STATINS: OPTIMISING THERAPY, ADDRESSING INTOLERANCE

Final Evaluation report

September 2018

Independent, not-for-profit and evidence based, NPS MedicineWise enables better decisions about medicines and medical tests.

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Contents

EXECUTIVE SUMMARY

The program *Statins: Optimising Therapy, Addressing Intolerance* was launched on 1 July 2017 and the majority of visiting took place between July 2017 and the end of December 2017.

The main program activities included 1-1 educational visits; small group meetings; Clinical e-Audit (CEA); Pharmacy Practice Review (PhPR); online case study (CS); prescribing feedback; MedicineWise News and online resources.

This evaluation report details the process and impact evaluation that was used to understand if the program objectives have been achieved in the short term. The focus is primarily on health professionals who participated in NPS MedicineWise activities. The primary method used to measure program impact in relation to the key messages was a retrospective pre-test GP survey (with GPs who took part in an educational visit or small group meeting) and a control survey with non-participating GPs.

Overall program impact

- The program engaged over 12,000 unique health professionals.
- Participation targets were exceeded for educational visiting, the CEA and nurse participation in the CS.
- Health professionals participating in active program activities were satisfied with each of the activities (educational visiting, CEA, PhPR and CS). The learning objectives for each activity and participants' learning needs were met for the majority of health professionals.
- The educational visiting program achieved the highest Net Promoter Score for therapeutic topics to date of 74.9.

Impact on GP knowledge

Significant improvements to GPs' knowledge in line with program key messages were observed for surveyed GPs after participating in the Statins program. Of note, knowledge improved in the following areas:

- Using the absolute Cardiovascular (CV) risk enables the most effective approach to lipid management (+14% for participant GPs, p≤0.001; +9% between participant and control GPs, p≤0.005).
- Addition of a second lipid modifying medicine should be reserved for patients who have adequately trialled statin therapy (+10% for participant GPs, p≤0.001; +7% between participant and control GPs, p≤0.05).
- Up to 90% of patients who cannot tolerate a statin will be able to tolerate an alternate statin (+22% for participant GPs, p≤0.001; +18% between participant and control GPs, p≤0.001).

Impact on HP practice

- GPs who took part in an educational visit or small group meeting demonstrated significant improvements to practice following program participation, and in comparison to control GPs, in a number of areas:
  - Measurement of baseline CK levels (+25% for participant GPs, p≤0.001; +18% between participant and control GPs, p≤0.001).
  - Use of the online Australian absolute CV risk calculator to estimate CV risk (+20% for participant GPs, p≤0.001; +18% between participant and control GPs, p≤0.001).
  - A decrease in participant GPs who do not estimate CV risk (-4%, p≤0.05).

  - Assessment of absolute CV risk with the Australian CV risk calculator as the first step in addressing a patient's lipid profile (+24% for participant GPs, p≤0.001; +14% between participant and control GPs, p≤0.001).
  - Appropriate management of statin associated muscle symptoms (+15% for participant GPs, p≤0.001; +21% between participant and control GPs, p≤0.001).
- GPs who completed the CEA showed significant improvements to practice in some key areas related to patient management:
  - A significant increase of 59% (p≤0.0001) in the number of patients whose LDL-C target had been measured and achieved in the last 12 months.
  - A significant increase of 32% (p≤0.0001) for the number of patients for whom GPs had assessed and documented CV risk.
- After participating in the pharmacy practice review, there was an increase in the proportion of pharmacists who always or often discuss with patients the importance of using statins in the context of CV risk (+33%).

Recommendations

- Consider the appropriate levels of 'new' and 'old' content in program design to ensure that the program is well received and adds value to GPs.
- Consider additional promotional activities for patient resources. Awareness of the resources and downloads were relatively low and so further promotional activities may be worthwhile given the effort that goes into their development.
- Consider the audience for the online case study and target only at nurses and pharmacists. As for previous programs GP participation was extremely low, reaching only 30% of the target.
- Continue to collaborate with specialists and other health professionals for program design and development, particularly for resource development and review of materials, collaboration or co-design and expert working groups.
- Consider incorporating the MedicineInsight handout into one of the other resources, such as the EVC or case scenario, to reduce the number of handouts.
- Consider feedback provided on products from participating health professionals e.g. CEA and CS to help with ongoing quality improvement.
- Consider more than one wave of promotion for products once they have launched to increase uptake. For example, the CEA was promoted once only through the EDM and would likely have benefitted from additional promotion.

INTRODUCTION

This evaluation report details the process and impact evaluation findings of the *2017 Statins: Optimising Therapy, Addressing Intolerance* program.

Statins: Optimising Therapy, Addressing Intolerance

Dyslipidemia is abnormal levels of plasma cholesterol, triglycerides, or both, that contributes to the development of atherosclerosis. Around 8.5 million Australian adults have dyslipidaemia, which is a major risk factor for cardiovascular disease. Dyslipidemia itself usually causes no symptoms but can lead to symptomatic vascular disease, including coronary artery disease, stroke, and peripheral arterial disease. It is most often managed by GPs, where 1 in 3 encounters are related to this.[1] Decisions about whether to start lipid-modifying therapy should be made on the basis of absolute cardiovascular (CV) risk, not lipid levels alone. Lipid-modifying therapy is recommended in Australia if there is a known history of CV disease or for primary prevention in people at high absolute CV risk or a moderate absolute CV risk with additional factors.[2] Since the last NPS MedicineWise program about dyslipidaemia in 2011, evidence indicates that Australian GPs continue to prescribe statins for people with elevated cholesterol levels but at low absolute CV risk.[3,4] There is also evidence of underuse of statins in people at high absolute CV risk.[3-5] One of the RACGP Choosing Wisely Australia recommendations is to avoid commencing therapy for hyperlipidaemia without first assessing the absolute risk of a CV event. In addition, PBAC has expressed concern that the PBS listing of ezetimibe with statin co-packs and combination products may be directing use away from recommended dose titration of statins. The price for ezetimibe (approximately $70 with or without a statin at the time of program implementation) is much higher than the price for a statin (approximately $12–$30) and PBS data also indicates that prescribing of ezetimibe and ezetimibe combinations has increased between 2005 and 2015.

In order to address these quality use of medicine issues and facilitate improved patient care, the program *Statins: Optimising Therapy, Addressing Intolerance* (hereafter referred to as Statins) was developed as a visiting program to health professionals. The program was officially launched on 1 July 2017 and the majority of visiting took place between July 2017 and the end of December 2017.

The main goal of the program was to reduce the risk of CV events in Australians managed in primary care.

Program objectives

The program objectives were to:

1. Increase by 15% the proportion of GPs who use the Australian absolute cardiovascular disease risk calculator to inform the prescribing of lipid lowering medicines.
2. Decrease GP prescribing of a) ezetimibe by 10% and b) ezetimibe fixed dose combination products by 10% for people who have not adequately trialled statin therapy 18 months after the start of the program.
3. Increase by 5% the proportion of people who adhere to prescribed lipid lowering medicines 18 months after the start of the program.

Key messages

- Assess absolute cardiovascular risk before prescribing lipid lowering medicines
- Optimise LDL lowering by adequately trialling statin therapy before adding a second agent
- Use a systematic approach to assess suspected statin intolerance

Statins program activities

The activities and resources developed for the program are shown in Table 1.

TABLE 1: STATINS PROGRAM ACTIVITIES

Health professionals (Active)	Health professionals (Passive)	Consumer
1-1 educational visit (EV)	Practice review (Prescribing feedback)	Consumer information online (website)
Small group meeting, including MedicineInsight (SGM)	MedicineWise News	Statins patient action plan
Clinical e-Audit (CEA)	MedicineWise Update (email)	Statins medicines FAQs
Pharmacy practice review (PhPR)	HP knowledge hub (website) – including a video on statin intolerance	Social media (Facebook, Twitter & LinkedIn)
Online case study (CS)	Australian prescriber article – *Encouraging adherence to long-term medication*	
Pharmacy visits		

As part of this program the previously named small group case-based meeting was changed to a small group meeting and a new resource was introduced. A MedicineInsight handout was developed for use in small group meetings with non-MedicineInsight practices alongside the standard resources (EVC, case scenario and patient resources). The MedicineInsight handout contained aggregated data from the MedicineInsight program. Its purpose was to supplement the program's key messages and promote the MedicineInsight program to general practices.

EVALUATION METHODS

Process and impact evaluation was used to understand if the program objectives had been achieved in the short term. The focus was primarily on health professionals (HPs) who had participated in our activities as all consumer materials were passive or HP-mediated.

Process evaluation

Process evaluation was conducted to measure the reach of interventions, and gain feedback from audiences on the implementation of the program / activities, including the new small group meeting format for non-MedicineInsight practices.

Intervention reach

The following data items were collected to understand program reach:

- Participation data – health professional participation in active and passive interventions
- Resource downloads
- Social media statistics.

Data were collected between 1st July 2017 and 30th June 2018.

Audience feedback

Online evaluation forms

Health professionals were asked to complete an online evaluation form approximately one week after an educational visit. A total of 834 health professionals completed the online evaluation form after participating in an educational visit.

Health professionals completing the Clinical e-Audit (CEA) and the Pharmacy Practice Review (PhPR) also completed an online evaluation form. Data from each were exported into Excel for analyses (N=871, CEA; N=1044, PhPR).

Clinical Service Specialist (CSS) feedback

The Clinical Lead collated feedback received from CSSs during teleconferences and via the online forum to understand program delivery and how it was received by GPs.

Small group meeting feedback

Note: Evaluation of the small group meeting for non-MedicineInsight practices was conducted between September and December 2017. A separate report was produced for this and is available here.

Feedback was sought from health professionals who had participated in a non-MedicineInsight small group meeting and from the CSSs who delivered these meetings to understand how the MedicineInsight handout was used and received in small group meetings with non-MedicineInsight practices and to inform the development and delivery of the handout for future programs.

Health professional feedback – online survey

Health professionals were asked to complete an online evaluation survey approximately one week after participating in a small group meeting. Up to 11 December 2017, 9% (n=305) of the health professionals who had participated in a small group meeting (up to 1 December 2017) completed the survey. In relation to the non-MedicineInsight small group meeting, the survey asked health professionals to rate the usefulness of the resources provided and to provide feedback on the MedicineInsight handout. Data were downloaded from SurveyGizmo and collated.

GP feedback – telephone interviews

Ten GPs were contacted by email and invited to participate in a 15-minute interview. These GPs were required to have completed the online evaluation survey, indicated an interest in participating in an interview, and received the MedicineInsight handout as confirmed by their CSS. Four GPs responded and took part in a 15-minute telephone interview. The interview aimed to understand GPs' response to the meeting overall as well as specific feedback on the MedicineInsight handout and its role in the meeting.

Interviews were audio-recorded, transcribed and the transcripts de-identified for analysis. The transcripts were manually coded using content analysis.

CSS feedback – online survey

Sixty-five CSSs were asked via email and the CSS forum to complete an online survey between September and October 2017. The survey asked about training and support to deliver the non-MedicineInsight small group meeting, delivery of the meeting and reception to the MedicineInsight handout and program.

A total of 34 CSSs (52%) completed the survey. Data were downloaded from SurveyGizmo and collated in excel for analysis (descriptive and content analysis).

CSS feedback – interviews

CSSs who had delivered a non-MedicineInsight small group meeting up to the start of September 2017 were invited to participate in a 30-minute telephone interview. Of the 15 CSSs invited, 8 agreed to participate. CSSs were asked about the training they received to deliver the handout, how they delivered it and GPs' reception to the handout and MedicineInsight.

Interviews were audio-recorded and transcribed. The transcripts were manually coded using content analysis.

Impact evaluation

The primary method used to measure the impact of the program on GPs' knowledge and practice in relation to the key messages was a retrospective pre-test (RPT) survey with a control group. Impact on health professional practice was also measured through self-reported CEA data, PhPR data and self-report of practice change from the online evaluation forms (as detailed above).

GP survey

A paper-based questionnaire was developed by the Clinical and Evaluation Leads to understand the impact in relation to the program's key messages. Questions addressed knowledge and practice associated with each message. The questionnaire was pilot tested with 4 GPs and the program's Medical Advisor.

Two random samples of GPs were selected: 1) participant GPs – participated in a 'Statins' 1-1 educational visit (EV) or a small group meeting (SGM); and 2) control GPs – did not participate in an active 'Statins' activity but were known to NPS MedicineWise through participation in previous programs. As the survey was distributed before visiting was fully complete, GPs who were scheduled to receive a visit after January 2018 were excluded.

- **Participant GPs** (n=1200) received a RPT questionnaire (Appendix 1).
- **Control GPs** (n=800) received a standard questionnaire for comparison (Appendix 2).

The survey was distributed in February 2018 and was in the field for six weeks with two reminders.

The following descriptors are used throughout the report when describing the survey findings:

- Participant GPs: GPs who participated in an NPS MedicineWise Statins EV or SGM and completed a retrospective GP survey.
- Control GPs: GPs who did not participate in an NPS MedicineWise Statins activity and completed a GP control survey.

- Respondents: general descriptor for GPs who completed either a retrospective or control survey.

The participant survey data were analysed to identify any changes in GP knowledge or practice following exposure to a Statins educational activity. The participant post data were compared with the control data to determine differences and if these could be associated with the Statins program.

All data were analysed using SPSS version 23. The McNemar and Wilcoxon signed-rank tests were used for the paired participant data. Chi-square and the Mann-Whitney tests were used for participant and control data comparison. The significance level was set at 0.05. The z-test (comparison of proportions) was used to investigate associations between respondent characteristics (e.g. years practicing, gender) and knowledge or practice.

Survey response rate

The response rate for the survey (Table 2) was slightly lower than for other paper format NPS MedicineWise GP surveys. This may be related to survey fatigue or GPs' interest in the topic.

TABLE 2: SURVEY RESPONSE RATE

	Initial sample	Exclusions*	Completed	Response rate
Participant	1200	29	226	19%
Control	800	81	150	21%

*Exclusion reasons include returned to sender, personal reasons for not wishing to complete

Clinical e-Audit

Data were extracted for the CEA between July 2017 and June 2018. Data were available for over 900 GPs and each GP assessed 10 patients (the same 10) in two phases. The outcome measure is the number of patients satisfying each of the best practice clinical indicators included in the activity. While there were 10 clinical indicators measured in the CEA, only 6 were assessed in both the initial and review phases after identification of potential practice improvement related to management of the patients. For each indicator, a generalised linear model with a Poisson distribution, log link function and an offset (logarithm of the number of patients) was used to estimate the percentage change in the number of patients meeting the indicator. The analyses were conducted using the GENMOD procedure in SAS v9.3.

Self-report evaluation data were collected on the impact of the CEA on GPs' practice. These data were extracted into Excel for analysis.

Pharmacy practice review

Over 1000 pharmacists completed the PhPR by the end of June 2018. Self-report evaluation data were collected on the impact of the activity on pharmacists' practice. These data were exported into Excel for analysis.

PBS data analysis

Time series data analysis will be conducted to measure the impact of the program on changes in prescribing of lipid-lowering medicines and costs to the PBS. This analysis will be conducted in 2019.

The program aimed to reduce prescribing of both ezetimibe and ezetimibe fixed dose combination products by 10% (PBS volume) for people who have not adequately trialled statin therapy.

Analysis of the 10% sample PBS patient level data will be used to measure the impact of the program on adherence to lipid-modifying medicines.

PARTICIPATION IN PROGRAM ACTIVITIES

Program participation

A total of 12,582 *unique* health professionals actively participated in NPS MedicineWise Statins activities (including the one-to-one educational visit (EV), small group meeting (SGM), Clinical e-Audit (CEA), Pharmacy Practice Review (PhPR), online case study (CS), conference workshop, program update) between July 2017 and June 2018 (Figure 1).

