
Final Report prepared for the Ministry of Health

Evaluation of the Primary Care Patient Experience Survey Tool

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Executive summary

The Patient Experience Survey Tool

In 2015, the Ministry of Health (the Ministry) and the Health Quality & Safety Commission (the Commission) piloted the online National Primary Care Patient Experience Survey (PES). The pilot was the start of a national rollout. Five primary health organisations (PHOs) were involved in the pilot phase and an additional PHO participated in the (early stage) cognitive testing process.

The aim of the PES is to find out what patients think of their primary care, and how they perceive their overall care to be managed, including general practice, diagnostic, specialist, and/or hospital services. The PES focuses on the co-ordination and integration of care across the entire health system, using primary care as a window, rather than merely surveying the last visit to a general practice.

In 2017, the Ministry commissioned this formative evaluation of the PES tool to assess how well it is working and whether improvements can be made. The evaluation focused on how to improve the response rate by those sent an email or SMS (text) invitation to participate in the survey. Improving the response rate is especially important in those demographic groups who are not currently opening or completing the survey.

On average it took people 15 minutes to complete the survey

Our analysis shows that the median time to complete the survey was 15 minutes (excluding those respondents who took over 24 hours). The median time taken to complete the survey was similar for females and males but increased with age; those aged 65 years and older more likely to take more than 15 minutes to respond. The median completion time was faster for those who identified as European (15 minutes) compared to those who identified as Middle Eastern/Latin American/African (21 minutes).

Survey users find the qualitative responses from patients most useful

Stakeholders suggested that the most useful information for quality improvement is the qualitative responses from the survey. For example, if a specific practice receives a negative score, then the practice wants to know what the issue is, so they value qualitative feedback to better understand the negative score. The evaluation did not identify any questions or topics that the survey does not currently include that should be.

Findings on ways to improve the PES response rate lie mainly with the invitation to participate:

1. **The majority of email invitees completed the survey once they start it:** Twenty-eight percent of email invitees opened the survey link. Of those, 80 percent completed the survey once they started it. The length or content of the survey did not appear to be a deterrent. **The response from SMS invitees was lower.** Only 12 percent opened the survey link. Of those, only 50 percent completed the survey. It is possible that those who are sent the invitation by SMS do not have available data credit to download and respond to the survey.

2. **The PES response rate was comparable nationally and internationally:** We were not able to find a similar GP patient survey that was run entirely online for comparison. Overall we found that the PES completion rates for email and SMS invites were slightly lower than the New Zealand National Adult Inpatient Experience Survey, which was the most appropriate comparator available. That survey has an email completion rate consistently above 30 percent, compared with the PES completion rate of 22 percent. The PES completion rate will likely improve over time as it is used more. The English GP Patient Survey had a completion rate of 37.5 percent in 2017. However, this is primarily a postal survey, with only six percent of responses completed online.
3. **Some groups are under-represented as we would expect:** While increasing the general completion rate might not necessarily change the overall picture that emerges from the survey, our analysis showed that some groups—non-European and youth—are under-represented among respondents. Asian, Middle Eastern, Latin American, African, Māori, and Pacific ethnicities completed the PES at lower rates than those who identify as European. Women were more likely to start and complete the survey than men. These findings are to be expected as women are generally more likely to participate in surveys than men.¹
4. **Eighty-three percent of those who answered the first question went on to complete the survey:** It was not possible to analyse at what point people drop out of the survey by mode (SMS versus email), as the data was not available. The major drop-out stage was the invitation: 20 percent of those invited clicked on the link (16,156 out of 79,712). Once people clicked on the link, 83 percent of those who answered the first question went on to complete the survey (11,656 out of 14,020 people).
 - Those who identified as European, Māori, or Pacific were more likely than each other ethnicity to answer at least one question, whereas Asian, Middle Eastern, Latin American, African, and ‘other’ ethnicities were more likely to answer no questions.
 - Those aged 15–44 were more likely than each other age group to answer at least one question, whereas those aged 44 and over were more likely to answer no questions.
5. **Nearly half of all those who did not complete the survey exited in the first minute.** While it was not possible to analyse this according to response mode (email versus SMS), it is likely that a lot of these quick exits were by those reaching the survey through the SMS link.
6. **Unsurprisingly, the non-completion rate increased with the number of modules respondents needed to complete:** Each additional module took respondents, on average, two additional minutes to complete. The majority (60 percent) qualified for three to five modules out of a possible seven. While there was a natural increase in non-completion the more modules a patient is asked to respond to, the proportion who did complete them was still very high. One possible reason is that the additional module questions were relevant to their experience, so they went on to complete the survey.

¹ <https://files.eric.ed.gov/fulltext/ED501717.pdf>

Options to reduce survey drop-out rate

We also asked patients what would possibly encourage them to open the link and start the survey. The most common unprompted responses are outlined below:

- An invitation that looks more ‘official’ and authentic—patients need to be confident that it comes from a trusted source and that individual information will be held confidentially, away from the general practice.
- Brief and easy to read language in the survey invitation and improved survey format (including shorter questions).
- Knowing it will help improve the health system (especially for their family).
- Incentives (monetary and non-monetary).

Recommendations

We outline options to increase response rates and improve the survey’s reach in the community.

Improving response rates

- (a) Increase socialisation efforts in general practices, such as posters in the waiting area and promotion of the survey by desk and medical staff.
- (b) Adjust the ‘messaging’ of the survey when it is sent out, to reassure patients that the survey link is secure and legitimate and that their answers will be anonymous.
- (c) Work with telecommunication providers to secure a zero-cost arrangement for responding to the survey by mobile phone.
- (d) Work with internet providers to ensure the survey invitation is not blocked by their servers.
- (e) Make the invitation and landing page more user-friendly and accessible, and focus on easing respondents through the first page of questions.
- (f) Add pop-up encouragements. For example, the message could be that by answering this survey it will help you and your family in the future.
- (g) Incentives for completion of the survey could include rewards such as free data top ups or go into a draw for a voucher.
- (h) Revisit the use of tablets and consider what might encourage people to stay on in the waiting room to complete the survey.

Options to improve community reach

- (i) Promote awareness of the PES to certain consumer groups, for example via support groups in the community. District health boards and primary health organisations, with support from the Commission and the Ministry, should consider targeted and regular community sessions to actively raise awareness of the PES and demonstrate how they are using the results to improve services. This will

provide an important message to these groups that their health system perspectives are valued.

- (j) Consider additional distribution methods, such as:
- Yearly face-to-face surveying by independent researchers in patient waiting rooms or at community-based groups. The Commission may wish to look at the NZ Health Survey (NZHS), which undertakes face-to-face surveying, and propose that the PES results be used to inform the questions asked in the NZHS.
 - Secure messaging via Patient Portals.
 - Using social media such as Facebook Messenger to promote the survey. This could be targeted at those under-represented in response rates to the current format, and those who are unlikely to complete the survey even with enhancements to the email invitation.

1. Introduction

In 2015, the Ministry of Health (the Ministry) and the Health Quality & Safety Commission (the Commission) began to pilot a National Primary Care Patient Experience Survey (PES) as an online tool. The pilot was the starting point for a national rollout. Five PHOs were involved in the pilot phase and an additional PHO participated in the (early stage) cognitive testing process.

The scale of the survey led to a decision by the Ministry and the Commission to make the tool available online. Traditional methods, such as face-to-face interviews or a postal survey, would have been more labour-intensive and expensive to administer.

The aim of the PES is to find out what patients think of their primary care, and how they perceive their overall care to be managed, including general practice, diagnostic, specialist, and/or hospital services. It focuses on the co-ordination and integration of care across the entire health system, using primary care as a window, rather than merely surveying the last visit to a general practice. The information is intended to help improve the quality of service delivery and patient safety.

1.1 Development of the PES and pilot process

The Commission collaborated with the Australian National Health Performance Authority in the survey development. The draft survey tool was cognitively tested, refined, and evaluated in April and June 2015 by Point Research. Cognitive testing was used to establish how patients interpreted the proposed questions and instructions. This included assessments of cultural appropriateness and suitability for the New Zealand primary health care context.²

As part of the pilot phase, test surveys were sent to a subset of patients from July to October 2015. The five PHOs (Procure Networks, National Hauora Coalition, Whanganui Regional Health Network, Compass Health, and Pegasus Health) involved in the pilot have been running the survey each quarter since February 2016. In addition to the five pilot PHOs, Eastern Bay Primary Health Alliance and Midland Health Network participated in the cognitive testing process. The PES is gradually being rolled out to more general practices and PHOs.

The survey tool has been run in its full online version by Cemplicity since February 2016. Cemplicity is a Software-as-a-Service company. It works with the Commission and the Ministry on capturing the PES results and reporting them to PHOs.

The PES covers four domains that are closely aligned with current international best practice:

1. Co-ordination

² <https://www.hqsc.govt.nz/our-programmes/health-quality-evaluation/news-and-events/news/2196>

2. Partnership
3. Physical and emotional needs
4. Communication.

1.1.1 PES Governance Group

The PES Governance Group meets quarterly and oversees the survey. This group was established to act as the decision-making body for the implementation of the survey across PHOs and general practices and for use of the data that it collects. The group consists of representatives from PHOs, district health boards (DHBs), general practices, General Practice New Zealand (GPNZ), PHO and DHB consumer groups, the Commission, the Ministry and Cemplicity. The Group is currently chaired by the GPNZ representative.

1.1.2 Implementing the PES

Patients aged 15 years and over who are enrolled with a participating general practice, and who visit the practice during the quarterly survey sample week, receive a survey invitation via email or mobile phone text message (SMS). An email invitation is the default preference, as this method has a better response rate, but patients with no email address are invited by SMS. Children under 15 are not included in the survey.

There is a deliberate over-sampling of high users of health services.

Cemplicity, the provider of the national survey and reporting system, sends the survey invitations on behalf of the general practice. Patients receive a website link and are asked to complete the survey within three weeks. One reminder email is sent after seven days if the survey has not been completed. Anonymous responses are reported to general practices and PHOs in real time via a secure online reporting portal. Summarised information at PHO level is reported to DHBs, the Commission, and the Ministry in the same way. The Commission's website has detailed information on data access and reporting levels.

There is one common module, and up to seven additional modules depending on previous answers. These additional modules are:

- Medication
- Tests
- Care from a health care practitioner other than a general practitioner or nurse
- Specialist care
- Emergency departments
- Overnight at hospital
- Long-term conditions

The use of tablets to complete the survey in-situ was also trialled. There were performance issues with the type of tablet used (e.g., the internet connection was poor; the touchscreen was non-responsive, etc.). This led to poor completion rates for surveys undertaken by tablet. The Commission recommended (with the agreement of the PES Governance Group) putting the tablet method on hold while the use of higher quality tablets was investigated.

2. Evaluation approach

In 2017, the Ministry commissioned us to undertake a formative evaluation of the PES tool to assess:

- how well it is working
- whether any improvements can be made
- whether any enhancements or changes are required to help meet its aims and objectives.

The evaluation focused on how to improve the response rate by those who are sent an email or SMS invitation to participate in the survey.

Evaluation questions

The key evaluation questions outlined in the terms of reference were:

1. Are response rate numbers about right internationally, or can they be improved, and if so how?
2. What would be the best way to increase response rates in certain populations (e.g. Māori, Pacific peoples, youth and those from a lower socio economic background)?
3. Is there anything we can learn from the National Adult Inpatient Experience Survey in terms of improving response rates?
4. Looking at response statistics, how long does it take for most people to complete the survey? Does it differ by age and ethnicity?
5. When people don't complete the survey, at what point are they most likely to drop out? Are there any differences by age, ethnicity, and region? What options are there to reduce the drop-out rate? Would shortening the survey increase the number of people completing it? Are there questions in the survey that have answers sufficiently correlated that answering one is effectively answering both, so that one can be cut (or randomly switched)?
6. If it is recommended that shortening the survey would be beneficial, are there any questions that could be removed without losing useful detail or granularity?
7. Another possible option to reduce the length of the survey is to rotate the modules asked each quarter (i.e., certain modules could be included in the survey only every six months instead of every quarter). What would the effect of this be at practice level? Would it limit the usefulness of the survey in short Plan-Do-Study-Act (PDSA) cycles?
8. Which questions yield the most useful information for quality improvement, and which the least useful? Are there any questions or topics that the survey does not currently include but should?

Review of questions following initial analysis

An initial scan and early analysis of the available PES data showed that the majority of email invitees (80 percent) complete the survey once they start it (9,528 out of 11,902). This indicates that it is not the length or content of the survey that is influencing the overall

response rate. Therefore, the focus of the evaluation moved to the 72 percent of people invited by email and the 88 percent invited by SMS who did not open the link.

Sapere proposed to the working group (a sub-committee of the governance group) to undertake interviews with some patients and some stakeholder to better understand why people do not open the survey. This meant that the original key evaluation questions 6–8 would not be fully answered as the focus was on improving the response rate rather than the completion rate. The working group agreed with Sapere’s proposal to focus on why people do not open the survey. As a result the findings are focussed largely on potential improvements aimed at increasing the number of patients opening the survey.

The revised key evaluation questions were:

1. Are response rate numbers about right internationally, or can they be improved, and if so how?
2. What would be the best way to increase response rates in certain populations (e.g., Māori, Pacific peoples, youth, and those from a lower socio economic background? Is there anything we can learn about this from the interviews and focus groups?³
3. Looking at response statistics, how long does it take for most people to complete the survey? Does it differ by age and ethnicity?
4. When people don’t complete the survey, at what point are they most likely to drop out? Are there any differences by age, ethnicity, and region?
5. What options are there to reduce the drop-out rate? Would shortening the survey increase the number of people completing it?
6. Which questions yield the most useful information for quality improvement, and which the least useful? Are there any questions or topics that the survey does not currently include but should?

Out of scope: outcomes of survey

Evaluation of the work stream and implementation, and of whether key milestones and tasks have been achieved, were beyond the scope of this evaluation. Outcomes of the survey (e.g., is the survey facilitating actions to improve service quality in general practice) were also out of scope.

Approach

Our mixed-method approach was informed by the key evaluation questions, the scope and purpose of the evaluation, as outlined above. Findings were developed by triangulating our analysis of the PES data, a review of relevant literature, and interviews with patients and key stakeholders.⁴

³ The original key evaluation question was ‘Is there anything we can learn from the inpatient survey in terms of improving response rates?’ However, following the initial analysis, this was revised to focus on using the interviews and focus group views to identify how to improve response rates.

