Get Healthy Service Evaluation

A report of the secondary analysis of data collected as part of the Get Healthy Service

June 2024

Physical Activity, Nutrition and Obesity Research Group (PANORG)

Prevention Research Collaboration

The University of Sydney

Ethics approval

Ethics approval was granted by the University of Sydney Human Research Ethics Committee (Reference: 2019/710) and the Aboriginal Health and Medical Research Council (Reference: 2209/24).

Executive Summary

The NSW Get Healthy Service (GHS) was first delivered in February 2009 and is an effective, free telephone-based healthy lifestyle coaching service supporting adults to make sustained improvements in healthy eating, physical activity and achieving or maintaining a healthy weight. Since its inception, the GHS has been adapted to cater to those with increased risk of chronic disease including: the Diabetes Prevention Program developed for adults at risk for type 2 diabetes, Get Health in Pregnancy for women during pregnancy, and an Aboriginal program. The Physical Activity Nutrition and Obesity Research Group were engaged to evaluate the GHS by undertaking a secondary analysis of the GHS data. The evaluation focused on a process and impact evaluation of the GHS based on data of participants who were referred to the program between December 2017 and May 2023. The evaluation also included a series of analyses of individual GHS programs including the Standard Program, the Diabetes program, Aboriginal Program and Get Healthy in Pregnancy Program. The following questions guided the evaluation:

1. What is the demographic and risk factor profile of GHS participants?
2. What is the conversion rate of participants referred to the program to being actively enrolled in the program.
   a. How does this differ based on program characteristics?
   b. How does this differ based on participant characteristics?
3. What is the conversion rate of participants actively enrolled in the program to completing the program.
   a. How does this differ based on program characteristics?
   b. How does this differ based on participant characteristics?
4. What are the health risk behaviour change outcomes associated with GHS participation?

Reach of the Program

Nearly 123,000 participants were referred to the GHS between December 2017 and May 2023, of these 107,450 were first time referrals. Approximately 50%referred participants were actively enrolled (i.e. they received at least one coaching call) and 32% went on to complete the program at the time of reporting.

The most common registration method was using a bulk referral form by health professionals (27%) followed by a website registration (23%) with the majority of referrals received from maternity health professionals. Of participants referred to the GHS, 43% (n=15,560) were in Get Healthy in Pregnancy, 34% (n=12,536) were in the Standard Program, 20% (n=7,426) were in the Diabetes Prevention Program and 2.9% (n=1,044) were in the Aboriginal Program.

Demographic and Risk Factor Profile

The majority of participants referred to GHS were female (87%, n=89,561), aged between 16-49 years (77%, n=76,250), had tertiary qualifications (69%, n=27,708), were in paid employment (60%, n=24,753) and spoke English at home (86%, n=64,077), and 8.2% (n=6,907) were Aboriginal. Based on their residential postcode, 61% (n=61,421) of referred participants were from least disadvantaged backgrounds and 64% (n=68,343) were from major cities. Regarding health risk characteristics of those people referred to the GHS, 78% (n=32,286) of participants were classified as being overweight or obese based on their calculated BMI; and had a greatly increased risk of chronic disease based on their waist circumference (86%, n=11,780). Based on the healthy eating guidelines,

53% (n=9,624) of participants consumed the recommended two serves of fruit per day and 13% (n=2,318) of participants consumed the recommended five serves of vegetables per day. The majority of participants referred to the GHS (60%, n=12,157) did not meet the recommended levels of sufficient physical activity per week.

Engagement with the Program

Overall, 32% of participants completed the GHS after being actively enrolled. However, the subsequent evaluation of individual programs demonstrated that compared to the Standard Program, participants who were actively enrolled in the Diabetes Program were more likely to complete the program, and 16% of those actively enrolled in the Aboriginal program completed the program, and those in Get Healthy in Pregnancy did not differ significantly in terms of program completion. In terms of the characteristics of enrolled participants and their likelihood of completing the program, women, those with a high school education or less, and those in paid employment were significantly less likely to complete, and men, participants aged 50+ years, those who spoke English at home, those from the least disadvantaged areas and those who did not identify as Aboriginal were more likely to complete the program.

Impact of the Program

Improvements to participants' physical activity and healthy eating behaviours were noted across the GHS overall. On average participants increased their physical activity by 43.52 minutes/week, they had a 11% higher rate of fruit consumption, 30% higher rate of vegetable consumption, 44% lower rate of sugar sweetened drink consumption and 31% lower rate of takeaway food consumption than at baseline. After accounting for missing data, improvements in physical activity, and vegetable, fruit, sweetened drink and takeaway food consumption were reported for GHS Standard, GHS Diabetes, GHS Aboriginal and Get Healthy in Pregnancy program participants.

Across the GHS, participants also reported significant improvements in anthropometric related measures, and on average, participants improved their BMI score by 0.51 kg/m^2 and their waist circumference by 2.74 cm. After accounting for missing data, improvements in weight, BMI and waist circumference were reported for participants who completed GHS Standard, GHS Diabetes and GHS Aboriginal programs.

Implications of the evaluation

This evaluation of the GHS as a whole and for the Standard, Diabetes, Pregnancy and Aboriginal programs is an important part of service delivery continuous improvement processes and an opportunity to measure the reach and impact of the GHS over time. The process evaluation data clearly show that the GHS is being used by those most at need in terms of risk factor profiles. More will need to be done to reach and retain participants from rural and remote areas, culturally and linguistically diverse and Aboriginal populations. Additionally, efforts to ensure that all people referred to the GHS engage with the service in a more comprehensive way, for example, receive a first coaching call and continue to receive the optimal number of coaching calls for their need. The impact evaluation findings suggest that the magnitude of change in health behaviour and anthropometric risk factors is less than it was in the early years of the service which could be due to a number of factors that warrant exploration.

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1. Background

1.1 The Get Healthy Service

The Get Healthy Service (GHS) is an effective, free telephone-based healthy lifestyle coaching service that has been operating in NSW since 2009. The GHS supports NSW adults to make sustained improvements in healthy eating, physical activity and achieving or maintaining a healthy weight. Since its inception the GHS has been adapted to cater to those with increased risk of chronic disease including: the Diabetes Prevention Program (DPM), developed for adults at risk for type 2 diabetes; Get Health in Pregnancy for women during pregnancy that includes an alcohol abstinence program; and an Aboriginal[1] program, developed to facilitate accessibility and ensure Aboriginal cultural appropriateness.

The GHS is delivered by independent service providers. Between December 2017 and June 2023, the GHS was delivered by one provider and transitioned to a new provider from July 2023. Ahead of this change in service provider, the Physical Activity Nutrition and Obesity Research Group (PANORG) were engaged to undertake a secondary analysis of existing GHS data, and a series of secondary analyses of the GHS Standard program, the GHS Diabetes program, the Get Healthy in Pregnancy program, and the Aboriginal program.

1.2 Evaluation of the Get Healthy Service

The GHS provides a real-world example of translational research, with the program delivered at scale across the NSW population. The GHS has been successful in supporting participants in making sustained improvements in healthy eating, physical activity, and weight; and thereby decreasing their chronic disease risk profile. Previous evaluations of the GHS have demonstrated the following:

- The GHS was being used by those who are most in need as determined by their socio-demographic and risk factor profile (1).
- Several promotional strategies were effective at driving referrals to the GHS, including mass media advertising, (2-4) general practice referral practices (5) and proactive marketing strategies (6). With evaluations demonstrating that implementation of population-based services such as GHS require sustained investment in recruitment strategies and targeted advertising, or else risk being underutilised.
- Those who completed the coaching program of the GHS made significant improvements to the risk factor profile with clinically significant decreases in weight and waist circumference, in addition to improvements to healthy eating and physical activity (7).
- In a longer term follow up study, improvements in weight, waist circumference, BMI, and fruit and vegetable consumption were observed from baseline to 12-months and apart from

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[1] This report refers to Aboriginal people in accordance with the NSW Ministry of Health Guideline Communicating Positively: A Guide to Appropriate Aboriginal Terminology. The authors acknowledge that 'Indigenous' is not a homogenous group of people and includes Aboriginal and Torres Strait Islander people. Both Aboriginal and Torres Strait Islander people may enrol and participate in the GHS and its programs. However, in this evaluation, the proportion of Indigenous participants that identified as Torres Strait Islander was less than 5%. Therefore, Aboriginal and Torres Strait Islander participant data were combined and referred to as 'Aboriginal' for reporting purposes, with Aboriginal chosen as the preferred term to reflect that the service was delivered, and the evaluation was conducted, in NSW. Additionally, this evaluation was conducted on the service and its programs (for example, the Diabetes Program, the Aboriginal Program), therefore analysis and reporting by Indigenous groups was beyond the scope of this report.

vegetable consumption, there were no significant differences between completion (6 month) and 12-month changes from baseline, indicating these risk factor improvements were maintained from the end of the coaching program (8).

- An evaluation of the Diabetes Prevention Management program found that the program reached priority population groups, those typically underrepresented in diabetes prevention programs and resulted in clinically relevant improvements in anthropometric and lifestyle risk factors in adults at increased risk for type 2 diabetes (9).

- Formative research undertaken with Aboriginal people was positive in relation to the Aboriginal program but areas for service enhancement, including improving program content, delivery and service promotion as well as ensuring culturally appropriate referral pathways were noted. Once these changes were implemented, the proportion of Aboriginal GHS participants increased significantly (3.2 to 6.4%). There were significant improvements across a number of risk factors assessed after six months (average weight loss: 3.3 kg and waist circumference reduction: 6.2 cm) for Aboriginal participants completing the program (10).

- A more recent evaluation of the Get Healthy in Pregnancy program found that participants who completed ten coaching calls made significant improvements in more health-related behaviours than those who completed fewer calls. A higher proportion of women with pre-pregnancy obesity gained weight below the guidelines (33.8%) than above the guidelines (28.5%). Get Healthy in Pregnancy has the potential to support all pregnant women, including those with pre-pregnancy obesity, to achieve a healthier pregnancy (11).

Given the lapse of time between when these evaluations were conducted, particularly in relation assessing the impact of the GHS, it is considered timely to undertake a comprehensive evaluation of the Service and its service offerings. Such an evaluation also provides an opportunity to assess the delivery of the service between December 2017 and May 2023 and with the impact of COVID-19 on telehealth adoption and utilisation, this evaluation of the GHS is needed to inform the incoming service provider, other telehealth service providers, and those evaluating telephone-based coaching services more broadly.

1.3 Literature Review

To inform and contextualise the evaluation, a rapid review of literature of telehealth program evaluations in Australia and internationally was conducted to inform the following questions:

1. How does the GHS conversion rate of referrals to enrolment and completions compare to similar programs (in Australia and internationally)?
2. How does the Get Healthy Service compare to similar programs (in Australia and internationally) in relation to program completions?
3. How does the impact of the Get Healthy Service compare to similar programs (in Australia and internationally)?

The inclusion and exclusion criteria for the rapid review are included in Appendix 1.

Comparison to other population healthpromotion initiatives

There was an exponential increase in telehealth (also referred to as eHealth, telemedicine, digital health) and telehealth research due to the COVID-19 pandemic. The literature review findings indicate that the GHS is novel, and internationally there are no government funded, state-wide telehealth prevention programs that are suitable for comparison to the GHS.

1.4 Aims and research questions

The aim of this evaluation was to conduct a secondary analysis of the GHS process and impact, using existing NSW GHS data collected between December 2017 and May 2023. The evaluation included a series of secondary analyses of some of the GHS programs including the GHS Standard Program, Diabetes program, Aboriginal Program and Get Healthy in Pregnancy Program. The evaluation was guided by the following research questions, which were developed in collaboration with the NSW Health Centre for Population Health.

Process evaluation research questions:

1. What is the demographic and risk factor profile of GHS participants?
2. What is the conversion rate of participants referred to being actively enrolled in the program?
   a. How does this differ based on program characteristics?
   b. How does this differ based on participant characteristics?
3. What is the conversion rate of participants actively enrolled to completing the program?
   a. How does this differ based on program characteristics?
   b. How does this differ based on participant characteristics?

Impact evaluation research question:

4. What are the health risk behaviour change outcomes associated with GHS participation?

2. Methods

All participants provided data and consent to the GHS service provider as part of their enrolment and ongoing participation in the program. The program and impact evaluation used a pre-post design, and data for GHS participants who enrolled in the program from December 2017 to May 2023 were included in the analysis. This period was selected as it was the contract period for the most recent service provider. Changes in program delivery prevent data collected by different service providers being aggregated.

2.1 Data management

Data collected by the NSW Ministry of Health as part of the Get Healthy suite of programs were provided to PANORG as six datasets and data was matched on unique participant identifier (specific to each individual) and enrolment identifier (specific to each referral). Participant records were excluded from the analysis for several reasons:

- There participant record did not have a 'participant id number' (n=76),
- The participant did not live in NSW (n = 11,277),
- The participant was enrolled in a program not included in this evaluation (n= 1065): Cancer Support Program (n= 175); Alcohol Reduction Program (n=309); Get Healthy Stay Healthy Program (n=578); Alcohol Abstinence in Pregnancy Program (n=3).
- There were 1367 participants offered the brief intervention, those who accepted the brief intervention (n=97) were excluded from the analysis.
- Participant referrals included both participants referred to the service for the first time, and participants referred to the service more than once (repeat referrals). This evaluation included all participants at their first referral. Amongst all referrals, 20% (n=26,484) were participants who were referred to the service more than once. All participants had their first referral to the service included and all subsequent referrals excluded.
- Across the GHS 66% (n = 81,111) of records were missing data reporting the program they were enrolled in. As such, these participants were reported in the GHS evaluation and not included in the analyses of each program.

