annual	5	5	5	100%
TAS				
Q1	-	-	-	-
Q2	-	-	-	-
Q3	-	-	-	-
Q4	-	-	-	-
Annual	-	-	-	-
WA				
Q1	25	23	23	92%
Q2	3	3	3	100%
Q3	5	6	5	100%
Q4	-	-	-	-
Annual	33	32	31	94%

Table 35. Program Match Rate of Ready Set Go, Let's Move

Net Promoter Score by State/Territory by Quarters

ACT	NSW	VIC	QLD	SA	TAS	WA
-----	-----	-----	-----	----	-----	----

Q1						65 (n=23)
Q2						67 (n=3)
Q3	91 (n=22)	70 (n=112)				83 (n=6)
Q4	67 (n=24)	73 (n=196)			75 (n=4)	
Annual Average NPS Value	79 (n=46)	72 (n=308)			71 (n=165)	75 (n=4)

Note: n* represents the total number of evaluation survey respondents, not the number of program attendees.

n** refers to the number of respondents who completed both pre-program and post-program surveys matched by their date of birth, resident postcode, and program date.

*** Match rate refers to the percentage of matches between pre-program and post-program survey responses, using the pre-program survey respondent count as the denominator

(n=response number)

Table 36. NPS of Ready Set Go, Let's Move

C.3 Other Self-Management Programs for Registrants

C.3.1 Camps

Camps are held over 2-5 nights and aim to increase diabetes self-management knowledge and skills, resilience, and decrease diabetes-related distress for young people living with diabetes. Since the COVID-19 pandemic, camps in some states and territories were replaced with an online experience. The program evaluated for this report is the junior camps which ran as single day events due to COVID-19.

Parents of attendees are also asked to answer questions assessing camp outcomes and given the opportunity to provide camp feedback.

Evaluation Respondent Details

Data of the Camps program were only recorded in Q1 from Western Australia and Q2 from Tasmania.

Please note, the Q1 data from Western Australia was not data from the children who participated in the Camps program but 14 post-program evaluation survey responses from parents. With regards to the data in Q2, all data were recorded from children (n=24) who participated the Camps program, with 5 parents' post-program survey responses.

Net Promoter Score by State/Territory by Quarters

	TAS	WA
Q1		93 (n=14)
Q2	80 (n=5)	
Q3		
Q4		
Annual Average NPS Value	80 (n=5)	93 (n=14)

(n=response number)

Table 37. NPS of Camps

C.3.2 Gestational Diabetes Group Education Session

Gestational Diabetes Group Education Session is a two-hour program for newly diagnosed women with gestational diabetes. The education sessions aim to increase knowledge, understanding and confidence to self-manage gestational diabetes

The Gestational Education program covers:

- What is gestational diabetes;
- Management of gestational diabetes
- Healthy eating guidelines
- Self blood glucose monitoring

Evaluation Respondent Details

The Gestational Diabetes Group Education Session is only provided in the Northern Territory and participants only need to complete a post-program survey for evaluation.

The total evaluation survey response number of the Gestational Education program between July 1, 2021 and June 30, 2022 is 484, including 126 responses in Q1, 117 responses in Q2, 145 responses in Q3, and 96 responses in Q4

Net Promoter Score by State/Territory by Quarters

	NT
Q1	71 (n=126)
Q2	80 (n=113)
Q3	80 (n=142)
Q4	73 (n=95)
Annual Average NPS Value	76 (n=476)

(n=response number)

Table 38. NPS of Gestational Diabetes Group Education Session

C.3.3 Getting Started Group Education Session

Getting Started Group Education Session is a two-and-a-half-hour program designed for people with newly diagnosed type 2 diabetes. It is designed to increase knowledge, understanding and confidence to self-manage type 2 diabetes and reduce the risk of complications

The Getting Started program covers:

- What is diabetes
- Management of diabetes
- Healthy eating guidelines
- Physical activity guidelines
- Acute and long-term complications

Evaluation Respondent Details

Getting Started Group Education Session is only provided in the Northern Territory and participants only need to complete a post-program survey for evaluation.