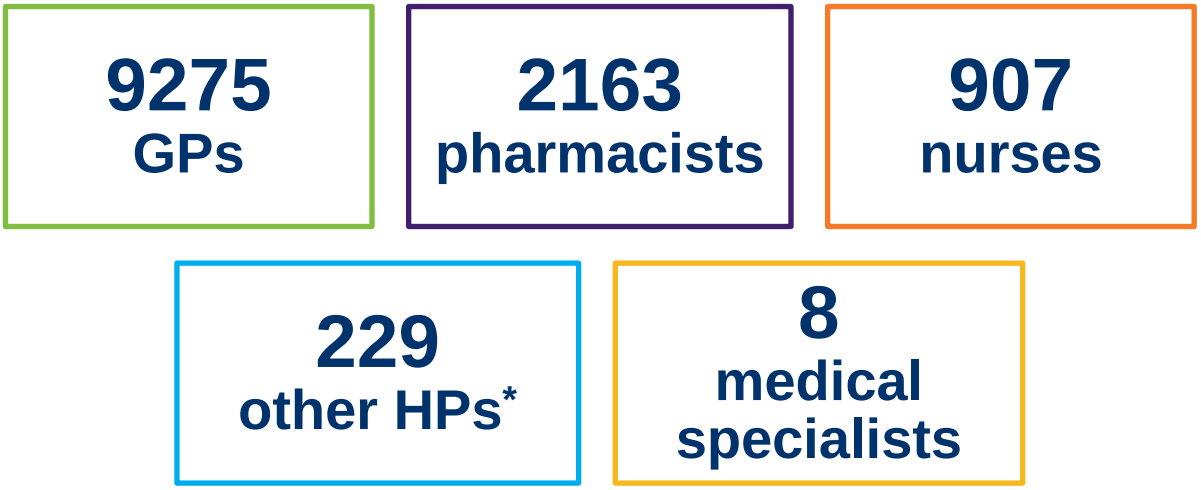


FIGURE 1: UNIQUE HEALTH PROFESSIONAL ACTIVE PARTICIPATION IN STATINS ACTIVITIES. * OTHER HEALTH PROFESSIONALS INCLUDE STUDENTS, INTERNS, ALLIED HEALTH, PRACTICE MANAGERS

A target of 8,500 GP participants in educational visits (EV and SGM) was set for this program. This target was **exceeded** with a total of 8,740 GPs participating in EVs or SGMs (Table 3). No targets were set for nurses or pharmacists.

TABLE 3: HEALTH PROFESSIONAL PARTICIPATION IN STATINS EDUCATIONAL VISITS

Activity	GPs	GP target	Nurses	Pharmacists	Medical specialists	Other
One-to-one visit	4552	5950	251	59	-	50
Small group meeting	3239	2550	449	215	2	113
Small group meeting - MedicineInsight	949	-	113	-	-	39

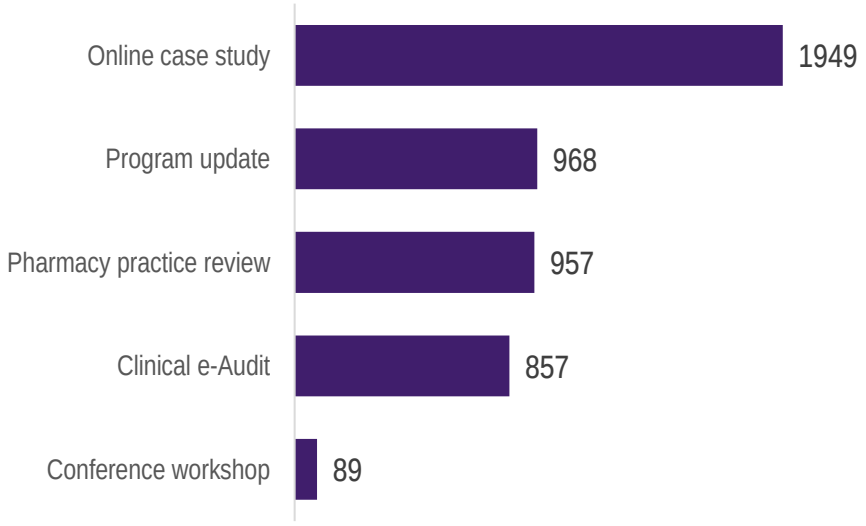


FIGURE 2: PARTICIPATION NUMBERS FOR NON-VISITING STATINS ACTIVITIES

The online case study achieved the highest participation rate after educational visiting (Figure 2). Most pharmacists engaged with NPS MedicineWise through the online activities (PhPR and CS). Only the nurse targets were exceeded for the CS (Table 4), as were GP participation targets for the CEA.

TABLE 4: HEALTH PROFESSIONAL PARTICIPATION IN ONLINE ACTIVITIES

Activity	GPs	GP target	Nurses	Nurse Target	Pharmacists	Pharmacist target
Clinical e-Audit	855	800	1	-	-	-
Online case study	363	1200	503	200	940	1000
Pharmacy practice review	-	-	-		955	1500

Participation in the GP survey

A total of 227 GPs (19% response rate) and 150 GPs (21% response rate) completed the participant and control surveys, respectively.

Who were the respondents?

Demographics were similar for both participant and control GPs (Table 5). GP respondents represented all states and territories and were similar to national data regarding gender and location, with no significant differences observed. Participant and control GPs had been practising for an average of 23.5 and 21.3 years, respectively. There was a significant difference in the number of patients GPs saw per week. Participant GPs saw an average of 103 patients per week and control GPs an average of 115 patients per week ($p \leq 0.05$). Most GPs saw up to 10 patients per week on statins.

TABLE 5: GP DEMOGRAPHICS FOR PARTICIPANT AND CONTROL SURVEY RESPONDENTS

		Participant, % (n)	Control, % (n)	National,^ %
Sex	Male	55.1 (124)	48.3 (71)	54.6
	Female	44.9 (101)	51.7 (76)	45.4
State	ACT	0.4 (1)	3.4 (5)	1.5
	NSW	31.6 (71)	37.8 (56)	30.2
	NT	0.9 (2)	0 (0)	1.6
	QLD	18.2 (41)	17.6 (26)	22.1
	SA	4 (9)	9.5 (14)	7.8
	TAS	2.2 (5)	2.7 (4)	2.5
	VIC	34.7 (78)	15.5 (23)	24.1
	WA	8 (18)	13.5 (20)	10.3
Years practising	*Mean number*	*23.48*	*21.3*	
	1 to 10 years	18.8 (42)	29.1 (43)	
	11 to 20 years	25.9 (58)	19.6 (29)	
	21 to 30 years	29 (65)	30.4 (45)	
	Over 30 years	26.3 (59)	20.9 (31)	
Number of patients per week	*Mean number*	*103*	*115*	
	Less than 50 patients	11.7 (26)	15.2 (22)	
	50 to 100 patients	48 (107)	34.5 (50)	
	101 to 200 patients	39 (87)	45.5 (66)	
	Over 200 patients	1.3 (3)	4.8 (7)	
Number of statins patients per week	No patients	0.5 (1)	0.7 (1)	
	1 to 10 patients	61.8 (134)	58.3 (84)	
	11 to 20 patients	23 (50)	20.1 (29)	
	21 to 30 patients	9.7 (21)	7.6 (11)	
	Over 30 patients	5.1 (11)	13.2 (19)	
Location	Major city	66.2 (149)	73.6 (109)	68.6
	Inner regional	24 (54)	15.5 (23)	18.5
	Outer regional	8.4 (19)	9.5 (14)	9.1
	Remote	1.3 (3)	1.4 (2)	1.8

^DOH GP workforce statistics 2016-2017. Accessed July 2018.
http://www.health.gov.au/internet/main/publishing.nsf/Content/General+Practice+Statistics-1

What NPS MedicineWise statins activities did survey respondents participate in?

Over half (n=123, 54%) of all participant GPs took part in an EV (Figure 3), followed by a SGM (n=85, 38%) and a MedicineInsight SGM (n=24, 11%). Additionally, 8% of participant GPs stated they had read the MedicineWise News: *Uncovering the truth about statin intolerance* and 4.7% (n=7) of control GPs completed a CEA.

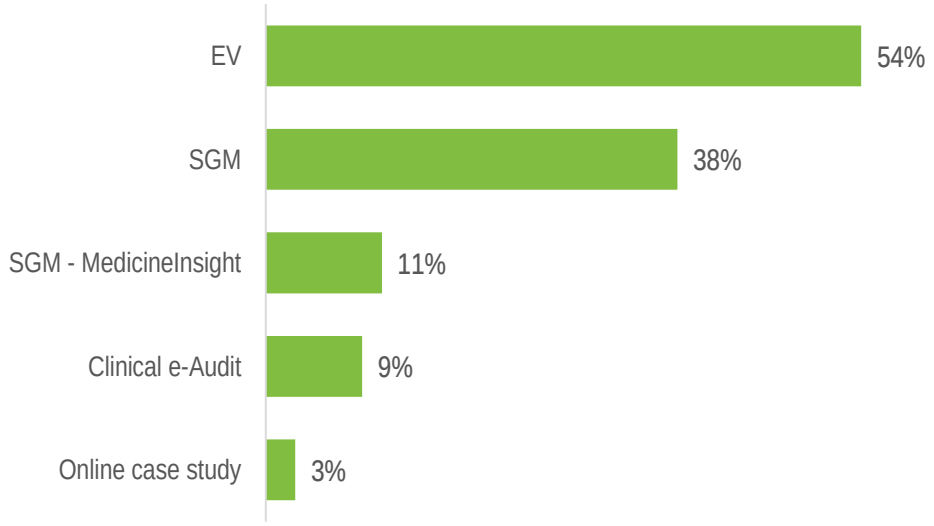


FIGURE 3: SURVEY PARTICIPANT GPS' PARTICIPATION IN A STATINS ACTIVITY

AUDIENCE FEEDBACK

GP feedback on educational visiting

Feedback was received from 731 GPs (8%) after an educational visit. There was an equal split between those participating in an EV and SGM. Additionally, 17% of GPs stated they had taken part in a MedicineInsight meeting, however caution should be given to this statistic as a number of GPs believed they had taken part in a MedicineInsight visit when this was not the case. The majority of GPs who completed the online evaluation form believed the learning objectives of the educational visit had been entirely met (Table 6). The least met objective related to discussing practice systems and prioritising areas of improvement in patient management (77% entirely met). Initially, some CSSs did not realise that this was a learning outcome of both the MedicineInsight and the non-MedicineInsight SGMs. Some CSSs also ran out of time to discuss practice specific systems or were initially unsure how to approach this kind of discussion without practice specific data.

GPs' learning needs were entirely met for 94% of participants, the activity was entirely relevant to practice for 99% of GPs and 97% of GPs were entirely satisfied with the activity.

TABLE 6: ACHIEVEMENT OF LEARNING OBJECTIVES FOR EDUCATIONAL VISITING

Learning objective	Entirely met, % (n)	Partially met, % (n)	Not met, % (n)
Describe the role of absolute cardiovascular risk assessment before prescribing lipid-modifying therapy	95 (698)	4 (28)	1 (5)
Use an adequate trial of statins to optimise lipid lowering before adding a second agent	96 (702)	3 (24)	1 (4)
Identify the symptoms and risk factors of statin-associated muscle symptoms (SAMS) and apply a systematic approach to assessing and managing SAMS	95 (694)	4 (31)	1 (6)
Discuss systems in your practice and prioritise areas for improvement in the management of patients using lipid-modifying medicines*	77 (269)	20 (71)	3 (10)

*This LO was only for SGMs

Net promoter score

Over 75% of GPs were found to be 'promoters' when asked about their likelihood of recommending the activity to a colleague using the Net Promoter Score (Figure 4). The overall score for the statins activity was 74.9. The overall score is the highest received for therapeutic programs to date.

FIGURE 4: THE NET PROMOTER SCORE FOR STATINS EDUCATIONAL VISITING

Resources

Within an educational visit, a number of resources were used to provide information and facilitate discussion. Most GPs reported that the EVC, Statin Associated Muscle Symptoms (SAMS) assessment guide and MedicineInsight practice report were 'very useful' resources (Table 7). A number of GPs also stated that they found other resources provided by their CSS very useful, such as the Statins FAQ patient resource, resources in clinical software, and links to website resources including a CVD risk calculator.

TABLE 7: USEFULNESS OF VISITING RESOURCES

Resource	Very useful, % (n)	Useful, % (n)	Not useful, % (n)
EVC	79 (541)	20 (134)	1 (6)
SAMS assessment guide and algorithm	79 (534)	20 (135)	1 (8)
Case scenario	60 (99)	38 (63)	2 (4)
SGM - MedicineInsight data handout	60 (96)	39 (62)	2 (3)
SGM - MedicineInsight practice report	76 (81)	22 (23)	2 (2)
Patient action plan	64 (384)	31 (189)	5 (29)

HP feedback on SGM for non-MedicineInsight practices

Participants

A total of 305 health professionals, including 263 GPs, completed the online feedback survey after participating in a non-MedicineInsight small group meeting (Figure 5). Most respondents were from Queensland (33%), Victoria (29%), Western Australia (19%) and New South Wales (17%), respectively.

Four GPs (including 1 GP registrar) from Victoria and Queensland participated in a telephone interview. These GPs had been practising for between 1 and 40 years, with half practising for over 30 years.

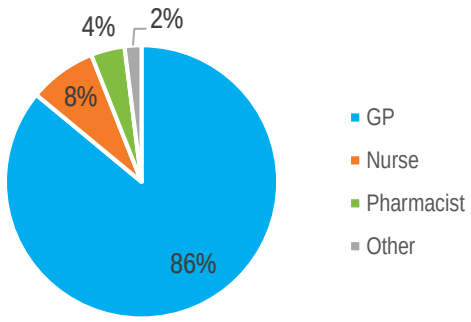


FIGURE 5: ROLE OF HEALTH PROFESSIONALS RESPONDING TO THE ONLINE FEEDBACK SURVEY

Expectations

Interviewed GPs stated that previous small group meetings had been useful and enjoyable. Prior to the meeting on Statins, they expected it would improve or reinforce their knowledge and practice as well as provide an opportunity to teach registrars and students. Additionally, GPs thought the meeting would allow practice staff to come together and discus patient management.

The small group meeting overall

Interviewed GPs and survey respondents were positive about the small group meeting, finding it useful, practical and engaging. Interviewed GPs stated that they found the small group meeting had improved their knowledge, with one commenting that the information provided on statin side effects and drug interactions was particularly useful. The GP registrar found the meeting particularly useful as they had limited experience in long-term lipid management.

GPs appreciated the “vibrant” discussions that occurred with colleagues as part of the meeting and the use of the case study to facilitate the discussion, which often led into a discussion of their own patients. The simple concise handouts were also appreciated.

All interview participants had attended previous small group meetings and did not notice any differences between this small group meeting and previous ones. All GPs were positive and would not change the format for future meetings.

> “The meeting actually was very good, in that we went off-script a little bit. We discussed other patients and it was very worthwhile.”

Small group resources

Most interviewed GPs recalled use of the case study, the EVC and the SAMS guide in the meeting, with some also remembering use of the patient resources. Only 1 GP recalled the MedicineInsight handout with others not specifically remembering it until prompted. About a quarter of survey respondents stated they were not shown or did not recall the case scenario and/or the MedicineInsight handout.

However, the majority of survey respondents found the other resources provided to them in the meeting useful or very useful. Similarly, interviewed GPs felt that all the resources were equally useful and helped to facilitate the ensuing discussions. They appreciated the evidence base behind the resources, which were also helpful for teaching. The case study also helped to facilitate further discussions amongst GPs about their own patients. One GP particularly appreciated the information provided as the additional evidence supported their decision-making on when to use lipid lowering agents, which they highlighted is not always clear-cut.

> “I did find the SAMS handout good because I didn't really have a good resource for that before the meeting.”

GPs generally felt that all the resources were helpful, but also commented on aspects that were particularly helpful to them. This included information in the EVC on statin options and what to consider when choosing a statin. One GP commented that they recently referred to it when changing a patient’s statin, and another GP found the SAMS EVC insert a particularly valuable resource.

How was the MedicineInsight handout received?

