
Patient Experience Survey – Adult Inpatients

Methodology and Procedures

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HEALTH QUALITY & SAFETY
COMMISSION NEW ZEALAND

Kupu Taurangi Hauora o Aotearoa

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1. Introduction

1.1 Background

Until recently, inpatient surveying was mandatory and followed the Patient Satisfaction Survey Guidelines published in 2000 by the Ministry of Health. In 2011 the national quality and risk managers group reviewed the requirement to survey inpatients.

This review concluded that the reliability and validity of the existing reporting regime was 'very limited', and recommended that the reporting requirement be withdrawn from November 2011. This recommendation was accepted, and reporting ceased.

The review also recommended that District Health Boards (DHBs) be required to report on their system for capturing patient experience by September 2012 and evaluate changes made by September 2013. However, this parallel recommendation has not been implemented consistently. While a toolkit and guide were produced by the quality and risk managers group and issued in June 2012, there is no consistently applied national standard for measuring patient experience.

1.2 Purpose of the survey

Understanding the patient experience is vital to improving patient safety and the quality of service delivery. It has been shown to be a sound indicator of the quality of health and disability services. Growing evidence indicates that better experience, developing partnerships with consumers, and patient and family-centred care are linked to improved health, clinical, financial, service and satisfaction outcomes.¹²³⁴ Integrating the lessons from patient experiences in a quality improvement programme increases the chances of service improvement.

There is currently no nationally consistent data source for a measure to adequately address this area. This leaves a clear gap in the Health Quality & Safety Commission's (the Commission) national quality and safety indicator set and in the Ministry of Health's accountability metrics.

The survey fills this gap. It is a tool for DHBs to obtain a set of consistent national indicators and carry out local assessment and improvement. The survey tool contains both quantitative and qualitative information.

The patient experience survey is about improving the quality of health services in New Zealand by enabling patients to provide feedback that can be used to monitor and improve the quality and safety of health services.

¹ Picker Institute Policy Position no. 3: *Why patients should share in decision-making?* Oxford: Picker Institute Europe. URL: http://www.pickereurope.org/Filestore/Policy/position_papers/Picker_Policy_3_Why_patients_should_be_involved.pdf

² Balik B, Conway J, Zipperer L, et al. 2011. *Achieving an Exceptional Patient and Family Experience of Inpatient Hospital Care*. IHI Innovation Series white paper. Cambridge, Massachusetts: Institute for Healthcare Improvement. URL: www.IHI.org

³ CAHPS® Consumer Assessment of Healthcare Providers and Systems. 2010. *The Clinical Case for Improving Patient Experience*. URL: <https://www.cahps.ahrq.gov/Quality-Improvement/Improvement-Guide/Why-Improve/Improving-Patient-Experience.aspx>

⁴ CAHPS® Consumer Assessment of Healthcare Providers and Systems. 2010. *The Business Case for Improving Patient Experience*. URL: <https://www.cahps.ahrq.gov/Quality-Improvement/Improvement-Guide/Why-Improve/Business-Case.aspx>

Being able to capture, understand and act on patient experiences in a timely manner, is a vital contributor to improving health service delivery and also prioritising attention and resources.

1.3 Patient experience indicators programme

The programme led by the Commission and jointly managed with the Ministry of Health, with input from the sector and consumers, aims to develop:

- a nationally consistent model of patient experience indicators incorporating four key domains (communication, partnership, coordination, and physical and emotional needs) supported by additional questions
- a national inpatient survey to be used by all DHBs quarterly that can be incorporated in existing local patient experience surveys
- adopting pre-existing and validated tools, where possible
- an approach consistent with international best practice, to allow New Zealand data to be compared with overseas results.

A task and finish group comprised of representatives from the Commission, the Ministry of Health policy team and the National Health Board has overseen the programme.

The programme consists of key work streams which run concurrently to ensure rapid progress:

- select and define indicators
- design and test the survey tool to develop a usable patient survey for DHBs
- “proof of concept” – testing implementation of the patient survey to confirm the tool will work as required within a defined system and criteria
- implement the survey tool – including developing the methodology and procedures, procuring and implementing a national survey and reporting system, and engaging with DHBs on the national requirements and system.

1.4 Participation

Implementing a national inpatient survey is a priority for DHBs and the Commission as set out in the Minister’s letters of expectation. The DHBs Operating Policy Framework is also clear that DHBs are required to participate in activities led by the Ministry of Health and the Commission to measure patient experience nationally (9.7.1). DHBs are expected to survey patients’ experience of the care they received and to take part in a national review facilitated by the Commission to assess mechanisms to collect information about patient experience and to make recommendations for future data collection strategies (9.7.2).