The total evaluation survey response number of the Getting Started program between July 1, 2021 and June 30, 2022 is 146, including 35 responses in Q1, 52 responses in Q2, 32 responses in Q3, and 27 responses in Q4.

Net Promoter Score by State/Territory by Quarters

	NT
Q1	69 (n=35)
Q2	80 (n=51)
Q3	81 (n=31)
Q4	78 (n=27)
Annual Average NPS Value	77 (n=144)

(n=response number)

Table 39. NPS of Getting Started Group Education Session

C.3.4 Basic Registrant Education Session

The NDSS basic education programs, in the form of seminars, aim to increase awareness of the information, support and services that are available to people living with diabetes through the NDSS and increase understanding of diabetes for the purpose of engaging or re-engaging them with the recommended cycles of care.

Evaluation Respondent Details

Participants only need to complete a post-program survey for evaluation.

The total evaluation survey response number of the Basic Education Sessions between July 1, 2021 and June 30, 2022 is 185, and all those respondents were recorded in Q3 from South Australia.

Net Promoter Score by State/Territory by Quarters

SA

Q1	-
Q2	-
Q3	63 (n=176)
Q4	-
Annual Average NPS Value	63 (n=176)

(n=response number)

Table 40. NPS of Basic Registrant Education Session

C.3.5 Culturally & Linguistically Diverse (CALD) Information Sessions

Information sessions for CALD registrants are provided in language either through a bi-lingual health worker or with the use of an interpreter and provide broad and generalist information about most aspects of diabetes and diabetes management. Sessions include culturally relevant information and provide an opportunity for the NDSS to reach priority target groups to engage them with the recommended cycles of care and increase their awareness of the information, programs and services that can support them with their diabetes management.

Evaluation Respondent Details

Participants only need to complete a post-program survey for evaluation.

The total evaluation survey response number of the CALD Education Sessions between July 1, 2021 and June 30, 2022 is 273. The evaluation match rates of CALD Education Sessions per quarter per state/territory are shown below.

VIC NSW QLD

Q1	42	3	-
Q2	2	37	6
Q3	-	34	37
Q4	-	110	2
Total	44	184	45

Table 41. Evaluation Match Rates of Culturally & Linguistically Diverse (CALD) Information Sessions

Net Promoter Score by State/Territory by Quarters

ACT NSW VIC QLD SA TAS WA

Q1	100 (n=3)	48 (n=42)				
Q2	63 (n=35)	0 (n=2)	50 (n=6)			
Q3	94 (n=34)		74 (n=34)			
Q4	81 (n=108)		50 (n=2)	75 (n=4)		
Annual Average NPS Value	85 (n=180)	24 (n=44)	58 (n=42)	75 (n=4)		

(n=response number)

Table 42. NPS of Culturally & Linguistically Diverse (CALD) Information Sessions

Appendix D- Quarter 3 & 4 Economic Analysis

This section presents the economic analyses of Quarter 3 and Quarter 4 of the Comprehensive Diabetes Self-Management and Topic-Specific Programs (online and face-to-face).

Program	Delivery	Activities	Attendees	Cost	Cost Per Activity	Cost Per Attendee
DESMOND	Face-to-face	77	1,460	\$1,400,086	\$7,910	\$959
OzDAFNE	Face-to-face	29	144	\$545,759	\$8,819	\$3,790
OzDAFNE	Online	3	17	\$147,202	\$49,067	\$8,659
Topic-Specific	Face-to-face	837	7,054	\$3,222,010	\$3,848	\$457
Topic-Specific	Online	221	838	\$510,732	\$311*	\$80*
CAMPS (attendees & parents)	Face-to-face & Online	5	170	\$578,335	\$115,667	\$3,402

* As Topic-Specific Self-Management Programs were not delivered virtually until 1 July 2022 the aggregate cost per attendee predominantly refers to Webinars
 Table 43. Costing for NDSS programs (Quarters 3 & 4)

D.1 Comprehensive Self-Management Programs for Registrants

DESMOND

For the DESMOND (face-to-face) program, during the reporting period of Quarter 3 and Quarter 4 of 2021-2022 (Table 43):

- There were 177 activities with a total of 1,460 attendees;
- The total cost of conducting these activities was \$1,400,086;
- The per program cost of running DESMOND was \$7,910;
- The per person cost for DESMOND was \$959.