Descriptive statistics for the demographic profile of GHS participants used all non-missing data except where it was likely that there was an error in the data. Where data was outside plausible values, it was assumed this was an error in data entry and the data point was removed, and the participant record was retained. For example,

- Participant age in years was outside the inclusion criteria for the GHS and plausible ages (over 100 years of age) were assumed to be a data entry error and excluded.
- Waist circumferences less than 30cm and greater than 500cm were assumed to be a data entry error and excluded.
- The self-reported height of participants ranged from 0.02m (n=2) to 6m (n=1). All heights below 1.00m and above 2.20m were removed and replaced as missing.
- The self-reported weight of participants ranged from 2kg (n=1) to 600kg (n=2), with 14 participants reporting a weight between 250kgs and 600kgs. All weights below 40kgs and above 240kgs were removed and replaced as missing. It is assumed that patients less than 40kgs and above 240kgs would be experiencing comorbidities and complications requiring acute or ongoing care from a medical practitioner and are not eligible for the GHS.

- Minutes of physical activity per week produced a range from 0 – 99900. It was assumed that observations over 4200 minutes per week (equivalent to ten hours per day, seven days per week) was an error and removed. There were 9 records with minutes of physical activity per week over 4200 minutes.

2.2 Outcome measures

Socio-demographic measures were provided to the service provider by participants. Information recorded was date of birth, level of education, employment, language spoken at home, Aboriginality, and residential postcode, as well as information about previous pregnancies. Age was calculated from date of birth. Postcodes were used to define Socio-Economic Indexes for Areas (SEIFA, Index of Relative Socio-Economic Disadvantage - IRSD)(12) and Modified Monash Model (MMM) as measures of social disadvantage and geographical remoteness respectively. Participant postcodes were used to determine Socio-Economic Indexes for Areas (SEIFA), as a measure of area socio-economic status, and Modified Monash Model (MMM) as a measure of geographical location remoteness. The SEIFA Index of Relative Socio-economic Disadvantage (IRSD) was used a general socio-economic index that summarises a range of information about the economic and social conditions of people and households within an area (12). As per the Australian Bureau of Statistics definition, quintiles 1 and 2 are classified as most disadvantaged and quintiles 3-5 are classified as least disadvantaged. As per the Australian Government Department of Health and Aged Care standards, some postcodes can have more than one MMM index (13). This analysis required that all postcodes have a single MMM. For postcodes that had more than one MMM index, the average rounded index for each postcode was calculated and used so that all postcodes had a single MMM.

For inclusion in the program evaluation (statistical analysis of conversion rate), demographic measures were converted to binomial outcomes for ease of interpretation and if the sample size for some categories was too small to include individually. Categories were created based on population in each category, and meaningful categories for interpretation. The following variables were categorised as follows:

- Education status: Highschool (Did not got to school, less than or up to year 12 or equivalent), Other (Trade certificate, bachelor's degree, associate diploma certificate II, advance diploma, Masters/PhD).
- Employment: Paid (Full time, part time or casual employment), Other (Unemployed, retired, home duties).

Engagement with the program was defined in three ways:

(i) Referred: All participants referred to the service, at their first referral.
(ii) Actively enrolled: Of those referred participants, all participants who were screened (enrolled) and who received at least one coaching phone call.
(iii) Program completion: Denoted by a status of 'graduated' (participants who completed all allocated calls) or 'early completion' (participants who received four or more coaching calls or reached their goal prior to completing all ten coaching calls).

Behavioural outcomes were analysed in two ways:

(i) Within individual change of matched pairs at baseline and program completion.

(ii) Whether participants met the national guidelines for physical activity (150 minutes a week)(14) and fruit (2 serves per day) and vegetable consumption (5 serves per day) (15). An indicator denoting whether an individual met physical activity (PA) guidelines was determined by calculating the total number of minutes of exercise per week across any combination of the three exercise types (walking, moderate and vigorous physical activity). Fruit and vegetable consumption were determined by counts of serves per day.

2.3 Statistical Methods

In addition to descriptive analyses of the GHS cohort and sub-analyses of each program, inferential analyses were conducted for the process evaluation and the impact evaluation. Results for the descriptive analyses were presented using counts and proportions for categorical data (e.g., BMI categories), and means, standard deviations, and ranges for continuous data (e.g., age). Quantity of missing data was reported.

For the analysis of conversion from referred to actively enrolled, or actively enrolled to complete, we conducted a series of binary outcome models (enrolled: no/yes; complete: no/yes) using generalised linear models, to test for associations between each outcome with a series of socio-demographic factors, both bivariable (each covariate entered in a separate model) and multivariable (all covariates in the same model). We used robust Poisson models to estimate probability ratios (16), with results reported as PRs, their 95% confidence intervals, and p-values. To test for differences between programs, we then carried out all analyses again stratified by program type.

For the analysis of the impact of GHS, we conducted a series of mixed effects models to examine the mean change in the outcome between baseline and completion. Thus, each participant had two rows of data (baseline and completion). We used linear mixed models for continuous outcomes (weight, BMI, waist circumference, and minutes of physical activity) and Poisson models for count outcomes (number of serves of fruit, number of serves of vegetables, sweetened drinks, takeaway meals). Results for continuous outcomes are reported as mean differences, and for count outcomes as incidence-rate ratios, both with their corresponding 95% confidence intervals and p-values.

The impact evaluation was conducted using available case and imputed data to provide a more accurate, and generalisable estimate of effect. Available case analysis was conducted to inform comparisons to previous GHS evaluations and given the relatively large proportion of missing data, multiple imputation was conducted to reduce possible bias due to issues such as attrition. For the multiple imputation we imputed M=50 data sets using the package 'mice', with imputations derived from random forests, a machine learning algorithm able to account for complex and non-linear relationships between variables. We then carried out the same impact analyses in the imputed data sets and combined the results. Estimates produced using multiple imputation are unbiased in the face of differential losses to follow-up and provide greater power to detect effects (because no cases are excluded from analysis). As such, the results of the imputed impact evaluation provide a more accurate estimate of effect, compared to the available case analysis.

3. Results

3.1 The Get Healthy Service

3.1.1 Overview of Get Healthy Service participants and programs

Between December 2017 and May 2023, 122,948 participants were referred to the GHS. Of these, 87% (n= 107,450) were participants referred for their first time. Of those who were referred more than once (n=27,509), 83% (n = 9,888) were referred twice. The number of referrals per participant ranged from 2 – 15 referrals. There were 53,566 participants who actively enrolled in the program and 18,133 who completed the program (refer to Figure 1).

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                    ┌─────────────────────────────┐
                    │   GHS referrals received    │
                    │  December 2017 - May 2023   │
                    │        N=122,948            │
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                                 │
                                 ▼
                    ┌─────────────────────────────┐
                    │    First time referrals     │
                    │        n=107,450            │
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    ┌────────────────────────┐      ┌────────────────────────┐
    │ GHS Participants lost to│      │ GHS Participants who    │
    │      follow up          │      │ are actively enrolled   │
    │      n=53,884           │      │      n=53,566           │
    └────────────────────────┘      └────────────────────────┘
                                                 │
                                                 ▼
                                    ┌────────────────────────┐
                                    │ GHS Participants who    │
                                    │ completed the program   │
                                    │ at time of reporting    │
                                    │      n=18,133           │
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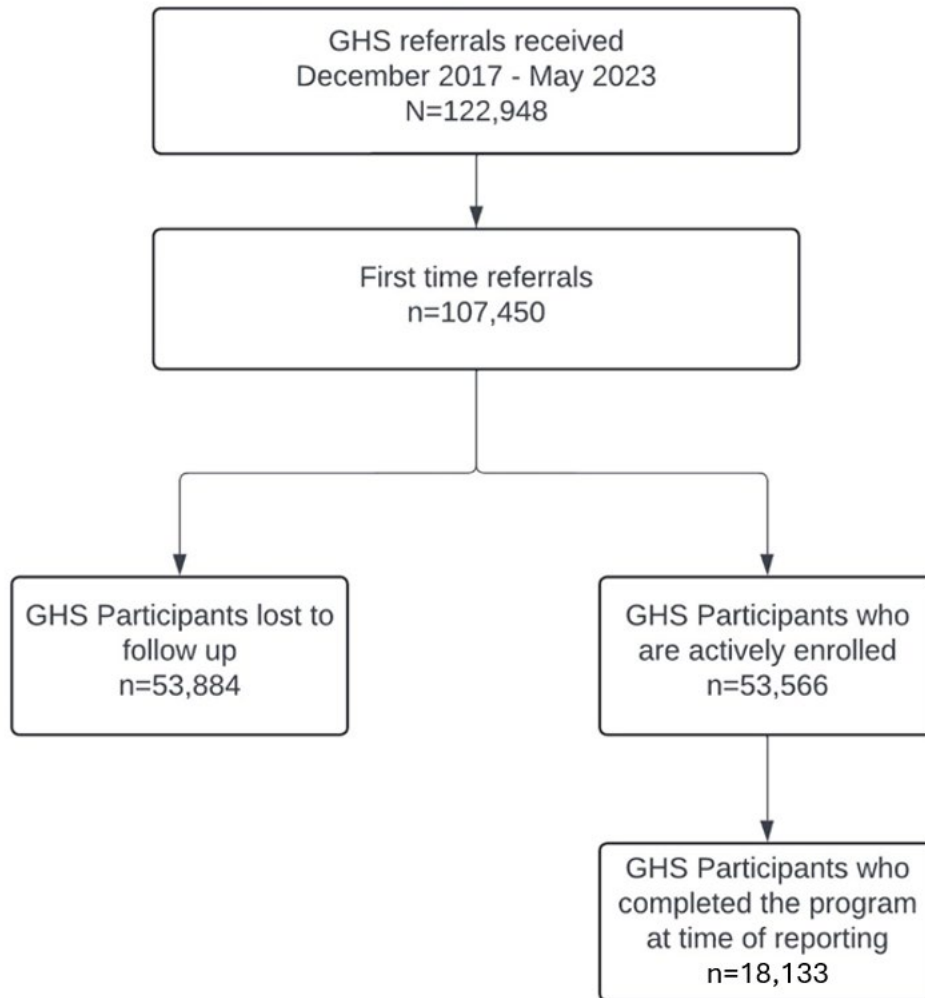
Figure 1: Overview of number of referrals received and participant enrolments

Program characteristics

Program characteristics for participants referred to the GHS for their first time (n= 107,450), those who actively enrolled (received one coaching call or more) and those who completed the program are outlined in Table 1. For participants lost to follow up after being referred and before being actively enrolled in the program (n=53,884), 77% of all available data was missing. As such our understanding of those who are referred but do not progress to being actively enrolled is limited by the available data and should be interpreted with caution.

The most common registration methods were using a bulk referral form by health professionals (27%, n=28,952) and the website (23%, n=25,167). At referral, weight management was the most common reason for referral (7.7%, n=8,322). However, 87% of data was missing for the reason for referral variable in the dataset. Most referrals were from maternity health professionals (53%, n= 56,146), with 71% (n= 47,645) of all GHS participants referred by midwives. Of participants referred to the GHS, 43% (n=15,560) were in Get Healthy in Pregnancy, 34% (n=12,536) were in the Standard Program, 20% (n=7,426) were in the Diabetes Prevention Program and 2.9% (n=1,044) were in the Aboriginal Program.

Of those who were referred and did not actively engage with the program, and had a record for termination, 23% (n= 23,381) 'passively withdrew' and were lost to follow-up (i.e. participant enquired about the service but was unable to be contacted as per cycle protocol) and 25% (n= 26,055) actively withdrew. The demographic characteristics of those who did not go on to actively enrol in the program followed the same trends as those who did actively enrol in the program. Refer to Appendix 2.

Participant sociodemographic and health risk factor characteristics

Participant characteristics for those referred to the GHS, those who actively enrolled and those who completed the program are outlined in Table 2. The majority of participants referred to GHS were female (87%, n=89,561), aged between 16-49 years (77%, n=76,250), had tertiary qualifications (69%, n=27,708), were in paid employment (60%, n=24,753) and spoke English at home (86%, n=64,077), and 8.2% (n=6,907) identified as Aboriginal peoples. Based on their residential postcode, 61% (n=61,421) of referred participants were from less disadvantaged backgrounds and 64% (n=68,343) were from major cities.

In terms of health risk characteristics, 78% (n=32,286) of participants were classified as being overweight or obese based on their calculated BMI; and had a greatly increased risk of chronic disease based on their waist circumference (86%, n=11,780). Based on the healthy eating guidelines, 53% (n=9,624) of participants were consuming the recommended two serves of fruit per day and 13% (n=2,318) of participants were consuming the recommended five serves of vegetables per day. The majority of participants referred to the GHS (60%, n=12,157) did not meet the recommended levels of sufficient physical activity per week.