⁴ See Appendix 1 Methodology for more detail.

We reviewed relevant literature (on survey response for similar types of initiative) and analysed PES data. Findings from our PES data analysis informed the qualitative interview questions and the target groups (youth, Māori, Pacific peoples, and Asian) for the patient interviews.

Interviews were conducted with:

- 27 patients in general practice waiting rooms (7 practices, from the pilot PHO sample).⁵
- 40 patients via two Pacific Island focus groups, one being a youth group of people with disabilities.
- 16 key stakeholders.

In total 83 people were involved in interviews or focus groups. The evaluation fieldwork was undertaken between July and October 2017.

Overall, our approach included:

- Stage 1: reviewing relevant literature.
- Stage 2: analysing PES data and reports from the development and pilot of the survey.
- Stage 3: interviews with 16 stakeholders identified by the Governance Group and the evaluation team.
- Stage 4: interviews with 27 patients in 7 general practice waiting rooms from the Wellington, Christchurch, and Auckland regions.
- Stage 5: two focus groups, with Pacific youth participants, covering 40 people, in Auckland.

The patient experience survey is an anonymous survey, so we could not trace survey results to individuals and therefore could not interview previous respondents, partial respondents, and non-respondents who were invited to complete the PES.

Our approach was to interview current patients in primary care practice waiting rooms, from a sample of the pilot PHOs, and to run two focus groups. We did not ask patients to complete the survey as most were waiting to be seen by their health practitioner. We showed current patients the survey (live on our computer) and asked what would encourage them (and others like them) to open the survey link and complete the survey. Understanding why people are not opening the survey was seen by the evaluation team as key to improving response rates.

⁵ We note that the pilot PHOs do not have a demographic base representative of the total New Zealand population.

3. Findings

We set our findings below.

3.1 The PES response rate is comparable nationally and internationally

The first evaluation question is whether the response rate is about right internationally or can it be improved and, if so, how?

We analysed the PES response data, looked at two similar surveys, and then looked at relevant research literature on the different ways health-related surveys are undertaken.

3.1.1 Response rate of PES data

Analysis of the PES data showed that 28 percent of email invitees and 12 percent of SMS invitees opened the survey link.

The majority of email invitees completed the survey once they start it

Of the 28 percent of email invitees that opened the survey link, 80 percent completed the survey. Therefore, the length and the content of the survey did not appear to be a deterrent.

The SMS completion rate was lower with only 12 percent of the invitees opening the survey link. Of those, 50 percent completed the survey. It is possible that those who are sent the invitation by SMS do not have available data credit to download and respond to the survey.⁶

3.1.2 Response rate to other health-related surveys

We were not able to find a similar general practice patient survey that was run entirely online for comparison. The two surveys discussed here are either primarily run via post or have postal responses as an option.

The quarterly New Zealand National Adult Inpatient Experience survey is based on a selection of adult patients who spent at least one night in hospital. They are sent an invitation via email, SMS or post inviting them to participate in a 20-question survey.⁷

The New Zealand National Adult Inpatient Experience survey had a **response rate of 27–28 percent** over the last four quarters (quarter two 2016 to quarter one 2017). There were 1,809 total responses in quarter one of 2017.

- Email response rates were consistently above **30 percent**.

⁶ Patients we interviewed commented that if the survey invitation was sent to their work phone it would not be an issue, but that they would still prefer to complete the survey on their computer at home. Younger interviewees suggested that if they received free credit as an incentive they might consider completing the survey on their mobile phone, if it did not take too long.

⁷ <https://www.hqsc.govt.nz/our-programmes/health-quality-evaluation/projects/patient-experience/>

- SMS response rates were lower (15–18 percent for the last four quarters).
- **Postal surveys had the highest response rates of around 40 percent**, however the postal response rate has dropped from 48 percent in 2014 to 33 percent in 2017.⁸

The experience of a hospital overnight stay may be more fertile ground for comment, and this could be one reason why the response rate is slightly higher than for the PES.

Overall we found that the PES response rates for email and SMS invites are slightly lower than the New Zealand national adult inpatient experience survey, which is the most appropriate comparator available. That survey has an email response rate consistently above 30 percent, compared with the PES rate of 22 percent invited going on to complete.

SMS completion rates were lower (15–18 percent for the last four quarters) but this still compares well with the PES rate of six percent going on to complete.

The English GP Patient Survey is an annual survey (from 2011–2016 it was run twice a year). It was sent to around 2.16 million patients in 2017 between January and March. The maximum number of questions asked is 60. **The response rate for 2017 was 37.5 percent** (808,332 responses). **It is primarily a postal survey**, with 758,671 of the responses completed on paper and the remaining 49,661 questionnaires completed online (with a small number completed over the phone).⁹

We note that these two surveys have been implemented for a longer period than the PES, which is still being rolled out nationally. The PES response rate may increase over time as people become more aware of the survey.

3.2 Non-response bias

Surveys of a sample of a larger population are prone to bias from a number of sources. A common focus is on non-response bias—there is a possibility that people who do not respond to a survey would give different answers to those who did respond.

Because there is often little information about those who do not respond, survey researchers usually focus on the response rate as a key indicator of survey quality. However, response rates lack both validity and reliability as a proxy measure of non-response bias (Davern 2013).

The Commission investigated the response rates of the New Zealand national adult inpatient experience survey to determine whether these (at the time, around 27 percent) were valid and reliable. The study concluded that the non-responders to the original survey gave responses to the follow-up survey that were similar to the original survey responses. **The report suggested that putting more effort into increasing the response rate of the inpatient experience survey was unlikely to change its conclusions** (Victoria University of Wellington, not yet published but referenced as HQSC 2017).

⁸ <https://www.hqsc.govt.nz/our-programmes/health-quality-evaluation/publications-and-resources/publication/2901/>, last accessed 12 July 2017.

⁹ It was not possible to calculate an online response rate.

3.3 Research on different ways to undertake health-related surveys

We looked at research literature comparing different ways to undertake health-related surveys. A Cochrane systematic literature review by Marcano Belisario *et al.* (2015) compared smartphone and tablet apps as a delivery mode for health-related surveys compared to other modes such as paper, email, and SMS. Fourteen studies were included, covering 2,272 participants. None of the studies reported data accuracy or response rates. The authors found that:

- Data equivalence: in both controlled and uncontrolled settings, the included studies found no significant differences in the mean overall scores between apps and other delivery modes, and all correlation coefficients exceeded the recommended thresholds for data equivalence.
- Time taken to complete a survey questionnaire: in a controlled setting, one study found that an app was faster than paper, whereas the other study did not find a significant difference between the two delivery modes. In an uncontrolled setting, one study found that an app was faster than SMS.
- Data completeness: only reported in uncontrolled settings. An app was found to result in more complete records than paper, and in significantly more data entries than an SMS-based survey questionnaire.
- Adherence to sampling protocols: only reported in uncontrolled settings. Apps may be better than paper but not different from SMS.

The authors concluded that:

- Apps might not affect data equivalence as long as the intended clinical application of the survey questionnaire, its intended frequency of administration, and the setting in which it was validated remain unchanged.
- Findings on the time taken to complete a self-administered survey questionnaire were contradictory.
- Although apps might improve data completeness, there is not enough evidence to assess their impact on adherence to sampling protocols.
- None of the included studies assessed how elements of user interaction design, survey questionnaire design, and intervention design might influence mode effects.
- We should not assume that mode effects relevant to other delivery modes apply to apps running on consumer smart devices.

Slater and Kiran (2016) compared email and in-situ survey (via tablet) patient characteristics and responses in primary care settings in Canada. The two methods were delivered over separate time periods. There was a **19.8 percent response rate for email surveys**, and a **55.9 percent response rate for those surveys delivered in the waiting room**. This

suggests that tablets may be a good option.¹⁰ However, the authors found that this method resulted in a higher proportion of incomplete surveys.

Patients responding to the e-mail survey were more likely to live in higher-income neighbourhoods,¹¹ to be between the ages of 35 and 64,¹² and to be female.¹³ They found no significant differences related to self-rated health between the two groups.

There were few differences in responses to the survey questions between the two survey methods and any differences were explained by the underlying differences in patient demographic characteristics.

Slater and Kiran suggest that respondent demographic characteristics might differ depending on the method of survey delivery, and these differences might affect survey responses. Methods of delivering patient experience surveys that require electronic literacy might under-represent patients living in lower-income neighbourhoods.

The majority of people we interviewed preferred email to tablets or smartphones. Patients said that they would like to receive an SMS survey invitation request but that they would prefer to complete the survey on their computer. When asked about completing via in-situ survey tablets in practice rooms, most did not want to stay back and complete a survey after their appointment unless there was an incentive to do so. This response is consistent with the Commission's trials of tablets. To overcome this reluctance to stay back, practices offered the tablets during flu vaccination season while patients have to wait 20 minutes following their appointment.

3.4 Can the PES response rate be improved, and if so how?

We believe the response rate can be improved. The Edwards *et al.* (2009) Cochrane systematic review looked at ways to increase response rates to electronic questionnaires.¹⁴

The odds of response were increased by more than a half using:

- Incentives.
- Shorter e-questionnaires, simpler language.
- A statement that others had responded.
- A more interesting topic.

The odds of response increased by a third using:

¹⁰ Tablets in-situ were trialled in the PES rollout but there were issues with the type of tablet used (see Section 1.1.2 for more detail).

¹¹ P = 0.0002.

¹² P = 0.0147.

¹³ P = 0.0434.

¹⁴ Cochrane systematic review and meta-analysis included 32 trials (Edwards et al 2009). For more statistical data on this, see Appendix 4.

- A lottery with immediate notification of results.
- An offer of survey results.
- A white background.

The odds of response were increased with:

- Personalised e-questionnaires.
- Using a simple header.
- Using textual representation of response categories.
- Giving a deadline.

The odds of response **tripled** when:

- A picture was included in an e-mail.

The odds of response were reduced when:

- ‘Survey’ was mentioned in the e-mail subject line.
- The e-mail included a male signature.

Our patient interviews and focus group feedback support the findings in the Cochrane review on ways to increase response rates to electronic questionnaires, including how to ‘nudge’¹⁵ people using positive reinforcement and indirect suggestions. We asked interviewees¹⁶ what would encourage them to open the survey link and start the survey. The most common unprompted responses were:

- An invitation that looks more ‘official’ and authentic—patients need to be confident that it comes from a trusted source and that individual information will be held confidentially, away from the practice.
- Improved format and language of the invitation.
- Knowing it will help improve the health system (especially for their family).
- Incentives (monetary and non-monetary).

We expand on these responses below.

3.4.1 The survey invitation needs to look more ‘official’

The way the PES is packaged could be leading to the low response rate. Interviewees highlighted the need for reassurance that the survey is legitimate and that the link is from a reliable and secure source. There is a growing use of email to request consumer feedback on services and products. This, along with an increase in spam and phishing emails, means that it is not always clear which are ‘legitimate’ emails. Interviewees commented on ‘erring on the side of caution’ and if in doubt not clicking the survey link.

If [it] looks less like spam and it came from my doctor.

¹⁵ See Wilk 1999.

¹⁶ Because of the response rate data, we targeted our patient engagement in waiting rooms towards youth and non-Europeans. Our focus group sessions were targeted at Pacific youth.

General practices and the Ministry of Health were 'trusted', and patients thought having their logos or brands on the invitation and on each survey page would reassure them that they are accessing a 'trusted site'. Although general practice logos are included on the invite, some patients were unsure about the other logos (from Cemplicity and the Commission), and these caused some confusion.

Some interviewees added that if they received an SMS from their general practice saying it would be sending a survey link to them by email, they might be more likely to respond to the survey.

3.4.2 Improved format and language of the invitation

Use of photos or images in the invitation and survey could encourage people to start. The Commission is already exploring possibilities such as the use of images.

We asked patient and focus group interviewees whether images or pictures would encourage them to open the survey link. About half said yes, especially if these reflected their age or cultural background.

Yes, images of Samoan family. Visual prompts are good. Samoans are visual people.

The same interviewee qualified their statement by adding that they would only complete the survey if it was provided as hard copy, done in a waiting room, and would take 10 minutes maximum.

Focus group attendees thought images would encourage them to open the survey link, 'images of people like me and my peers', but not necessarily to complete the survey.

However, most patient interviewees thought it would make no difference. Some commented that images chew up data to download, and that you needed a smartphone to view them.

Many comments focused on the wording and length of the email message.

The important thing is that the language is meaningful and I can understand it. There are lots of words in there I don't know what they mean.

Too much text in the opening email version. SMS is quicker and to the point.

Interviewees commented that although they liked the succinctness of the SMS message, they would probably not open the survey using their mobile phones.

3.4.3 Knowing the survey will help improve the health system

Interviewees commented that if they knew the survey was going to improve the health system (especially for their family), it might encourage them to start the survey. About half of those we interviewed said they would like to receive feedback on how the survey is being used to improve patient experience through the health system. Most qualified this by saying that they did not want frequent updates or to receive a lengthy email.

3.4.4 Incentives could encourage people to open the link

Brown *et al.* (2016) investigated whether incentives yielded higher response rates to emailed patient experience surveys in the United States. Patients were offered a 5 USD incentive

(either cash or an e-certificate) for the completion of the survey. Those randomised to the incentive were significantly more likely to respond to the survey than those in the control group [57 percent versus 50 percent]. Rates of completion of the survey were similar, but higher for the incentive group [99 percent incentive versus 97 percent control]. Those randomised to the incentive condition that completed the survey were more likely to prefer a cash incentive rather than the e-certificate (69 percent of the incentives delivered to web respondents were in the form of cash).

Younger patient we interviewed thought incentives might encourage them to start the survey, but that this would need to be clear and upfront in the email invitation. Suggestions included an iTunes card, mobile phone data credit, and a discount for the next doctor's visit. Focus group respondents thought the offer of food or discounted doctors' visits might encourage them to start the survey.

3.5 There are opportunities to increase response rates in certain populations

The second question we were asked to answer was to examine what would be the best way to increase response rates in certain populations, in particular Māori, Pacific peoples, youth, and those from low socio-economic backgrounds.