These requirements are also reflected in the 2014/15 DHB non-financial monitoring framework and performance measures document, with the first national inpatient survey reports due from DHBs on 20 October 2014.

It is mandatory for DHBs to participate in the quarterly surveys (four surveys per year) from 1 July 2014. However, the national survey and reporting system enables DHBs to conduct fortnightly surveys if they choose.

2. The survey tool

2.1 Design and principles

Working with KPMG to review international evidence and best practice, the Commission identified four domains or areas of interest that were most important to understand patient experience.

The Commission has reviewed and tested the ideas in KPMG's report with a number of stakeholders and consumers, including the Commission's expert advisory group on quality and safety indicators. As a result the following domains were chosen:

- communication
- partnership
- coordination
- physical and emotional needs.

The survey tool is built around these four domains.

The Commission has bought a license to use the complete Picker library of 200-plus questions (which includes the UK's NHS survey library and the US extension to HCAHPS). From these, a final set of 20 questions has been developed. This has involved slight alterations in language to make the questions easily understood and appropriate to a New Zealand context.

The survey is structured to provide a view on each of the four domains. This is done through an overall question which asks patients to rate their overall experience of the domain using a 10 point scale, supported by between 2 and 5 questions from the Picker set to test specific aspects of these domains; and a "free text" box which asks the respondent to give examples to support their rating.

The survey concludes with two questions specific to patients who underwent surgery, a final question about confidence and trust in staff, demographic information and a final text box for any further information the respondent wants to give.

A full copy of the survey is included at [Appendix 1](#), and available here <http://www.hqsc.govt.nz/our-programmes/health-quality-evaluation/news-and-events/news/1290/>.

2.2 Patient identifiable information

All responses to the survey are anonymous unless responders choose to provide their contact details because they wish to talk to someone at the DHB.

Each survey sent has a unique ID that enables line-by-line analysis of responses. When the patient data extract is imported to the national system, a number is assigned to each line of information. The national survey and reporting process does not require patient identifiable information to be held in the database. Initially it is needed to enable email and text correspondence to be addressed but once each survey link is closed (three weeks after email and text surveys are sent), all identifiable information is deleted from the system.

Note that demographic information – age, gender, and ethnicity - is retained.

The national system provider is required to host the data base within New Zealand and strict privacy and security protocols are maintained.

A Privacy Impact report is being prepared for the programme and this will be reviewed by the Office of the Privacy Commissioner.

2.3 Informing patients of use of their information

DHBs are well aware of the need to inform patients of the use of the information they provide. DHBs will already have a statement in their registration/admission form that is similar to this:

GENERAL PRIVACY STATEMENT

We collect your health information to provide you with appropriate care, to plan for and fund health services, to carry out teaching and to monitor quality. We share this information with other health care providers and agencies involved in your care. We treat your information as confidential and ensure that it is kept secure and only accessed by authorised persons. You have a right to request access to your records and to request correction of the information. Information may be supplied to family, support people or other agencies if you give us your permission or disclosure is authorised by law.

This statement covers the collection of the patient's email address to monitor quality through patient surveys.

Another useful statement to include is something like:

PATIENT EMAIL ADDRESS FOR RECEIPT OF CLINICAL CORRESPONDENCE

Please provide your email address if you are happy for <DHB> to send your clinical correspondence via e-mail. We may also invite you to give us feedback about your care. Please advise <DHB> as soon as possible in writing if your contact information changes.

This statement is useful given the patient's email address may be accessed by other people in the household. The email survey invitation includes an unsubscribe option.

DHBs public notices and 'your rights' brochures should also include similar information re use of patient information for monitoring of quality etc. It would be useful to add collection of patient email addresses to these notices to increase the uptake and awareness of this by both patients and staff.

2.4 Official information act requests

If the national system provider receives an Official Information Act (OIA) request they are required under their agreement to refer this to the Commission or DHBs.

If the Commission receives an OIA request this will be referred to the DHBs for response where this relates to DHBs data.

2.5 Survey flexibility

The national survey is the core minimum question set which all DHBs must administer for a defined group of patients ([see below](#)) once a quarter. This will allow national derivation of a

score for each domain each quarter for each DHB. Provided the instructions set out below are followed, the findings should be comparable and statistically robust.

Additional questions can be added. [Appendix 2](#) sets out a list of the Picker questions which have been tested by the Commission and found to work well but not included in the final survey due to size constraints. In addition, **all** questions within the Picker library are available for DHBs to use; however, these have not been validated in a New Zealand context. These are available on application to the Commission.