OzDAFNE

During the reporting period of Quarter 3 and Quarter 4 of 2021–2022, OZDAFNE was delivered both face-to-face and online.

For the OZDAFNE programs (face-to-face) delivered during the reporting period (Table 43):

- There were 29 activities with a total of 144 attendees;
- The total cost of conducting these activities was \$545,759
- The aggregate cost per activity was \$18,819; and
- The aggregate cost per attendee was \$3,790

For the OZDAFNE programs (online) delivered during the reporting period (Table 43):

- There were 3 activities with 17 attendees;
- The total cost of conducting these activities was \$147,202;
- The aggregate cost per activity was \$49,067; and
- The aggregate cost per attendee was \$8,659

Note that OzDAFNE (online) was still in the pilot phase for 2021-2022. For 2022-2023 it will be a part of the nationally consistent suite of programs delivered from 1 July 2022.

D.2 Topic-Specific Self-Management Programs for Registrants

Costs for Topic-Specific Programs are reported at an aggregate level as the data was not available at the individual program level. Results generated from the pre-program and post-program surveys are also provided in Table 43.

At the aggregate level for Topic-Specific Programs (face-to-face), during the reporting period of Quarter 3 and Quarter 4 of 2021-2022 (Table 43):

- There were 837 activities with a total of 7,054 attendees;
- The total cost of conducting these activities was \$3,222,010;
- The aggregate cost per activity was \$3,848; and
- The aggregate cost per attendee was \$457.

Note that the above costs exclude the peer support face-to-face programs as clarification of the data is still outstanding.

At the aggregate level for of Topic-Specific Programs (online), during the reporting period of Quarter 3 and Quarter 4 of 2021-2022 (Table 43):

- There were 221 activities with a total of 2,838 attendees;
- The total cost of conducting these activities was \$510,732;

The aggregate cost per activity and attendee was not able to be found due to data availability e.g. Topic-Specific Programs (online) and Webinars were provided in the same line item.

CAMPS

For the CAMPS program, during the period of Quarter 3 and Quarter 4 of 2021–2022 (Table 43):

- There were 5 activities with a total of 170 attendees;
- The total cost conducting these activities was \$578,335;
- The per program cost of running CAMPS was \$ 115,667;
- The per person cost for CAMPS was \$3,402.

Appendix E- Limitations from Quarterly Reports

There were a number of limitations provided in the quarterly reports. For ease of reference please see below:

Limitations reported in the Quarter 3 report:

Lack of participation data

Participation data is a crucial indicator of participants' engagement, which is also significantly related to the process evaluation. The participation data for the ten NDSS programs evaluated is only available in NSW/ACT and QLD between September and December 2021 (i.e. Q2, 2021-22). In addition to this, there is no detailed information on the number of attendees and the number of pre-evaluations provided for a specific NDSS program or service.

Lack of health literacy data

The largest challenge in interpreting much of the data collected is the lack of health literacy status of participants. Individual health literacy is described as 'the knowledge, motivation and competencies of a consumer to access, understand, appraise and apply health information to make effective decisions about health and healthcare and take appropriate action'. The health literacy status of NDSS registrants is fundamental to their ability to understand health information provided to them and to make appropriate health decisions. Adding a simple question and/or a validated health literacy survey when administering a whole of scheme survey would be useful in the future to understand NDSS Registrants' health literacy level. Information would then be able to be targeted appropriately and would allow the effectiveness of the NDSS activities to be accurately evaluated and compared.

Patient Activation Measure (PAM) licensing

As Diabetes Australia has discontinued the licencing with PAM upon recommendation of UTS. Implementation of the Patient Assessment of Care for Chronic Conditions (PACIC), will occur from 1 July 2022. Therefore, UTS are currently not able to analyse the difference in PAM pre- and post-test scores (i.e. patient activation levels) for each participant using the scoring algorithm provided by the developers. The reporting is therefore focussed on each individual item of PAM to assess the participation experience of NDSS registrants.