Firstly we examined the PES data (see Appendix 2 for further details) and found that:

- Younger people were less likely to start or complete the PES than older people.
- Asian, Middle Eastern, Latin American, African, Māori, and Pacific patients did not complete the PES at the same rate as those who identify with European ethnicity.
- Women were more likely to start or complete the survey than men.

While the unpublished report referenced as HQSC 2017 suggests that putting more effort into increasing New Zealand national adult inpatient experience survey response rate might not change the conclusions, our analysis showed that there are some groups (non-European and youth) that are under-represented in the PES.¹⁷

3.5.1 E-surveys may not be the best way to capture some responses

In addition to the material in Section 3.4, we discuss possible ways to improve response rates in certain populations. These were suggested in our interviews with patients, focus groups and stakeholders.

A common response from Māori, Pacific peoples, both young and older patients was that if the mode of invitation or mode of delivery were different, they would respond to the survey. Some added that they would be more likely to complete the survey if it were in person, by phone or hard copy.

¹⁷ It is important to note here that that the majority of responses to date are from the pilot PHO group, which is not demographically representative of New Zealand. However, as the survey rolls out nationally, this will change.

Think it's important to participate to improve health services, like the idea of better joined up services. I have great trust in the practice, if they want me to fill out survey, I'd do it, but not by email or on [txt] phone. Person surveying me like you are now.

Feedback from the focus group of Pacific young adults acknowledged that most could see the value in gathering information to help improve health services, but most agreed that an online survey would not be a good approach to capture the views of Pacific peoples.

Pacific people like to talk rather than write out their responses.

If my opinion matters this is not a good way to capture it.

The focus group respondents were mostly concerned that if the Ministry and the Commission were sincere about capturing the voices of youth, Māori, and Pacific peoples they should consider other options such as using a platform like Facebook, or face-to-face surveying once or twice a year in person at the practice patients attend, or other community-based groups where people usually gather.

Use Pacific health providers, with a translator and a hard copy of the survey and an interviewer, straight after patient's appointment with the nurse or doctor. Interview in a separate room.

Use the church or community groups – target age groups as a sub group. Provide refreshments... Privacy issues, health issues [are] not an issue for Pacific peoples. [Promote at] Housie or Pasifika events to raise awareness of survey 'to plant the seed'.

These options have already been examined by the Commission. They have been discounted as they are difficult to operationalise using the current survey methodology and have significant financial implications for the Commission. A key stakeholder suggested that health service practices may wish to undertake these activities as a supplement to the PES.¹⁸

Key stakeholders acknowledge the work that was done during the cognitive testing with a range of cultural groups. They suggest that further work could be done to encourage certain groups to start and complete the online survey. They also suggest supplementary approaches to capture groups who, regardless of upfront improvements to the survey, would still not engage.

There are real trust issues with Māori and Pasifika, it has been proven time and time again a survey is not the right mode... need to go and share kai, sit with people and talk. The terminology and language is wrong, people don't understand primary care or secondary – they know family doctor and hospital terms.

One stakeholder added that Māori, Pacific peoples, and especially immigrant and high-needs patients are likely to assume they are being assessed and not the service provided, because of the way it is currently worded.

For those who are new to New Zealand and fear for their immigration status, any survey or questions by what is seen as authority they are very, very cautious of. It is seen as if they are being tested. And if their English is not so good, they fear 'failing' something.

¹⁸ Email correspondence with the Commission, 5 December 2017.

The disabled youth Pacific focus group said that they were often called on to respond to surveys. They were very clear that for youth engagement surveys should be short and snappy, especially if asked to respond to a survey by mobile phone. Most of them said they never use email so would not get the link in that way.

We only do things that are very fast – we don't like to linger. Needs to be quick and done. Geez – that survey we are looking at is way too long – I'd never do that.

3.6 On average it takes people 15 minutes to complete the survey

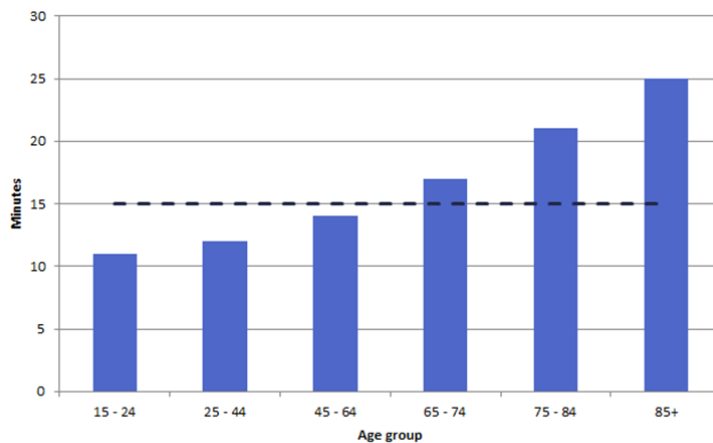
In this section, we respond to the third evaluation question. Using the PES data, we outline how long it takes for most people to complete the survey by age, ethnicity, and sex.

Overall, the median time to complete the survey was 15 minutes (excluding those respondents who took over 24 hours).

3.6.1 Time taken by age

The median time taken to complete the PES increased with age.

Figure 1 Median time taken to complete the PES, by age

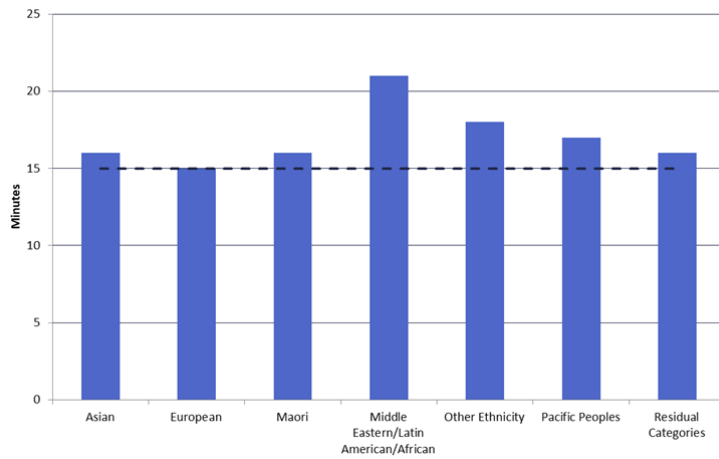


Source: Sapere analysis

3.6.2 Time taken by ethnicity

Those who identified as European completed the PES the fastest (an average of 15 minutes), while those of Middle Eastern, Latin American, or African ethnicity had an average completion time of 21 minutes.

Figure 2 Median time taken to complete the PES, by ethnic group¹⁹

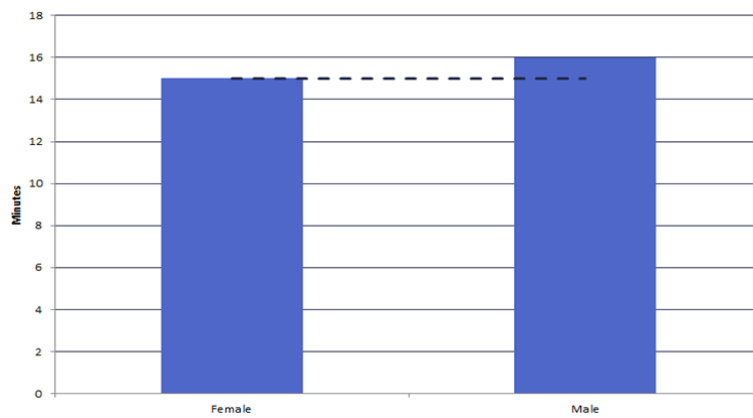


Source: Sapere analysis

3.6.3 Time taken by sex

The time taken was similar for females and males.

Figure 3 Median time taken to complete the PES, by sex



Source: Sapere analysis

¹⁹ While some people identified with more than one ethnicity, for the purposes of this analysis we only used the first identified ethnicity.

3.7 When people do not complete the survey, at what point are they most likely to drop out?

To answer the fourth evaluation question, we analysed the PES data to identify when people do not complete the survey, the point at which they are most likely to drop out and whether there are any demographic differences. This data is from six survey rounds, run between February 2016 and May 2017.

Our definition of ‘starting’ the survey is clicking through the invitation link to the survey website. Our definition of ‘completing’ the survey is based on a field (‘is Complete’) from Cemplicity data. However, **it is important to note that some ‘incomplete’ responses will still contain responses to most of the questions.**

3.7.1 The completion rate is increasing over time, due to an increase in email invites

These response rates should be interpreted in the context of the sample methodology, which is essentially census-seeking to get as many responses as possible among all eligible contactable patients. This means the starting sample size is large and results in a large count of completed surveys. For context, in the prediction of election results the recommended minimum sample size in New Zealand for polls is 500 people.²⁰ In addition, the method of inviting all eligible adults receiving services, rather than the enrolled population, deliberately over-samples high users of health services.

As seen in Table 1 and Figure 4, the completion rate for those invited by email was 22 percent over all six quarters. The SMS completion rates were much lower than the email completion rate.

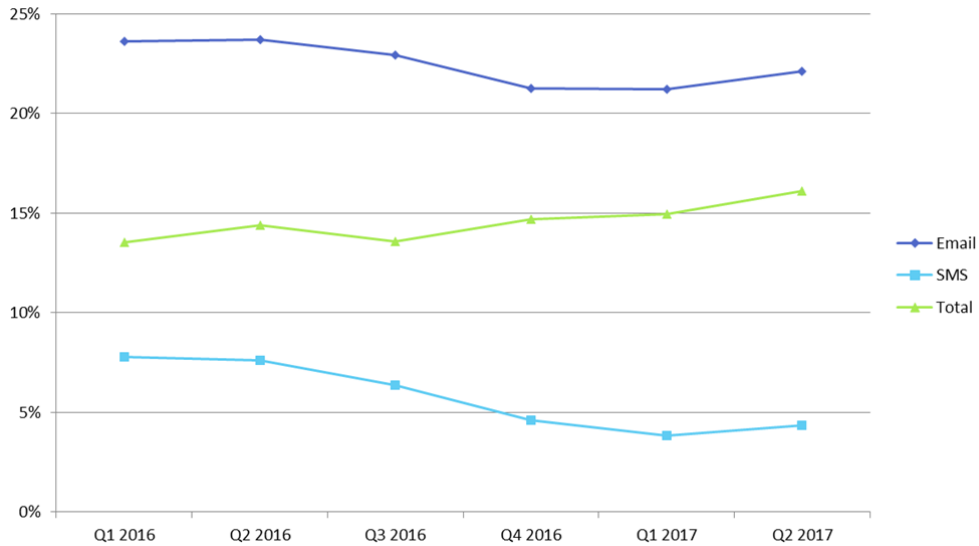
Table 1 Number and percentage of PES responses by mode of invitation

Level of completion	Email (No.)	Percentage of those invited (email) (%)	SMS (No.)	Percentage of those invited (SMS) (%)
Invited	43,055	-	36,657	-
Started	11,902	28	4,248	12
Completed	9,528	22	2,133	6

Source: Sapere analysis

²⁰ <http://www.researchassociation.org.nz/Resources/Documents/Political%20Polling%20Code%202014.pdf>

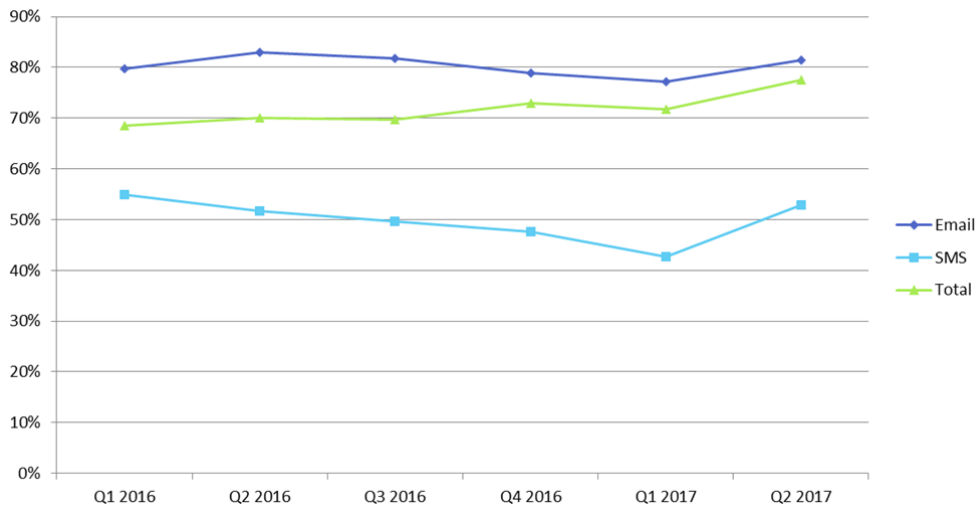
**Figure 4 Percentage of survey invitees that completed the survey by mode of invite
Quarter 1 2016–Quarter 2 2017**



Source: Sapere analysis

As seen in Figure 5, around 80 percent of those invited by email who start the survey did complete the survey. Completion rates for SMS were much lower.