Table 1: Get Healthy Service program characteristics

Characteristic	Referred N = 107,450[1]	Actively enrolled N = 53,566[1]	Complete N = 18,133[1]
Registration method			
Website	25,167 (23%)	16,472 (31%)	3,870 (21%)
Telephone Contact	6,084 (5.7%)	4,301 (8.0%)	1,325 (7.3%)
Referral form (single)	16,818 (16%)	7,548 (14%)	3,253 (18%)
Bulk Referral form (Health Professional)	28,952 (27%)	11,931 (22%)	5,298 (29%)
Bulk Referral form (non-health professional)	4,099 (3.8%)	1,261 (2.4%)	519 (2.9%)
Re-enrolment	362 (0.3%)	331 (0.6%)	120 (0.7%)
Website - Health Professional	4,684 (4.4%)	2,730 (5.1%)	1,036 (5.7%)
Clinical electronic pathway	21,280 (20%)	8,992 (17%)	2,712 (15%)
Referral reason			
Physical Activity	1,952 (1.8%)	1,027 (1.9%)	420 (2.3%)
Healthy Eating	3,349 (3.1%)	1,467 (2.7%)	611 (3.4%)
Weight Management	8,322 (7.7%)	4,375 (8.2%)	1,735 (9.6%)
Alcohol Reduction	215 (0.2%)	114 (0.2%)	48 (0.3%)
Alcohol Abstinence in Pregnancy	17 (<0.1%)	8 (<0.1%)	1 (<0.1%)
Diabetes Prevention	271 (0.3%)	132 (0.2%)	50 (0.3%)
Cancer Support	364 (0.3%)	245 (0.5%)	95 (0.5%)
Missing/data not provided	92,954 (87%)	46,193 (86%)	15,169 (84%)
Referral source			
Aboriginal Services*	3,008 (2.9%)	1,106 (2.1%)	268 (1.5%)
Health Professional: Maternity	56,146 (53%)	23,287 (44%)	8,285 (46%)
Health Professional: Other	20,069 (19%)	11,556 (22%)	3,944 (22%)
Mass Media	6,182 (5.9%)	4,323 (8.3%)	1,316 (7.3%)
Medical Professional	5,177 (4.9%)	3,529 (6.7%)	1,166 (6.5%)
NSW Health Initiative	1,525 (1.5%)	924 (1.8%)	427 (2.4%)
Other	5,681 (5.4%)	3,564 (6.8%)	1,080 (6.0%)
Other States	424 (0.4%)	206 (0.4%)	99 (0.6%)
Research Study	6,763 (6.4%)	3,854 (7.4%)	1,338 (7.5%)
Referrer profession			
Aboriginal Health Specialist	670 (1.0%)	156 (0.5%)	61 (0.5%)
Allied Health	3,168 (4.7%)	1,703 (5.8%)	795 (7.0%)
Medical Specialist	2,766 (4.1%)	1,697 (5.8%)	680 (6.0%)
Midwifery	47,645 (71%)	19,647 (67%)	7,053 (62%)
Missing	6,599 (9.8%)	2,785 (9.5%)	1,170 (10%)
Musculoskeletal	2,346 (3.5%)	1,403 (4.8%)	705 (6.2%)
Nursing	3,976 (5.9%)	2,023 (6.9%)	890 (7.8%)
Oral Health	109 (0.2%)	24 (<0.1%)	9 (<0.1%)
Other	18 (<0.1%)	8 (<0.1%)	3 (<0.1%)
Program			
Get Healthy Service Standard Program	12,536 (34%)	12,366 (34%)	3,866 (33%)
Get Healthy in Pregnancy Program	15,560 (43%)	15,508 (43%)	4,925 (43%)
Aboriginal Program	1,044 (2.9%)	1,036 (2.9%)	167 (1.4%)
Diabetes Prevention Program	7,426 (20%)	7,411 (20%)	2,583 (22%)
Termination reason			
Active withdrawal	26,055 (25%)	15,436 (31%)	2 (<0.1%)
Early completion	3,925 (3.8%)	3,918 (7.8%)	3,917 (23%)
Graduated	13,461 (13%)	13,243 (26%)	13,241 (77%)
LTFU complete	29,262 (29%)	458 (0.9%)	1 (<0.1%)
LTFU incomplete	4,012 (3.9%)	61 (0.1%)	

Passive withdrawal	23,381 (23%)	16,021 (32%)	5 (<0.1%)
Terminated	2,527 (2.5%)	1,067 (2.1%)	

[1]n (%)

* Referral Source: Aboriginal Services includes Aboriginal Community Controlled Health Services, including Aboriginal Medical Services, and Aboriginal programs such as the Knock-Out Health Challenge.

Table 2: Baseline socio demographic and risk factor characteristics of Get Healthy Service Participants

Baseline Characteristic	Referred N = 107,450[1]	Actively enrolled N = 53,566[1]	Complete N = 18,133[1]
Gender			
Male	12,829 (13%)	8,024 (15%)	3,021 (17%)
Female	89,561 (87%)	45,181 (85%)	15,015 (83%)
Age group			
16-49	76,250 (77%)	36,749 (70%)	11,433 (64%)
50 or over	22,702 (23%)	16,064 (30%)	6,312 (36%)
Educational attainment			
Certificate/Diploma or higher	27,708 (69%)	27,396 (70%)	7,777 (72%)
Highschool	6,505 (16%)	6,386 (16%)	1,592 (15%)
Year 10 or less	5,667 (14%)	5,587 (14%)	1,482 (14%)
Employment status			
Paid employment	24,753 (60%)	24,454 (60%)	6,247 (56%)
Retired	4,651 (11%)	4,606 (11%)	1,928 (17%)
Other	11,607 (28%)	11,421 (28%)	3,052 (27%)
Language spoken at home			
English	64,077 (86%)	43,340 (84%)	14,198 (83%)
Other	10,452 (14%)	8,151 (16%)	2,807 (17%)
Aboriginal			
Aboriginal	6,907 (8.2%)	3,428 (6.9%)	841 (4.9%)
Non-Aboriginal	77,257 (92%)	46,115 (93%)	16,310 (95%)
SEIFA			
Most Disadvantaged	39,445 (39%)	19,429 (37%)	6,306 (36%)
Least Disadvantaged	61,421 (61%)	32,644 (63%)	11,316 (64%)
Modified Monash Model			
Major Cities	68,343 (64%)	36,390 (69%)	12,476 (70%)
Other	37,938 (36%)	16,642 (31%)	5,450 (30%)
BMI			
Underweight	461 (1.1%)	458 (1.1%)	167 (1.2%)
Normal weight	8,883 (21%)	8,860 (21%)	3,288 (25%)
Overweight	12,384 (30%)	12,358 (30%)	4,067 (30%)
Obese	19,902 (48%)	19,837 (48%)	5,891 (44%)
Waist circumference			
Greatly increased risk	11,780 (86%)	11,767 (86%)	4,176 (84%)
Increased risk	1,986 (14%)	1,983 (14%)	811 (16%)
Two serves of fruit daily			
Insufficient	8,491 (47%)	8,475 (47%)	2,509 (45%)
Sufficient	9,624 (53%)	9,604 (53%)	3,111 (55%)
Five serves of vegetables daily			
Insufficient	15,461 (87%)	15,428 (87%)	4,698 (85%)
Sufficient	2,318 (13%)	2,315 (13%)	835 (15%)
Physical activity status			
Insufficient	12,157 (60%)	12,134 (60%)	3,760 (59%)
Sufficient	7,981 (40%)	7,972 (40%)	2,569 (41%)

[1]n (%), for each outcome the number of participants represents only those with data for that variable and may not sum to the total number of participants for referred, actively enrolled, or completed.

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3.1.2 Process evaluation for Get Healthy Service

Amongst those referred to the GHS for their first time (n= 107,450), two thirds of participants referred to GHS (66%, n = 81,111) were missing data reporting the program they were enrolled in. For participants with data indicating the program they enrolled in, the change in the number of participants from referral to active enrolment is presented in Table 3. Within each program, only a small number of participants did not progress from referral to active enrolment: Standard Program (n= 170), Diabetes Program (n= 15), Get Healthy in Pregnancy (n= 962), and Aboriginal Program (n= 8). As such, analysis of the conversion rate from being referred to actively enrolled was only conducted at the overall GHS level and not for each individual program.

The decrease in the number of participants from active enrolment in each program, to program completion was considerable. The analysis was therefore conducted at the GHS level, as well as for each program. The conversion from active enrolment to program completion should be the focus for interpretation of these results.

Table 3:   Get Healthy Service participants at referral, active enrolment and program completion

Program	Referred* (R)	Actively Enrolled (AE)	R-AE	Completed (C)	AE-C
Get Healthy Service	107,450	53,566	53,884	18,133	35,433
Standard Program	12,536	12,366	170	3,866	8,500
Diabetes Program	7,426	7,411	15	2,583	4,828
Aboriginal Program	1,044	1,036	8	167	869
Pregnancy Program	22,020	21,060	960	6,297	14,763

* This table includes only those participants at their first (or only referral), and who met the eligibility criteria for inclusion (refer to 2.1 Data Management, page 11).

The conversion rate from referred to actively enrolled and program completion, by participant and program characteristics for the GHS is outlined in Table 4. Compared to the Standard Program, participants who actively enrolled in the Diabetes Program were more likely to complete (RR 1.105, 95% CI 1.061 to 1.151), those in the Aboriginal program were less likely to complete the program (RR 0.514, 95% CI 0.446 to 0.592) and those in Get Healthy in Pregnancy did not differ significantly in terms of program completion (RR 1.018, 95% CI 0.983 to 1.054).

In the univariable analysis, participants actively enrolled in the GHS and who were women (compared to men), those with an education level of high school or less (compared to a tertiary education), those in paid employment (compared to those retired or not in paid employment), and those living in rural and remote areas (compared to a major city) were significantly less likely to complete the program. Participants aged 50+ years (compared to younger than 50 years), those who spoke English at home (compared to another language), those from the least disadvantaged areas (compared to the most disadvantaged areas) and those who did not identify as Aboriginal were more likely to complete the program.

In the multivariable analyses, the characteristics of participants enrolled in the GHS who were less likely to complete the program remained statistically significant for all variables other than

regionality. Women (RR 0.851, 95% CI 0.815 to 0.889), those with a high school education or less (RR 0.838, 95% CI 0.805 to 0.873) and those in paid employment (RR 0.864, 95% CI 0.833 to 0.897) were less likely to complete. Participants aged 50+ years (RR 1.604, 95 CI 1.544 to 1.666), those who did not speak English at home (RR 1.105, 95% CI 1.054 to 1.158), those who did not identify as Aboriginal (RR 1.081, 95% CI 1.042 to 1.121) and those from the least disadvantaged areas (RR 1.564, 95% CI 1.423 to 1.718) were more likely to complete the program.

Table 4: Conversion rate from referred to actively enrolled and program completion, by participant and program characteristics for the Get Healthy Service

Get Healthy Service	Referred to actively enrolled					Actively enrolled to complete				
	n [1]	Risk ratio	CI (lower)	CI (upper)	p-value	n [1]	Risk ratio	CI (lower)	CI (upper)	p-value
Univariable analyses										
Program										
Get Healthy in Pregnancy	36,287	1.010	1.008	1.013	<0.000	36,043	1.018	0.983	1.054	0.326
Aboriginal Program	-	1.006	1.000	1.012	0.041	-	0.514	0.446	0.592	<0.000
Diabetes Program	-	1.012	1.009	1.014	<0.000	-	1.105	1.061	1.151	<0.000
Participant characteristics										
Gender (female v male)	102,390	0.807	0.795	0.819	<0.000	53,205	0.876	0.848	0.905	<0.000
Age group (50+ years v <50 years)	98,952	1.468	1.452	1.485	<0.000	52,813	1.266	1.234	1.299	<0.000
Educational attainment (≤high school v tertiary)	39,880	0.995	0.992	0.997	<0.000	39,369	0.927	0.892	0.962	<0.000
Employment status (paid v other)	41,011	1.002	1.000	1.004	0.066	40,481	0.798	0.772	0.825	<0.000
Language spoken at home (other v English))	74,529	1.153	1.140	1.166	<0.000	51,491	1.049	1.014	1.086	0.006
Aboriginal (non-Aboriginal v Aboriginal)	84,164	1.203	1.174	1.232	<0.000	49,543	1.423	1.338	1.514	<0.000
SEIFA (least disadvantaged v most disadvantaged)	100,866	1.079	1.066	1.093	<0.000	52,073	1.058	1.031	1.086	<0.000
MMM Regionality (other v major city)	106,281	0.824	0.813	0.835	<0.000	53,032	0.956	0.931	0.983	0.001
Multivariable analyses										
Gender (female v male)	37,195	1.003	0.999	1.006	0.117	36,755	0.851	0.815	0.889	<0.000
Age group (50+ years v <50 years)	-	1.005	1.003	1.008	<0.000	-	1.604	1.544	1.666	<0.000
Educational attainment (≤high school v tertiary)	-	0.996	0.993	0.999	0.009	-	0.838	0.805	0.873	<0.000
Employment status (paid v other)	-	1.001	0.999	1.004	0.303	-	0.864	0.833	0.897	<0.000
Language spoken at home (other v English)	-	0.999	0.996	1.003	0.671	-	1.105	1.054	1.158	<0.000
Aboriginal (non-Aboriginal v Aboriginal)	-	1.002	0.999	1.004	0.126	-	1.081	1.042	1.121	<0.000
SEIFA (least disadvantaged v most disadvantaged)	-	1.008	1.002	1.014	0.009	-	1.564	1.423	1.718	<0.000
MMM Regionality (other v major city)	-	1.001	0.998	1.003	0.663	-	0.975	0.937	1.014	0.198

[1] Where a single number of participants is provided, it is because the number represents the total number of participants included in the model.

3.1.3 Impact evaluation for the Get Healthy Service

The mean change in weight and health risk behaviour outcomes from baseline to program completion across the GHS is shown in Table 5. When reviewing the impact evaluation results from the available case and the imputed analysis, the estimates from the imputed analysis are produced using multiple imputation and are unbiased in the face of differential losses to follow-up and provide greater power to detect effects (because no cases are excluded from analysis).