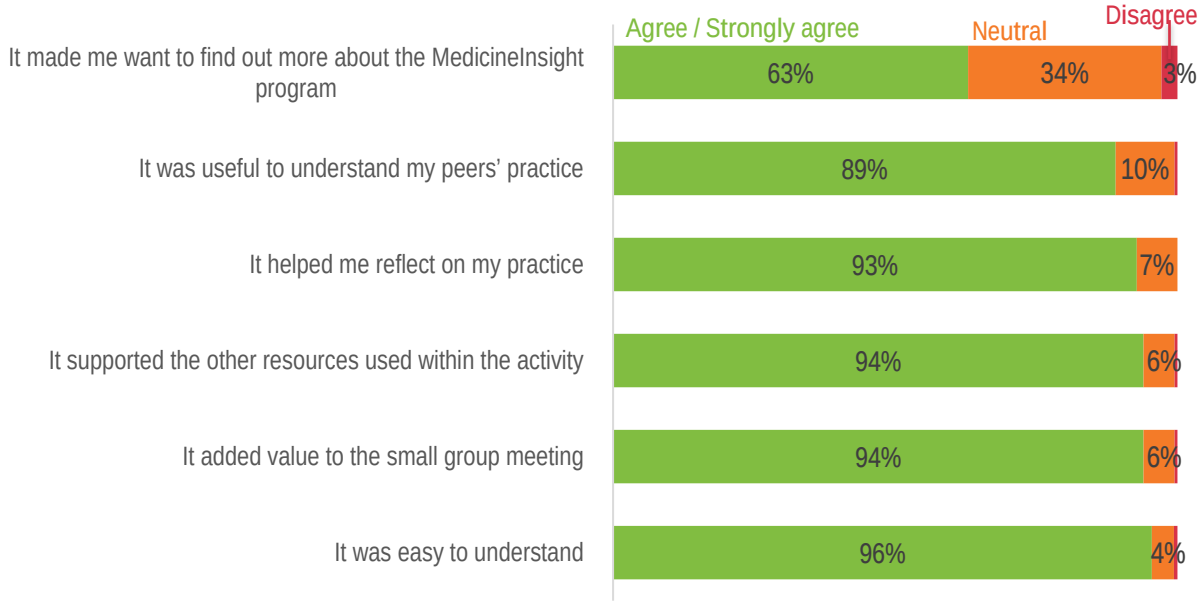


FIGURE 6: FEEDBACK ON THE MEDICINEINSIGHT HANDOUT

Nearly all health professionals who recalled the MedicineInsight handout stated that it was easy to understand (Figure 6). GPs thought the MedicineInsight handout was useful and interesting and they appreciated the provision of Australian real-time data rather than international data. It added value and facilitated discussions. However, GPs highlighted that the handout was not the focus of the discussion rather part of a whole where it reinforced particular aspects of a discussion point. These thoughts were also supported by the online survey where most health professionals agreed or strongly agreed that it added value and supported the use of the other resources (Figure 6). Some interviewed GPs stated that although the data was good they preferred to bring the discussion back to their own patients and it triggered one GP to think about their own patients who might be at risk and not on a statin, and vice versa. Other comments were that: the handout was a good teaching aid for registrars and students, providing them with a good evidence base; the data added a statistical element to what would otherwise be a quite generic discussion; and it caused the GP registrar to consider the value of the general practice having their own data. The majority of survey respondents also agreed or strongly agreed that it helped them to reflect on their practice and understand their peers' practice.

> "I think it was very interesting and it added value, but I think....We need all of that information as a background and we need that if we're going to have the evidence-base and we're going to understand what we should and shouldn't be doing, but it's really hard to get clinicians to focus on that because they always want to go back to patient X, Y or Z."

GPs felt that their CSS had explained the MedicineInsight program clearly and the GPs themselves appeared to have a good understanding of how the program works. Additionally, two thirds of survey respondents stated that the handout had made them interested in the MedicineInsight program.

What was of most value?

The program resources, particularly the SAMS insert, and the discussions that occurred amongst colleagues within the meeting were thought to be particularly valuable aspects of the meeting. These reinforced GPs knowledge, facilitated discussions on the use of statins and provided a good resource for assessing SAMS that GPs had not previously had.

Clinical e-Audit feedback

The majority of CEA participants who completed the evaluation form (N=871) felt that the learning objectives had been entirely (77-89%) or partially (11-23%) met and that the activity was entirely relevant (94%) to their practice. Most heard of the CEA via the NPS MedicineWise website, participation in other NPS MedicineWise activities (such as educational visits or other CEAs), via a colleague or through an NPS MedicineWise EDM.

Only 43% of GPs were found to be 'promoters' when asked about their likelihood of recommending the activity to a colleague using the Net Promoter Score (Figure 7). The overall score for the Statins CEA activity was 28.1. This is similar to that for the diabetes CEA.

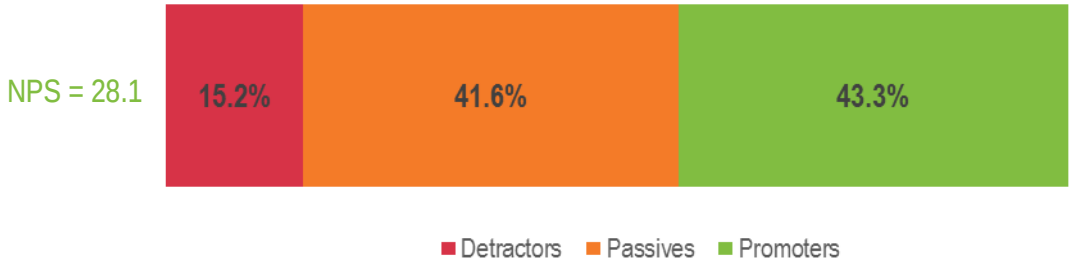


FIGURE 7: THE NET PROMOTER SCORE FOR STATINS CEA

A number of participants commented positively on the audit and had no suggestions for improvement. Suggestions for improvement that were provided (from around 10% of participants) mainly related to the design of the CEA and its clinical content.

> "Best clinical audit I have done"
>
> "Very good audit, gave me a lot of knowledge and changed my approach to patients with dyslipidaemia."

- **Clinical e-audit design:**
  - Provide a simpler format with fewer repetitive questions and less data entry;
  - Allow and specify a longer time between initial and follow-up phases, such as 3 months. This ensures adequate time for the patient to return to the GP and have any necessary tests;
  - Allow some flexibility around the patient numbers required to do the audit – some GPs found it difficult to get the required number of patients and others found the current number made the audit time consuming.
  - Improve the website usability. It can be extremely slow at times with pages slow to load and issues uploading or submitting data. Additionally, add an auto save function to assist GPs when the CEA times out.
- **Clinical content:**
  - The question which addresses the measurement of lipid levels and achievement of LDL target should be separated as these are two separate steps. While lipid levels may have been measured, they may not be at target;
  - The audit should take a patient's other health factors into account such as comorbidities, other medicines and risk factors such as smoking, physical activity and diabetes.
- **Future developments:**
  - More clinical topics requested;
  - Functionality to allow autofill of the audit data from clinical practice software.

Online case study

A total of 792 health professionals completed the case study (CS) evaluation form. Of these, 37% were GPs; 19% nurses; and 43% pharmacists. Most GPs believed that their specific learning objectives had been entirely met, as did pharmacists. This was lower for nurses, where approximately

85% of nurses felt that their learning objectives had been entirely met. Learning needs were entirely met for 84% of GPs, 80% of nurses and 88% of pharmacists. Similarly, 90% of GPs felt that the content of the CS was entirely relevant, as did 78% of nurses and 86% of pharmacists. Most health professionals also felt the delivery of the CS was entirely suitable.

The net promoter score for the Statins CS was 53 and 61% of health professionals were classed as 'promoters'. This is similar to the score for other case studies.

Positive feedback was received from health professionals about the CS. The following improvements were also suggested by a few respondents:

- More challenging questions as they were too easy for some;
- Ensure reference material (e.g. SAMS algorithm here) can be saved or printed for future use;
- More case scenarios / examples would be helpful.

"Really interesting, stimulating and relevant."

"I like the practical points. Useful for every day practice."

Pharmacist feedback on the Pharmacy Practice Review

Overall, positive feedback was received about the PhPR. Over 82% stated that all the learning objectives had been met and 90% that the activity was entirely relevant to their practice. Most found out about the PhPR through the NPS MedicineWise website, a colleague or through an NPS MedicineWise email or publication.

A total of 61% of pharmacists, pharmacy interns and students were 'promoters' of the Statins PhPR according to the Net Promoter Score. The overall score for this activity was 52.

"I tried it for the first time. I found it practically useful to help my patients manage their conditions and medications. I will try other modules listed on the website."

Program collaboration

A number of specialists, GPs and other health professionals were involved in the development and review of program resources and materials, early consultation for the program, expert working groups and collaboration or co-design. The National Heart Foundation also collaborated on a Statins themed pharmacist hour. All those who provided feedback were satisfied or very satisfied with communication and the frequency of contact as well as the extent to which their input was taken on board.

A number of these health professionals had not previously worked with NPS MedicineWise on therapeutic programs, but all stated they would consider working with NPS MedicineWise in the future. Most were interested in being involved in resource development and review of materials, collaboration or co-design, expert working groups, early consultations and speaking at training days or workshops.

Few suggestions were provided as to how the experience could be improved. However one health professional suggested that NPS MedicineWise co-author journal articles with some of the key opinion leaders.

CSS feedback on educational visiting

Feedback from CSSs related to the program overall and its strengths and weaknesses.

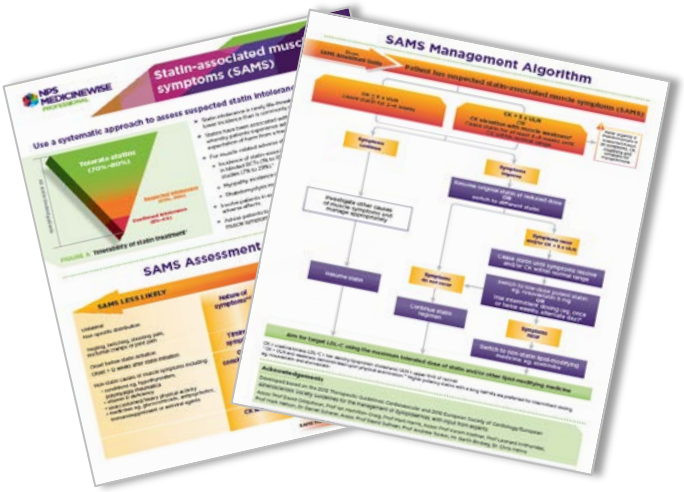
Overall feedback

CSSs reported that the topic was well received by GPs, many of whom appreciated the update on a condition that is commonly managed in general practice. The balance between old and 'new' information provided in the program was thought to be an ideal balance. CSSs were able to reiterate

messages around absolute CV risk (previously discussed in other programs) as well as provide new evidence and guidance on the topic of statin intolerance.

Program strengths

Resources



The SAMS management algorithm and assessment guide (EVC insert) were received positively by CSSs, GPs and specialists. As this resource was developed with 11 experts and was consequently published in the CV Therapeutic Guidelines and Australian Medicines Handbook, it added credibility to the program and to the key message supported by this resource. This algorithm was a good enabler of the second key message and the key objectives associated with adequately trialling statin therapy before adding ezetimibe. The information in this resource also alleviated GPs' concerns about up-titrating statin doses due to fear of side effects. Similarly, it helped CSSs facilitate discussions about when it is appropriate to prescribe high intensity statins.

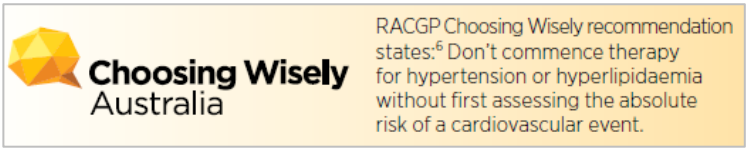
The consumer factsheet 'Statin FAQs' was reported as well received by pharmacists who are often required to address consumer concerns about this class of medicines.

Data within the MedicineInsight report and the MedicineInsight data handout looked at the pre-treatment CV risk of patients currently using statin therapy. CSSs felt that this was highly effective and was the first time this kind of data had been published in Australia.

Enablers

CSSs felt that GPs showed a strong interest in this topic, specifically in relation to management of CV risk and CVD, statin side effects and new approaches to managing dyslipidaemia. Additionally, the following occurred externally around the time of program implementation:

- A PBAC commissioned post market review of ezetimibe conducted from January – July 2017 was in perfect alignment with the program's key messages and highlighted issues that NPS MedicineWise was addressing: statin non-adherence; adequate trial and titration of statin therapy; and inappropriate use of ezetimibe.
- BP and Medical Director software updated the CV risk calculator embedded in their software so that it was in line with the Australian CV risk calculator. This was a positive enabler to the first key message about the assessment of CV risk before prescribing lipid-lowering therapy and the program objective related to increasing the use of the Australian CV risk calculator.
- A RACGP instigated Choosing Wisely message about absolute CV risk assessment helped to support and promote the first key message of the program.



Program barriers

CSSs reported a number of potential barriers and limitations to the program:

- Use of the Framingham equation (this is used to predict risk in the Australian CV risk calculator) and the Australian absolute CV risk tool was not accepted by a small number of GPs who felt that it did not account for enough CV risk factors, particularly as some international risk calculators include additional risk factors. Family history was seen as a significant risk factor missing from the

Australian calculator (as also reported in the 2015 blood pressure program) and GPs wanted more guidance around how to interpret this.

- The 'systems' learning outcome of the small group meeting was not as readily met compared with the other learning outcomes. However, this was identified early and strategies to address and implement this learning outcome were provided to CSSs. This led to more participants agreeing that the outcome had been met.
- During program delivery it was discovered that pathology labs across the country reported target and reference lipid ranges differently and not all were in alignment with the current Australian guidelines. A key opinion leader from the Australasian Association of Clinical Biochemists confirmed that this was something on the organisation's agenda to fix. CSSs were subsequently able to bring this insight into discussion with GPs.

CSS feedback on SGM for non-MedicineInsight practices

Preparing for implementation

Most CSSs felt confident in their ability to deliver the new small group meeting to non-MedicineInsight practices after training as they felt it was similar to previous small group meetings and many were also familiar with delivering MedicineInsight visits. Similarly, 65% of survey respondents agreed or strongly agreed that the training had sufficiently prepared them to deliver the new small group format. For the small number of CSSs who did not agree that the training had prepared them sufficiently, additional time was requested in the training for more detailed explanations on MedicineInsight data to increase their confidence in the delivery of a small group meeting to non-MedicineInsight practices. Similarly, interviewed CSSs also suggested that more time was required for MedicineInsight data training, including explanations of all the terms used within the handout and use of the data summary, and how to incorporate the MedicineInsight data handout within a small group meeting. This would also be very valuable for non-MedicineInsight practices.

Prior to delivery of the small group meeting, CSSs perceived that the MedicineInsight data handout was intended to be used:

- To highlight the key messages.
- To promote MedicineInsight.
- To provide insight into real world practice with national aggregated data.

Delivery of the small group meeting to non-MedicineInsight practices

CSSs stated they would always use the EVC during the meeting and the case scenario, unless time was limited. All but one of the interviewed CSSs said they used the MedicineInsight handout regularly. One CSS did not use it at all and had no recollection of seeing it prior to the interview. Of the CSS survey respondents, 68% stated that they used the handout at every visit while one quarter did not.

The majority of CSSs stated that data on the MedicineInsight handout was incorporated into the case scenario discussion at suitable points in the meeting. The first page of the handout was generally used all the time. CSSs found that these graphs were easy to incorporate and flowed well. However, page 2 of the handout was not used as frequently by some. CSSs highlighted that the graphs on page 2 were harder to incorporate at times as they were more difficult for GPs to quickly understand, took more explanation and were "less useful to the discussion". CSSs felt that some GPs were overwhelmed by these graphs and were more disconnected with them, preferring to talk about their own experience and patients instead. CSSs would not spend as long on the graphs on page 2 or would direct the conversation to other points to keep the discussion flowing and relevant. Each CSS adapted their delivery approach as they became more comfortable with delivering the topic through more effective explanations of the MedicineInsight data and tailoring it to each practice as required.

The majority of survey respondents stated that they were confident discussing the data handout and answering any questions practice staff had about the data (Figure 8). Those CSSs that were less confident delivered standard MedicineInsight visits less frequently than other CSSs.