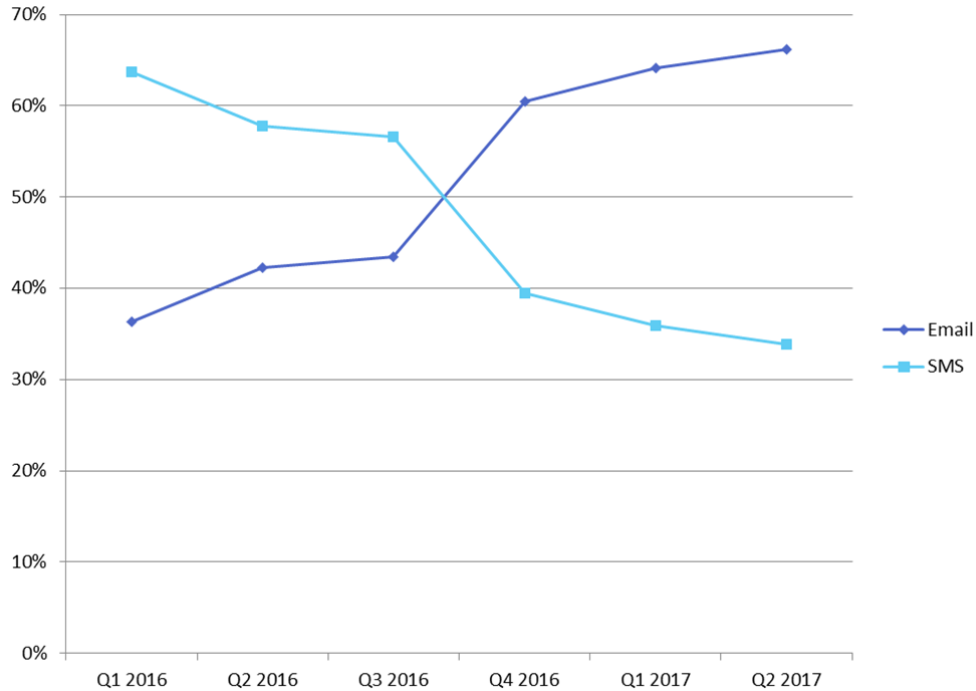
Figure 5 Percentage of completed survey from those that started the survey by mode of invite, Quarter 1 2016–Quarter 2 2017



Source: Sapere analysis

There has been a slight increase in completion rates as a combined total of email and SMS (the green line in Figure 4 and Figure 5). This is because SMS invites, that have lower response and completion rates, have decreased over time (see Figure 6).

Figure 6 Email and SMS invites as a percentage of total invites, Quarter 1 2016–Quarter 2 2017



Source: Sapere analysis

3.7.2 At what stage do people drop out of the survey?

Data was not available to analyse at what point people drop out of the survey by mode (SMS versus email). Therefore, we have only categorised the data by level of completion (i.e., those that were ‘invited’, ‘started’ and ‘completed’) of the survey. This section will be influenced by the higher number of those not starting and dropping out when responding via SMS.

Table 2 (overleaf) shows that the major drop-out stage is where people are invited, but do not click on the link. 80 percent of those invited do not click on the link.

Once people clicked on the link, 13 percent did not answer a single question before exiting out of the survey (2,136 out of 16,156 people who started).

83 percent of those who answer the first question go on to complete the survey (11,656 people completed the survey out of 14,020 people who answered at least one question).

Table 2 Percentage of PES respondents by level of completion, Quarter 1 2016–Quarter 2 2017

Level of survey completion	Total	Percentage of those invited (%)	Percentage of those started (%)	No. of people lost per stage (%)	Percentage of total invited lost (%)
Invited	79,712	n/a	n/a	n/a	n/a
Started	16,156	20	n/a	-63,556	-80
Answered at least one question	14,020	18	87	-2,136	-3
Got to the modular questions and answered the medication module ^{1,3}	12,731	16	79	-1,289	-2
Got beyond the modules ^{2,3}	12,429	16	77	-302	-0.4
Completed ³	11,656	15	72	-773	-1

Source: Sapere analysis

1. Note: the medication module question appears first; the second module question asks an additional six questions (see Section 1.1.2 for more detail).
2. “Got beyond the modules” is defined as those who answered the questions that determine how many modules respondents will need to go on and complete.
3. The last three categories will have nearly complete responses, as the modular questions are asked after the main body of the survey.

Those identifying as European, Māori, or Pacific were more likely to answer at least one question. Breaking down the 4,500 incomplete survey responses (Table 3), you can see:

- Those identifying as European, Māori, or Pacific are more likely than each other ethnicity to answer at least one question, whereas Asian, Middle Eastern, Latin American, African, and ‘other’ ethnicities are more likely to answer no questions.
- Those aged 15–44 are more likely than each other age group to answer at least one question, whereas those aged 44 and over are more likely to answer no questions.

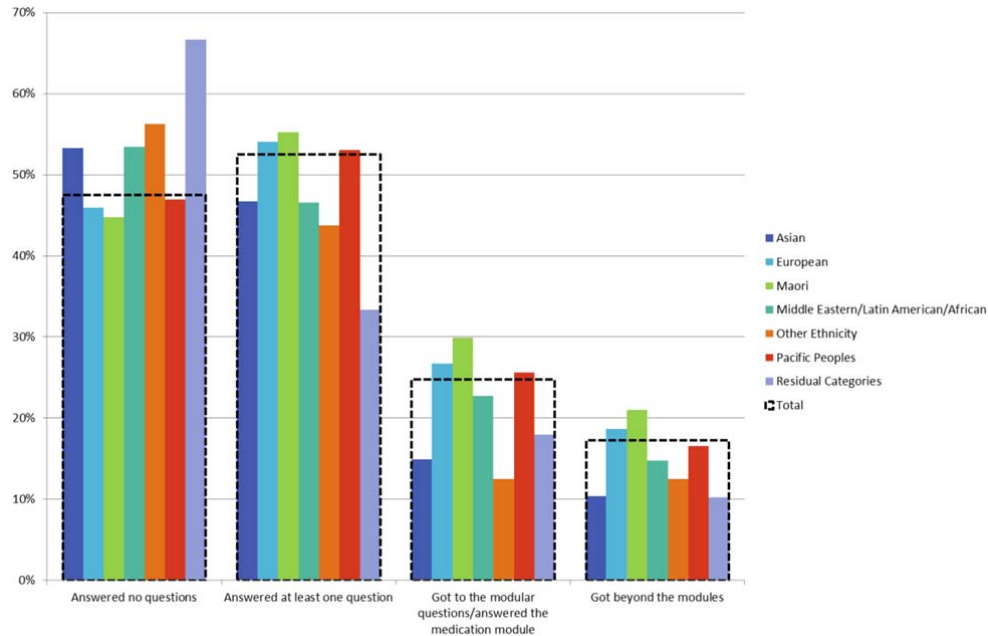
Table 3 Number of incomplete PES responses by level of completion and ethnic group, Quarter 1 2016–Quarter 2 2017 (n=4,500)

Level of survey completion	Asian	European	Māori	Middle Eastern/Latin American/African	Other Ethnicity	Pacific peoples	Residual Categories
Answered no questions	389	1,421	145	47	9	99	26
Answered at least one question	341	1,671	179	41	7	112	13
Got to the modular questions/ answered the medication module ¹	109	825	97	20	2	54	7
Got beyond the modules ²	76	577	68	13	2	35	4

Source: Sapere analysis

1. Note: the medication module question appears first; the second module question asks an additional six questions (see Section 1.1.2 for more detail).
2. “Got beyond the modules” is defined as those who answered the questions that determine how many modules respondents will need to go on and complete.

Figure 7 Percentage of incomplete PES responses by level of completion and ethnic group, Quarter 1 2016–Quarter 2 2017 (n=4,500)



Source: Sapere analysis

1. As a percentage of incomplete responses.
2. ‘Answered no questions’ and ‘answered at least one question’ for each ethnicity will add up to 100%.

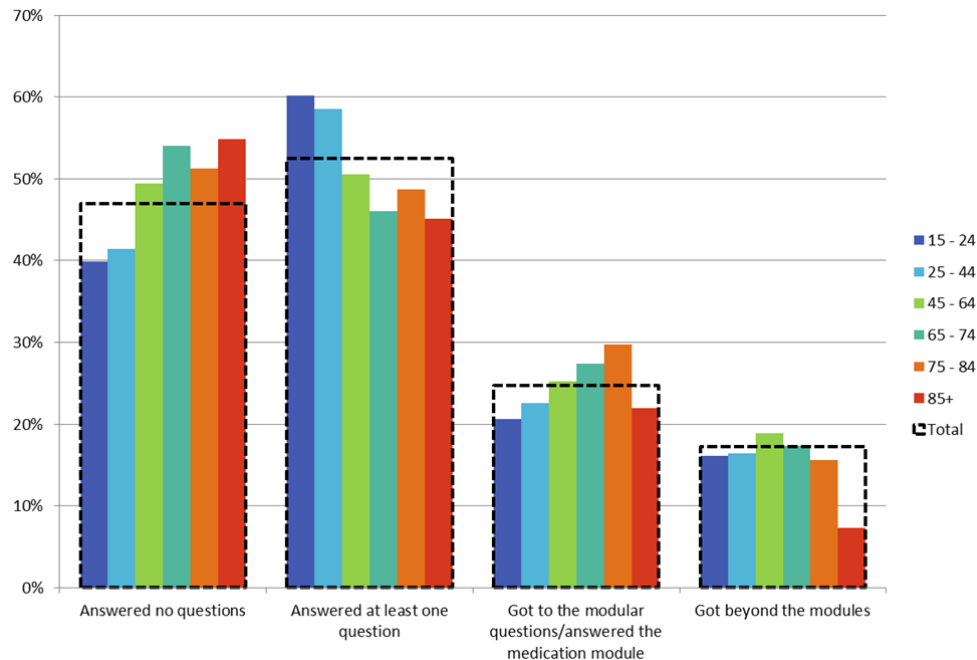
Table 4 Number of incomplete PES responses by level of completion and age group, Quarter 1 2016–Quarter 2 2017 (n=4,496¹)

Level of survey completion	15–24	25–44	45–64	65–74	75–84	85+
Answered no questions	151	515	829	412	181	45
Answered at least one question	228	727	848	351	172	37
Got to the modular questions/answered the medication module ²	78	280	424	209	105	18
Got beyond the modules ³	61	204	317	132	55	6

Source: Sapere analysis

1. There were 4 incomplete responses without an age entered; therefore the total responses here total 4496, rather than 4,500.
2. Note: the medication module question appears first; the second module question asks an additional six questions (see Section 1.1.2 for more detail).
3. “Got beyond the modules” is defined as those who answered the questions that determine how many modules respondents will need to go on and complete.

Figure 8 Percentage of incomplete PES responses by level of completion and age group, Quarter 1 2016–Quarter 2 2017 (n=4,496¹)



Source: Sapere analysis

1. There were 4 incomplete responses without an age entered; therefore the total responses here total 4496, rather than 4,500.
2. As a percentage of incomplete responses
3. 'Answered no questions' and 'answered at least one question' for each age group will add up to 100%.

3.7.3 After how long do people drop out of the survey?

The more time they spent on the survey, the more likely they were to complete it

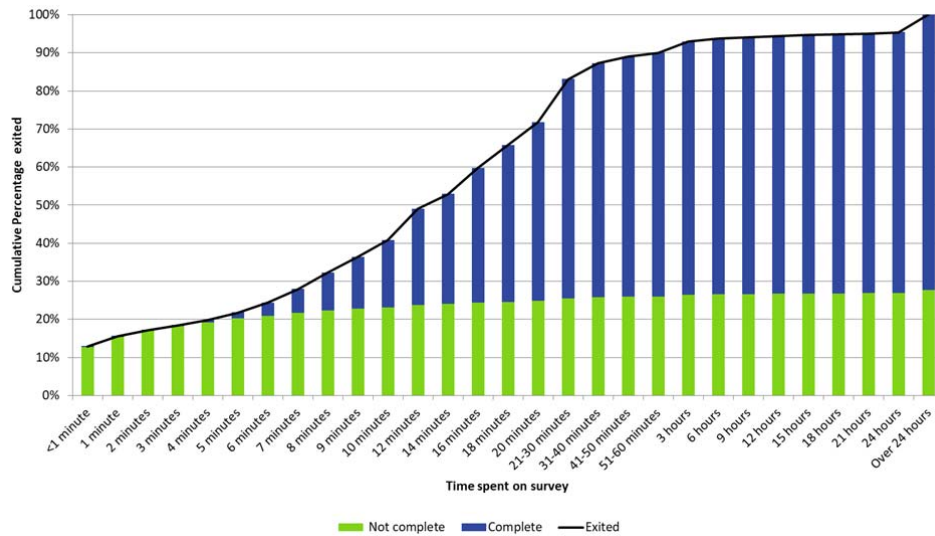
Figure 9 shows the trend of respondents as they exit the survey over time. It indicates that most of those who did not complete the survey abandon it sooner rather than later (i.e., if the survey length deterred them, then that was a decision they made early). The findings suggest that efforts to encourage completion of the survey should focus on those who exit within the first five minutes.

When looking at those who completed the survey against those who did not, we found that:

- Nearly half of all those who did not complete the survey exited in the first minute. While it is not possible to analyse this according to response mode (email versus SMS), it is likely that a lot of the quick exits were by those reaching the survey through the SMS link.
- In the first 5 minutes, almost three quarters of those who eventually exit without completing had done so. This increased to 83 percent by the 10-minute mark.

- Among those who answer at least one question, once respondents spend over six minutes on the survey they were 75 percent likely to complete it. The completion rate increased to over 90 percent at 10 minutes.

Figure 9 Survey completion rate by the time spent on survey



Source: Sapere analysis

3.7.4 How does the number of modules respondents need to complete affect completion rates?

Each additional module (respondents can qualify for up to seven extra modules in addition to the standard questions) takes respondents, on average, two additional minutes to complete.

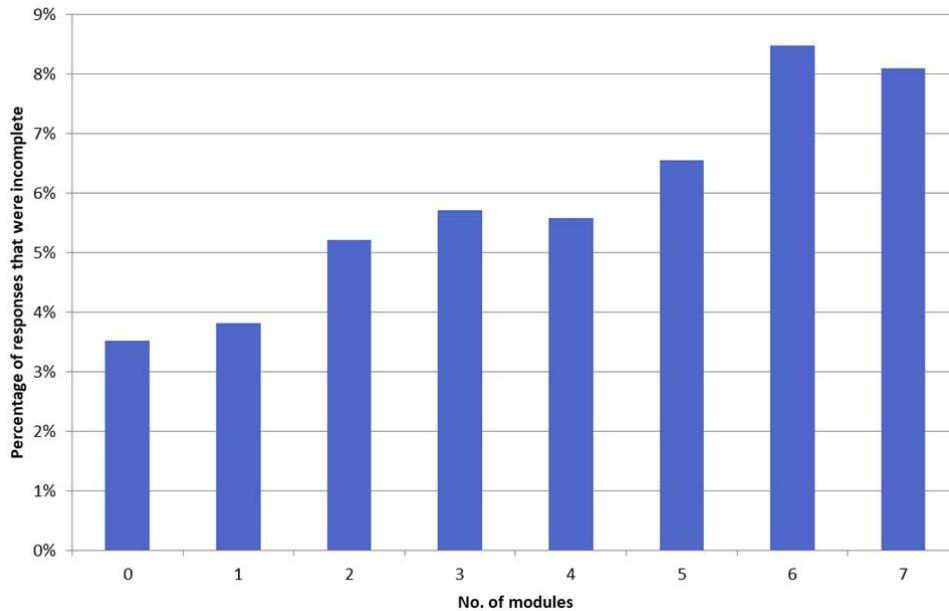
For those who answered the modular questions:

- 18 percent of respondents qualified for 0–2 modules
- 60 percent of respondents qualified for 3–5 modules
- 22 percent of respondents qualified for 6–7 modules

Figure 10 shows the proportion of respondents who were eligible for extra modules (i.e., they completed the modular questions), but did not go on to complete the survey. The non-completion rate increased with the number of modules respondents needed to complete.