The mean change in weight and health risk behaviour outcomes from baseline to program completion across the GHS is shown in Table 5. Findings from the available case analysis indicate participants improved their BMI score by 0.51 kg/m^2 (95% CI -0.56 to -0.45) and their waist circumference by 2.74 cm (95% CI -2.96 to – 2.52). On average, participants increased their physical activity by 43.5 minutes/week (95% CI 40.55 to 46.49). At program completion, participants had a 11% higher rate of fruit consumption (IRR 1.11, 95% CI 1.08 to 1.14), 30% higher rate of vegetable consumption (IRR 1.3, 95% CI 1.27 to 1.32), 44% lower rate of sweet drink consumption (IRR 0.56, 95% CI 0.52 to 0.60) and 31% lower rate of takeaway food consumption (IRR 0.69, 95% CI 0.66 to 0.72) than at baseline. For each outcome, participants who had complete data (included in the imputed analysis) also reported statistically significant improvements in weight and health behaviour outcomes.

Table 5:   Get Healthy Service pre-post health risk behaviour change.

Get Healthy Service	Baseline		Completion		Available case					Imputed data				
	Mean	SD	Mean	SD	MD	SE	CI (lower)	CI (upper)	p-value	MD	SE	CI (lower)	CI (upper)	p-value
Weight (kg)	84.76	23.11	83.25	22.07	-1.45	0.08	-1.60	-1.30	<0.000	-0.88	0.08	-1.05	-0.72	<0.000
BMI (kg/m²)	30.76	7.75	30.21	7.37	-0.51	0.03	-0.56	-0.45	<0.000	-0.31	0.03	-0.37	-0.24	<0.000
Waist circumference (cm)	102.57	17.46	99.88	17.01	-2.74	0.11	-2.96	-2.52	<0.000	-2.06	0.18	-2.42	-1.70	<0.000
PA (minutes per week)	120.09	116.25	163.40	122.81	43.52	1.52	40.55	46.49	<0.000	30.50	1.51	27.53	33.46	<0.000
	Mean	SD	Mean	SD	IRR	SE	CI (lower)	CI (upper)	p-value	IRR	SE	CI (lower)	CI (upper)	p-value
Fruit (serves/day)	1.68	1.26	1.85	1.04	1.11	0.01	1.08	1.14	<0.000	1.09	0.01	1.07	1.11	<0.000
Vegetable(serves/day)	2.74	1.70	3.55	1.61	1.30	0.01	1.27	1.32	<0.000	1.29	0.01	1.27	1.31	<0.000
Sweet drinks (serves/day)	0.36	1.06	0.20	0.72	0.56	0.04	0.52	0.60	<0.000	0.51	0.02	0.47	0.56	<0.000
Takeaway food (serves/day)	1.09	1.82	0.75	1.30	0.69	0.02	0.66	0.72	<0.000	0.68	0.01	0.66	0.71	<0.000

MD=mean difference, IRR=incidence rate ratio, PA=physical activity, SD=standard deviation. Count variables (fruit, vegetable, sweet drinks, and takeaway food) are reported as a mean and standard deviation to show variation across the population

3.1.4 Impact evaluation overview: GHS Standard, Diabetes, Pregnancy and Aboriginal programs

The pre-post change in weight and health risk behaviour outcomes from baseline to program completion for the GHS as well as each program is illustrated in Figures 2 (unimputed analyses) and Figures 3 (imputed analyses). The changes for each program are outlined in more detail in Tables 8, 11, 13 and 16.

Note: Only statistically significant changes are plotted. Negative values indicate a decrease, and positive values indicate an increase. Get Healthy in Pregnancy weight, BMI and waist circumference are not plotted due to data quality, and fruit (serves/day) are plotted however the small increase in fruit intake is not visible in this figure.

Figure 2:   Pre-post health risk behaviour change, by program (unimputed data)
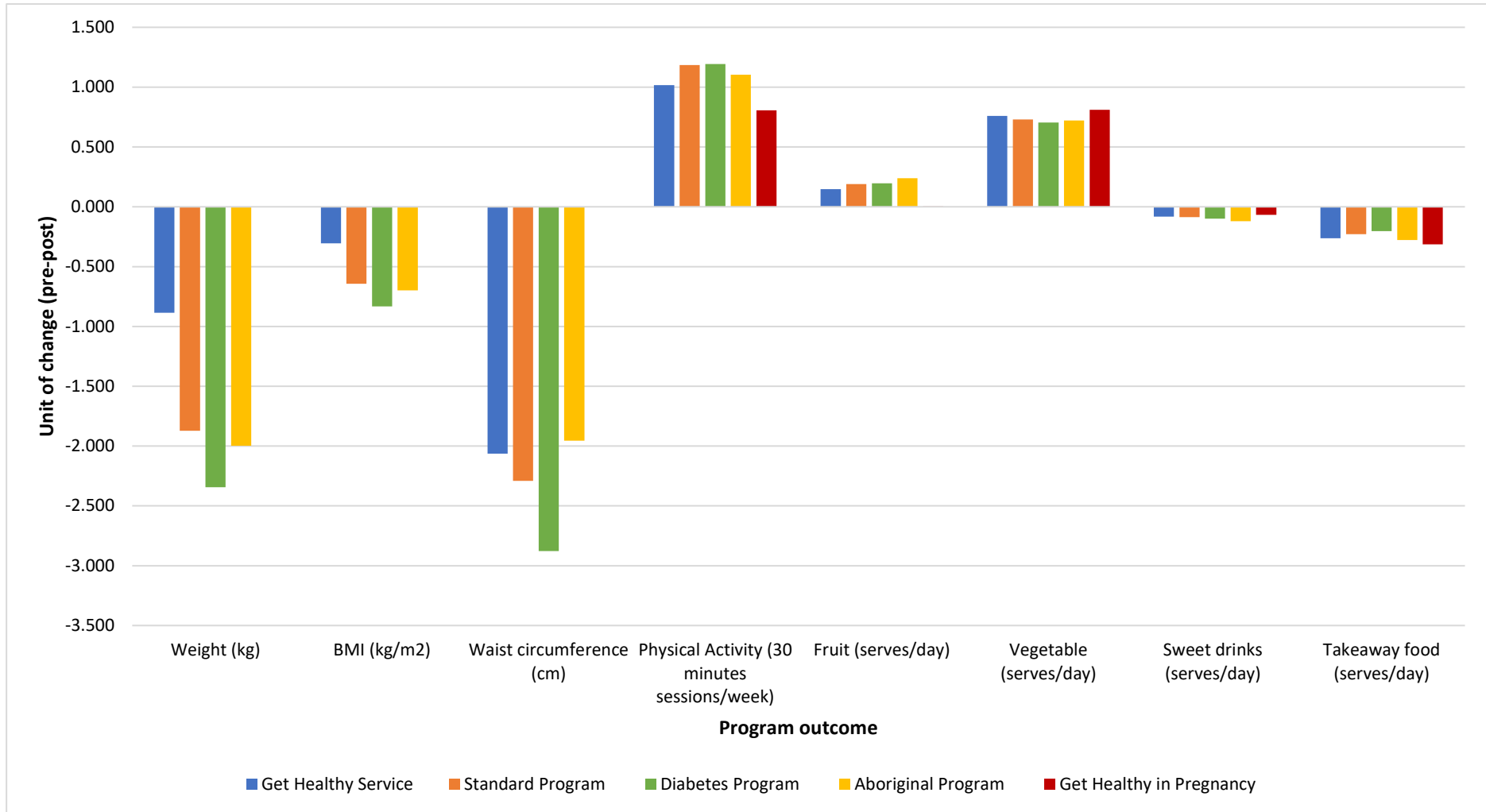
Note: Only statistically significant changes are plotted. Negative values indicate a decrease, and positive values indicate an increase. Get Healthy in Pregnancy weight, BMI and waist circumference are not plotted due to data quality.

Figure 3:   Pre-post health risk behaviour change, by program (imputed data)

3.2 Get Healthy Service Standard Program

3.2.1 Overview of Get Healthy Service Standard Program participants.

Participant characteristics for those referred to the GHS Standard Program, those who actively enrolled and those who completed the program are outlined in Table 6. Approximately three quarters of participants referred to the Standard Program were female (74%, n=9,205), 55% (n=6,859) were aged between 16-49 years, 67% (n=7,556) had a tertiary education and 56% (n=6,402) were in paid employment. The majority of participants referred to the Standard Program spoke English at home (87%, n=10,828), the minority were Aboriginal (2.4%, n=278) and approximately two thirds were from the least disadvantaged areas (64%, n=7,765) and from major cities (66%, n=8,205).

In terms of health risk characteristics, 80% (n=7,811) of participants referred to the Standard Program were classified as being overweight or obese based on their calculated BMI; and 77% (n=4,137) had a greatly increased risk of chronic disease based on their waist circumference. Based on the healthy eating guidelines, 50% (n=3,213) of participants referred to the Standard Program consumed the recommended two serves of fruit per day and 15% (n=953) of participants were consuming the recommended five serves of vegetables per day. Less than half of participants referred to the Standard Program engaged in sufficient physical activity (44%, n=2,997).

3.2.2 Process evaluation for Get Healthy Service Standard Program.

The conversion rate from referred to actively enrolled and program completion, by participant and program characteristics for the GHS Standard Program is outlined in Table 7.

In the univariable analysis, participants actively enrolled in the Standard Program and who were women (compared to men) and those in paid employment (compared to those retired or not in paid employment) were significantly less likely to complete the program. Participants aged 50+ years (compared to younger than 50 years) were significantly more likely to complete the program.

In the multivariable analyses, the characteristics of participants enrolled in the Get Healthy Service who were less likely to complete the program were also statistically significant for gender, educational attainment, and employment status. Women (RR 0.925, 95% CI 0.868 to 0.985), those with a high school education or less (RR 0.821, 95% CI 0.768 to 0.878) and those in paid employment (RR 0.791, 95% CI 0.748 to 0.837) were less likely to complete the Standard Program. Participants aged 50+ years (RR 1.526, 95% CI 1.435 to 1.622) were more likely to complete the program.

Table 6: Baseline socio demographic and risk factor characteristics of Get Healthy Service Standard Program participants

Baseline Characteristic	Referred N = 12,536[1]	Actively enrolled N = 12,366[1]	Complete N = 3,866[1]
Gender			
Male	3,301 (26%)	3,258 (26%)	1,130 (29%)
Female	9,205 (74%)	9,083 (74%)	2,729 (71%)
Age group			
16-49	6,859 (55%)	6,773 (55%)	1,685 (44%)
50 or over	5,648 (45%)	5,564 (45%)	2,168 (56%)
Educational attainment			
Certificate/Diploma or higher	7,556 (67%)	7,499 (67%)	2,274 (69%)
Highschool	1,764 (16%)	1,747 (16%)	500 (15%)
Year 10 or less	1,914 (17%)	1,898 (17%)	541 (16%)
Employment status			
Other	3,139 (27%)	3,107 (27%)	927 (27%)
Paid employment	6,402 (56%)	6,352 (56%)	1,706 (50%)
Retired	1,905 (17%)	1,896 (17%)	768 (23%)
Language spoken at home			
English	10,828 (87%)	10,679 (87%)	3,357 (88%)
Other	1,564 (13%)	1,548 (13%)	479 (12%)
Aboriginal			
Aboriginal	278 (2.4%)	275 (2.4%)	88 (2.3%)
Non-Aboriginal	11,354 (98%)	11,210 (98%)	3,669 (98%)
SEIFA			
Most Disadvantaged	4,407 (36%)	4,346 (36%)	1,312 (35%)
Least Disadvantaged	7,765 (64%)	7,665 (64%)	2,448 (65%)
Modified Monash Model			
Major Cities	8,205 (66%)	8,100 (66%)	2,538 (66%)
Other	4,200 (34%)	4,136 (34%)	1,281 (34%)
BMI			
Underweight	93 (1.0%)	92 (0.9%)	31 (0.9%)
Normal weight	1,881 (19%)	1,876 (19%)	747 (22%)
Overweight	3,148 (32%)	3,140 (32%)	1,122 (33%)
Obese	4,663 (48%)	4,647 (48%)	1,519 (44%)
Waist circumference			
Greatly increased risk	4,137 (77%)	4,131 (77%)	1,523 (75%)
Increased risk	1,237 (23%)	1,234 (23%)	503 (25%)
Two serves of fruit daily			
Insufficient	3,270 (50%)	3,263 (50%)	997 (44%)
Sufficient	3,213 (50%)	3,207 (50%)	1,249 (56%)
Five serves of vegetables daily			
Insufficient	5,444 (85%)	5,432 (85%)	1,842 (83%)
Sufficient	953 (15%)	952 (15%)	373 (17%)
Physical activity status			
Insufficient	3,786 (56%)	3,777 (56%)	1,274 (53%)
Sufficient	2,997 (44%)	2,995 (44%)	1,108 (47%)

[1]n (%), for each outcome the number of participants represents only those with data for that variable and may not sum to the total number of participants for referred, actively enrolled, or completed.