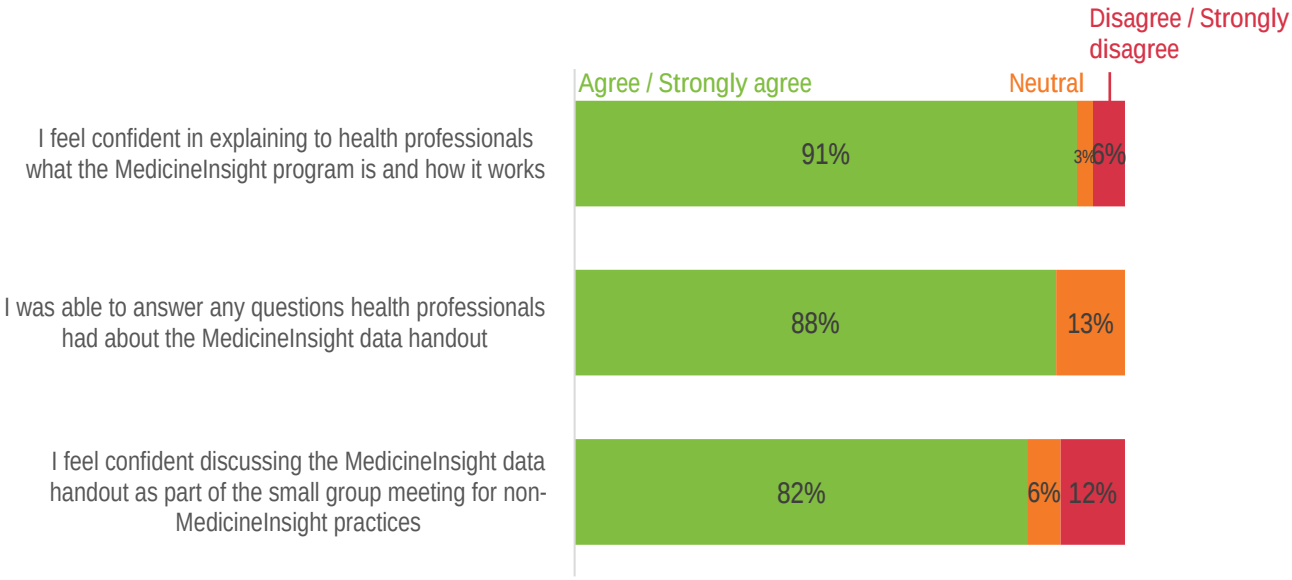
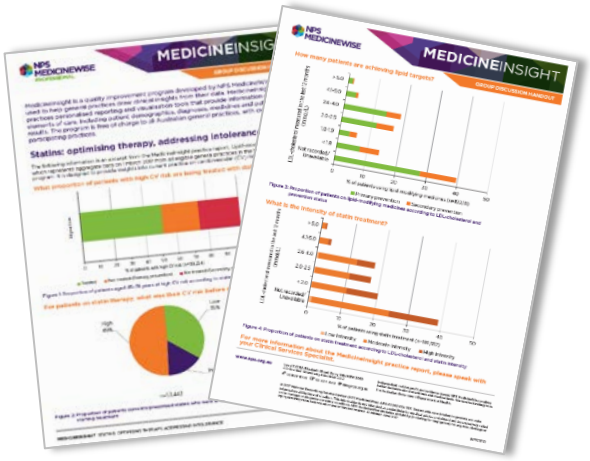


FIGURE 8: CSS' CONFIDENCE IN EXPLAING MEDICINEINSIGHT DATA AND ANSWERING QUESTIONS

Just over 50% of CSS respondents stated that health professionals were receptive to the MedicineInsight handout. Similarly, there were differences in how interviewed CSSs perceived that GPs had received the MedicineInsight data. Some felt that GPs were not surprised by the data and could particularly identify with the data in figures 1 and 2 (page 1 of the handout), which allowed them to quantify what they experience clinically. Others believed that some GPs were surprised at what the data depicted and this generated discussion amongst the GPs.



CSSs felt that the format of some graphs made it more difficult for GPs to interpret and understand the data. While interviewed GPs did not specifically comment on this, CSSs stated that a number asked for further explanations of figures 3 and 4 (page 2 of the handout) which appeared to take time to understand compared to figures 1 and 2. Additionally, CSSs had to describe the definitions for low, medium and high intensity for figure 4, which took time. CSSs believed that the colours on the page 2 graphs made them hard to interpret, particularly the different shades of orange, and suggested that vertical bar charts may be easier for GPs to understand than the horizontal charts. Similarly, the pie chart colours were not intuitive and different to those on the EVC which caused some confusion. Suggestions were that a traffic light system would have been more appropriate. However, other than sometimes being surprised by the data, GPs did not raise any concerns or issues about the data.

> "Being able to provide health professionals with a snap-shot of real-time Australian data to help put the educational session into context [worked well in the delivery]."

It was unclear if GPs noticed the new format with mixed views from CSSs on this. In general CSSs did not find the meeting format overly different to previous SGCBMs other than the extra time required

to explain MedicineInsight and fit in the data. Overall, CSSs were very positive about the aggregate data, which they felt was a powerful tool to support and contextualise the key messages, as well as engage GPs.

About half of both surveyed and interviewed CSSs felt there was not enough time in the meeting to explain MedicineInsight, do the data justice and get through all the discussion points. In several instances CSSs would have to skip some of the MedicineInsight data, particularly that on page 2. This was often the case when the meeting was less than 1 hour. In those instances, the MedicineInsight data was often mentioned but not in as much detail and the data on page 1 often took priority. Other challenges were the multiple pieces of paper for GPs to "shuffle" which caused distraction and wasted time; and lack of interest in the data by some GPs who felt it was not relevant to their practice.

> "Finding the time in a 1 hour meeting (that GPs are often late for and hence they only run for 45 minutes) to discuss key messages so to achieve learning outcomes and give MedicineInsight the explanation it deserves is a challenge."

Interest in MedicineInsight

There was mixed interest in the MedicineInsight program as a result of the small group meeting, though a small number of surveyed CSSs felt that increasing awareness of MedicineInsight had worked well as part of the program delivery. Some CSSs did not have any practices that showed interest. This was also reflected in the survey responses where only one third of CSSs agreed that health professionals had shown interest in the MedicineInsight program. Half of the interviewed CSSs had some practices that showed interest with a few signing up. Other practices had the wrong software, despite being interested; were part of a corporate group who were not interested; and one practice had concerns about privacy and being "spied on".

Improvements

The majority of surveyed CSSs were satisfied or very satisfied with the overall delivery of the new small group meeting to non-MedicineInsight practices (Figure 9). Most interviewed CSSs stated that they were just as confident delivering the new small group meeting as for previous SGCBMs.

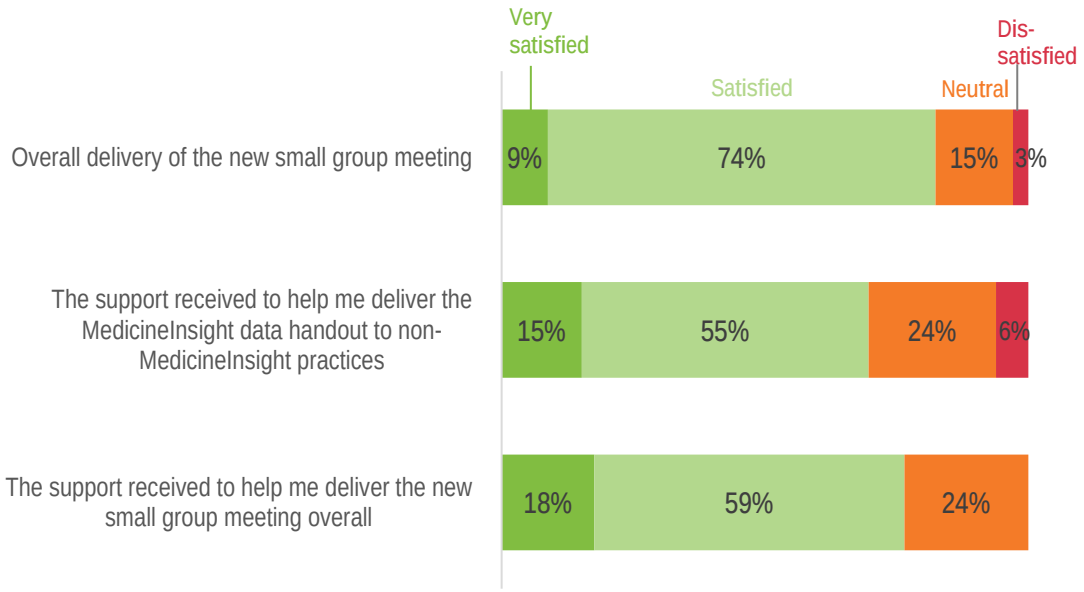


FIGURE 9: CSS' SATISFACTION WITH DELIVERY AND SUPPORT

Future support

The majority of surveyed CSSs were satisfied or very satisfied with the support they received in delivering the MedicineInsight handout and the small group meeting. For those who were dissatisfied the main reasons were that more training was required to help with the delivery. For future topics, longer sessions within the topic briefing workshops on the use and interpretation of the MedicineInsight handout would be helpful as well as more discussion on MedicineInsight in team teleconferences. A number of CSSs requested more details within the MedicineInsight data summary that included clear outlines of the data definitions to help CSSs in their explanations of the figures to practice staff e.g. the definition for a high, medium and low risk patient. This will also enable CSSs to feel more confident when they respond to questions about the data.

Future small group meetings

CSSs commented that for future MedicineInsight handouts consideration should be given to what data is included. For example, each data point should cover a key message. However it is important to ensure there are not too many figures to incorporate into the discussion given the time poor nature of many visits. Additionally, the figures provided should be easy to interpret with many CSSs commenting on the difficulty some GPs had with figures 3 and 4. These graphs were perceived as too complicated and would also have benefited from including 'N' values. The data could also be merged into the EVC or the case study to reduce the number of resources that a GP has to "flick between" with a number of CSSs commenting that there were "too many handouts". One CSS also questioned whether all the resources had to be in colour as this increased cost and made it more difficult for CSSs to print resources at home.

"Graphs/figures need to be very easy to interpret as we don't have enough time to explain each one in great detail due to time constraints."

"Figure 4 would have had more meaning for the doctors if the definition for 'low / mod / high intensity' was defined into actual doses of the different statins."

REACH OF MEDIA AND RESOURCES

Program resources

A number of articles and resources were made available on the NPS MedicineWise website for the Statins program.

HP resources

HP resources included MedicineWise News and a video. The video, entitled 'NPS Briefing: everything you need to know about statin intolerance' was uploaded in April 2018. It provided HPs with a briefing on the controversial topic of statin intolerance where the latest evidence and the newly developed SAMS treatment algorithm was discussed by the Clinical Lead. This is the first time this medium has been used to show the clinical lead expanding program key messages. In total, there were 2,601 visits to the page containing the video (which has links to all the Statins materials) between April 2018 and June 2018 (Table 8). A total of 16% of the 2,601 visitors to the page watched 75% of the video. This is a reasonable viewing rate given the video was only released after delivery of visits and NPS MedicineWise's focus on the topic had ceased.

TABLE 8: VIDEO ENGAGEMENT

Video	Page views	Started video	Watched 75%	Viewing rate
NPS Briefing: everything you need to know about statin intolerance	2,601	670	429	16%

Consumer resources

Consumer resources were developed for HPs to download and use with their patients:

- A Statins patient action plan for assessing and managing muscle symptoms was available on the NPS MedicineWise website.
  - 565 downloads of this occurred between July 2017 and June 2018 from the NPS MedicineWise website.
- A Statins FAQ document was available for download from the NPS MedicineWise website and clinical software.
  - 515 downloads of this occurred between July 2017 and June 2018 from the NPS MedicineWise website.


ACTIONPLAN

Staying on track with your statin

Why are statins important?

My Action Plan

Is a statin causing my symptoms?

Agreed actions

What will my doctor do?

Date of my next visit:

NPS MEDICINEWISE

The results from the GP survey suggest that awareness and use of the patient resources by participant GPs was moderate (Figure 10), despite the majority of those providing feedback directly after the visit stating that the patient action plan was useful or very useful.

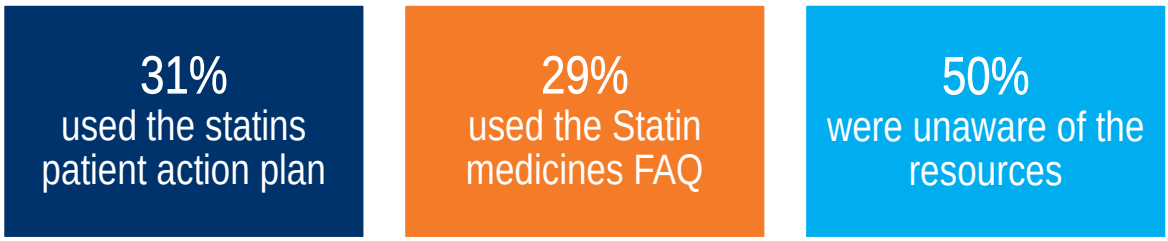


FIGURE 10: GPS' USE OF THE NPS MEDICINEWISE STATINS PATIENT RESOURCES

Electronic Direct Mail (EDM)

The program and its activities were promoted to health professionals via *MedicineWise Update*, an EDM to NPS MedicineWise's in-house subscriber list, multiple times between June 2017 and May 2018 (Table 9). The open and click through rates were consistently higher for GPs than the other HP groups for most of the activities/resources. This is in line with EDM responses for previous topics. Educational visit promotion generated the highest response rate (3.3% total clicks) amongst GPs, followed by the SAMS video. Almost 2,000 clicks were delivered to the web page featuring this resource, which appeared to be of most interest to pharmacists (3% click through rate).

TABLE 9: DISTRIBUTION OF EDMS

Statins activity/resource	Date EDM sent	HP segment & # sent	Clicks to web site	CTR
Educational Visit	20/6/17	GPs: 16,496	GPs: 547	3.3%
MedicineWise News	20/7/17	GPs: 16,357 Other HPs: 13,234 Pharmacists: 18,335 Nurses: 28,828	GPs: 327 Other HPs: 249 Pharmacists: 468 Nurses: 339 Total: 1,383	2.0% 1.9% 2.6% 1.2%
Online Case Study	20/7/17	GPs: 16,357 Other HPs: 13,234 Pharmacists: 18,335 Nurses: 28,828	GPs: 170 Other HPs: 88 Pharmacists: 156 Nurses: 114 Total: 528	1.0% 0.7% 0.9% 0.4%
	22/9/17	GPs: 19,653 Other HPs: 12,691 Pharmacists: 21,963 Nurses: 34,070	GPs: 131 Other HPs: 70 Pharmacists: 188 Nurses: 338 Total: 727	0.7% 0.6% 0.9% 1.0%
	20/4/18	Pharmacists: 25,807	Pharmacists: 179	0.7%
Patient resources: SAMS algorithm, patient action plan, FAQs	20/7/17	GPs: 16,357 Other HPs: 13,234 Pharmacists: 18,335 Nurses: 28,828	GPs: 389 Other HPs: 187 Pharmacists: 376 Nurses: 284 Total: 1,236	2.4% 1.4% 2.1% 1.0%
Pharmacy Practice Review	22/9/17	Pharmacists: 21,963	Pharmacists: 330	1.5%
	22/3/18	Pharmacists: 25,719	Pharmacists: 395	1.5%
	20/4/18	Pharmacists: 25,807	Pharmacists: 285	1.1%
Clinical e-Audit	22/9/17	GPs: 19,653 Other HPs: 12,691	GPs: 276 Other HPs: 161 Total: 437	1.4% 1.3%
SAMS video	17/5/18	GPs: 32,465 Other HPs: 20,693 Pharmacists: 26,012	GPs: 677 Other HPs: 521 Pharmacists: 773 Total: 1,971	2.1% 2.5% 3.0%

CTR: Click through rate

The CS received the lowest level of interest, however this was promoted in 3 EDMS and led to a total of 1,434 leads. A mid-year CPD promotion of the PhPR generated further interest for this product in addition to the standard program EDM. The CEA was only promoted once via EDM. This would likely have benefitted from additional promotion, but priority was given within the organisation for the promotion of two new business products (Codeine and Cervical Screening modules).

Additionally, products were advertised digitally through RACGP and ACCRM member e-newsletters, and subscriber EDMs for Pharmacy Daily and the Australian Journal of Pharmacy. Flyers were produced to promote visits, other activities and resources. These were distributed by CSSs, with the Prescribing Feedback in December 2017, at the Nurse Practitioners conference in September 2017 and GP17 in October. A bulk fax promotion of Statins visits was also sent to Practice Managers in June 2017.

Social media

The program's messages and products were promoted throughout the program period via Facebook, Twitter and LinkedIn (Table 10). The majority of engagements were received through Facebook and Twitter. The paid Twitter posts from July to November reached the most people, followed by the paid Facebook post of the "Statin' the facts" consumer video. Social media posts included Pharmacist hour on Facebook and promotion of the consumer video on Facebook and Twitter. The *Statin' the facts* video created a lot of discussion on Facebook with both positive and negative sentiment about the use of statins.

There were 2 CALD related posts on Facebook in January for Chinese and Arabic audiences. These posts aimed to encourage consumers to discuss CV risk with their parents and grandparents as evidence suggests that older people of Middle Eastern and Chinese backgrounds have a high risk of developing cardiovascular disease. These had moderate reach but few engagements.

The Statins program had a higher reach and engagement on social media than the recent COPD and diabetes programs, however more money was spent on advertising for this program.