Figure 10 indicates that while there is a natural increase in non-completion the more modules a patient is asked to respond to, the proportion who do complete them is still very high; one possible reason is that the additional module questions are relevant to their experience, so they do go on to complete the survey.

Figure 10 Percentage of incomplete PES responses by number of modules, Quarter 1 2016–Quarter 2 2017



Source: Sapere analysis

3.8 Interviewees were largely positive about the questions

We examined our interview responses to answer the fifth evaluation question, ‘What options are there to reduce survey drop-out rate, and would shortening the survey increase the number of people completing it?’

The majority of patients we interviewed in practice waiting rooms were largely positive about the questions and, as previously mentioned, the majority of email invitees (80 percent) complete the survey once they start it. This means that shortening the survey or revising the questions may not increase the number of people completing it.

Participants who were less positive, including the youth-with-disabilities focus group, thought the questions were too long and the language too difficult to understand. We were informed that this group does surveys frequently, so this is not about resistance to surveys per se, but rather how they are presented and what is expected.

Interviewees from the university student focus group suggested that removing the number of questions and replacing the progress line with a colour bar (green to red) may be less off-putting. Some participants in this group suggested using a 1 to 10 scale to make the survey quicker by reducing the need to write.

3.9 The questions most useful for informing quality improvement are the qualitative responses from patients

Stakeholders had a wide variety of opinions about the survey and how it is designed and delivered. There was a minority of key stakeholders who felt the survey was working well as it is, albeit acknowledging there is a need to reach more non-Europeans and youth. The majority felt the current format and distribution method may be off-putting for some, and there are areas for improvements to make the PES more accessible.

In terms of helping with quality improvement, stakeholders suggested that the most useful information for quality improvement is the qualitative responses in the survey. For example, if a specific practice receives a negative score, then the practice wants to know what the issue is, so they value qualitative feedback to better understand the negative score. The evaluation did not identify any questions or topics that the survey does not currently include but should.

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Appendix 1 Methodology

Desk review

We undertook a desk review of literature to identify international standards and potential lessons for improving response rates. Literature was identified using key words in sources such as PubMed, Cochrane Research Library, and Google Scholar.

The desk review of relevant national and international literature gave us an opportunity to examine international experiences for data on response rates, length of surveys, and the gender, ethnicity, and geography of responders and non-responders.

We also identified evidence linking patient experience surveys and quality improvements. While linking the PES results with any quality improvement actions was out of scope, we were still able to use published literature to see if other jurisdictions' surveys have led to quality improvements, what the content of those surveys was, and whether that content was paralleled in the PES.

Analysis of PES data

We analysed survey completion and response rates by:

- Age
- Sex
- Ethnicity
- PHO

Breaking down the data by these sections allowed us to explore whether:

- Different sections have different response issues.
- There is any trend in completion rate over time.

We also compared completion rates to the inpatient survey to get a benchmark comparison.

We examined concerns about known segments such as the response rates of Māori from either the administrative data or the survey data. This helped us identify whether a particular question could be omitted for half the sample, hence reducing the length, and still allow a statistically significant finding for the sample collected.

Definitions

- While some people identified with more than one ethnicity, for the purposes of this analysis, we only used the first identified ethnicity as coded by the practice. The practice-coded ethnicity data was more complete than the patient-reported ethnicity.
- Where ethnicity and gender were not available from practice data, we used patient answers.

Time period

We have analysed the last six quarters of the survey. Patients were invited to participate in the survey when they visited a GP or a nurse during the survey week in each quarter.²¹ The number of general practices participating grew each quarter.

Combining data sets and excluded data

Analysis used two different extracts from the survey data, which we combined. Combining the datasets resulted in slight differences in demographic categories and total counts, summarised in Table 5.

Due to the types of data in each dataset, some analysis is performed on one dataset and others on the combined dataset. Due to the small differences, this should not affect the comparability of the results to a significant degree.

Some records did not have all demographic information (i.e. age, gender, and ethnicity) available. Therefore, some responses are excluded from some or all analyses.

Surveys can be completed in a variety of modes (online responses to email or SMS invitations, or on tablets in a general practice). Tablet responses are excluded from this analysis as they often had missing data. Tablet responses represent a small number of records (420) compared with those surveys completed through email or SMS. Therefore, excluding the tablet responses should not affect the results to a significant degree.

Table 5 Dataset numbers

	Invited	Started	Completed
Dataset 1	n/a	16,156	11,656
Dataset 2	79,712	16,150	11,661
Combined dataset after matching	79,672	16,143	11,652

Source: Sapere analysis

Interviews

Key stakeholder interviews were undertaken from 8 August to 6 September 2017, with representatives from GPNZ, RNZCGP, the Commission, the Ministry, Cemplicity, and Wellington, Canterbury, and Auckland PHOs and DHBs.

²¹ Survey weeks in 2016: Q1, 10–16 February; Q2, 2–8 May; Q3, 8–14 August; Q4, 31 October – 6 November. Survey weeks in 2017: Q1, 7–13 February; Q2, 1–7 May.

Twenty-seven patients were interviewed in waiting rooms from seven practices in the Wellington region, Christchurch, and Auckland. These took place from 8 August to 7 September 2017.

We used a purposive sampling approach. Youth, Māori, Pacific peoples, and Asian patients were approached by the interviewer and invited to participate in a brief interview while they waited for their appointment. On completion of the interview, patients were offered \$10.

Table 6 Demographics of patients interviewed

Sex (n=27)	
Female	16
Male	11
Age (n=26) ²²	
Less than 17 ²³	1
17–24	6
25–34	7
35–44	4
45–54	5
55–64	1
65 or over	2
Ethnicity (n=27)	
Māori or Māori/European	5
Pacific or Pacific/European	6
European/New Zealand European or European and other (but not Māori or Pacific)	9
Asian	6
Other	1

²² One participant did not provide age.

²³ Parent present and agreed for child to participate.

Ethnicity (n=27)

Middle Eastern/Latin American/African	0
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Analysis of qualitative data

We used a short interview guide for our waiting room interviews. A semi-structured interview is a qualitative method of inquiry that uses a set of open questions to explore particular themes and issues relevant to the evaluation. It does not limit respondents to a set of pre-determined answers, but instead prompts key stakeholders to explore the context and pursue issues that may not have been raised. We undertook thematic analysis of all interview responses.

The interviews with patient consumer stakeholders were conducted in seven practices from the Auckland, Wellington, and Christchurch regions. We showed the email invitation to participate in the survey, and an electronic version of the PES.

Interviews with other key stakeholders and subject matter experts were undertaken by phone.

Focus group sessions

Following the initial analysis, we agreed with the client to replace the pop up survey (online poll) with two focus groups in Auckland. We used a snowballing approach for our focus groups. We approached a Pacific student group based at the University of Auckland, who agreed to participate in the evaluation. Sixteen students participated in the focus group, which was held on 1 September.

A second focus group involved 24 Pacific youth with disabilities, aged from 16 to 20 years.

Appendix 2 General survey findings

This appendix contains findings from the survey data analysis that do not directly answer the key evaluation questions, but still provide useful information. The section looks at the following, separated by age, ethnicity, and gender:

- Invited, started, and completed statistics
- Standardised rates
- Mode of invitation (email vs. SMS)

Age

- More respondents aged 45 and above are invited to the survey than the national demographic – this finding is expected as older people are more likely to visit a doctor/nurse, the basis for invitation to the survey.
- Those aged 65+ are more likely to start the survey than any other age group, particularly those aged 65–84 years.
- Respondents in the 15–24 and 25–44 age groups are less likely to start the survey.
- Broadly, this pattern is similarly reproduced at later stages in the survey process, although the 15–24 group is significantly less likely to complete after starting than other age groups.

Table 7 contains the raw numbers and/or percentages of those respondents who were invited, who started, and who completed the survey.

The column 'enrolled population' shows the proportion of the total enrolled population for each demographic, so this column sums to a total of 100 percent.

- The next columns, 'invited' and 'no. invited', provide the number and proportion of the enrolled population in each demographic that is invited to the survey, demonstrating how older age groups are more likely to visit a GP/nurse and therefore be invited to complete the survey.
- The column 'started' provides the proportion of those invited in each demographic who start the survey; while the final column provides the proportion of those who start in each demographic that go on to complete the survey.

Table 7 Invited, started and completed by age group

Demographic	Enrolled population (5)	Invited (%)	No. invited	Started (%)	Completed (as proportion of started) (%)
15–24	15.6	3.2	8,479	10.6	58.2
25–44	33.2	4.5	24,712	15.7	67.9
45–64	32.8	5.2	28,699	21.1	72.4
65–74	10.6	6.4	11,343	29.8	77.6
75–84	5.6	5.5	5,144	31.7	78.5
85+	2.2	3.2	1,181	23.5	70.5
All	100.0	4.8	79,558	20.3	72.2

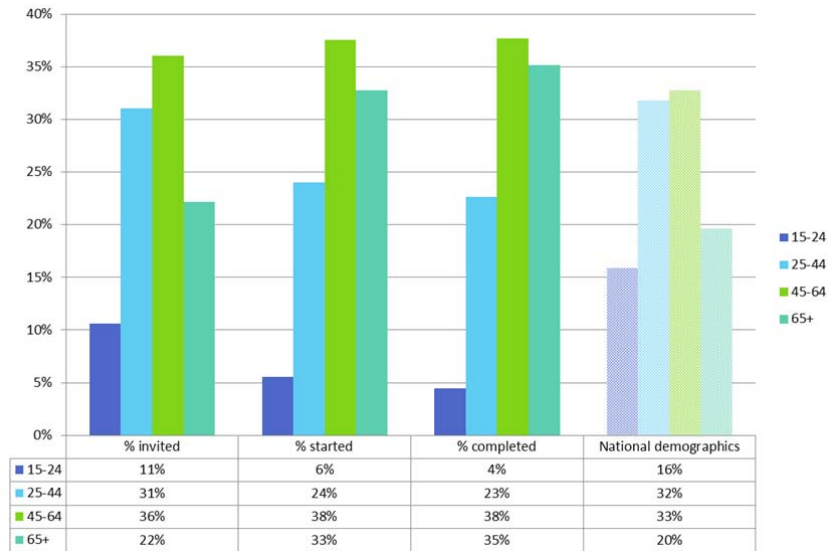
Source: Sapere analysis

Does not include 114 invited respondents that had no age identified.

Figure 11 shows the age group spread for those who are invited to the survey, those who start the survey (by at least clicking on the link), and those who go on to complete the survey. For each stage, the percentages will add up to 100. This is why for certain age groups it appears the percentage is increasing across each stage: some age groups are more likely to start and/or complete the survey.

The chart also shows the national demographics of the population enrolled in any PHO across New Zealand (not including those under the age of 15). These percentages will also differ slightly from Table 7, which contains the percentages of the population enrolled in participating PHOs only.

Figure 11 Percent invited, started and completed, by age



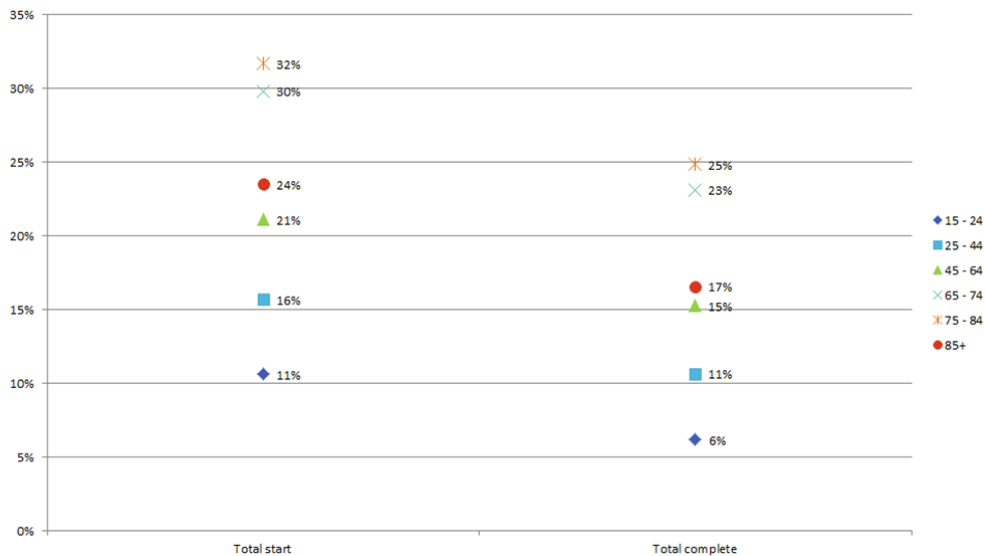
Source: Sapere analysis

1. National demographics are taken from the total enrolled population across New Zealand, therefore will differ from Table 7

We have grouped those aged 65+ together to match the grouping that was available for the national demographics.

Figure 12 displays the same data in a different way. The chart follows each age group through the survey. In other words, within each age group, 100 percent will be invited to the survey, but this will drop as not everyone will start or complete the survey.