Table 7: Conversion rate from referred to actively enrolled and program completion, by participant characteristics for the Get Healthy Service Standard Program

GHS Standard Program	Referred to actively enrolled					Actively enrolled to complete				
	n [1]	Risk ratio	CI (lower)	CI (upper)	p-value	n [1]	Risk ratio	CI (lower)	CI (upper)	p-value
Univariable analyses										
Gender (female v male)	102,390	0.807	0.795	0.819	<0.000	12,341	0.864	0.817	0.915	<0.000
Age group (50+ years v <50 years)	98,952	1.468	1.452	1.485	<0.000	12,337	1.561	1.481	1.646	<0.000
Educational attainment (≤high school v tertiary)	39,880	0.995	0.992	0.997	<0.000	11,144	0.944	0.887	1.004	0.067
Employment status (paid v other)	41,011	1.002	1.000	1.004	0.066	11,355	0.791	0.748	0.837	<0.000
Language spoken at home (other v English))	74,529	1.153	1.140	1.166	<0.000	12,227	0.987	0.912	1.069	0.747
Aboriginal (non-Aboriginal v Aboriginal)	84,164	1.203	1.174	1.232	<0.000	11,485	1.021	0.857	1.215	0.819
SEIFA (least disadvantaged v most disadvantaged)	100,866	1.079	1.066	1.093	<0.000	12,011	1.057	0.999	1.117	0.054
MMM Regionality (other v major city)	106,281	0.824	0.813	0.835	<0.000	12,236	0.988	0.935	1.045	0.685
Multivariable analyses										
Gender (female v male)	37,195	1.003	0.999	1.006	0.117	9,869	0.925	0.868	0.985	0.015
Age group (50+ years v <50 years)	-	1.005	1.003	1.008	<0.000	-	1.526	1.435	1.622	<0.000
Educational attainment (≤high school v tertiary)	-	0.996	0.993	0.999	0.009	-	0.821	0.768	0.878	<0.000
Employment status (paid v other)	-	1.001	0.999	1.004	0.303	-	0.826	0.777	0.879	<0.000
Language spoken at home (other v English))	-	0.999	0.996	1.003	0.671	-	0.967	0.883	1.059	0.467
Aboriginal (non-Aboriginal v Aboriginal)	-	1.002	0.999	1.004	0.126	-	1.019	0.958	1.084	0.552
SEIFA (least disadvantaged v most disadvantaged)	-	1.008	1.002	1.014	0.009	-	0.950	0.788	1.145	0.590
MMM Regionality (other v major city)	-	1.001	0.998	1.003	0.663	-	0.968	0.908	1.032	0.323

[1] Where a single number of participants is provided, it is because the number represents the total number of participants included in the model.

3.2.3 Impact evaluation for Get Healthy Service Standard Program

The mean change in weight and health risk behaviour outcomes from baseline to program completion across the GHS Standard Program is shown in Table 8. Findings from the available case analysis indicate Standard Program participants improved their BMI score by 0.77 kg/m^2 (95% CI -0.84 to -0.70) and their waist circumference by 2.50 cm (95% CI -2.80 to – 2.20). On average participants increased their physical activity by 47.42 minutes/week (95% CI 42.52 to 52.33). At program completion, participants had a 12% higher rate of fruit consumption (IRR 1.12, 95% CI 1.07 to 1.17), 27% higher rate of vegetable consumption (IRR 1.27, 95% CI 1.23 to 1.32), 52% lower rate of sweet drink consumption (IRR 0.48, 95% CI 0.42 to 0.55) and 27% lower rate of takeaway food consumption (IRR 0.73, 95% CI 0.69 to 0.78) than at baseline. For each outcome, participants who had complete data (included in the imputed analysis) also reported statistically significant improvements in weight and health behaviour outcomes.

Table 8:   Get Healthy Service Standard Program pre-post health risk behaviour change

GHS Standard Program	Baseline		Completion		Available case					Imputed data				
	Mean	SD	Mean	SD	MD	SE	CI (lower)	CI (upper)	p-value	MD	SE	CI (lower)	CI (upper)	p-value
Weight (kg)	84.77	23.05	82.56	22.31	-2.15	0.10	-2.36	-1.95	<0.000	-1.87	0.13	-2.12	-1.62	<0.000
BMI (kg/m^2)	30.39	7.73	29.58	7.42	-0.77	0.04	-0.84	-0.70	<0.000	-0.64	0.05	-0.74	-0.55	<0.000
Waist circumference (cm)	98.96	17.86	96.66	17.31	-2.50	0.15	-2.80	-2.20	<0.000	-2.29	0.15	-2.58	-2.01	<0.000
PA (minutes per week)	134.33	121.16	181.75	125.93	47.42	2.50	42.52	52.33	<0.000	35.51	1.70	32.19	38.83	<0.000
	Mean	SD	Mean	SD	IRR	SE	CI (lower)	CI (upper)	p-value	IRR	SE	CI (lower)	CI (upper)	p-value
Fruit (serves/day)	1.64	1.15	1.84	0.98	1.12	0.02	1.07	1.17	<0.000	1.12	0.01	1.10	1.15	<0.000
Vegetable(serves/day)	2.82	1.65	3.58	1.56	1.27	0.02	1.23	1.32	<0.000	1.28	0.01	1.25	1.30	<0.000
Sweet drinks (serves/day)	0.31	0.96	0.16	0.64	0.48	0.07	0.42	0.55	<0.000	0.47	0.03	0.42	0.52	<0.000
Takeaway food (serves/day)	1.10	1.64	0.80	1.46	0.73	0.03	0.69	0.78	<0.000	0.70	0.02	0.66	0.74	<0.000

MD=mean difference, IRR=incidence rate ratio, PA=physical activity, SD=standard deviation. Count variables (fruit, vegetable, sweet drinks, and takeaway food) are reported as a mean and standard deviation to show variation across the population

3.3 The Get Healthy Service Diabetes Program

3.3.1 Overview of Get Healthy Service Diabetes Program participants

Participant characteristics for those referred to the Get Healthy Service Diabetes Program, those who actively enrolled and those who completed the program are outlined in Table 9. Females made up 71% (n=5,272) of all participants referred, 75% (n=5,594 were aged between 50 years or older and 46% (n=3,228) were in paid employment. Most participants referred to the Diabetes Program spoke English at home (91%, n=6,682), the minority were Aboriginal (1.7%, n=127) and almost two thirds were from the least disadvantaged areas (62%, n=4.494) and from major cities (62%, n=4,592).

In terms of health risk characteristics, the majority (92%, n=6,517) of participants referred to the Diabetes Program were classified as being overweight or obese based on their calculated BMI; and 91% (n=4,744) had a greatly increased risk of chronic disease based on their waist circumference. Based on the healthy eating guidelines, 51% (n=2,449) of participants referred to the Diabetes Program consumed the recommended two serves of fruit per day and 14% (n=644) of participants consumed the recommended five serves of vegetables per day. Approximately one third of participants referred to the Diabetes Program engaged in sufficient physical activity (36%, n=1,837).

3.3.2 Process evaluation for Get Healthy Service Diabetes Program

The conversion rate from referred to actively enrolled and program completion, by participant and program characteristics for the Get Healthy Service Diabetes Program is outlined in Table 10.

In the univariable analysis, participants actively enrolled in the Diabetes Program and who were women (compared to men) and those in paid employment (compared to those retired or not in paid employment) were significantly less likely to complete the program. Participants aged 50+ years (compared to younger than 50 years) and those not Aboriginal were significantly more likely to complete the program.

In the multivariable analyses, participants actively enrolled in the Diabetes Program who were women (RR 0.841, 95% CI 0.785 to 0.900), had an education level of high school or less (RR 0.883, 95% CI 0.824 to 0.946) and those in paid employment (RR 0.796, 95% CI 0.742 to 0.854) were significantly less likely to complete the program. Participants aged 50+ years (RR 1.511, 95% CI 1.374 to 1.661) were more likely to complete the program.

Table 9: Baseline socio demographic and risk factor characteristics of Get Healthy Service Diabetes Program participants

Baseline Characteristic	Referred N = 7,426[1]	Actively enrolled N = 7,411[1]	Complete N = 2,583[1]
Gender			
Male	2,130 (29%)	2,126 (29%)	829 (32%)
Female	5,272 (71%)	5,261 (71%)	1,750 (68%)
Age group			
16-49	1,827 (25%)	1,819 (25%)	446 (17%)
50 or over	5,594 (75%)	5,587 (75%)	2,137 (83%)
Educational attainment			
Certificate/Diploma or higher	4,104 (61%)	4,101 (61%)	1,460 (61%)
Highschool	1,008 (15%)	1,003 (15%)	361 (15%)
Year 10 or less	1,664 (25%)	1,661 (25%)	571 (24%)
Employment status			
Paid employment	3,228 (46%)	3,225 (46%)	984 (40%)
Retired	2,029 (29%)	2,027 (29%)	912 (37%)
Other	1,752 (25%)	1,745 (25%)	588 (24%)
Language spoken at home			
English	6,682 (91%)	6,669 (91%)	2,336 (91%)
Other	694 (9.4%)	692 (9.4%)	239 (9.3%)
Aboriginal			
Aboriginal	127 (1.7%)	126 (1.7%)	30 (1.2%)
Non-Aboriginal	7,248 (98%)	7,234 (98%)	2,542 (99%)
SEIFA			
Most Disadvantaged	2,751 (38%)	2,747 (38%)	949 (38%)
Least Disadvantaged	4,494 (62%)	4,484 (62%)	1,581 (62%)
Modified Monash Model			
Major Cities	4,592 (62%)	4,582 (62%)	1,586 (62%)
Other	2,781 (38%)	2,777 (38%)	977 (38%)
BMI			
Underweight	21 (0.3%)	21 (0.3%)	10 (0.4%)
Normal weight	603 (8.4%)	603 (8.5%)	250 (9.8%)
Overweight	1,822 (26%)	1,820 (26%)	698 (27%)
Obese	4,695 (66%)	4,689 (66%)	1,585 (62%)
Waist circumference			
Greatly increased risk	4,744 (91%)	4,739 (91%)	1,759 (90%)
Increased risk	442 (8.5%)	442 (8.5%)	195 (10.0%)
Two serves of fruit daily			
Insufficient	2,334 (49%)	2,330 (49%)	830 (47%)
Sufficient	2,449 (51%)	2,449 (51%)	942 (53%)
Five serves of vegetables daily			
Insufficient	4,065 (86%)	4,061 (86%)	1,481 (85%)
Sufficient	644 (14%)	644 (14%)	269 (15%)
Physical activity status			
Insufficient	3,215 (64%)	3,211 (64%)	1,119 (61%)
Sufficient	1,837 (36%)	1,836 (36%)	728 (39%)

[1]n (%), for each outcome the number of participants represents only those with data for that variable and may not sum to the total number of participants for referred, actively enrolled, or completed.

Table 10: Conversion rate from referred to actively enrolled and program completion, by participant characteristics for the Get Healthy Service Diabetes Program

GHS Diabetes Program	Referred to actively enrolled					Actively enrolled to complete				
	n [1]	Risk ratio	CI (lower)	CI (upper)	p-value	n [1]	Risk ratio	CI (lower)	CI (upper)	p-value
Univariable analyses										
Gender (female v male)	102390	0.807	0.795	0.819	<0.000	7385	0.847	0.793	0.905	<0.000
Age group (50+ years v <50 years)	98952	1.468	1.452	1.485	<0.000	7404	1.571	1.438	1.716	<0.000
Educational attainment (≤high school v tertiary)	39880	0.995	0.992	0.997	<0.000	6764	0.989	0.925	1.057	0.735
Employment status (paid v other)	41011	1.002	1.000	1.004	0.066	6996	0.763	0.714	0.815	<0.000
Language spoken at home (other v English))	74529	1.153	1.140	1.166	<0.000	7359	0.977	0.876	1.089	0.672
Aboriginal (non-Aboriginal v Aboriginal)	84164	1.203	1.174	1.232	<0.000	7358	1.565	1.127	2.173	0.007
SEIFA (least disadvantaged v most disadvantaged)	100866	1.079	1.066	1.093	<0.000	7229	1.018	0.954	1.087	0.584
MMM Regionality (other v major city)	106281	0.824	0.813	0.835	0.000	7357	1.016	0.952	1.084	0.630
Multivariable analyses										
Gender (female v male)	37195	1.003	0.999	1.006	0.117	6470	0.841	0.785	0.900	<0.000
Age group (50+ years v <50 years)	-	1.005	1.003	1.008	<0.000	-	1.511	1.374	1.661	<0.000
Educational attainment (≤high school v tertiary)	-	0.996	0.993	0.999	0.009	-	0.883	0.824	0.946	<0.000
Employment status (paid v other)	-	1.001	0.999	1.004	0.303	-	0.796	0.742	0.854	<0.000
Language spoken at home (other v English))	-	0.999	0.996	1.003	0.671	-	1.038	0.925	1.163	0.528
Aboriginal (non-Aboriginal v Aboriginal)	-	1.002	0.999	1.004	0.126	-	1.021	0.952	1.095	0.556
SEIFA (least disadvantaged v most disadvantaged)	-	1.008	1.002	1.014	0.009	-	1.385	0.981	1.955	0.064
MMM Regionality (other v major city)	-	1.001	0.998	1.003	0.663	-	0.992	0.924	1.065	0.824

[1] Where a single number of participants is provided, it is because the number represents the total number of participants included in the model.

3.3.3 Impact evaluation for Get Healthy Service Diabetes Program

The mean change in weight and health risk behaviour outcomes from baseline to program completion across the Get Healthy Service Diabetes Program is shown in Table 11. Findings from the available case analysis indicate Diabetes Program participants improved their BMI score by 0.95 kg/m^2 (95% CI -1.04 to -0.85) and their waist circumference by 3.38 cm (95% CI -3.74 to – 3.02). On average participants increased their physical activity by 49.36 minutes/week (95% CI 43.92 to 54.79). At program completion, participants had a 12% higher rate of fruit consumption (IRR 1.12, 95% CI 1.06 to 1.18), 27% higher rate of vegetable consumption (IRR 1.27, 95% CI 1.22 to 1.32), 49% lower rate of sweet drink consumption (IRR 0.51, 95% CI 0.45 to 0.59) and 31% lower rate of takeaway food consumption (IRR 0.69, 95% CI 0.63 to 0.74) than at baseline. For each outcome, participants who had complete data (included in the imputed analysis) also reported statistically significant improvements in weight and health behaviour outcomes.