TABLE 10: SOCIAL MEDIA REACH AND ENGAGEMENT

Social media channel	Reach	Engagements*	Advertising spend
Facebook			
Statin' the Facts consumer video	96,312	486	$1,000.00
Pharmacist chat	11,484	229	$150.00
CALD – Chinese post	4,704	28	-
CALD – Arabic post	3,982	9	-
Twitter			
July – Nov 2017 (25 posts)	117,260	488	$500.00
October 2017 (1 post)	837	4	-
June 2018 (1 post - Statin' the Facts consumer video)	1,384	29	-
LinkedIn			
Optimising statins case study	3,134	41	-
Statin intolerance	3,729	48	-
Learn more	4,344	52	-
Assess and manage muscle symptoms in people taking statins	658	13	$82.20
Total	257,338	1,520	$1,732.20

*likes, shares, comments, retweets

IMPACT ON GP KNOWLEDGE

Significant improvements to GPs' knowledge in line with program key messages were observed after participating in the Statins program. Of note, knowledge improved in the following areas:

- Using the absolute CV risk enables the most effective approach to lipid management (+14% for participant GPs, p≤0.001; +9% between participant and control GPs, p≤0.005)
- Addition of a second lipid modifying medicine should be reserved for patients who have adequately trialled statin therapy (+10% for participant GPs, p≤0.001; +7% between participant and control GPs, p≤0.05)
- Up to 90% of patients who cannot tolerate a statin will be able to tolerate an alternate statin (+22% for participant GPs, p≤0.001; +18% between participant and control GPs, p≤0.001)

Agreement with knowledge statements

GPs were asked to rate their level of agreement with a number of knowledge statements that aligned with the program's key messages and objectives (Table 11).

TABLE 11: GPS' AGREEMENT WITH KNOWLEDGE STATEMENTS

Statement, *desired response*	Participant BEFORE, % (n)	Participant NOW, % (n)	Control, % (n)	Significance
Using the absolute CV risk enables the most effective approach to lipid management. *Agree/strongly agree*	79.4 (170)	93.8 (210)	84.5 (125)	p≤0.001 (before/now) p≤0.005 (control/now)
There is evidence to support a continuous, graded relationship between LDL-C and major CV events. *Agree/strongly agree*	75.4 (159)	89.1 (197)	81.8 (121)	p≤0.001 (before/now) p≤0.05 (control/now)
Addition of a second lipid modifying medicine should be reserved for patients who have adequately trialled statin therapy. *Agree/strongly agree*	85.5 (183)	95.6 (215)	88.4 (130)	p≤0.001 (before/now) p≤0.01 (control/now)
In secondary prevention (patients with established CVD), an intensive approach to LDL-C lowering is usually warranted. *Agree/strongly agree*	89.7 (192)	96.9 (217)	97.3 (144)	p≤0.001 (before/now)
Ezetimibe has a strong evidence base for improving CV outcomes in both the primary and secondary prevention setting. *Disagree/strongly disagree*	15 (32)	13.9 (31)	16 (23)	No significance
Adherence to statin medicines should be checked at each consultation. *Agree/strongly agree*	76.1 (162)	94.2 (211)	91.2 (134)	p≤0.001 (before/now)
Statins have a robust evidence base for efficacy and safety with over 30 years of clinical trial data. *Agree/strongly agree*	83.6 (178)	91.5 (205)	87.1 (128)	p≤0.001 (before/now)
Up to 90% of patients who cannot tolerate a statin will be able to tolerate an alternate statin. *Agree/strongly agree*	34.3 (73)	56.7 (127)	38.8 (57)	p≤0.001 (before/now) p≤0.001 (control/now)

Although knowledge was quite high in some areas prior to the program, several significant differences in knowledge were observed between control and participant GPs and for participant GPs before and after participating in the program.

The first key message of the program relates to assessing absolute CV risk before prescribing a lipid-modifying medicine. Significantly more participant than control GPs agreed or strongly agreed that using absolute CV risk is the most effective approach for lipid management (93.8% vs 84.5%, p≤0.005). A significant difference was also observed for participant GPs following participation in the program with an increase in knowledge of 14% (p≤0.001).

The second key message asked GPs to optimise their patients LDL-lowering by adequately trialling statin therapy before adding a second agent. Significantly more participant than control GPs agreed or strongly agreed that evidence supports a continuous, graded relationship between LDL-C and major CV events (89.1% vs 81.8%, p≤0.05) and that addition of a second lipid modifying medicine should be reserved for patients who have adequately trialled statin therapy (95.6% vs 88.4%, p≤0.01). A significant difference was also observed for participant GPs following participation in the program with an increase in knowledge of 14% and 10% respectively (p≤0.001) for the above statements.

Participant GPs also demonstrated a significant increase in knowledge after program participation in relation to the use of an intensive approach to LDL-C lowering for secondary prevention (+7.2%, p≤0.001) and that adherence to statins should be checked at every consultation (+18%, p≤0.001). No differences were observed between control and participant GPs for these statements.

Only a small number of GPs in all groups selected either of the desired responses 'disagree' or 'strongly disagree' for the statement 'Ezetimibe has a strong evidence base for improving CV outcomes in both the primary and secondary prevention setting'. No differences in knowledge were observed between groups for this statement. However, comparison across responses between participant and control GPs (Figure 11) showed a greater proportion of participant than control GPs *incorrectly* 'strongly agreed' with this statement (p≤0.05).

Key message 3 encouraged GPs to use a systematic approach to assess suspected statin intolerance. Knowledge was generally high for both participant and control GPs in relation to knowing that statins have a robust evidence base. However, after participating in the program, participant GPs demonstrated a significant increase in their knowledge of this (+8%, p≤0.001).

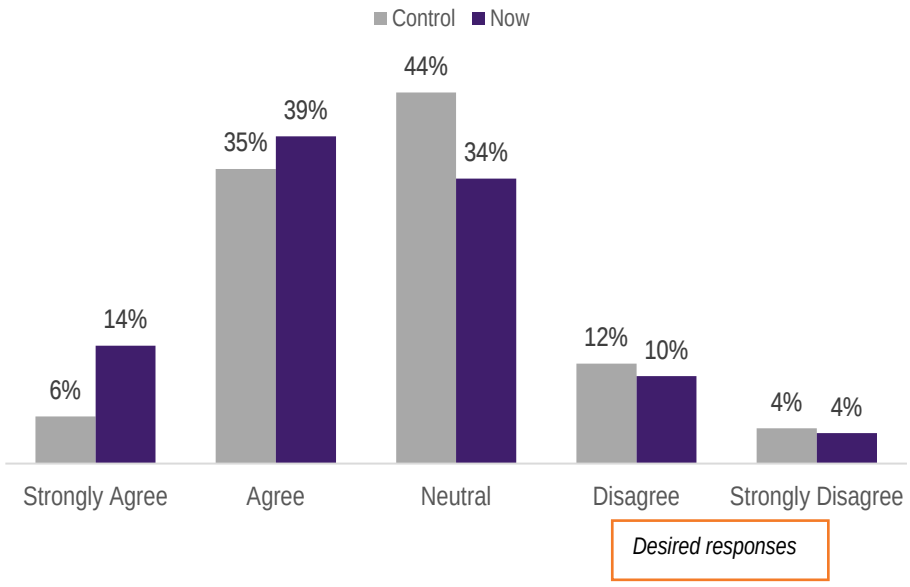


FIGURE 11: GPS' AGREEMENT WITH 'EZETIMIBE HAS A STRONG EVIDENCE BASE' STATEMENT

Significantly more participant than control GPs agreed or strongly agreed that up to 90% of patients who cannot tolerate a statin will be able to tolerate an alternate statin (56.7% vs 38.8%, p≤0.001). A significant difference was also observed for participant GPs following participation in the program with an increase in knowledge of 22% (p≤0.001).

Factors associated with SAMS

GPs were asked about what factors they thought were most suggestive of statin associated muscle symptoms (SAMS). Five options were provided, with three of these being the desired options (Figure 12). The most selected option by participant and control GPs was 'Muscle symptoms with elevated CK which normalises after cessation of the statin'. No differences were observed between control and participant GPs but after participating in the program participant GPs showed a 15% increase in their selection of this option (p≤0.001).

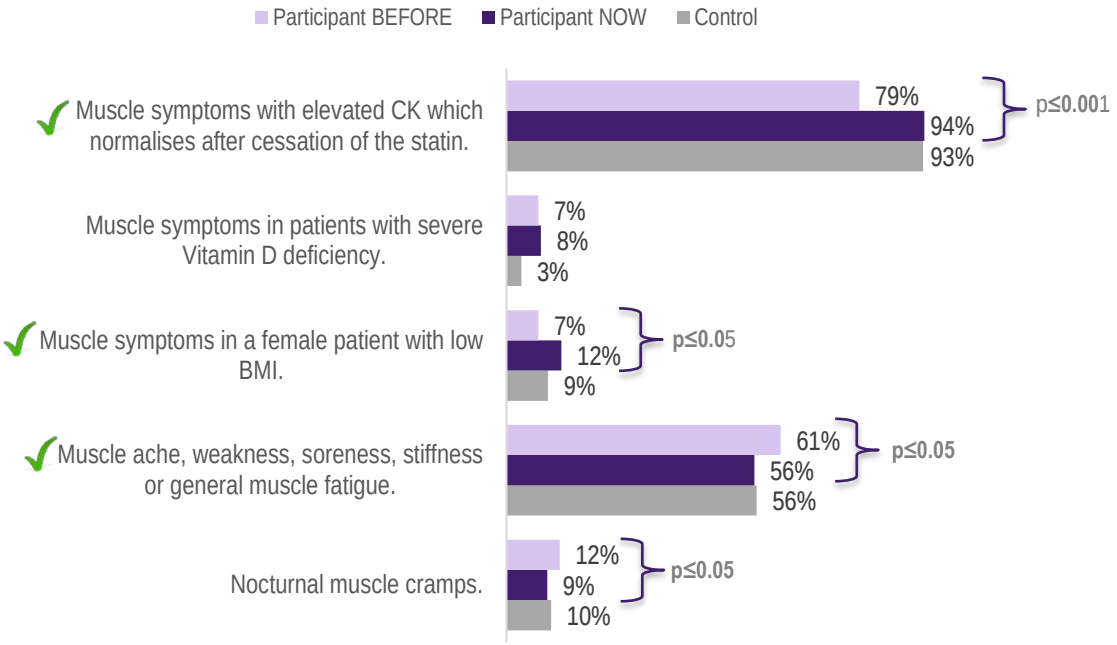


FIGURE 12: GPS' SELECTION OF FACTORS MOST SUGGESTIVE OF SAMS

All three of the desired options are factors associated with SAMS. A very small percentage of GPs selected all of the desired options only (Table 12), although there was a significant increase in participant GPs selecting all these options after program participation (+4%, p≤0.005). More GPs selected two of the desired options and there was a significant increase for participant GPs in their selection of these after program participation (+6%, p≤0.05).

TABLE 12: GPS' KNOWLEDGE OF FACTORS ASSOCIATED WITH SAMS

	Participant BEFORE, % (n)	Participant NOW, % (n)	Control, % (n)	Significance
ALL desired options selected	1.9 (4)	5.9 (13)	2 (3)	p≤0.005 (before/now)
Two desired options selected	36.7 (77)	42.3 (93)	40 (60)	p≤0.05 (before/now)
One desired option selected	83.8 (176)	85.9 (189)	87.3 (131)	

IMPACT ON PRACTICE

GPs' practice was significantly improved following program participation, and in comparison to control GPs, in a number of areas:

- Measurement of baseline CK levels (+25% for participant GPs, p≤0.001; +18% between participant and control GPs, p≤0.001)
- Use of the online Australian absolute CV risk calculator to estimate CV risk (+20% for participant GPs, p≤0.001; +18% between participant and control GPs, p≤0.001)
- A decrease in participant GPs who do not estimate CV risk (-4%, p≤0.05)
- Assessment of absolute CV risk with the Australian CV risk calculator as the first step in addressing a patient's lipid profile (+24% for participant GPs, p≤0.001; +14% between participant and control GPs, p≤0.001)
- Appropriate management of statin associated muscle symptoms (+15% for participant GPs, p≤0.001; +21% between participant and control GPs, p≤0.001)

GP survey findings

GPs were asked about the frequency with which they undertook particular activities when making clinical decisions and were provided with a number of case scenarios in the survey to understand their practice.

Initiating a patient on statin therapy

GPs were asked about their frequency of particular actions when initiating a patient on statin therapy (Table 13). All actions (other than ordering ongoing ALT and CK tests) are recommended for GPs to consider when they initiate a patient on statins. There was a significant improvement in GPs' practice after participating in the program and in comparison to control GPs in relation to 'always' or 'often': checking baseline CK; checking blood glucose levels at baseline and at 4-8 weeks after initiating the statin; and counselling patients on what to expect when taking statins.

It was hoped that GPs would select that they rarely or never 'order ongoing ALT and CK tests every 3 months after initiating statins' as these are not required unless clinically indicated. However there was a significant *decrease* in participant GPs who selected 'rarely' or 'never' *after* participating in the program (-11%, p≤0.001) and significantly *more control* than participant GPs selecting these options (+13%, p≤0.05).

TABLE 13: DESIRED RESPONSES TO STATEMENTS RELATED TO INITIATION OF STATIN THERAPY

Statement, *desired response*	Participant BEFORE, % (n)	Participant NOW, % (n)	Control, % (n)	Significance
Check baseline CK. *Always/often*	24.3 (53)	49.3 (108)	31 (45)	p≤0.001 (before/now) p≤0.001 (control/now)
Check blood glucose levels at baseline and at 4-8 weeks after initiating the statin. *Always/often*	37.9 (81)	53.6 (118)	42.2 (62)	p≤0.001 (before/now) p≤0.05 (control/now)
Counsel patients on what to expect when taking statins. *Always/often*	91.3 (199)	99.1 (219)	94.6 (139)	p≤0.001 (before/now) p≤0.01 (control/now)
Order ongoing ALT and CK tests every 3 months after initiating statins. *Rarely/never*	45.9 (100)	35.1 (78)	47.6 (70)	p≤0.001 (before/now) p≤0.05 (control/now)
Check for drug interactions with the statin. *Always/often*	72.4 (157)	88.7 (196)	87.8 (130)	p≤0.001 (before/now)

One of the program objectives was to increase the proportion of GPs who use an Australian absolute CV risk calculator before prescribing a lipid-modifying medicine, which was associated with the key message around assessing absolute CV risk before prescribing a lipid-modifying medicine. As such, GPs were asked about their strategies to estimate CV risk in patients when considering the use of a lipid-modifying medicine. Six possible options were presented to GPs to elicit which they would use and it was hoped that they would select one or more of the desired options (2, 3 and 4), which are all Australian based risk calculators.

When considering prescribing a lipid-modifying medicine, which of the following strategies do you use to estimate CV risk in patients aged 45 – 74 years?

1. Review a patient's individual BP, lipid and glucose blood results
2. The online Australian absolute CV risk calculator (cvdcheck.org.au)
3. The Heart Foundation Australian CV risk charts
4. In-built clinical software CV risk calculators
5. I don't generally estimate CV risk

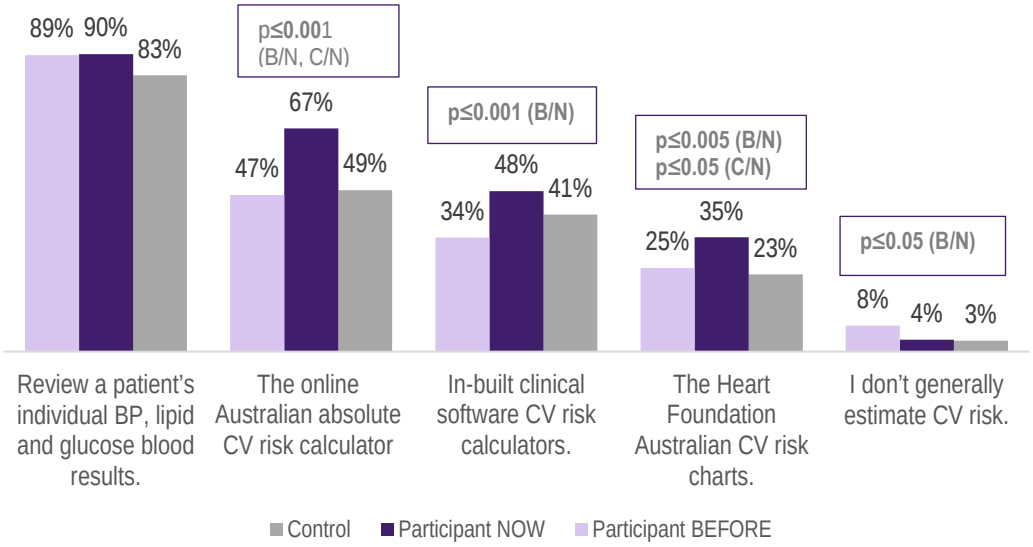


FIGURE 13: GPS' CHOICE OF STRATEGIES USED TO ESTIMATE CV RISK; B/N=BEFORE VS NOW; C/N=CONTROL VS NOW

There was a significant increase in participant GPs who would use one or more of the Australian based CV risk calculators (Figure 13) and positively a significant *decrease* in participant GPs who stated that they do not estimate CV risk (-4%, p≤0.05). While this question aimed to elicit what strategies GPs use to estimate CV risk, a large percentage of GPs in both groups also selected that they would 'review a patient's individual BP, lipid and glucose blood results' as well as one or more of the risk calculators (Table 14). GPs may have misinterpreted this option as an initial step to estimate CV risk rather than the use of a CV risk calculator. Only a small number of GPs solely selected one or more of the CV risk calculators (e.g. 9% vs 90% of participant GPs).