Figure 12 Percent started and completed, by age



Source: Sapere analysis

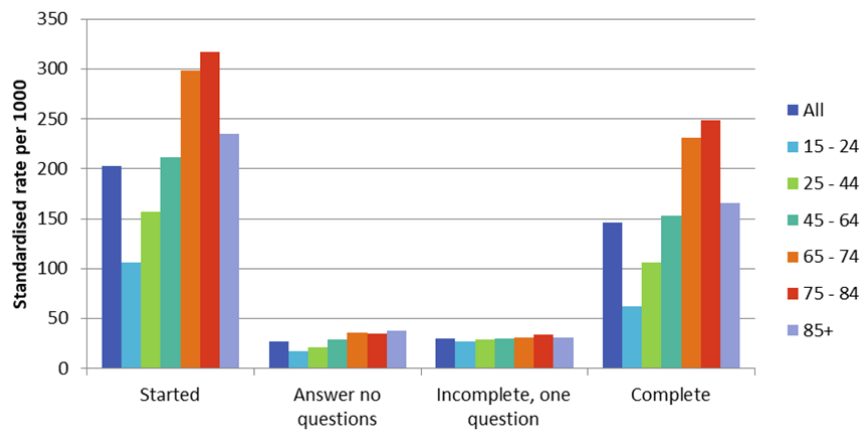
1. As a percent of those invited in each age group.

Standardised rates

From Figure 11, you can see that people aged 44 and under are under-represented compared to the national demographics. However, this is expected; the older people get, the more likely they are to visit the doctor.

This is where standardised rates are helpful. Standardised rates take into account differences between populations, for example, older people are more likely to visit the doctor. When you look at Figure 13, it still shows the same pattern; the older respondents get, the more likely they are to start and complete the survey (this then drops again in the 85+ bracket).

Figure 13 Standardised rates, by age

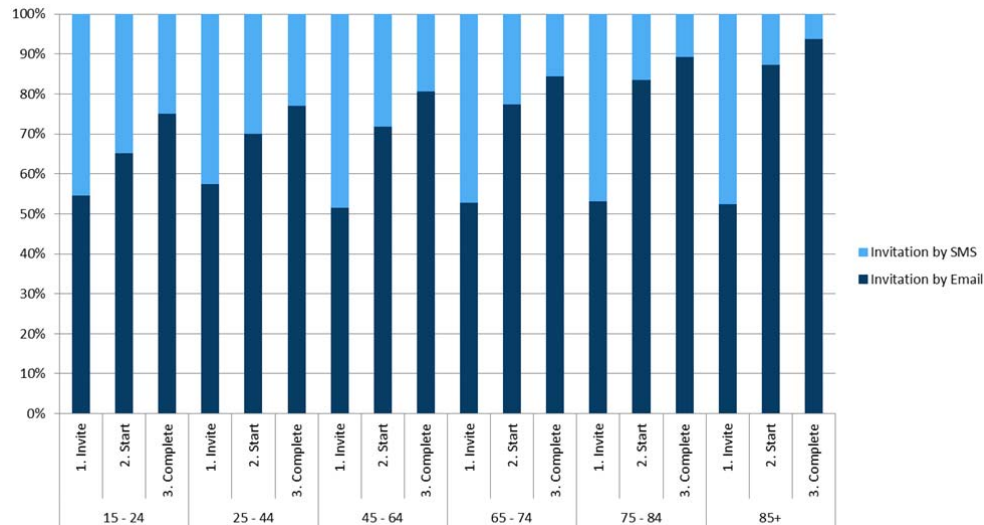


Source: Sapere analysis

Mode of invitation

Figure 14 shows how many respondents were invited, started and completed the survey, by mode. While the mode of invitation is fairly evenly split between email and SMS, respondents were more likely to start and complete the survey through email. Additionally, the proportion of those starting and completing the survey via email increased with age.

Figure 14 Mode of invitation, invited, by age



Source: Sapere analysis

Ethnicity

- Europeans were over-represented in those who were invited, those who started, and those who completed the survey.
- Those who identified as Asian or Pacific were invited at similar rates to the national demographics. However, these groups were less likely to start the survey compared to Europeans, and so end up under-represented.
- Fewer Māori were invited than the national demographic. They were also less likely to start the survey than Europeans, so they end up under-represented.
- Those who listed European as their first (or only) ethnicity had the highest rates, both for starting (around 22 percent) and completion (around 75 percent of those who started completed).
- Those who identified as Māori or Pacific peoples had lower rates for starting (12–14 percent) but still reasonably high rates for completion (67 and 60 percent respectively).
- 15–16 percent of those who identified as Asian or Middle Eastern/Latin American/African started, but the completion rate of those who started was only 50 percent for both groups.

Table 8 contains the raw numbers and/or percentages of those respondents who were invited, who started, and who completed the survey.

Table 8 Invited, started and completed, by ethnicity

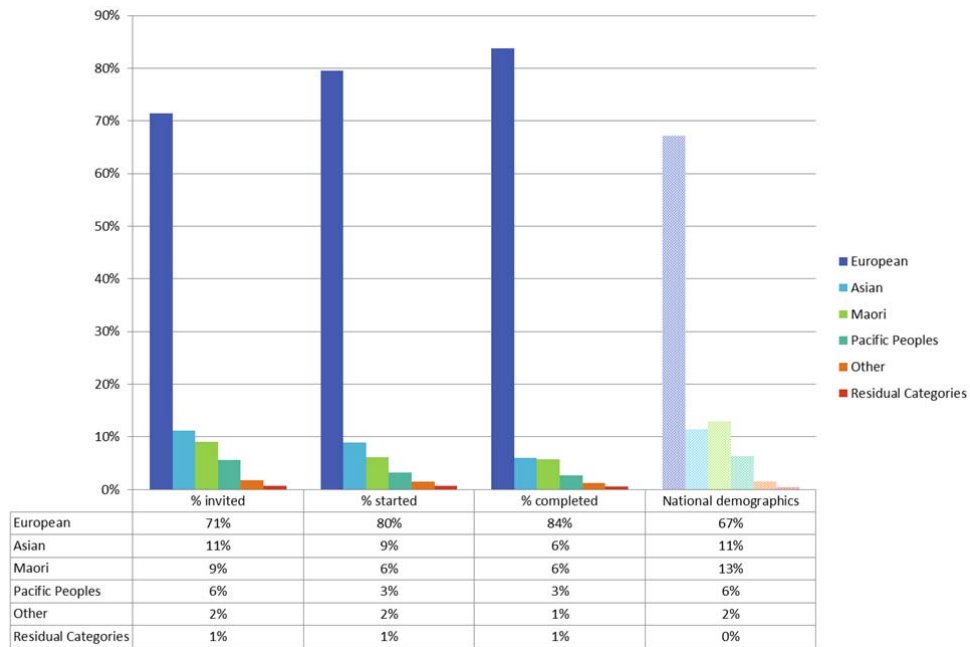
Demographic	Enrolled population	Invited	No. invited	Started	Completed (as proportion of started)
Asian	13.6%	3.9%	8,883	16.2%	49.1%
European	67.5%	5.0%	56,982	22.5%	76.0%
Māori	10.1%	4.3%	7,274	13.6%	67.4%
Middle Eastern/Latin American/African	0.0%	NA	1,124	15.2%	48.0%
Other Ethnicity	1.7%	1.2%	331	21.1%	77.1%
Pacific Peoples	6.8%	4.0%	4,519	11.6%	59.6%
Residual Categories	0.4%	9.5%	559	20.0%	66.1%
All	100.0%	4.8%	79,672	20.3%	72.2%

Source: Sapere analysis

Figure 15 shows the ethnicity spread for those who are invited to the survey, those who start the survey (by at least clicking on the link), and those who go on to complete the survey. For each stage, the percentages will add up to 100. This is why for certain ethnicities it appears the percentage is increasing across each stage. This is showing that some ethnicities are more likely to start and/or complete the survey.

The chart also shows the national demographics of the population enrolled in any PHO across New Zealand (not including those under the age of 15). These percentages will also differ slightly from Table 8, which contains the percentages of the population enrolled in participating PHOs only.

Figure 15 Invited, started and completed, by ethnicity

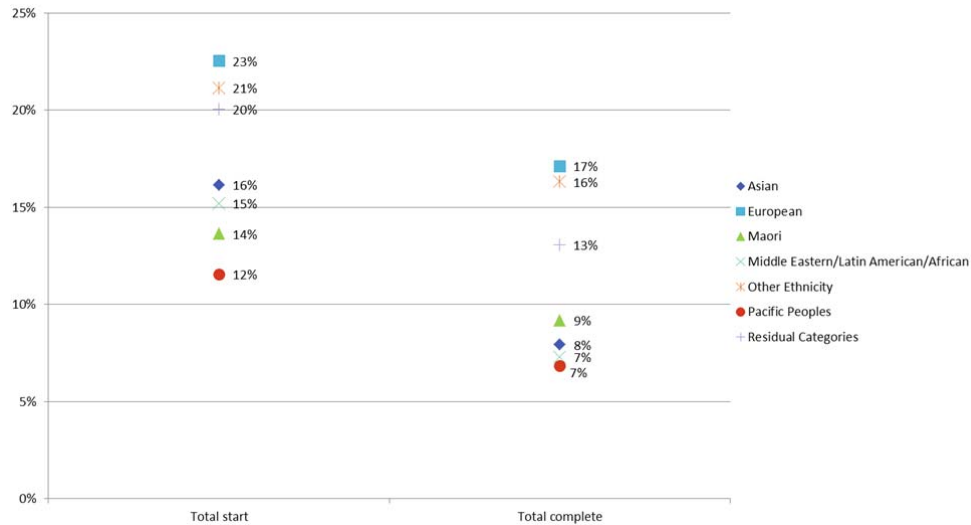


Source: Sapere analysis

1. National demographics are taken from the total enrolled population across New Zealand, therefore will differ from Table 8.
2. We have grouped 'Middle Eastern/Latin American/African' and 'other' ethnicities together to match the grouping that was available for the national demographics.

Figure 16 displays the same data in a different way. The chart follows each ethnicity through the survey. In other words, within each age group, 100 percent will be invited to the survey, but this will drop as not everyone will start or complete the survey.

Figure 16 Percent started and completed, by ethnicity



Source: Sapere analysis

1. As a percent of those invited in each ethnic group

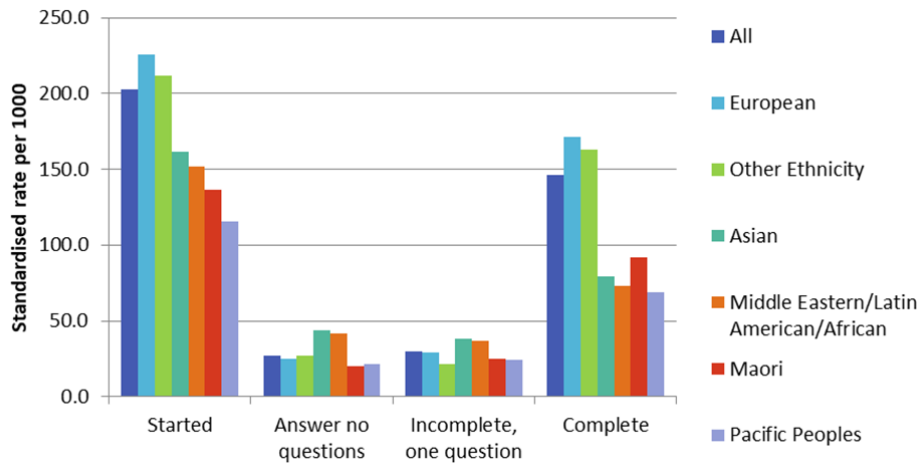
Standardised rates

The standardised response rates, which take into account the possibility of variances in different ethnicities' tendencies to visit the GP or nurse, show similar patterns (as seen in Figure 17):

- Europeans are more likely to start and complete than other ethnicities.
- Ranked by decreasing likelihood of opening the survey link, Asian/MELAA/Māori/Pacific are less likely to start and then about half as likely to complete.
- Asian and Middle Eastern/Latin American/African ethnicity groups were more likely to start than Māori or Pacific Peoples. However, they were also more likely to answer no questions at all or just one question, contributing to their completion rate coming down to near that of Pacific Peoples.

This trend was also seen above in Figure 15 where it showed that the start rates for Asian and Middle Eastern/Latin American/African ethnicity groups were higher than Māori and Pacific Peoples, but the completion rates were lower.

Figure 17 Standardised rates, by ethnicity



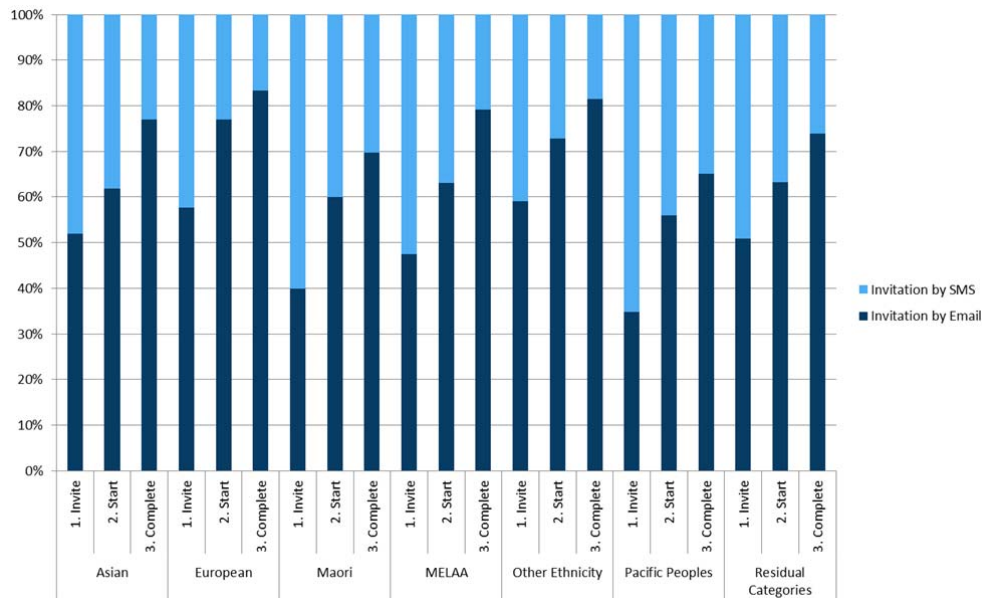
Source: Sapere analysis

Mode of invitation

Figure 18 shows how many respondents were invited, started, and completed the survey, by mode:

- Pacific Peoples and Māori were more likely to be invited via SMS than any other ethnicity group.
- Respondents of all ethnicities were more likely to start and complete the survey through email.