Table 11: Get Healthy Service Diabetes Program pre-post health risk behaviour change

GHS Diabetes Program	Baseline		Completion		Available case					Imputed data				
	Mean	SD	Mean	SD	MD	SE	CI (lower)	CI (upper)	p-value	MD	SE	CI (lower)	CI (upper)	p-value
Weight (kg)	91.10	23.64	88.40	22.52	-2.69	0.15	-2.97	-2.40	<0.000	-2.34	0.19	-2.71	-1.98	<0.000
BMI (kg/m^2)	32.95	8.03	31.98	7.64	-0.95	0.05	-1.04	-0.85	<0.000	-0.83	0.06	-0.95	-0.72	<0.000
Waist circumference (cm)	106.88	16.23	103.76	15.90	-3.38	0.18	-3.74	-3.02	<0.000	-2.88	0.18	-3.23	-2.52	<0.000
PA (minutes per week)	117.66	115.82	167.01	120.96	49.36	2.77	43.92	54.79	<0.000	35.79	1.85	32.16	39.43	<0.000
	Mean	SD	Mean	SD	IRR	SE	CI (lower)	CI (upper)	p-value	IRR	SE	CI (lower)	CI (upper)	p-value
Fruit (serves/day)	1.61	1.37	1.80	0.93	1.12	0.03	1.06	1.18	<0.000	1.13	0.02	1.10	1.16	<0.000
Vegetable(serves/day)	2.70	1.79	3.43	1.59	1.27	0.02	1.22	1.32	<0.000	1.27	0.01	1.24	1.30	<0.000
Sweet (serves/day)	0.36	1.11	0.18	0.70	0.51	0.07	0.45	0.59	<0.000	0.47	0.03	0.42	0.52	<0.000
Takeaway food (serves/day)	0.86	1.48	0.59	1.12	0.69	0.04	0.63	0.74	<0.000	0.68	0.02	0.63	0.72	<0.000

MD=mean difference, IRR=incidence rate ratio, PA=physical activity, SD=standard deviation. Count variables (fruit, vegetable, sweet drinks, and takeaway food) are reported as a mean and standard deviation to show variation across the population

3.4 Get Healthy in Pregnancy

3.4.1   Overview of Get Healthy in Pregnancy participants

Participant characteristics for those referred to the Get Healthy in Pregnancy Program, those who actively enrolled and those who completed the program are outlined in Table 12. Approximately three quarters of participants referred to Get Healthy in Pregnancy had a tertiary education (77%, n=13,474), were in paid employment (71%, n=12,679) and spoke English at home (78%, 16,324). Almost two thirds of participants were from least disadvantaged areas (64%, n=13,269), 76% were from major cities (n=15,922) and 4.1% were Aboriginal (n=870).

In terms of health risk characteristics, 70% (n=14,395) of participants referred to the Get Healthy in Pregnancy Program were classified as being overweight or obese based on their calculated BMI. Based on the healthy eating guidelines, 63% (n=3,337) of participants referred to Get Healthy in Pregnancy consumed the recommended two serves of fruit per day and 11% (n=561) of participants consumed he recommended five serves of vegetables per day. Thirty seven percent of participants referred to the program engaged in sufficient physical activity (37%, n=2,415).

3.4.2   Process evaluation for Get Healthy in Pregnancy

The conversion rate from referred to actively enrolled and program completion, by participant and program characteristics for the Get Healthy in Pregnancy Program is outlined in Table 13.

In the univariable analysis, participants actively enrolled in the Get Healthy in Pregnancy Program with an education level of high school or below (compared to tertiary education) and those from outside of major cities (compared to living in a major city) were significantly more likely to complete the program. Participants who did not identify as Aboriginal and those who spoke a Language other than English at home were significantly more likely to complete the program.

In the multivariable analyses, participants actively enrolled in the Get Healthy in Pregnancy Program who had a high school or lower level of education were less likely to complete the program (RR 0.774, 95% CI 0.710 to 0.845). Those who spoke a language other than English at home (RR 1.164, 95% CI 1.084 to 1.249) and those from the least disadvantaged areas (RR 1.135, 95% CI 1.060 to 1.215) were more likely to complete the program.

Table 12: Baseline socio demographic and risk factor characteristics of Get Healthy in Pregnancy Program participants

Baseline Characteristic	Referred N = 22,020[1]	Actively enrolled N = 21,058[1]	Complete N = 6,295[1]
Age group			
16-49	21,093 (100%)	21,022 (100%)	6,280 (100%)
50 or over	15 (<0.1%)	15 (<0.1%)	3 (<0.1%)
Educational attainment			
Certificate/Diploma or higher	13,474 (77%)	13,448 (77%)	3,352 (83%)
Highschool	2,881 (16%)	2,866 (16%)	542 (13%)
Year 10 or less	1,150 (6.6%)	1,144 (6.6%)	166 (4.1%)
Employment status			
Paid employment	12,679 (71%)	12,647 (71%)	2,974 (71%)
Retired	16 (<0.1%)	16 (<0.1%)	4 (<0.1%)
Other	5,267 (29%)	5,251 (29%)	1,216 (29%)
Language spoken at home			
English	16,324 (78%)	16,265 (78%)	4,765 (76%)
Other	4,698 (22%)	4,688 (22%)	1,518 (24%)
Aboriginal			
Aboriginal	870 (4.1%)	867 (4.1%)	146 (2.3%)
Non-Aboriginal	20,259 (96%)	20,191 (96%)	6,149 (98%)
SEIFA			
Most Disadvantaged	7,521 (36%)	7,496 (36%)	2,061 (33%)
Least Disadvantaged	13,269 (64%)	13,225 (64%)	4,130 (67%)
Modified Monash Model			
Major Cities	15,922 (76%)	15,869 (76%)	4,861 (78%)
Other	4,993 (24%)	4,975 (24%)	1,358 (22%)
BMI			
Underweight	317 (1.5%)	316 (1.5%)	117 (1.9%)
Normal weight	5,853 (29%)	5,836 (29%)	2,088 (34%)
Overweight	6,390 (31%)	6,376 (31%)	1,915 (31%)
Obese	7,969 (39%)	7,939 (39%)	2,081 (34%)
Two serves of fruit daily			
Insufficient	1,952 (37%)	1,948 (37%)	459 (38%)
Sufficient	3,337 (63%)	3,327 (63%)	764 (62%)
Five serves of vegetables daily			
Insufficient	4,612 (89%)	4,599 (89%)	1,064 (88%)
Sufficient	561 (11%)	560 (11%)	142 (12%)
Physical activity status			
Insufficient	4,112 (63%)	4,103 (63%)	1,071 (66%)
Sufficient	2,415 (37%)	2,413 (37%)	549 (34%)

[1]n (%), for each outcome the number of participants represents only those with data for that variable and may not sum to the total number of participants for referred, actively enrolled, or completed.

Table 13: Conversion rate from referred to actively enrolled and program completion, by participant characteristics for the Get Healthy in Pregnancy Program

Get Healthy in Pregnancy Program	Referred to actively enrolled					Actively enrolled to complete				
	n [1]	Risk ratio	CI (lower)	CI (upper)	p-value	n [1]	Risk ratio	CI (lower)	CI (upper)	p-value
Univariable analyses										
Educational attainment (≤high school v tertiary)	39,880	0.995	0.992	0.997	<0.000	12,720	0.746	0.687	0.810	<0.000
Employment status (paid v other)	41,011	1.002	1.000	1.004	0.066	13,055	0.990	0.928	1.057	0.771
Language spoken at home (other v English)	74,529	1.153	1.140	1.166	<0.000	15,130	1.058	1.003	1.117	0.040
Aboriginal (non-Aboriginal v Aboriginal)	100,866	1.079	1.066	1.093	<0.000	14,982	1.112	1.057	1.169	<0.000
SEIFA (least disadvantaged v most disadvantaged)	84,164	1.203	1.174	1.232	<0.000	14,983	1.147	0.837	1.572	0.394
MMM Regionality (other v major city)	106,281	0.824	0.813	0.835	<0.000	15,087	0.910	0.858	0.964	0.001
Multivariable analyses										
Educational attainment (≤high school v tertiary)	37,385	0.996	0.993	0.999	0.005	-	0.774	0.710	0.845	<0.000
Employment status (paid v other)	-	1.001	0.999	1.004	0.384	-	0.961	0.895	1.032	0.271
Language spoken at home (other v English)	-	0.999	0.996	1.002	0.582	-	1.164	1.084	1.249	<0.000
Aboriginal (non-Aboriginal v Aboriginal)	-	1.008	1.003	1.014	0.009	-	1.245	0.773	2.005	0.367
SEIFA (least disadvantaged v most disadvantaged)	-	1.002	0.999	1.004	0.157	-	1.135	1.060	1.215	<0.000
MMM Regionality (other v major city)	-	1.001	0.998	1.003	0.651	-	0.942	0.868	1.022	0.153

[1] Where a single number of participants is provided, it is because the number represents the total number of participants included in the model.

3.4.3 Impact evaluation for Get Healthy in Pregnancy

The mean change in weight and health risk behaviour outcomes from baseline to program completion across the Get Healthy in Pregnancy Program is shown in Table 14. Findings from the available case analysis indicate Get Healthy in Pregnancy participants improved their physical activity by 27.86 minutes/week (95% CI 21.86 to 33.86) from baseline to completion. At program completion, participants had a 38% higher rate of vegetable consumption (IRR 1.38, 95% CI 1.32 to 1.45), 33% lower rate of sweet drink consumption (IRR 0.67, 95% CI 0.58 to 0.78) and 37% lower rate of takeaway food consumption (IRR 0.63, 95% CI 0.58 to 0.68) than at baseline. For each outcome, participants who had complete data (included in the imputed analysis) also reported statistically significant improvements in weight and health behaviour outcomes.

Table 14: Get Healthy in Pregnancy Program pre-post health risk behaviour change

Get Healthy in Pregnancy	Baseline		Completion		Available case					Imputed				
	Mean	SD	Mean	SD	MD	SE	CI (lower)	CI (upper)	p-value	MD	SE	CI (lower)	CI (upper)	p-value
PA (minutes per week)	97.58	103.14	125.44	108.58	27.86	3.06	21.86	33.86	<0.000	24.21	2.12	20.06	28.37	<0.000
	Mean	SD	Mean	SD	IRR	SE	CI (lower)	CI (upper)	p-value	IRR	SE	CI (lower)	CI (upper)	p-value
Fruit (serves/day)	1.93	1.26	1.97	1.26	1.02	0.03	0.96	1.08	0.600	1.05	0.02	1.02	1.08	<0.000
Vegetable(serves/day)	2.65	1.67	3.67	1.71	1.38	0.02	1.32	1.45	<0.000	1.32	0.02	1.28	1.35	<0.000
Sweet drinks (serves/day)	0.42	0.99	0.28	0.73	0.67	0.08	0.58	0.78	<0.000	0.57	0.04	0.50	0.65	<0.000
Takeaway food (serves/day)	1.47	2.55	0.90	1.25	0.63	0.04	0.58	0.68	<0.000	0.68	0.02	0.65	0.71	<0.000

MD=mean difference, IRR=incidence rate ratio, PA=physical activity, SD=standard deviation. Count variables (fruit, vegetable, sweet drinks, and takeaway food) are reported as a mean and standard deviation to show variation across the population

3.5 The Get Healthy Aboriginal Program

3.5.1 Overview of Get Healthy Aboriginal Program participants

Participant characteristics for those referred to the Get Healthy Service Aboriginal Program (n=1,044), those who actively enrolled (n=1,036) and those who completed the program (n=167) are outlined in Table 15. Approximately three quarters of participants referred to the Aboriginal Program were female (77%, n=800), 60% (n=631) were aged between 16-49 years, 46% (n=428) had a tertiary education and 52% (n=507) were in paid employment. Almost all participants referred to the Aboriginal Program spoke English at home (99%, n=1,026), approximately half (49%, n=480) were from the least disadvantaged areas and 64% (n=661) were from areas outside of major cities.

In terms of health risk characteristics, 92% (n=696) of participants referred to the Aboriginal Program were classified as being overweight or obese based on their calculated BMI; and 90% (n=413) had a greatly increased risk of chronic disease based on their waist circumference. Based on the healthy eating guidelines, 45% (n=297) of participants referred to the Aboriginal Program consumed the recommended two serves of fruit per day and 9.5% (n=62) of participants consumed the recommended five serves of vegetables per day. Less than half of participants referred to the Aboriginal Program engaged in sufficient physical activity (46%, n=302).

There was one participant who did not identify as Aboriginal yet completed the Aboriginal program (Table 15). As there are multiple points in the Aboriginal program at which eligibility is checked, it was assumed that in practice, if this person was ineligible for the Aboriginal program they would have been screened and referred to a more suitable program. Given this participant completed the Aboriginal program, it was assumed that there was an error in their data and there was insufficient data or justification to exclude this participant, and for the purposes of this analysis they were retained.

3.5.2 Process evaluation for the Get Healthy Aboriginal Program

The conversion rate from referred to actively enrolled and program completion, by participant and program characteristics for the Get Healthy Service Aboriginal Program is outlined in Table 16.

In the univariable analysis, participants actively enrolled in the Aboriginal Program and who were women (compared to men) were significantly less likely to complete the program. Participants aged 50+ years (compared to younger than 50 years) were significantly more likely to complete the program.

In the multivariable analyses, women (RR 0.533, 95% CI 0.378 to 0.752) and those with a high school education or less (RR 0.586, 95% CI 0.412 to 0.832) were significantly less likely to complete the Aboriginal Program. Participants aged 50 years or older (compared to younger than 50 years) were significantly more likely to complete the program (RR 2.079, 95% CI 1.473 to 2.935).