TABLE 14: GPS' CHOICE OF STRATEGY TO ESTIMATE CV RISK

Selected response	Participant BEFORE, % (n)	Participant NOW, % (n)	Control, % (n)	Significance
Statement 2,3 or 4 selected, not 1 or 5	7.3 (16)	9 (20)	15.3 (23)	
Statement 2,3 or 4 selected, not 5	72 (157)	89.7 (200)	82 (123)	p≤0.001 (before/now) p≤0.05 (control/now)

Max is a 55-year-old patient who comes in for a regular check-up. He has a history of GORD and IBS but does not take any regular medicines. He has a BP of 128/85 mmHg and BMI of 29 kg/m2. His lipid results are – TC 6.0 mmol/L, LDL-C 3.9 mmol/L, HDL-C 0.9 mmol/L, TG 2.8 mmol/L. What is your first step to address Max's lipid profile?

GPs were presented with a case scenario to determine what their first step would be to address a patient's lipid profile.

Best practice is to *first* 'assess' Max's absolute CV risk using the Australian CV risk calculator', as per key message 1. There was a significant increase of 24% (p≤0.001) in the proportion of participant GPs who correctly said they would first assess Max's absolute CV risk after participating in the program (Figure 14) and significantly more of these GPs selected this compared to control GPs (p≤0.001). However, just 20% of participant GPs selected *only* this option. This was still a significant increase after program participation (+7%, p≤0.001) but a significantly smaller proportion than control GPs (35%, p≤0.01). Over half of participant GPs would additionally 'advise Max to intensively change his diet and lifestyle which should reduce his lipids to target' after participating in the program. While this is appropriate to do, it is not the first step. A significantly greater proportion of GPs who took part in a SGM correctly answered this question compared to those who took part in an EV (p≤0.05).

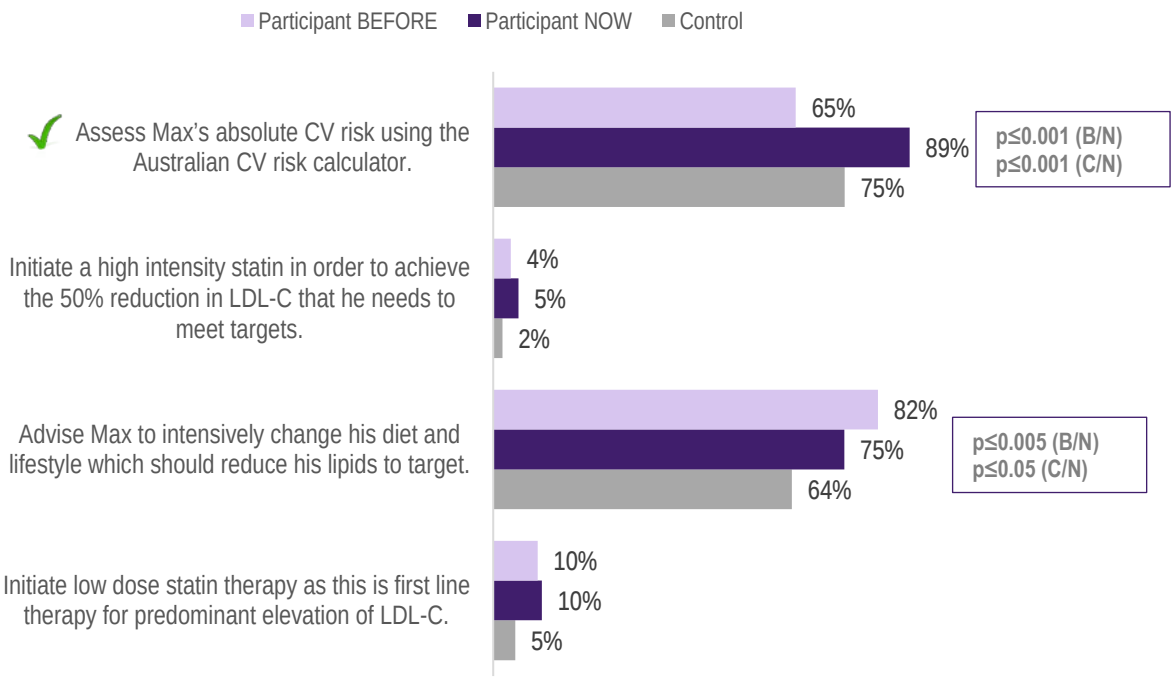


FIGURE 14: GPS' PRACTICE IN RELATION TO THE FIRST STEP TO ADDRESS A PATIENT'S LIPID PROFILE; B/N=BEFORE VS NOW; C/N=CONTROL VS NOW

Trialling statin therapy

Key message 2 of the program highlights to GPs that best practice, according to clinical guidelines, is to adequately trial statin therapy before adding a second agent. This also relates to the 2nd program objective to reduce ezetimibe prescribing for patients who have not adequately trialled statin therapy. GPs were presented with a case scenario to understand how they would manage a patient already on a statin who has not achieved their target LDL-C.

Mandy is a 58-year-old patient at high absolute CV risk of 27% in the next 5 years, with diabetes, dyslipidaemia and a 30 pack/year history of smoking. You advised Mandy to quit smoking, provided appropriate resources and suggested she improve her lifestyle. She agreed to start Atorvastatin 20mg daily. 12 weeks later you order non-fasting lipid tests and her LDL-C is still not at target (LDL-C 2.7 mmol/L, ~40% reduction from baseline). How would you address this?

The desired approach is for GPs to 1) check that Mandy is regularly adherent to her Atorvastatin, 2) check how well Mandy has improved her lifestyle (exercise and diet) and 3) titrate her Atorvastatin dose up to 40mg daily and check how she tolerates it at the next consultation. Significantly more participant than control GPs selected all three desired options only (Table 15; 42.6% vs 29.3%, p≤0.01). Similarly, after program participation, there was a significant increase in GPs selecting all desired options according to best practice (+14%, p≤0.001).

TABLE 15: GPS SELECTING ALL DESIRED RESPONSES TO THE CASE SCENARIO

	Participant BEFORE, % (n)	Participant NOW, % (n)	Control, % (n)	Significance
GPs selecting all desired responses	28.8 (62)	42.6 (95)	29.3 (44)	p≤0.001 (before/now) p≤0.01 (control/now)

When looking at individual options (Figure 15), the largest, and significant, difference between participant and control GPs (and before and after program participation) was observed for GPs who said that they would titrate Mandy's Atorvastatin dose up to 40mg daily and check how she tolerates it at the next consultation. This is a positive indication of the impact of the program on GPs' practice around adequately trialling statin therapy. However, there was also a significant increase after program participation in GPs selecting that they would add a second agent such as ezetimibe (+12%, p≤0.001), which is contrary to best practice in the first instance. A significantly greater proportion of GPs who took part in a SGM correctly answered this question compared to those who took part in an EV (p≤0.05).

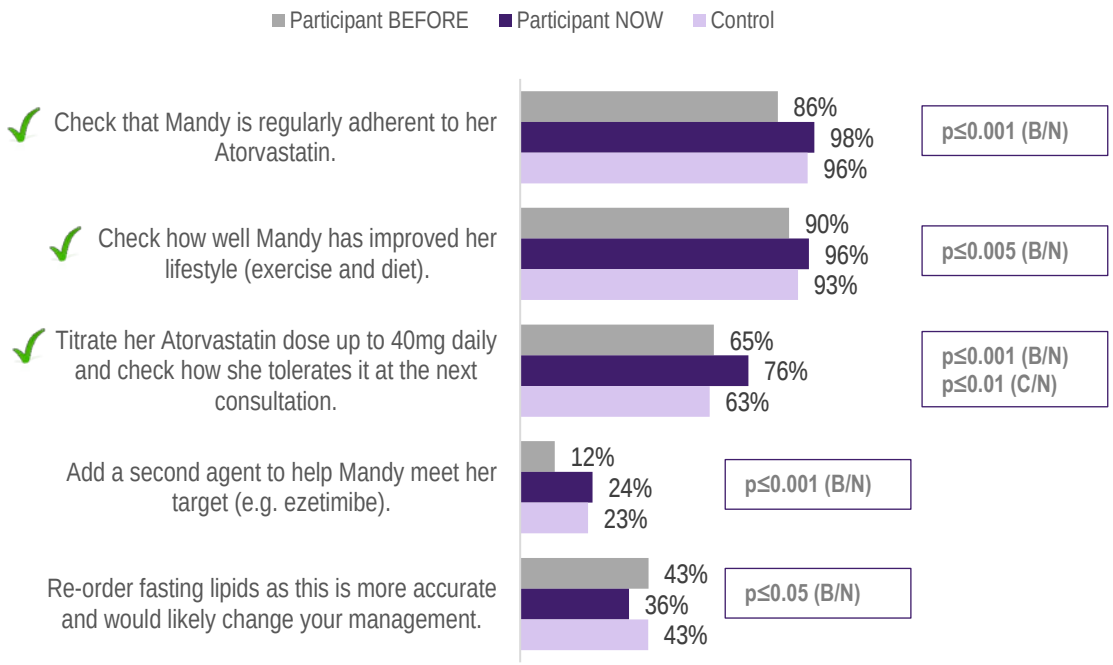


FIGURE 15: GPS' PRACTICE IN RELATION TO ADEQUATELY TRIALLING STATIN THERAPY; B/N=BEFORE VS NOW; C/N=CONTROL VS NOW

Management of SAMS

GPs were encouraged to use a systematic approach to assess suspected statin intolerance, which often has a lower true incidence than is commonly reported. Participant GPs were provided with a SAMS management algorithm within the educational visit which highlights the steps to take if a patient has suspected SAMS. Surveyed GPs were asked how they would manage a patient on a statin with muscle soreness and a CK level of 3 x ULN. Four options were provided for the GP to consider, 2 of which were the desired responses (Figure 16). Overall there was a significant positive difference between the practice of participant and control GPs with more participant GPs selecting the 2 desired options (52.5% vs 32%, p≤0.001) and a significant positive increase in GPs' practice after program participation (+15%, p≤0.001). Positively, although not significant, there was a decrease in the proportion of participant GPs who would switch to a non-statin medicine such as ezetimibe, a practice that the program hoped to discourage. Significantly less participant than control GPs also selected this option (19% vs 38%, p≤0.001).

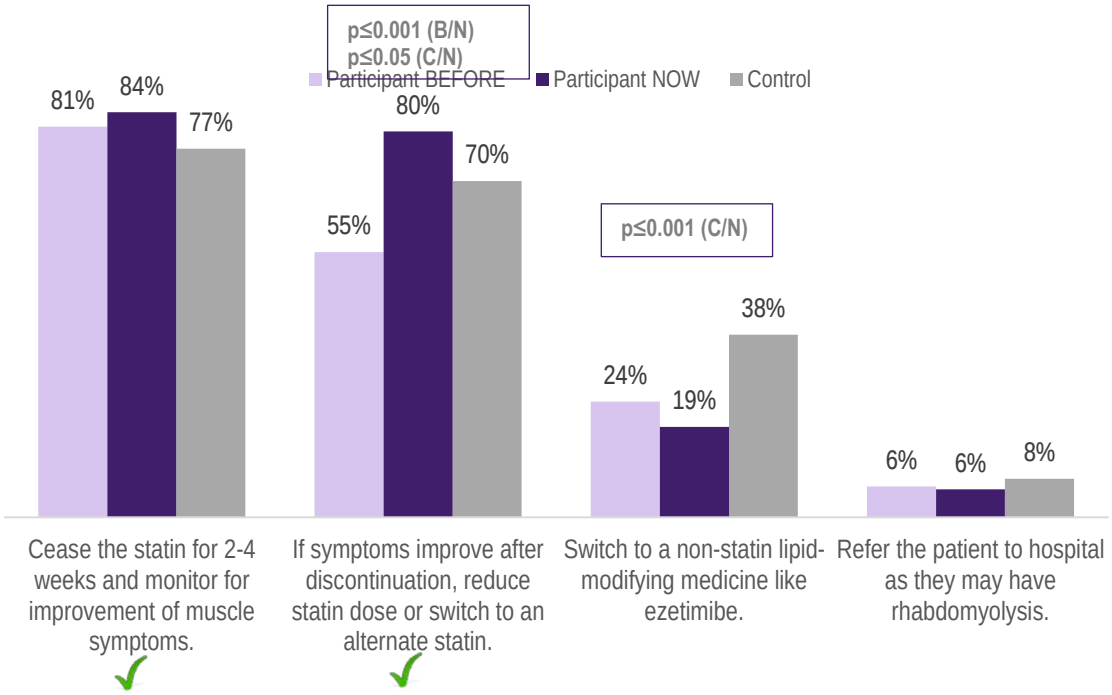


FIGURE 16: GPS' APPROACH TO SUSPECTED STATIN INTOLERANCE

Prescribing feedback on prescribing of lipid-modifying medicines

Feedback on GPs' prescribing of lipid-modifying medicines was provided through the Department of Human Services in December 2017 to 29,929 Australian GPs. All survey respondents were asked about the feedback's usefulness and changes to practice as a result of receiving it. Approximately 50% of control GPs and 30% of participant GPs stated they could not recall the feedback or did not receive it, with a significant difference between these groups ($p \leq 0.001$). Of those GPs who recalled receiving the feedback, most control and participant GPs felt it was presented in a way that was easy to understand, was a useful tool for comparing their prescribing with that of their peers and helped them to reflect on their prescribing of lipid-modifying medicines (Figure 17). Minimal differences were observed between the views of control and participant GPs for these areas. More participant than control GPs (+11%) felt that the feedback had prompted a change in their prescribing of lipid-modifying medicines, though this was not statistically significant.

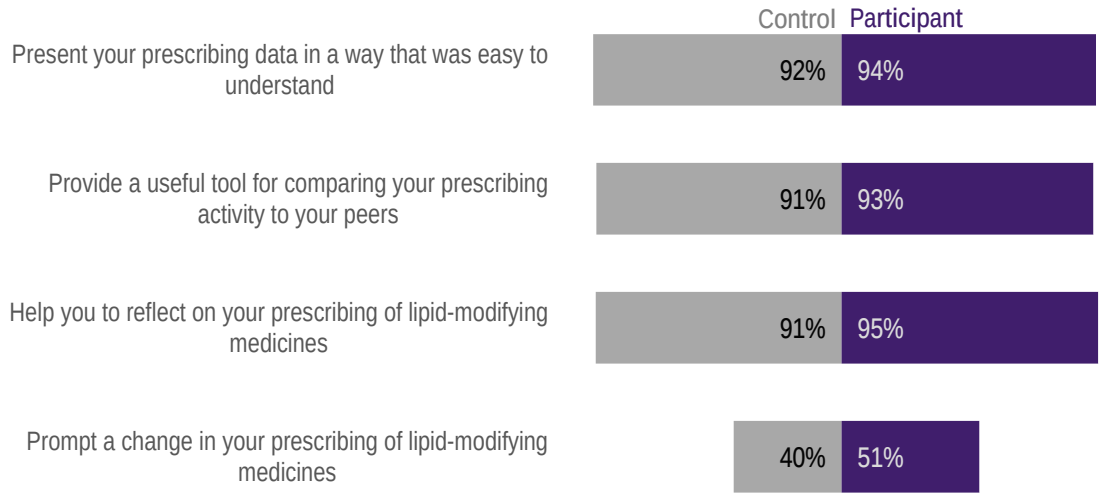


FIGURE 17: GPS WHO RESPONDED 'YES' TO THE PRESCRIBING FEEDBACK QUESTIONS (DENOMINATOR IS TOTAL NUMBER OF GPS WHO RECALLED RECEIVING IT)

Educational visit online evaluation form

Figure 18 highlights the level of practice change that 730 GPs (8% of visited GPs) stated had occurred as a result of the educational visit. Two thirds of GPs stated that the activity had reinforced their practice overall and so no change was required. Based on specific actions, the most common actions that GPs said they had taken or intended to take were in relation to systematically assessing and managing SAMS (47%) and recognising that true SAMS is uncommon (32%). Approximately 70% of GPs stated that their practice had been reinforced around adequately trialling statin therapy before adding a second agent and using the Australian CV risk calculator to inform prescribing decisions. Few GPs disagreed with the program content.