Figure 18 Mode of invitation, invited, by ethnicity



Source: Sapere analysis

Gender

- More females visited a GP in the survey weeks and so more females than males were invited to do the survey.
- A higher proportion of females invited actually started the survey (22 percent compared to 20 percent for males).
- A higher proportion of those females who started then go on to complete the survey (73 percent compared to 70 percent)

Table 9 contains the raw numbers and/or percentages of those respondents who were invited, who started, and who completed the survey.

Table 9 Invited, started and completed, by gender

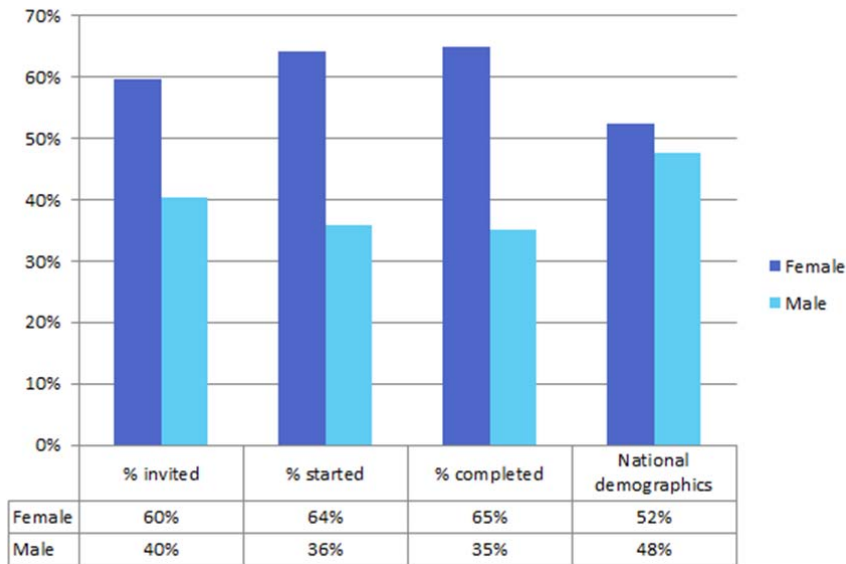
Demographic	Enrolled population	Invited	No. invited	Started	Completed (as proportion of started)
Female	52.4%	5.4%	47,607	21.8%	73.1%
Male	47.6%	4.0%	32,065	18.0%	70.5%
All	100.0%	4.8%	79,672	20.3%	72.2%

Source: Sapere analysis

Figure 19 shows the gender for those who are invited to the survey, those who start the survey (by at least clicking on the link), and those who go on to complete the survey. For each stage, the percentages will add up to 100. This is why it appears the percentage is increasing across each stage for females: females are more likely to start and/or complete the survey.

The chart also shows the national demographics of the population enrolled in any PHO across New Zealand (not including those under the age of 15). These percentages will also differ slightly from Table 9, which contains the percentages of the population enrolled in participating PHOs only.

Figure 19 Percent started and completed, by gender

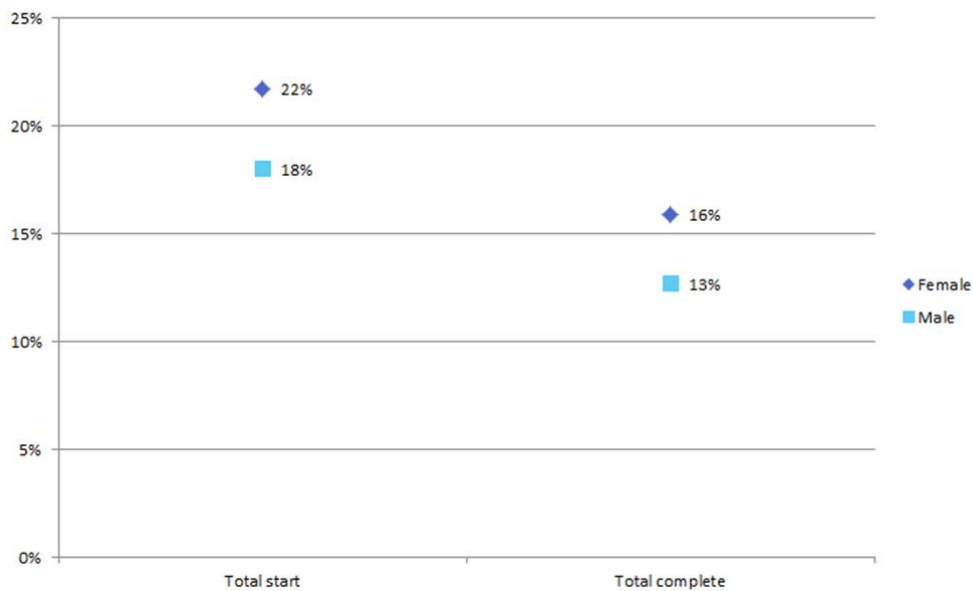


Source: Sapere analysis

1. National demographics are taken from the total enrolled population across New Zealand, therefore will differ from Table 9.

Figure 20 displays the same data in a different way. The chart follows each gender through the survey. In other words, within each gender, 100 percent will be invited to the survey, but this will drop as not everyone will start or complete the survey.

Figure 20 Percent invited, started and completed, by gender



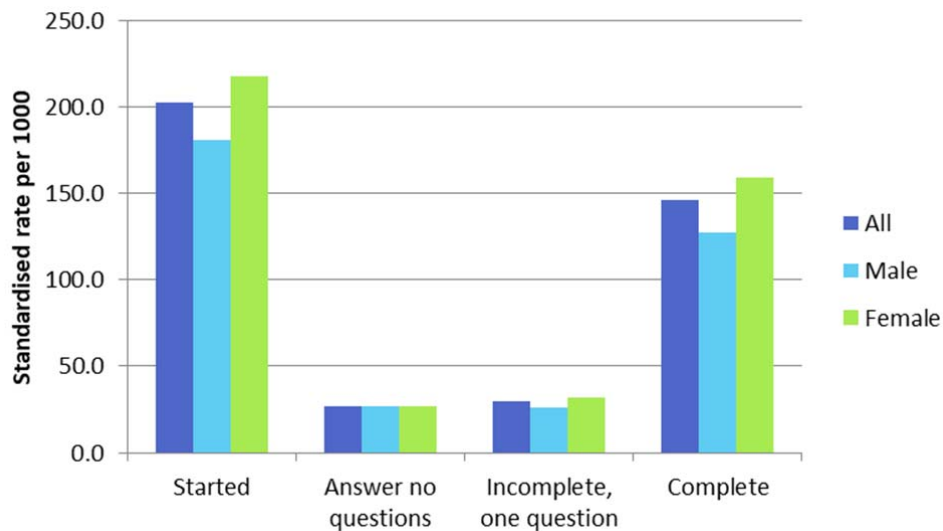
Source: Sapere analysis

1. As a percent of those invited in each gender

Standardised rates

Figure 21 provides the rates for progression through the survey standardised to the population invited to the survey. Normalised for population differences, females are more likely both to start the survey and to complete the survey.

Figure 21 Standardised rates, by gender

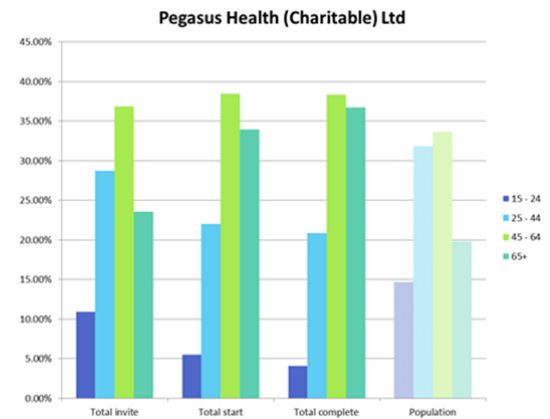
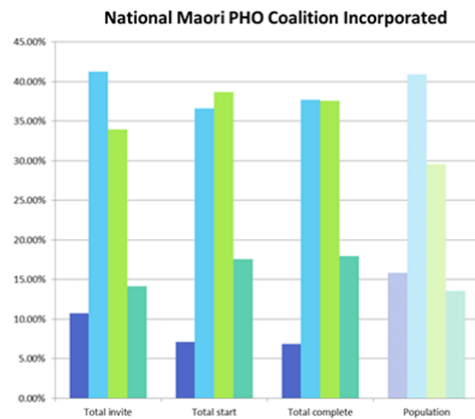
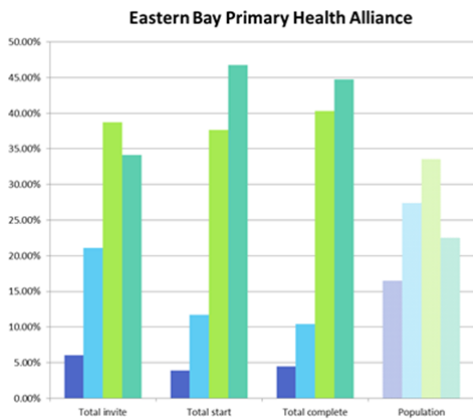
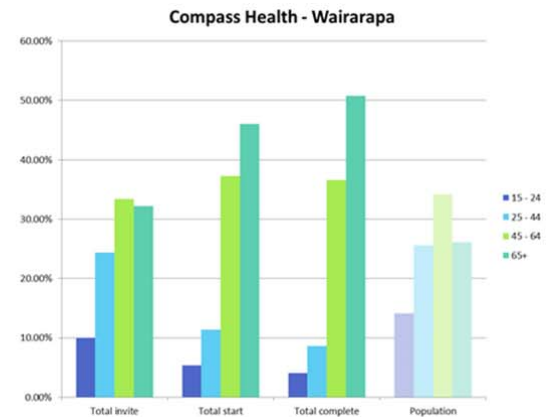
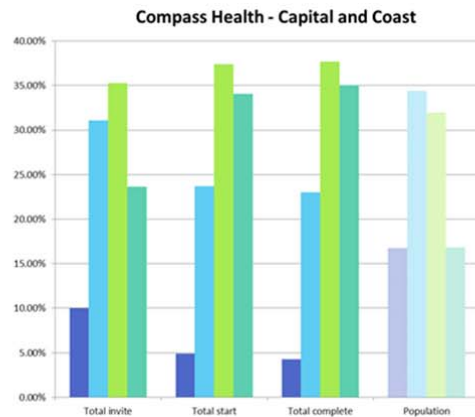
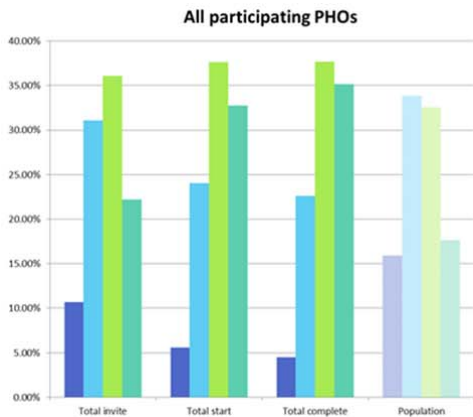


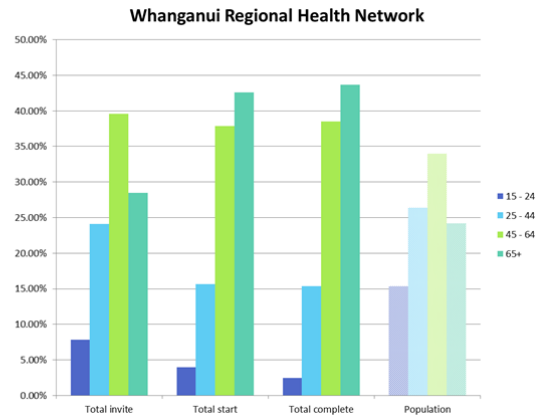
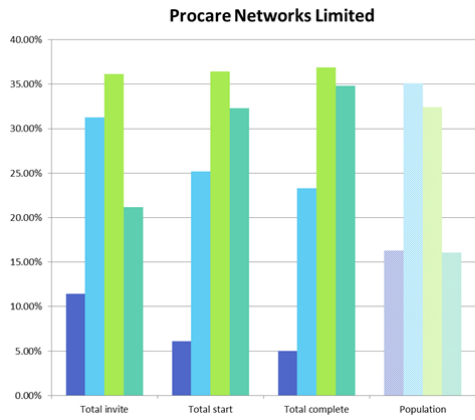
Source: Sapere analysis

Mode of invitation

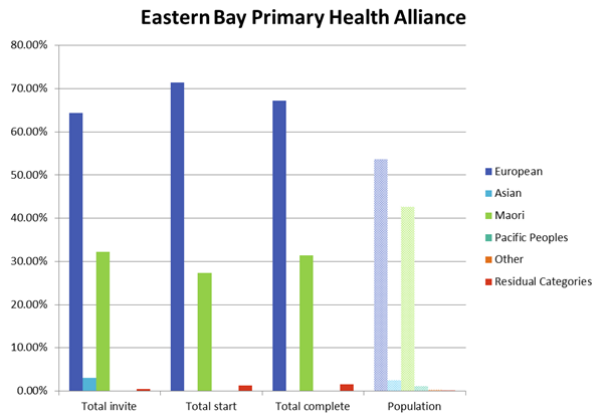
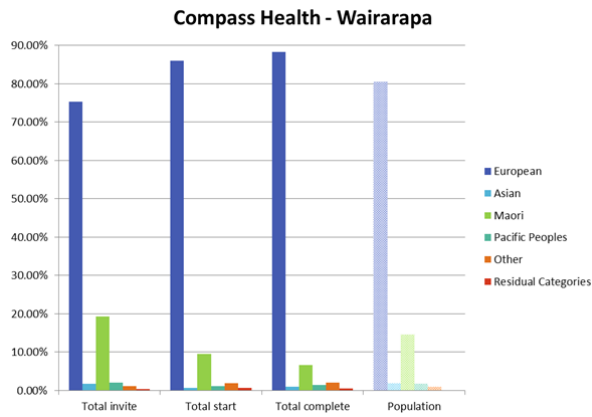
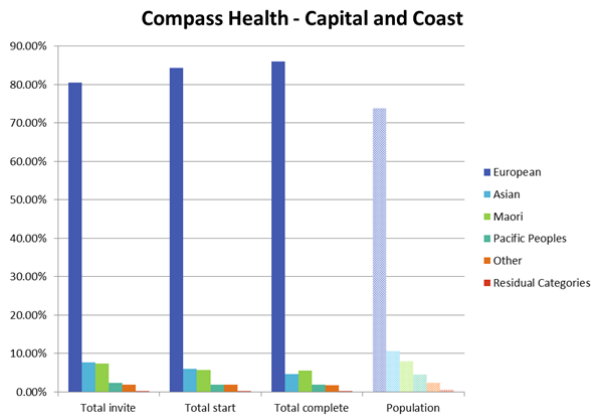
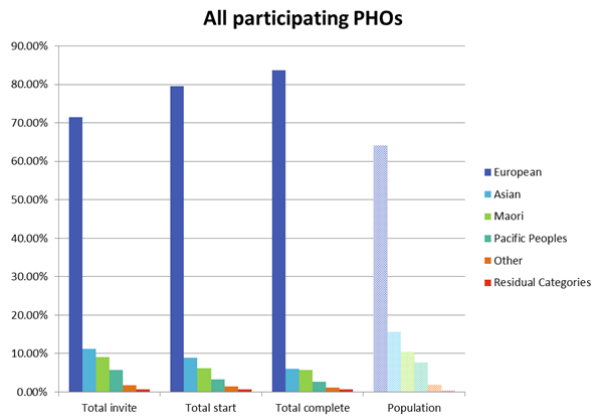
Slightly more females than males were invited via email (56 percent compared with 51 percent). Respondents of both genders were more likely to start and complete the survey through email (82 percent of both females and males completed the survey through email).