Table 15: Baseline socio demographic and risk factor characteristics of Get Healthy Service Aboriginal Program participants

Baseline Characteristic	Referred N = 1,044[1]	Actively enrolled N = 1,036[1]	Complete N = 167[1]
Gender			
Male	239 (23%)	238 (23%)	58 (35%)
Female	800 (77%)	793 (77%)	106 (65%)
Age group			
16-49	631 (60%)	625 (60%)	70 (42%)
50 or over	413 (40%)	411 (40%)	97 (58%)
Educational attainment			
Certificate/Diploma or higher	428 (46%)	424 (45%)	67 (54%)
Highschool	204 (22%)	204 (22%)	19 (15%)
Year 10 or less	307 (33%)	306 (33%)	39 (31%)
Employment status			
Paid employment	507 (52%)	504 (52%)	61 (47%)
Retired	67 (6.9%)	67 (7.0%)	14 (11%)
Other	393 (41%)	391 (41%)	55 (42%)
Language spoken at home			
English	1,026 (99%)	1,018 (99%)	164 (99%)
Other	13 (1.3%)	13 (1.3%)	2 (1.2%)
SEIFA			
Most Disadvantaged	505 (51%)	502 (51%)	73 (48%)
Least Disadvantaged	480 (49%)	476 (49%)	80 (52%)
Modified Monash Model			
Major Cities	377 (36%)	374 (36%)	55 (33%)
Other	661 (64%)	656 (64%)	111 (67%)
BMI			
Underweight	4 (0.5%)	4 (0.5%)	1 (0.7%)
Normal weight	56 (7.4%)	56 (7.4%)	7 (4.8%)
Overweight	146 (19%)	146 (19%)	32 (22%)
Obese	550 (73%)	546 (73%)	106 (73%)
Waist circumference			
Greatly increased risk	413 (90%)	412 (90%)	84 (90%)
Increased risk	44 (9.6%)	44 (9.6%)	9 (9.7%)
Two serves of fruit daily			
Insufficient	360 (55%)	360 (55%)	67 (57%)
Sufficient	297 (45%)	295 (45%)	50 (43%)
Five serves of vegetables daily			
Insufficient	590 (90%)	588 (90%)	100 (87%)
Sufficient	62 (9.5%)	62 (9.5%)	15 (13%)
Physical activity status			
Insufficient	350 (54%)	350 (54%)	63 (55%)
Sufficient	302 (46%)	300 (46%)	51 (45%)

[1]n (%), for each outcome the number of participants represents only those with data for that variable and may not sum to the total number of participants for referred, actively enrolled, or completed.

Table 16: Conversion rate from referred to actively enrolled and program completion, by participant characteristics for the Get Healthy Service Aboriginal Program

Aboriginal Program	Referred to actively enrolled					Actively enrolled to complete				
	n [1]	Risk ratio	CI (lower)	CI (upper)	p-value	n [1]	Risk ratio	CI (lower)	CI (upper)	p-value
Univariable analyses										
Gender (female v male)	102,390	0.807	0.795	0.819	<0.000	1,031	0.558	0.419	0.744	<0.000
Age group (50+ years v <50 years)	98,952	1.468	1.452	1.485	<0.000	1,036	2.138	1.612	2.836	<0.000
Educational attainment (≤high school v tertiary)	39,880	0.995	0.992	0.997	<0.000	934	0.731	0.526	1.015	0.061
Employment status (paid v other)	41,011	1.002	1.000	1.004	0.066	962	0.790	0.573	1.090	0.152
Language spoken at home (other v English))	74,529	1.153	1.140	1.166	<0.000	1,031	0.961	0.266	3.465	0.951
SEIFA (least disadvantaged v most disadvantaged)	100,866	1.079	1.066	1.093	<0.000	978	1.141	0.852	1.529	0.376
MMM	106,281	0.824	0.813	0.835	<0.000	1,030	1.140	0.847	1.536	0.388
Multivariable analyses										
Gender (female v male)	38,141	1.003	1.000	1.006	0.069	874	0.532	0.378	0.749	<0.000
Age group (50+ years v <50 years)	-	1.005	1.002	1.007	<0.000	-	2.068	1.463	2.923	<0.000
Educational attainment (≤high school v tertiary)	-	0.996	0.993	0.999	0.003	-	0.593	0.418	0.841	0.003
Employment status (paid v other)	-	1.002	0.999	1.004	0.145	-	0.773	0.543	1.100	0.153
Language spoken at home (other v English))	-	1.000	0.997	1.003	0.984	-	1.142	0.290	4.491	0.850
SEIFA (least disadvantaged v most disadvantaged)	-	1.002	1.000	1.004	0.103	-	1.290	0.927	1.793	0.131
MMM	-	1.000	0.997	1.003	0.974	-	1.191	0.841	1.687	0.325

[1] Where a single number of participants is provided, it is because the number represents the total number of participants included in the model.

3.5.3　Impact evaluation for the Get Healthy Aboriginal Program

The mean change in weight and health risk behaviour outcomes from baseline to program completion across the Get Healthy Service Aboriginal Program is shown in Table 17. Findings from the available case analysis indicate Aboriginal Program participants improved their BMI score by 0.75 kg/m^2 (95% CI -1.14 to -0.37), their waist circumference by 1.08 cm (95% CI -1.97 to 4.14) and their level of physical activity by 54.50 minutes/week (95% CI 26.21 to 82.79) from baseline to program completion. Participants in the Aboriginal program also had a 39% higher rate of fruit consumption (IRR 1.39, 95% CI 1.14 to 1.70), 33% higher rate of vegetable consumption (IRR 1.33, 95% CI 1.12 to 1.57), 39% lower rate of sweet drink consumption (IRR 0.71, 95% CI 0.37 to 1.36) and 41% lower rate of takeaway food consumption (IRR 0.59, 95% CI 0.39 to 0.88) than at baseline. For each outcome, participants who had complete data (included in the imputed analysis) also reported statistically significant improvements in weight and health behaviour outcomes.

Table 17: Get Healthy Service Aboriginal Program pre-post health risk behaviour change

GHS Aboriginal Program	Baseline		Completion		Available case					Imputed				
	Mean	SD	Mean	SD	MD	SE	CI (lower)	CI (upper)	p-value	MD	SE	CI (lower)	CI (upper)	p-value
Weight (kg)	98.22	25.08	96.49	26.17	-2.25	0.56	-3.35	-1.15	<0.000	-1.99	0.50	-2.98	-1.01	<0.000
BMI (kg/m^2)	34.94	7.99	34.25	8.18	-0.75	0.20	-1.14	-0.37	<0.000	-0.70	0.18	-1.04	-0.35	<0.000
Waist circumference (cm)	108.85	23.18	109.78	20.96	1.08	1.56	-1.97	4.14	0.489	-1.96	0.57	-3.07	-0.85	0.001
PA (minutes per week)	133.30	121.49	187.80	137.34	54.50	14.44	26.21	82.79	<0.000	33.15	3.77	25.77	40.53	<0.000
	Mean	SD	Mean	SD	IRR	SE	CI (lower)	CI (upper)	p-value	IRR	SE	CI (lower)	CI (upper)	p-value
Fruit (serves/day)	1.32	1.12	1.84	0.98	1.39	0.10	1.14	1.70	0.004	1.16	0.04	1.08	1.25	<0.000
Vegetable(serves/day)	2.40	1.68	3.18	1.46	1.33	0.08	1.12	1.57	0.001	1.29	0.04	1.21	1.37	<0.000
Sweet drinks (serves/day)	0.88	1.91	0.63	1.54	0.71	0.33	0.37	1.36	0.062	0.55	0.11	0.38	0.81	0.002
Takeaway food (serves/day)	1.20	1.64	0.71	1.07	0.59	0.21	0.39	0.88	0.001	0.67	0.05	0.58	0.76	<0.000

MD=mean difference, IRR=incidence rate ratio, PA=physical activity, SD=standard deviation. Count variables (fruit, vegetable, sweet drinks, and takeaway food) are reported as a mean and standard deviation to show variation across the population.

4. Implications for Practice

4.1 Program referral

The results suggest that there is a substantial number of participants (almost 54,000) referred to the GHS who are **lost to follow up** between referral and receiving a coaching call. Due to a lack of available data, it is not possible to determine if (despite being referred) whether they were eligible to participate, or the reason for not receiving a coaching call, or whether they have particular socio-demographic or risk factor characteristics that mean they are less willing or able to take part in the service.

Implication: We need to better understand demographic and health risk profiles of participants who are lost to follow up. In particular, in relation to their referral source and the service delivery protocols that are currently not supporting retention between referral and active engagement in the GHS. This evidence will inform efforts to improve participation in the service.

It is understood that Local Health Districts (LHDs) have set referral targets for Get Healthy in Pregnancy program referrals which are used to monitor performance. **The results demonstrate referral targets are effective** with most referrals being from Midwives, and the Get Healthy in Pregnancy having the highest proportion of referrals becoming actively enrolled. Health professionals (bulk referral form) referrals, clinical electronic pathways and website are also significant contributors to GHS registration. As the registration and referral description in the data does not provide any further information regarding these sources, it is difficult to determine whether there are strategies (ones employed in Get Healthy in Pregnancy or otherwise) that encourage health professionals or health services to refer to the GHS that could be replicated elsewhere.

Implication: Including and encouraging referrals within LHD performance agreements for all GHS programs could support increasing referrals to the Service.

The results show that 43% of participants enrol in Get Healthy in Pregnancy, 34% in the GHS Standard program, 20% in the GHS Diabetes program and 3% in the GHS Aboriginal program (Table 1). As previously noted, Get Healthy in Pregnancy likely receives more referrals due to its inclusion in LHD performance agreement and electronic referral pathways. Viewing these results through an equity lens and contributing to closing the health outcomes gap for Aboriginal people, **there is an argument for including referral targets for other programs** to facilitate and encourage participation in the GHS Aboriginal program.

Implication: Exploring opportunities to increase referrals, as well as engagement and completion of the GHS Aboriginal program may help to reduce some of the health inequities experienced by Aboriginal people in relation to improving health behaviours.

4.2 Program participation and completion

The results demonstrate that **there were variations in likelihood of completing GHS programs based on the socio-demographic profile** of participants. GHS participants (across all programs) who

actively enrolled and then completed a GHS program (Table 4) were more likely to be men, aged 50 years and older, have tertiary qualifications, not be in paid employment, were not Aboriginal and spoke a language other than English at home. They were also more likely to be from the least disadvantaged groups. Women, those with a high school education (or less), and those in paid employment were significantly less likely to complete the GHS programs.

The proportion of participants who were classified as being overweight or obese (based on their BMI classification), were at a greatly increased risk of chronic disease (based on their waist circumference), undertook insufficient amounts of physical activity and did not consume the recommended servings of vegetables (Table 2) suggests that **the GHS is reaching those in need of the service in line with their health risk factor profile**. However, there are other community members who (based on their socio-demographic profile) could benefit from the GHS programs. Increasing referrals for men whilst improving retention of women, younger people, people with high-school level education, those who speak English at home and Aboriginal peoples has potential to improve health risks amongst those community members.

Implication: Increase referrals for men, whilst improving retention amongst women, participants with a high school education, younger people, those who speak English at home, those in paid employment, and Aboriginal peoples. Targeting these demographic populations could ensure health benefits associated with participating in the GHS are experienced across the community.

The results of this evaluation also suggest that **there are variations in program completion based on GHS program enrolment**. For example, compared to the GHS Standard program, participants in the GHS Aboriginal program were less likely to complete the program, GHS Diabetes program participants were significantly more likely to complete the program and there was no difference in completion rate for GHiP participants.

There were some differences across the GHS programs in socio-demographic participant characteristics and their likelihood of program completion, which are detailed below:

- In line with the overall completion analysis for GHS programs, women participants in GHS Standard, GHS Diabetes and GHS Aboriginal programs were significantly less likely to complete these programs.
- Similarly, across all programs, those with a high school education (or less) were significantly less likely to complete the programs they had enrolled in.
- Those in paid employment were significantly less likely to complete their GHS program for the GHS Standard program and the GHS Diabetes program.
- For the GHS Standard, GHS Diabetes and GHS Aboriginal programs those aged over 50 years were more likely to complete their respective GHS programs.
- In Get Healthy in Pregnancy, participants who spoke English at home and those from less disadvantaged areas were more likely to complete the program.

Implication: Include program retention as part of LHD performance agreements for all GHS programs to increase rates of completion in the Service and its individual programs.

4.3 Population reach

Over the 42 months (December 2017 until May 2023), approximately 123,000 adults from NSW were referred to the GHS with approximately 54,000 becoming actively enrolled in the GHS; this equates to an approximate average of 35,000 of referred participants per year and 15,000 average active enrolments per year. It is difficult to determine whether this represents an appropriate level of annual population reach for the GHS, however **increasing the conversion rate of referrals to actively enrolled will assist in increasing the population reach of the GHS.**

Implication: Exploring strategies to increase the conversion rate of referrals to participants becoming actively enrolled should be undertaken to ensure a greater reach of the GHS.

4.4   Program effectiveness

Improvements to participants' physical activity and healthy eating behaviours were noted across the GHS overall. On average participants increased their physical activity by 30.5 minutes/week, they had a 9% higher rate of fruit consumption, 29% higher rate of vegetable consumption, 49% lower rate of sugar sweetened drink consumption and 32% lower rate of takeaway food consumption than at baseline. After accounting for missing data, improvements in physical activity, and vegetable, fruit, sweetened drink. and takeaway food consumption were reported for GHS Standard, GHS Diabetes, GHS Aboriginal and Get Healthy in Pregnancy program participants.

Across the GHS, **participants also reported significant improvements in anthropometric related measures**, with participants improving their weight by 0.88 kg, BMI score by 0.31 kg/m^2 and their waist circumference by 2.06 cm. After accounting for missing data, improvements in weight, BMI and waist circumference were reported for participants who completed GHS Standard, GHS Diabetes and GHS Aboriginal programs (noting that the Get Healthy in Pregnancy data was not included in a separate analysis due to poor data quality).