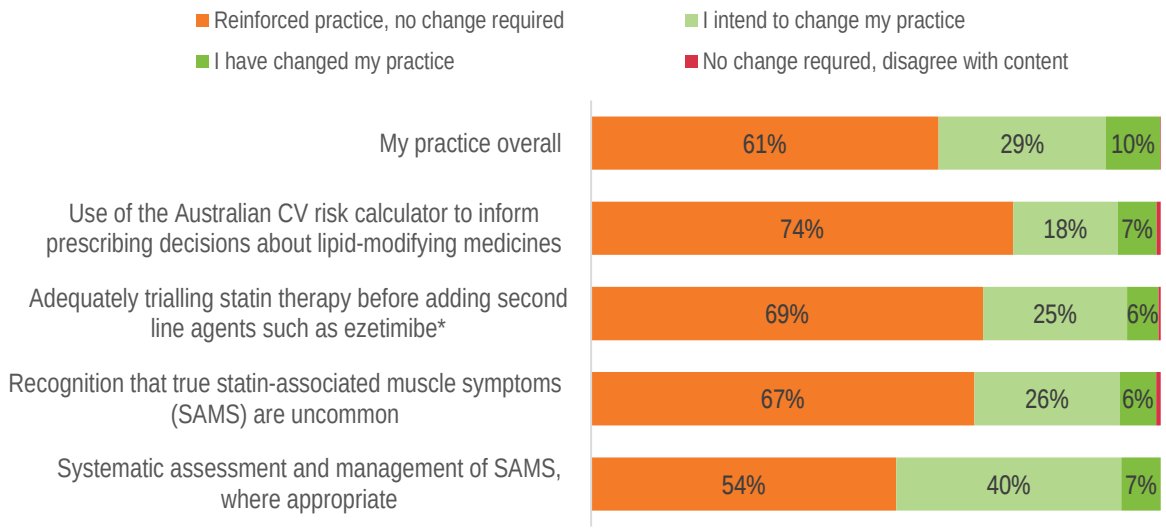


FIGURE 18: GPS' SELF REPORTED PRACTICE CHANGE. *THIS INCLUDES REINFORCING ADHERENCE TO MEDICINES AND LIFESTYLE CHANGES, AND TITRATING TO MAXIMUM TOLERATED DOSE WHERE APPROPRIATE

Around one third of GPs provided further comment on how the visit had affected their practice. Practice changes generally aligned with the program's key messages. GPs stated their practice was impacted in relation to assessment of CV risk; management of SAMS and statins side effects; statins use and appropriate doses; and measurement of baseline CK.

- **Assessment of CV risk.** GPs stated they were now more systematic and had more confidence in assessing CV risk. Many also now use a CV risk calculator, with some previously unaware that there was one in their clinical software, to assess risk before prescribing and so more appropriately manage high and low risk patients. *This is aligned with the GP survey data which demonstrated an increase in GPs who would use the online Australian CV risk calculator or the CV risk calculator in their clinical software to estimate a patient's CV risk.*
- **Management of SAMS and statins side effects**. GPs highlighted that they had a better understanding of SAMS and how to systematically assess and manage it. A number commented on the usefulness of the SAMS algorithm to help them with this process. GPs also stated that they would consider alternative statins options for patients with SAMS in relation to a dosage change or switching to an alternate statin.
- **Statins use and doses**. GPs stated the program had increased their knowledge and confidence in the use of statins and made them consider how they use statins including what statin to use; the appropriate dose; and increasing the dose before adding a second agent.
- **Measurement of baseline CK**. A small number of GPs highlighted that the visit had provided them with knowledge about CK measurements and as a result they would conduct baseline CK levels when starting a patient on statins. *This is aligned with the GP survey data which demonstrated an increase of 25% in GPs who would now frequently measure baseline CK levels.*

Clinical e-Audit findings

The Clinical e-Audit (CEA) sought to assist GPs in their approach to the use of statins. It aimed to help GPs:

- Recognise the importance of managing lipid levels in the context of absolute CV risk;
- Outline ways to optimise statin treatment to achieve lipid targets;
- Implement a systematic approach to manage, and assess adverse effects of statins;
- Identify strategies to improve adherence to lipid-modifying treatment and ensure an adequate trial;
- Describe when to add a second agent to treatment based on guidelines.

GPs participating in the CEA were asked to reflect on their management of 10 patients against the 10 specified indicators.

Table 16 highlights changes in the 6 clinical indicators that were measured in both the initial and review phases. The number of patients included in the audit at baseline varied by indicator and was dependent on the number of patients meeting the particular indicator.

There was a statistically significant increase of 59% (p≤0.0001) in the number of patients whose LDL-C target had been measured and achieved in the last 12 months. There was a significant increase of 32% for the number of patients for whom GPs had assessed and documented CV risk and 27% for whom adherence to lifestyle modifications had been assessed

TABLE 16: PERCENTAGE OF PATIENTS SATISFYING CLINICAL INDICATORS AT INITIAL AND REVIEW PHASES

Clinical indicator	Initial audit phase, %	Review audit phase, %	% change (95% CI)
Assessed and documented CV risk	72.9	96.3	32.0 (29.1, 35.1)*
Use of blood pressure-lowering medicine(s) in patients at high CV risk	84.9	91.1	7.3 (6.4, 8.3)*
Assessed adherence to lipid modifying medicines	89.4	98.6	10.3 (8.9, 11.7)*
Assessed adherence to lifestyle modifications	76.4	96.8	26.8 (24.1, 29.5)*
Measured lipid levels in the last 12 months	90.6	97.1	7.1 (6.3, 8.0)*
Achieved LDL-C target and measured in the last 12 months	48.6	77.4	59.3 (55.0, 63.8)*

*p ≤ 0.0001

Additionally, after participation in the CEA GPs reported the following actions that they had taken or intended to take:

- Increase recognition of the importance of basing pharmacological management of lipids on CV risk (54% of GPs);
- Increase awareness of when an additional lipid-modifying medicine should be added to statin therapy (52% of GPs);
- Increase the use of strategies to improve adherence to lipid-modifying therapy (53% of GPs).
- Increase the use of a step-wise approach when assessing for and managing suspected statin-associated adverse effects (58% of GPs).
- Increase recognition of when an alternative lipid-modifying therapy to statins is needed (53% of GPs).

Pharmacy practice review findings

The Pharmacy Practice Review sought to help pharmacists (including interns and students) reflect on their support of patients on statins. It aimed to help them:

- Identify that statins are first line lipid-modifying medicine and recognise when and how treatment should be intensified.;
- Explain the benefits of statins in reducing cardiovascular risk.;
- Communicate the importance of adherence to lipid-modifying medicine(s) and identify strategies to both assess and achieve adherence.;
- Review for adverse effects and systematically assess for possible statin-associated muscle symptoms in patients who are experiencing muscle symptoms.

Practice change

After participating in the pharmacy practice review, there was an increase in the proportion of pharmacists who always or often discuss with patients the importance of using statins in the context of CV risk (+33%), assess and recommend strategies to promote adherence to lipid-modifying medicines (+28%) and have confidence in their ability to systematically assess patients for SAMS (+27%) (Figure 19).

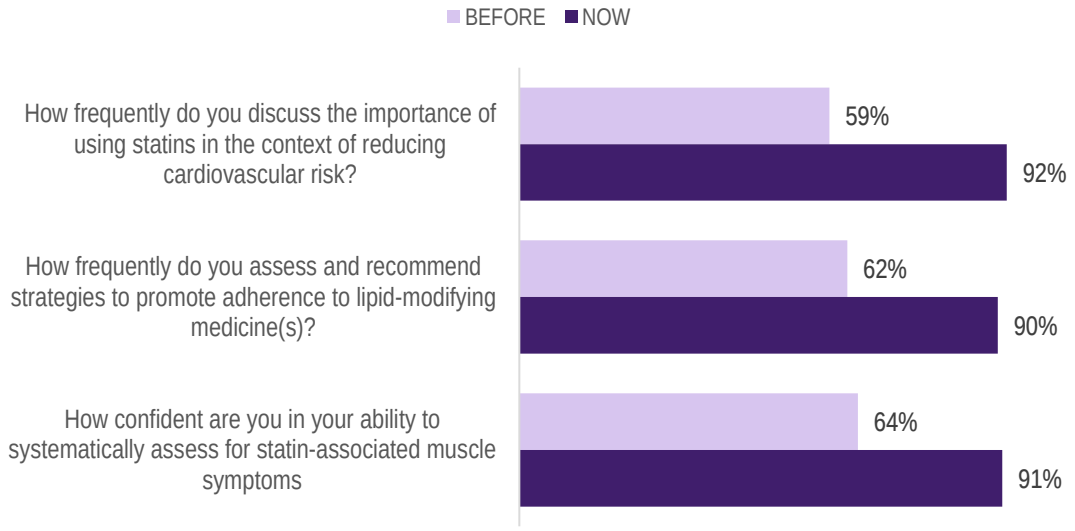


FIGURE 19: PHARMACISTS RESPONDING 'ALWAYS' OR 'OFTEN' TO PRACTICE STATEMENTS AFTER PARTICIPATION IN THE PHARMACY PRACTICE REVIEW

Close to half the pharmacists additionally stated that the review had prompted them to change their practice in other ways. Others reported practice changes as follows:

- They have become **more thorough and comprehensive in the care and counselling** they provide their patients. Pharmacists highlighted that they are more confident in their patient counselling on statins and CV risks. They now: conduct more follow-up with patients on repeat prescriptions; more regularly ask about their medicine; take a more holistic approach where they include lifestyle factors, adherence and SAMS in patient conversations; and tailor discussions to individual patients.
- They more frequently **assess patient's adherence** to statins through dispensing history or directly checking with patients. They **discuss the importance of statin adherence** with patients and what strategies they can use to help with adherence.
- They have an **increased awareness of the importance of lifestyle modifications** for cardiovascular health. Pharmacists highlighted that they now ask patients questions about their

lifestyle, provide lifestyle advice and changes patients can make to improve their condition, and provide resources to help patients with diet and exercise.

- They discuss and check for **side effects** in patients taking statins, including SAMS. They are more confident in discussing and assessing these.
- They have an **increased awareness of online and paper resources** that they can and will provide to patients to help reinforce their advice and increase patients' knowledge.

CONCLUSIONS

The 2017 *Statins: Optimising Therapy, Addressing Intolerance* program aimed to reduce the risk of cardiovascular events in Australians managed in primary care. Overall this program led to positive changes associated with the objectives and significant improvements in GP knowledge and practice.

Did the program achieve its participation targets?

The program actively engaged over 12,000 unique health professionals and **exceeded participation targets** for educational visiting. The target for GP participation in SGMs was exceeded by 27%. The online case study achieved the highest participation numbers of 1,949 participants after educational visiting though only the nurse targets were exceeded with GP and pharmacist targets falling short by 70% and 6% respectively.

Were health professionals satisfied with program activities?

Overall **health professionals participating in active program activities were satisfied** with each of the activities (educational visiting, CEA, PhPR and CS). The learning objectives for each activity and participants' learning needs were met for the majority of health professionals. The majority of participants stated that the activities were relevant to their practice and the program was well received by GPs overall. The resources were generally well received and the MedicineInsight handout appears to add value to the small group meetings. The educational visiting program achieved the highest Net Promoter Score to date of 74.9.

What impact did the program have on GPs' knowledge?

Significant improvements to GPs' knowledge in line with all program key messages and objectives were observed after participating in the Statins program. GPs had a greater knowledge after participating in the program, and compared to control GPs, about the use of CV risk as the most effective approach to lipid management. Knowledge also increased about: the addition of a second lipid modifying medicine only when patients have adequately trialled statin therapy; checking statin adherence at each consultation, although there was no difference compared to control GPs; understanding that most patients who cannot tolerate one statin will be able to tolerate another; and the factors that suggest a patient has SAMS.

What impact did the program have on HPs' practice?

The Statins program led to **significant improvements in GP practice** in line with program key messages and objectives.

GPs participating in the program were more likely to now estimate CV risk using an Australian CV risk calculator. Additionally, GPs who took part in the CEA demonstrated improvements in assessing and documenting CV risk and pharmacists who completed the PhPR were more likely to discuss statin use in the context of reducing CV risk with patients.

When initiating statin therapy GPs were more likely to practice according to guidelines, including checking baseline CK, checking blood glucose levels at baseline and at 4-8 weeks and counselling patients on what to expect with a statin. GPs were also more likely to adequately trial statin therapy before adding a second agent in order to optimise a patient's LDL-C levels. This includes titrating up a patient's statin dose before adding anything else and checking for adherence to the statin. Pharmacists were also more likely to assess patients' adherence and recommend strategies to help improve adherence after completing the PhPR.

GPs' practice improved in relation to the appropriate management of SAMS, including a decrease in GPs who would switch a patient to ezetimibe. Over half of CEA GPs had changed or would change

their practice to use a step-wise approach when assessing for and managing suspected statin intolerance and pharmacists stated that they were more confident in their ability to systematically assess patients for SAMS after doing the PhPR.

Were the program objectives achieved?

Program objectives appear to have been achieved in the short term, although to varying degrees. The objectives of the program will be fully measured when analysis of PBS data occurs in 2019.

- Increase by 15% the proportion of GPs who use the Australian absolute cardiovascular disease risk calculator to inform the prescribing of lipid lowering medicines.

The target for this objective has been **exceeded** based on findings from the GP survey. GPs participating in the program were more likely to now estimate CV risk using an Australian CV risk calculator (+20%) and assess absolute CV risk with the Australian CV risk calculator as the first step in addressing a patient's lipid profile (+24%).

- Decrease GP prescribing of a) ezetimibe by 10% and b) ezetimibe fixed dose combination products by 10% for people who have not adequately trialled statin therapy 18 months after the start of the program.

It is difficult to determine if this objective has been achieved in the short-term. There was an increase in GPs who would adequately trial statin therapy and switch to an alternate statin if required. However, there were no significant decreases in GPs who would use ezetimibe as a second agent or who would switch from a statin to ezetimibe. So while there may be an increase in patients who are adequately trialled on statin therapy, it is unclear if there will be a decrease in ezetimibe prescribing, based on the survey results. This will be fully determined when analysis of the PBS data occurs in 2019.

- Increase by 5% the proportion of people who adhere to prescribed lipid lowering medicines 18 months after the start of the program.

GPs' knowledge and practice improved in relation to checking patients' adherence to their statin and changing patients to an alternate statin if the current one is not tolerated. GPs and pharmacists additionally stated that their practice had changed in relation to use of strategies to help assess and improve patients' adherence. It is therefore hoped that GPs' and pharmacists' practices will lead to improved patient adherence, however these findings do not directly explore patients' adherence. This will be addressed when the 10% sample of PBS data is analysed in 2019.

Recommendations

Overall the Statins program had a positive impact on knowledge and practice. As a result of current evaluation findings however, the following recommendations are provided for consideration in future NPS MedicineWise programs.

Program design and implementation

- **Consider the appropriate levels of 'new' and 'old' content** in program design to ensure that the program is well received and adds value to GPs.
- **Consider additional promotional activities for patient resources**. Awareness of the resources and downloads were relatively low and so further promotional activities may be worthwhile given the effort that goes into their development.
- **Consider the audience for the online case study** and target only nurses and pharmacists. As for previous programs GP participation was extremely low, reaching only 30% of the target.
- **Continue to collaborate with specialists and other health professionals for program design and development**, particularly for resource development and review of materials, collaboration or co-design and expert working groups.
- **Consider incorporating the MedicineInsight handout into one of the other resources**, such as the EVC or case scenario, to reduce the number of handouts.

- **Consider feedback provided on products** from participating health professionals to help with ongoing quality improvement, especially for the CEA and CS.
- **Consider more than one wave of promotion for products** once they have launched to increase uptake. The CEA was promoted once only through the EDM and would likely have benefitted from additional promotion.

Evaluation

- **Consider how to improve the response rate for surveys** given the lower response rate for this survey, such as providing a gift to a charity based on numbers of participating GPs.

REFERENCES

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APPENDIX 1: GP RPT SURVEY

NPS MEDICINEWISE

Statins: Optimising therapy, addressing intolerance

Feb 2018

You recently participated in an educational activity on the topic *Statins: Optimising therapy, addressing intolerance* with an NPS MedicineWise Clinical Services Specialist. Your responses to this survey will help us assess this program and provide us with information to better support GPs.

A number of questions ask you to provide an answer for two different time periods. The first period (NOW) refers to your current attitudes and practice. The second period (BEFORE) refers to your attitudes and practice before participating in the program.