Appendix 3 PHO comparisons by age

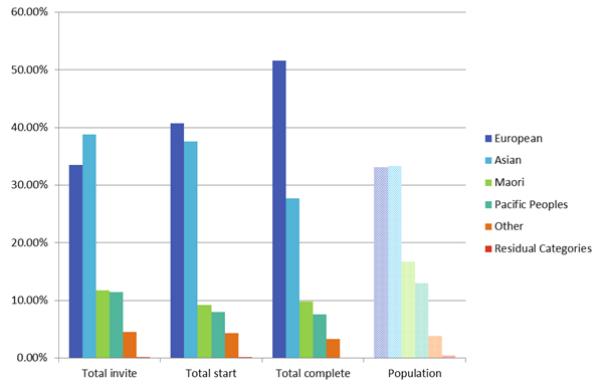




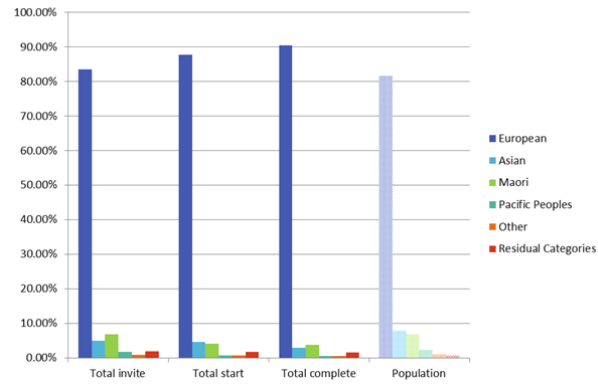
Appendix 4 PHO comparisons by ethnicity



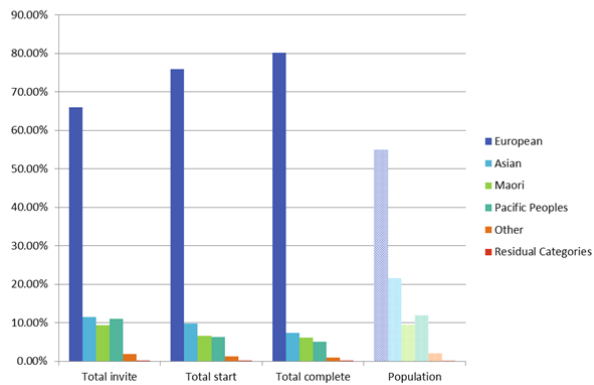
National Maori PHO Coalition Incorporated



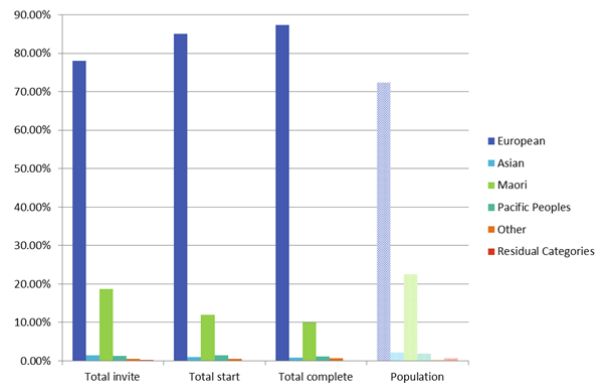
Pegasus Health (Charitable) Ltd



Procare Networks Limited



Whanganui Regional Health Network



Appendix 5 Research on response rates to e-surveys

Research on methods to increase response rates

The Edwards et al (2009) Cochrane systematic review and meta-analysis included 32 trials looking at ways to increase response rates to electronic questionnaires.

The odds of response were increased by more than a half using:

- Non-monetary incentives (1.72; 95% CI 1.09 to 2.72; heterogeneity $P < 0.00001$, $I^2 = 95\%$)
- Shorter e-questionnaires (1.73; 1.40 to 2.13; $P = 0.08$, $I^2 = 68\%$)
- Including a statement that others had responded (1.52; 95% CI 1.36 to 1.70)
- A more interesting topic (1.85; 95% CI 1.52 to 2.26)

The odds of response increased by a third using:

- A lottery with immediate notification of results (1.37; 95% CI 1.13 to 1.65)
- An offer of survey results (1.36; 95% CI 1.15 to 1.61)
- Using a white background (1.31; 95% CI 1.10 to 1.56)

The odds of response were also increased with:

- Personalised e-questionnaires (1.24; 95% CI 1.17 to 1.32; $P = 0.07$, $I^2 = 41\%$)
- Using a simple header (1.23; 95% CI 1.03 to 1.48)
- Using textual representation of response categories (1.19; 95% CI 1.05 to 1.36)
- Giving a deadline (1.18; 95% CI 1.03 to 1.34)

The odds of response tripled when:

- A picture was included in an e-mail (3.05; 95% CI 1.84 to 5.06; $P = 0.27$, $I^2 = 19\%$).

The odds of response *were reduced* when:

- “Survey” was mentioned in the e-mail subject line (0.81; 95% CI 0.67 to 0.97; $P = 0.33$, $I^2 = 0\%$)
- The e-mail included a male signature (0.55; 95% CI 0.38 to 0.80; $P = 0.96$, $I^2 = 0\%$).

Research on questionnaire length

Rolstad et al (2011) conducted a systematic review and meta-analysis of the association between response rate and questionnaire length. Thirty-two studies were identified, and 20 were included in the meta-analysis. In the studies discussed, the number of pages compared was the most commonly reported measure. The meaning of “short” varied from 1 item to 16 pages, whereas “long” could be anything from 2 to 36 pages.

In the meta-analysis, a general association between response rate and questionnaire length was found.²⁴ Response rates were lower for longer questionnaires, but because the P value for test of homogeneity was $P=0.03$, this association should be interpreted with caution because it is impossible to separate the impact of content from length of the questionnaires.

The authors suggest, given the weak support for an association between questionnaire length and response burden, that it is preferable to base decisions on use of instruments on the content rather than the length *per se*.

Research on response rate variation between organisations

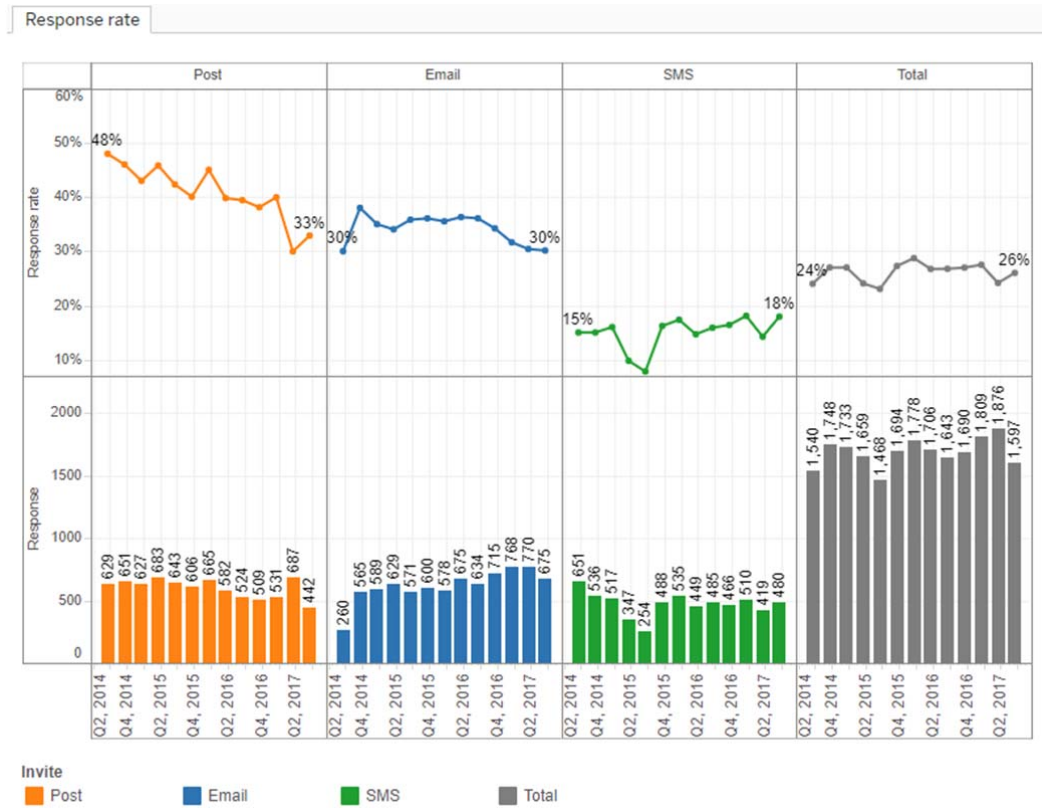
Saunders et al (2016) studied the differences in response rates between hospitals in England. The authors note that variation in organisation response rates may reflect chance, patient case-mix differences, or differences in survey delivery between organizations. Alternatively, it may reflect an intrinsic association between patient experience and survey response at the level of individual patients (e.g. patients who had a positive experience may be more inclined to respond to surveys, or return them more quickly or vice versa).

After analysing responses to surveys sent to 101,771 cancer survivors recently treated by 158 English NHS hospitals, they found that hospitals with higher response rates had higher scores for all items (Spearman correlation range, 0.03–0.44), particularly questions regarding hospital-level administrative processes, for example, procedure cancellations or medical note availability. This association was only partially explained by case-mix.

The authors suggest that high response rates may be a marker of efficient hospital administration, and higher quality, therefore they should not be adjusted away. They state that although nonresponse may result in slightly overestimating overall national levels of performance, it does not appear to meaningfully bias comparisons of case-mix adjusted hospital results.

²⁴ $P \leq 0.0001$.

Appendix 6 NZ national adult inpatient experience survey response rate 2014–2017



Appendix 7 Evaluation fieldwork tools

Patient and focus group interview guide

We want to know how we can encourage people to answer the Patient Experience Survey. We know that some groups who are invited to respond to the survey (either by email or SMS) do not open the survey link, and some people who do open the survey link do not complete the survey.

Opening survey link image

1. We would firstly like to show you some pictures and get your views on whether any of them would encourage you to open the survey link.

Intro and format of script

2. We firstly would like to show you the invitation to participate, and then the survey.
 - a. The invitation to participate - [What do you like about it? What do not you like about it? How do you think it can be improved to encourage people to open the survey link?]
 - b. Survey link - What would encourage you to open the survey link/complete the survey? [prompt, what do you like about it?]
 - c. Why would you not open the link/not want to complete a survey? [prompt, what do you not like about it? What would encourage you to open link/complete the survey?]
3. Why do you think people do not open the survey link/complete the survey? [prompt, any suggestions how we can encourage people to complete the survey?]
4. Would you prefer to answer the survey by smart phone/email/or tablet? [prompt, Why?]
5. Do you think feedback from your practice on how they are using the survey feedback to improve your experience would encourage you/people to answer the survey? [prompt: if yes, in what way; if no, why not?]

Please tell us a bit about yourself (remember this is all confidential to Sapere, but we like to know so we know who has responded and if we are getting a good balance of people e.g., number of males and females).

1. Gender

<input type="checkbox"/>	Female
<input type="checkbox"/>	Male
<input type="checkbox"/>	Gender diverse

2. Age

<input type="checkbox"/>	17-24
<input type="checkbox"/>	25-34
<input type="checkbox"/>	35-44
<input type="checkbox"/>	45-54
<input type="checkbox"/>	55-64
<input type="checkbox"/>	65 or over

3. Ethnicity

<input type="checkbox"/>	Māori
<input type="checkbox"/>	Pacific
<input type="checkbox"/>	European/New Zealand European
<input type="checkbox"/>	Asian
<input type="checkbox"/>	Middle Eastern/Latin American/African
<input type="checkbox"/>	Other

THANK YOU VERY MUCH FOR YOUR PARTICIPATION

Appendix 8 Interview guide for other key stakeholders

Ministry of Health and the Health Quality and Safety Commission have commissioned Sapere Research Group to undertake an independent evaluation of the Patient Experience Survey tool

Explain purpose of the evaluation. What you say will be kept confidential and you will not be identified in the evaluation report. It is an independent evaluation.

The Ministry and Commission want to know how the current PES tool is working and whether any changes are required.

1. *Please tell me about your role regarding the patient experience survey?*

Probe, your understanding of its purpose?

2. *How useful is the tool in your work, or your organisation's decision-making?*

3. *We know that some groups who are invited to respond to the survey (either by email or SMS) do not open the survey link, and some people open the link but either do not start the survey or complete it. Why do you think that is?*

4. *What do you think would be the best way to increase response rates in certain populations (e.g. Māori, Pasifika, refugee, or migrant groups, youth and deprived)? How can MoH and the HQSC reach out to non-responders?*

5. *Is there anything else you would like to add that has not already been covered?*

Thank participant and ask if they have any further comments they would like to make in regards to the PES tool.