The magnitude of improvements in relation to weight and BMI may not constitute what might be considered a clinically significant improvement (in the order of 5% or in the order of 2.5kg as shown in diabetes prevention programs at scale). The data does not provide any insight into whether this might be due to self-report bias, measurement error, missing data, the profile of participants, the number of phone calls participants received at the time of program completion, whether there are factors associated with the delivery of the program at play.

Implication: The effect size needs to be verified by an objective measure in a subsample of GHS participants. Further understanding the individual and program delivery factors that contribute to the health risk behaviour change of participants could inform whether there is anything that can be done to increase improvements over time (and in line with a clinically significant change).

4.5   Data quality

It is acknowledged that the GHS is a real-world service, and the data that is collected is part of service delivery which is likely to have an impact on data quality. **Missing data was particularly high** (66%) in the program classification field, which has meant that approximately 80,000 records were only analysed for the purpose of the overall GHS program rather than in the individual program analysis. There were also some data points which contained improbable values, for example waist

circumferences less than 30cm and greater than 500cm; and self-reported weight of participants ranging from 2kg to 600kg, with 14 participants reporting a weight between 250kgs and 600kgs. Measures to validate and ensure accurate and consistent data collection with the new service provider are underway.

Implication: Introducing ongoing training for coaches on the importance of accurately recording a minimum set of data and ensuring there are 'guard rails' or alerts for implausible data entries will improve data quality and subsequent analyses.

4.6 Dissemination of results and continuous improvement opportunities

The rapid literature review undertaken for this evaluation provides an indication of the lack of comparable telehealth service evaluations that are currently available across Australia. Whilst GHS has been in existence for 15 years, it is suggested that it is a somewhat novel or unique Government funded service. Given the exponential rise in telehealth and digital models of care post COVID-19, **the fields of public health policy and academia would benefit from more recent peer review published papers and grey literature reports on the GHS's process, reach, and impact.** In addition, the wealth of data and information that is collected in relation to the implementation of the GHS can be used to feed into service improvement strategies.

Implication: Dissemination of the results of this evaluation more broadly in both the peer review literature and grey literature will benefit both the public health policy field and academia. Conducting and disseminating the results of iterative and timely implementation evaluation processes will feed into continuous service improvement strategies to ensure the GHS reaches those most at need. Additionally, it will provide evidence to support practice improvement processes that support GHS participants to complete the service and are successfully improve to their risk factor profile.

5. Limitations

The GHS program is implemented in a real-world setting and data is collected using methods suitable for a telephone-based service. As such, there were limitations to the evaluation that must be considered when interpreting the findings. These include:

- In response to the COVID-19 pandemic isolation requirements, many public health promotion interventions were transferred from mixed-method models of delivery to remote methods of delivery to provide social distancing between health care providers and their patients. Simultaneous Federal and State telehealth policy changes to accommodate the rapid adoption of digital health technologies simultaneously resulted in a rapid increase in the number of telehealth interventions being evaluated (17). As such, the rapid literature review of embedded, established telehealth interventions produced a huge number of articles, predominantly randomised control trials (RCTs) which were excluded from this review and made identifying relevant evaluations challenging. It is possible that a thorough systematic review may produce other relevant texts, however, was outside the scope of this program evaluation.
- The data provided by participants are self-reported, which were not validated by objective measurement. These self-report measures were used to determine weight change, physical activity, and dietary outcomes of the program, which may include social desirability biases (such as under-reporting or data missing not at random) in additional to other inaccuracies.
- Missing data was evident throughout the data set. Possible causes include participants lost to follow-up, incomplete data collection processes, and social desirability biases.
- Incorrect data entry was evident throughout the data set, and as previously described in detail, where data was outside plausible values it was assumed this was an error in data entry and the data was removed. Increasing the proportion of missing data has the potential to introduce some bias that must be acknowledged, and where appropriate, imputation methods were used to mitigate the impact of missing data.
- While every effort is made to measure the change in behavioural outcomes across consistent time periods, without knowing the parameters under which data is collected and recorded by the telephone coaches absolute consistency cannot be guaranteed. This is particularly relevant to the Get Healthy in Pregnancy program where participants enrol to the GHS program at different gestational time points and can deliver their baby at different gestational time points, making standardisation difficult.
- The GHS program was delivered prior to, during, and after the COVID-19 pandemic. As a scaled telehealth program, the GHS did not require adaptation in response to the pandemic, however that does not mean the GHS process and impact was not affected by the pandemic. During the pandemic there were exponential increases in digital health technologies and models of care, given the transition of many face-to-face programs to online delivery. Whilst adoption of telehealth during the pandemic increased, evaluating the impact of the covid-19 pandemic on the GHS, an existing embedded telehealth program was beyond the scope of this evaluation.

6. Conclusion

This evaluation of the GHS and its programs is an important part of service delivery continuous improvement and an opportunity to determine the reach and impact of the GHS between December 2019 and May 2023. The process evaluation data clearly show that the GHS is being used by those in the community who are most at need in terms of their health risk factor profiles. Future efforts must be directed to reach people in rural and remote regions, Aboriginal peoples, and to ensure that all people referred to the Service engage in a more comprehensive way (receive a first coaching call and then receive as many coaching calls as appropriate). The impact evaluation suggests that the magnitude of change in lifestyle risk factors is less than it was in the early years of the GHS which could be due to several factors that warrant future comparative exploration.

7. References

1.   O'Hara BJ, Phongsavan P, Venugopal K, Bauman AE. Characteristics of participants in Australia's Get Healthy telephone-based lifestyle information and coaching service: reaching disadvantaged communities and those most at need. Health Education Research. 2011;26(6):1097-106.

2.   O'Hara BJ, Phongsavan P, Gebel K, Banovic D, Buffett KM, Bauman AE. Longer term impact of the mass media campaign to promote the Get Healthy Information and Coaching Service®: increasing the saliency of a new public health program. Health Promotion Practice. 2014;15(6):828-38.

3.   O'Hara BJ, Bauman AE, Phongsavan P. Using mass-media communications to increase population usage of Australia's Get Healthy Information and Coaching Service®. BMC public health. 2012;12:1-11.

4.   O'Hara BJ, Bauman AE, King EL, Phongsavan P. Brief Report–Process evaluation of the advertising campaign for the NSW Get Healthy Information and Coaching Service. Health Promotion Journal of Australia. 2011;22(1):68-71.

5.   O'Hara BJ, Phongsavan P, Rissel C, Hardy LL, Zander A, Greenaway M, et al. Role of general practice in the utilisation of the NSW Get Healthy Information and Coaching Service. Australian journal of primary health. 2015;21(2):182-8.

6.   O'Hara B, Eggins D, Phongsavan P, Milat AJ, Bauman AE, Wiggers J. Piloting proactive marketing to recruit disadvantaged adults to a community-wide obesity prevention program. Public Health Res Pract. 2015;25:e2521521.

7.   O'Hara BJ, Phongsavan P, Venugopal K, Eakin EG, Eggins D, Caterson H, et al. Effectiveness of Australia's Get Healthy Information and Coaching Service®: translational research with population wide impact. Preventive medicine. 2012;55(4):292-8.

8.   O'Hara BJ, Phongsavan P, Eakin EG, Develin E, Smith J, Greenaway M, et al. Effectiveness of Australia's Get Healthy Information and Coaching Service®: maintenance of self-reported anthropometric and behavioural changes after program completion. BMC Public Health. 2013;13:1-14.

9.   Cranney L, O'Hara B, Gale J, Rissel C, Bauman A, Phongsavan P. Telephone based coaching for adults at risk of diabetes: impact of Australia's Get Healthy Service. Transl Behav Med. 2019;9(6):1178-85.

10.   Quinn E, O'Hara BJ, Ahmed N, Winch S, McGill B, Banovic D, et al. Enhancing the get healthy information and coaching service for Aboriginal adults: evaluation of the process and impact of the program. International Journal for Equity in Health. 2017;16:1-11.

11.   McGill B, Lees D, Salisbury J, Reynolds T, Davidson S, Dorney E, et al., editors. Impact Evaluation of the Get Healthy in Pregnancy Program: Evidence of Effectiveness. Healthcare; 2023: MDPI.

12.   Australian Bureau of Statistics. Technical Paper Socio-Economic Indexes for Areas (SEIFA) 2016 Canberra: ABS; 2018.

13.   Care TDoHaA. Modified Monash Model Canberra The Australian Government 2024 [Available from: https://www.health.gov.au/topics/rural-health-workforce/classifications/mmm.

14.   Brown WJ, Bauman AE, Bull F, Burton NW. Development of Evidence-based Physical Activity Recommendations for Adults (18-64 years). Report prepared for the Australian Government Department of Health, August 2012. 2013.

15.   Health N, Council MR. Australian dietary guidelines. Canberra (Australia): National Health and Medical Research Council. 2013.

16.   Zou G. A modified poisson regression approach to prospective studies with binary data. American journal of epidemiology. 2004;159(7):702-6.

17.   Spaulding R, Smith CE. How telehealth care exploded due to COVID: What nurse researchers need to know. Res Nurs Health. 2021;44(1):5-8.

Appendix 1: Inclusion and exclusion criteria for rapid review

Similar programs were defined as tele-health, e-health, or m-health coaching programs with a focus on healthy eating, active living and/or weight loss. Programs that also include alcohol or tobacco were also available for inclusion if they also have a substantive HEAL component. The following PICOS criteria was developed to inform the rapid review:

Parameter	Criterion	Search Terms
Population	Population wide programs. Programs targeting specific subpopulations e.g., pregnancy (pre-conception to post-partum) and Aboriginal specific programs were included. Programs targeting adolescents and children were excluded.	Public; Population wide;
Intervention	Telehealth, e-health or, m-health coaching programs with a focus on healthy eating, active living and/or weight-loss. Programs may include alcohol and tobacco may be included if they contain a healthy eating or active living component.	Telehealth; eHealth; mHealth; online coaching; web-based; remote consultation
Comparator	Any comparator intervention including no intervention, "usual care," or "treatment as usual"	
Outcome	Service/Program Outcomes, or Individual Health Outcomes (Impact on Individual Participants):	Refer-; Enrolment; Participation; Program evaluation; Impact; Program completion. Or Body weight; Body Mass Index; Health Behaviours
Study Design	Established programs delivered at scale. Pilot studies, feasibility, efficacy, or small-scale effectiveness evaluations were excluded.	Translational; role-out; scaled; delivered;

Small-scale programs, pilot, feasibility, acceptability, randomised control trials (RCTs) and those not delivered at scale were excluded, as the findings are not directly applicable to a large-scale, embedded, and established program.

Appendix 2: Get Healthy Service Program characteristics: lost to follow up (referred to actively enrolled)

Characteristic	N = 53,884[1]
Gender	
Male	4,805 (9.8%)
Female	44,380 (90%)
Age group	
16-49	39,501 (86%)
50 or over	6,638 (14%)
Educational attainment	
Certificate/Diploma or higher	312 (61%)
Highschool	119 (23%)
Year 10 or less	80 (16%)
Employment status	
other	186 (35%)
Paid employment	299 (56%)
Retired	45 (8.5%)
Language spoken at home	
English	20,737 (90%)
Other	2,301 (10.0%)
Aboriginal	
Aboriginal	3,479 (10%)
Non-Aboriginal	31,142 (90%)
SEIFA	
Most Disadvantaged	20,016 (41%)
Least Disadvantaged	28,777 (59%)
Modified Monash Model	
Major Cities	31,953 (60%)
Other	21,296 (40%)
Registration method	
Website	8,695 (16%)
Telephone Contact	1,783 (3.3%)
Referral form (single)	9,270 (17%)
Bulk Referral form (Health Professional)	17,021 (32%)
Bulk Referral form (non-health professional)	2,838 (5.3%)
Re-enrolment	31 (<0.1%)
Website - Health Professional	1,954 (3.6%)
Clinical electronic pathway	12,288 (23%)
Referral reason	
Physical Activity	925 (1.7%)
Healthy Eating	1,882 (3.5%)
Weight Management	3,947 (7.3%)
Alcohol Reduction	101 (0.2%)
Alcohol Abstinence in Pregnancy	9 (<0.1%)
Diabetes Prevention	139 (0.3%)
Cancer Support	119 (0.2%)
Missing/data not provided	46,761 (87%)

Referral source	
Aboriginal Services	1,902 (3.6%)
Health Professional: Maternity	32,859 (62%)
Health Professional: Other	8,513 (16%)
Mass Media	1,859 (3.5%)
Medical Professional	1,648 (3.1%)
NSW Health Initiative	601 (1.1%)
Other	2,117 (4.0%)
Other States	218 (0.4%)
Research Study	2,909 (5.5%)
Referrer profession	
Aboriginal Health Specialist	514 (1.4%)
Allied Health	1,465 (3.9%)
Medical Specialist	1,069 (2.8%)
Midwifery	27,998 (74%)
Missing	3,814 (10%)
Musculoskeletal	943 (2.5%)
Nursing	1,953 (5.2%)
Oral Health	85 (0.2%)
Other	10 (<0.1%)
Program	
Get Healthy Service Standard program	170 (69%)
Get Healthy in Pregnancy program	52 (21%)
Aboriginal program	8 (3.3%)
Diabetes Prevention program	15 (6.1%)
Termination reason	
Active withdrawal	10,619 (20%)
Early completion	7 (<0.1%)
Graduated	218 (0.4%)
LTFU complete	28,804 (55%)
LTFU incomplete	3,951 (7.5%)
Passive withdrawal	7,360 (14%)
Terminated	1,460 (2.8%)

[1]n (%)