We appreciate your time and assistance. Your responses are confidential and will be reported in an aggregated, **de-identified** format. Please return your completed questionnaire by **3rd April 2018** using the enclosed reply-paid envelope, or to the address below.

Please mark your answers by crossing the box as instructed in the questions. ☒

NPS MedicineWise
Reply Paid 1980, Strawberry Hills, NSW 2012

1. Please place a cross in the box that best indicates your position on the following statements NOW and BEFORE participating in the program.

	NOW					BEFORE				
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Using the absolute CV risk enables the most effective approach to lipid management.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Adherence to statin medicines should be checked at each consultation.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Addition of a second lipid modifying medicine should be reserved for patients who have adequately trialled statin therapy.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
In secondary prevention (patients with established CVD), an intensive approach to LDL-C lowering is usually warranted.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
There is evidence to support a continuous, graded relationship between LDL-C and major CV events.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Statins have a robust evidence base for efficacy and safety with over 30 years of clinical trial data.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Ezetimibe has a strong evidence base for improving CV outcomes in both the primary and secondary prevention setting.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Up to 90% of patients who cannot tolerate a statin will be able to tolerate an alternate statin.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

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2. **When initiating a patient on statin therapy, please put a cross in the box that best indicates how frequently you would do the following NOW and BEFORE participating in the program.**

	NOW					BEFORE				
	Always	Often	Sometimes	Rarely	Never	Always	Often	Sometimes	Rarely	Never
Check baseline CK.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Check blood glucose levels at baseline and at 4-8 weeks after initiating the statin.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Counsel patients on what to expect when taking statins.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Order ongoing ALT and CK tests every 3 months after initiating statins.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Check for drug interactions with the statin.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

3. **When considering prescribing a lipid-modifying medicine, which of the following strategies do you use to estimate CV risk in patients aged 45 – 74 years? Please indicate what you do NOW and what you did BEFORE participating in the program.** (Select all that apply. If not applicable leave blank)

	NOW	BEFORE
Review a patient's individual BP, lipid and glucose blood results.	☐	☐
The online Australian absolute CV risk calculator (cvdcheck.org.au).	☐	☐
The Heart Foundation Australian CV risk charts.	☐	☐
In-built clinical software CV risk calculators.	☐	☐
I don't generally estimate CV risk.	☐	☐
Other (please specify)_____	☐	☐

4. **Mandy is a 58-year-old patient at high absolute CV risk of 27% in the next 5 years, with diabetes, dyslipidaemia and a 30 pack/year history of smoking. You advised Mandy to quit smoking, provided appropriate resources and suggested she improve her lifestyle. She agreed to start Atorvastatin 20mg daily. 12 weeks later you order non-fasting lipid tests and her LDL-C is still not at target (LDL-C 2.7 mmol/L, ~40% reduction from baseline). How would you address this NOW and BEFORE participating in the program?** (Select all that apply. If not applicable leave blank)

	NOW	BEFORE
Check that Mandy is regularly adherent to her Atorvastatin.	☐	☐
Re-order fasting lipids as this is more accurate and would likely change your management.	☐	☐
Check how well Mandy has improved her lifestyle (exercise and diet).	☐	☐
Titrate her Atorvastatin dose up to 40mg daily and check how she tolerates it at the next consultation.	☐	☐
Add a second agent to help Mandy meet her target (e.g. ezetimibe).	☐	☐

5. **Max is a 55-year-old patient who comes in for a regular check-up. He has a history of GORD and IBS but does not take any regular medicines. He has a BP of 128/85 mmHg and BMI of 29 kg/m2. His lipid results are – TC 6.0 mmol/L, LDL-C 3.9 mmol/L, HDL-C 0.9 mmol/L, TG 2.8 mmol/L. What is your first step to address Max's lipid profile? Please indicate what you would do NOW and what you would have done BEFORE participating in the program.** (Select ONE response only for NOW and ONE response only for BEFORE)

	NOW	BEFORE
Initiate low dose statin therapy as this is first line therapy for predominant elevation of LDL-C.	☐	☐
Advise Max to intensively change his diet and lifestyle which should reduce his lipids to target.	☐	☐
Initiate a high intensity statin (e.g. Rosuvastatin 40mg) in order to achieve the 50% reduction in LDL-C that he needs to meet targets.	☐	☐
Assess Max's absolute CV risk using the Australian CV risk calculator.	☐	☐

6. **Which of the following factors are MOST suggestive of statin associated muscle symptoms in patients taking a statin? Please indicate how you would respond NOW and BEFORE participating in the program.** (Select all that apply. If not applicable leave blank)

	NOW	BEFORE
Nocturnal muscle cramps.	☐	☐
Muscle ache, weakness, soreness, stiffness or general muscle fatigue.	☐	☐
Muscle symptoms in a female patient with low BMI.	☐	☐
Muscle symptoms in patients with severe Vitamin D deficiency.	☐	☐
Muscle symptoms with elevated CK (above the upper limit of normal, ULN) which normalises after cessation of the statin.	☐	☐

7. **How would you manage a patient on a statin with muscle soreness and a CK level of 3 x ULN? Please indicate what you would do NOW and what you would have done BEFORE participating in the program.** (Select all that apply. If not applicable leave blank)

	NOW	BEFORE
Cease the statin for 2-4 weeks and monitor for improvement of muscle symptoms.	☐	☐
Switch to a non-statin lipid-modifying medicine like ezetimibe.	☐	☐
If symptoms improve after discontinuation, reduce the statin dose or switch to an alternate statin.	☐	☐
Refer the patient to hospital as they may have rhabdomyolysis.	☐	☐

About your participation in NPS MedicineWise activities

8. In December 2017, you may have received your Department of Human Services confidential prescribing data related to lipid-modifying medicines.

Did the prescribing feedback?	Yes	No	Can't recall/ Didn't receive
Present your prescribing data in a way that was easy to understand	☐	☐	☐
Provide a useful tool for comparing your prescribing activity to your peers	☐	☐	☐
Help you to reflect on your prescribing of lipid-modifying medicines	☐	☐	☐
Prompt a change in your prescribing of lipid-modifying medicines	☐	☐	☐

9. Which NPS MedicineWise activities in the *Statins: Optimising therapy, addressing intolerance* program did you participate in (Select all that apply):

- ☐ One-to-one educational visit
- ☐ Small-group meeting
- ☐ Clinical e-Audit: *Statins: who, when and how?*
- ☐ Online case study: *Optimising statin therapy*
- ☐ Read the Medicinewise News: *Uncovering the truth about statin intolerance* (available on the NPS MedicineWise website)
- ☐ Do not recall

10. Have you participated in any other (non-NPS MedicineWise) educational activities about statins in the last 12 months?

- ☐ No ☐ Can't recall
- ☐ Yes (please specify):_____

11. Have you used any of the following NPS MedicineWise patient resources in discussions with your patients (available on the NPS MedicineWise website)? Select ALL that apply.

- ☐ Statins Patient Action Plan for assessing and managing muscle symptoms
- ☐ Statin medicines FAQs
- ☐ I am not aware of these resources

About you and your practice

12. Are you?

☐ Male ☐ Female

13. How many years have you practised as a GP?

⌊__⌋

14. Approximately how many patients would you see in a normal week?

⌊___⌋

15. Approximately how many patients would you see for a statin-related visit in a normal week?

⌊___⌋

16. What is the postcode of your main place of work?

⌊____⌋

17. Your principal practice has?

- ☐ 1 GP — solo practice
- ☐ 2 GPs
- ☐ 3–5 GPs
- ☐ 6–8 GPs
- ☐ More than 8 GPs

Thank you for completing this questionnaire.

Your responses are highly valued. If you have any queries please contact Dr Isla Hains, NPS MedicineWise Program Evaluation on (02) 8217 9235

NPS1981

APPENDIX 2: GP CONTROL SURVEY

NPS MEDICINEWISE

Feb 2018

Statins: Optimising therapy, addressing intolerance

This survey seeks to explore current GP attitudes, knowledge and practice about the use of statin therapies. Your responses to this survey will help us better support GPs.

We appreciate your time and assistance. Your responses are confidential and will be reported in an aggregated, **de-identified** format. Please return your completed questionnaire by **3rd April 2018** using the enclosed reply-paid envelope, or to the address below.

Please mark your answers by crossing the box as instructed in the questions. ☒

NPS MedicineWise
Reply Paid 1980, Strawberry Hills, NSW 2012

1. **When considering prescribing a lipid-modifying medicine, which of the following strategies do you use to estimate CV risk in patients aged 45 - 74 years?** (Select all that apply)

Review a patient's individual BP, lipid and glucose blood results.	☐
The online Australian absolute CV risk calculator (cvdcheck.org.au).	☐
The Heart Foundation Australian CV risk charts.	☐
In-built clinical software CV risk calculators.	☐
I don't generally estimate CV risk.	☐
Other (please specify)_____	☐

2. **Which of the following factors are MOST suggestive of statin associated muscle symptoms in patients taking a statin?** (Select all that apply)

Nocturnal muscle cramps.	☐
Muscle ache, weakness, soreness, stiffness or general muscle fatigue.	☐
Muscle symptoms in a female patient with low BMI.	☐
Muscle symptoms in patients with severe Vitamin D deficiency.	☐
Muscle symptoms with elevated CK (above the upper limit of normal, ULN) which normalises after cessation of the statin.	☐

3. **How would you manage a patient on a statin with muscle soreness and a CK level of 3 x ULN?** (Select all that apply)

Cease the statin for 2-4 weeks and monitor for improvement of muscle symptoms.	☐
Switch to a non-statin lipid-modifying medicine like ezetimibe.	☐
If symptoms improve after discontinuation, reduce the statin dose or switch to an alternate statin.	☐
Refer the patient to hospital as they may have rhabdomyolysis.	☐

4. **Mandy is a 58-year-old patient at high absolute CV risk of 27% in the next 5 years, with diabetes, dyslipidaemia and a 30 pack/year history of smoking. You advised Mandy to quit smoking, provided appropriate resources and suggested she improve her lifestyle. She agreed to start Atorvastatin 20mg daily. 12 weeks later you order non-fasting lipid tests and her LDL-C is still not at target (LDL-C 2.7 mmol/L, -40% reduction from baseline). How would you address this?** (Select all that apply)

Check that Mandy is regularly adherent to her Atorvastatin.	☐
Re-order fasting lipids as this is more accurate and would likely change your management.	☐
Check how well Mandy has improved her lifestyle (exercise and diet)	☐
Titrate her Atorvastatin dose up to 40mg daily and check how she tolerates it at the next consultation	☐
Add a second agent to help Mandy meet her target (e.g. ezetimibe).	☐

5. **Max is a 55-year-old patient who comes in for a regular check-up. He has a history of GORD and IBS but does not take any regular medicines. He has a BP of 128/85 mmHg and BMI of 29 kg/m2. His lipid results are – TC 6.0 mmol/L, LDL-C 3.9 mmol/L, HDL-C 0.9 mmol/L, TG 2.8 mmol/L. What is your first step to address Max's lipid profile?** (Select ONE response only)

Initiate low dose statin therapy as this is first line therapy for predominant elevation of LDL-C.	☐
Advise Max to intensively change his diet and lifestyle which should reduce his lipids to target.	☐
Initiate a high intensity statin (e.g. Rosuvastatin 40mg) to achieve the 50% reduction in LDL-C that he needs to meet targets.	☐
Assess Max's absolute CV risk using the Australian CV risk calculator.	☐

6. Please place a cross in the box that best indicates your position on the following statements.	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Using the absolute CV risk enables the most effective approach to lipid management.	☐	☐	☐	☐	☐
Adherence to statin medicines should be checked at each consultation.	☐	☐	☐	☐	☐
Addition of a second lipid modifying medicine should be reserved for patients who have adequately trialled statin therapy.	☐	☐	☐	☐	☐
In secondary prevention (patients with established CVD), an intensive approach to LDL-C lowering is usually warranted.	☐	☐	☐	☐	☐
There is evidence to support a continuous, graded relationship between LDL-C and major CV events.	☐	☐	☐	☐	☐
Statins have a robust evidence base for efficacy and safety with over 30 years of clinical trial data.	☐	☐	☐	☐	☐
Ezetimibe has a strong evidence base for improving CV outcomes in both the primary and secondary prevention setting.	☐	☐	☐	☐	☐
Up to 90% of patients who cannot tolerate a statin will be able to tolerate an alternate statin.	☐	☐	☐	☐	☐

7. When initiating a patient on statin therapy, please put a cross in the box that best indicates how frequently you would do the following:	Always	Often	Sometimes	Rarely	Never
Check baseline CK.	☐	☐	☐	☐	☐
Check blood glucose levels at baseline and at 4-8 weeks after initiating the statin.	☐	☐	☐	☐	☐
Counsel patients on what to expect when taking statins.	☐	☐	☐	☐	☐
Order ongoing ALT and CK tests every 3 months after initiating statins.	☐	☐	☐	☐	☐
Check for drug interactions with the statin.	☐	☐	☐	☐	☐

8. In December 2017, you may have received your Department of Human Services confidential prescribing data related to lipid-modifying medicines. Did the prescribing feedback?	Yes	No	Can't recall / Didn't receive
Present your prescribing data in a way that was easy to understand	☐	☐	☐
Provide a useful tool for comparing your prescribing activity to your peers	☐	☐	☐
Help you to reflect on your prescribing of lipid-modifying medicines	☐	☐	☐
Prompt a change in your prescribing of lipid-modifying medicines	☐	☐	☐

9. **Have you participated in any educational activities about statins in the last 12 months**

☐ No ☐ Can't recall

☐ Yes (please specify):_____

About you and your practice

10. **Are you?**

☐ Male ☐ Female

11. **How many years have you practised as a GP?**

12. **Approximately how many patients would you see in a normal week?**

13. **Approximately how many patients would you see for a statin-related visit in a normal week?**

14. **What is the postcode of your main place of work?**

15. **Your principal practice has?**

☐ 1 GP — solo practice
☐ 2 GPs
☐ 3–5 GPs
☐ 6–8 GPs
☐ More than 8 GPs

Thank you for completing this questionnaire.

Your responses are highly valued. If you have any queries please contact Dr Isla Hains, NPS MedicineWise Program Evaluation on (02) 8217 9235

NPS1980

About your participation in NPS MedicineWise activities

8. **Which NPS MedicineWise activities, if any, in the *Depression: re-examining the options* program 2016 did you participate in:** Please select ALL that apply.

- ☐ One-to-one educational visit
- ☐ Small-group case-based meeting
- ☐ Online case study
- ☐ Read the *MedicineWise News: Exploring non-drug options in depression* (February 2016)
- ☐ Clinical e-Audit: Depression: achieving remission, preventing relapse
- ☐ MedicineInsight practice visit on Managing depression
- ☐ Can't recall
- ☐ N/A - I didn't participate in anything

9. **Have you participated in any other (non-NPS MedicineWise) educational activities about depression in the last 12 months?**

- ☐ No ☐ Can't recall
- ☐ Yes (please specify):

_____

10. **Have you used any of the following NPS MedicineWise patient resources in discussions with your patients (available at http://www.nps.org.au/health-professionals/for-your-patients)?** Please select ALL that apply.

- ☐ Depression management factsheet
- ☐ Depression factsheet for Aboriginal and Torres Strait Islander people
- ☐ I am not aware of these resources

11. **In March 2016, you may have received your Department of Human Services (formerly Medicare Australia) confidential prescribing data related to antidepressants.**

Did the prescribing feedback?

	Yes	No	Can't recall/ Didn't receive
Provide a useful tool for comparing your prescribing activity to your peers	☐	☐	☐
Help you to reflect on your prescribing of antidepressants	☐	☐	☐
Prompt a change in your prescribing of antidepressants	☐	☐	☐

About you and your practice

12. **Are you?**

☐ Male ☐ Female

13. **How many years have you practised as a GP?**

⌊__⌋

14. **Approximately how many patients would you see in a normal week?**

⌊___⌋

15. **Approximately how many of the following patients would you see for a depression-related visit in a usual week?**

Adults with depression ⌊___⌋

Adolescents with depression ⌊___⌋

16. **What is the postcode of your main place of work?**

⌊____⌋

17. **Does your main practice have?**

- ☐ 1 GP — solo practice
- ☐ 2 GPs
- ☐ 3–5 GPs
- ☐ 6–8 GPs
- ☐ More than 8 GPs

18. **Does your practice have an associated psychology service on site?**

☐ Yes ☐ No

19. **Have you undertaken any specialised mental health training?**

☐ Yes ☐ No

Thank you for completing this questionnaire.

Your responses are highly valued. If you have any queries please contact Dr Isla Hains, NPS MedicineWise Program Evaluation on (02) 8217 9235

NPS1704