Limitations reported in the Quarter 4 report:

Lack of demographic and health information of all attendees of each NDSS program

The number of attendees and their demographic and health characteristics are essential indicators of participants' engagement, which are significantly related to the process evaluation. Demographic and health information allows the evaluator to not only report on who has participated in the programs but who has not completed the evaluation surveys. The NDSS providers will therefore be able to target non-respondents to understand their needs.

Lack of evaluation data with regards to NDSS Indigenous-focused & CALD-focused programs

Across all programs and services delivered in 2021-2022, there seems to be under-representation of Aboriginal and Torres Strait Islander people as well as people with diabetes from CALD backgrounds.

Please note, this limitation is based on the number of respondents from the 14 NDSS programs evaluated as part of this report, not all programs delivered in the NDSS. This may not be representative of the proportion of Indigenous registrants and CALD consumers attending NDSS events, as very few CALD programs and no NDSS programs delivered exclusively for Aboriginal and Torres Strait Islander communities were evaluated by UTS in 2021-2022 as these were not part of the evaluation framework.

Lack of evaluation data with regards to NDSS health professional programs

The healthcare workforce's capacity to deliver diabetes care is important for people living with and at risk of diabetes. Though a number of programs are designed to increase health professionals' knowledge and understanding of diabetes as well as increase the awareness of NDSS services/support, no NDSS health professional program data has been collected for evaluation.

Appendix F- Recommendations from Quarterly Reports

There were a number of recommendations in the quarterly reports. For ease of reference please see below:

Quarter 3 recommendations

The recommendations below are based on NDSS programs that were within the scope of the quarter 3 report.

- The NDSS ID number of participants should be collected when they provide their attendee details for an NDSS program or service registration. This recommendation can be implemented with help from Diabetes Australia and NDSS Agents. The NDSS ID number, the unique identifier code for each NDSS registrant, can extensively enhance the data quality and improve the process evaluation and outcome evaluation, by:
 - Enabling the evaluator to correctly link the NDSS program, service, product data with the NDSS registration dataset without contacting participants for sensitive identifying data (e.g. name, address, and Medicare number);
 - Allowing the evaluator to accurately interpret the reach of programs from the national scheme level (e.g. the possibility to evaluate registrants who participate in more than one NDSS activity quarterly and yearly);
 - Analysing evaluation data including the age group and sex information (from the NDSS registration dataset) of NDSS registrants who attend one or more NDSS activities;
 - Easing participants' burden on completing the same demographic questions of NDSS program surveys. This recommendation could be considered an approach to improving the data collection quality of the NDSS evaluation by minimising the data entry errors (e.g. missing data and invalid entries).
 - Allowing the evaluator to have three-month data-checking permission to review data and contact Agents for unexpected data entry errors.
- Among the NDSS programs included in this evaluation report, on average a quarter of participants were newly diagnosed, more than half were self-referred to the NDSS programs and services and most of them were living with type 2 diabetes. International evidence suggests the best outcomes for people with type 2 diabetes are achieved when support is provided within the first six months of diagnosis. Consideration should be given to strategies to encourage those newly diagnosed with type 2 diabetes to participate in NDSS programs with help from health professionals (i.e. introducing the NDSS to people with diabetes).

Quarter 4 recommendations

Adding goal-setting questions to each NDSS program evaluation survey

Although the current evaluation data showed that the NDSS programs significantly improved the knowledge and confidence in diabetes self-management among evaluation respondents, people living with diabetes have different goals to self-manage their diabetes. Therefore, adding a survey question focusing on NDSS registrants' goal setting in pre-program surveys and another question focusing on the behaviours that registrants intend to change in post-program surveys may be helpful to determine whether NDSS programs play a role in helping individuals achieve their goals.

Collecting program-specific costing data

There are a number of Topic-Specific Programs included in the NDSS evaluation. However, the costs of those programs were provided as a whole in the available cost dataset of the NDSS. Costing data for each Topic-Specific Program is suggested to be recorded separately. Then, comparisons of costs across NDSS programs can be conducted in the future evaluation.