DHBs considering adding new questions or incorporating the national survey in existing local surveys should be mindful that the size of the survey and time required completing it directly affect the response rate.

2.6 National survey and report system

The development programme included a “proof of concept” work stream – testing implementation of the patient survey to confirm it will work as required within a defined system and criteria. This resulted in the procurement of a national survey and report system oriented around online responses.

A key requirement is the provision of patient email addresses. We understand that a number of DHBs may need to amend their patient management systems to add an email address field and/or encourage staff to collect patient email addresses on admission.

The national system has the added value to DHBs of:

- Minimal administration by the DHB. A patient data extract is provided in accordance with the survey timetable and the DHB will receive email alerts if patients indicate they would like to be contacted.
- The DHB can login to monitor real-time updates to the dashboard reports that can be viewed relative to other DHBs results (all DHBs will see the same information except for the ‘patients requiring contact’ page and additional reports requested by individual DHBs). The dashboard of results refreshes on a regular basis, showing any new survey responses submitted.
- DHBs can enhance this with additional department level reporting on the dashboard, using the survey [data file](#) available from the national system provider for their own analysis/reporting, and they can agree on an additional service (at their own cost) with the national system provider.
- Higher quality, more timely data through minimal intervention, no postal delays, and immediate report updates.
- Patients needing contact can be triaged and attended to as soon as possible by an appropriate staff member.
- The system will allow more frequent surveying – up to a survey every two weeks if required. This allows for a continuous flow of data which is much more valuable for improvement purposes than a quarterly “temperature check”.

The national survey and report system will not administer any postal surveys. The ongoing licensed software support is detailed in [Appendix 9](#).

2.6.1 National system flexibility

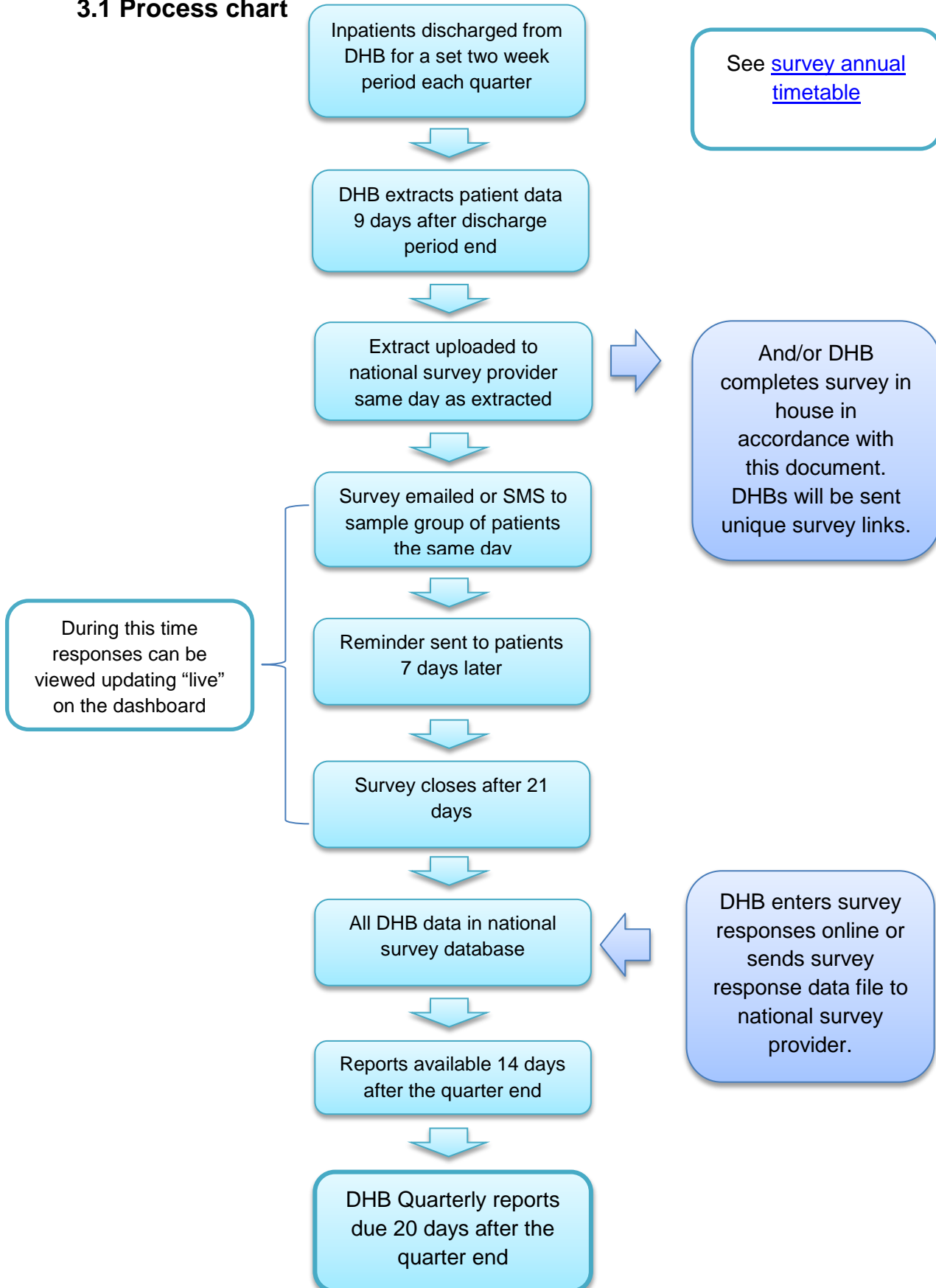
DHBs can use the system in a range of ways:

1. DHBs might choose to only upload a quarterly data file of their national survey responses in accordance with the survey [data file rules](#).
2. If a DHB would like to use the online system but can only mail surveys, they can use the unique survey links created by the national provider (upload their patient data extract to the national provider and be sent back unique survey links to mail merge) in their survey letters and on return, enter the responses directly in to the online system.
3. A DHB may need to use a mixed collection method where they have some email addresses, some mobile phone numbers but still a significant number of mail surveys. All patients discharged with email addresses and/or mobile phone numbers can be sampled from and the balance of the 400 patients sent surveys by mail by the DHB with the unique survey link.
4. The easiest scenario is for a DHB to complete the entire survey sample using the online system, collecting responses via email or SMS, with minimum administration for the DHB.
5. A DHB could also choose to further tailor the patient experience survey with more frequent surveys, additional questions and/or additional reports. This may involve the DHB negotiating their own additional local service with the national system provider.

As part of the implementation plan, the national system provider will meet face to face with each DHB to demonstrate the system and to highlight the options available to each DHB within the agreed pricing. A checklist of options and required decisions will be provided at this meeting.

3. Survey process

3.1 Process chart



3.2 Collection methods

Information will mostly be collected online. This is the cheapest, quickest method with the highest response rate, and it enables real time updates to online reports for DHBs. Patients selected for surveying will be contacted (in order) by email, SMS (text) and letter and provided with a unique online survey link to click on or type in to submit their response.

Once the patient's unique link closes, there is no patient identifiable information connected with it (demographic information remains) so that responders are anonymous unless they choose to provide their contact details. This option is provided in case the patient wishes to discuss an issue with the DHB (the DHB will receive an email alert). Once the survey has been completed, the link expires to ensure there is only one response per patient. The online links all expire three weeks from the time the survey is sent. There is additional time allowed to input paper survey responses.

According to NZ Statistics, more than 80 per cent of New Zealanders⁵ now have access to the internet, and this is likely to increase with the availability of new access mechanisms (eg. smartphones). Our 'proof of concept' has shown that data entry online is straightforward (the survey, albeit with no free text responses, could be completed in six minutes) and perfectly achievable via a smartphone screen.

However, non-internet access is concentrated among people aged 75 and over, poorer and more rural populations, all of whom can be high users of hospital services, so the possibility of postal return and 'in situ' surveying is allowed for. This reduces the risk of an unrepresentative sample.

3.3 Sampling method

While a completely random sample of 400 patients is desirable, we need to ensure as many surveys can be collected online as possible. This means selecting all patients with an email address, then a random selection of patients with a mobile phone number and/or postal address.

3.3.1 Email notification, online collection

The DHB runs the patient data extract for the two week period in accordance with the data extract and file format [rules](#). The file is uploaded through a secure portal on the same day to the national survey provider. The provider will then select a random sample of patients, or all patients with an email address if there are fewer than 400, and the survey invitation will be emailed to that patient on the day of the upload. The patient can click on the link to complete the survey online. If the patient has not completed the survey within 7 days they will receive a [reminder](#). After 21 days (from the original send date) the survey link will expire.

3.3.2 SMS notification, online collection

Following selection of patients with email addresses, any patient records that do not have an email address but do have a mobile phone number will be sent an SMS invitation to complete the survey. DHBs may choose to restrict the number of these. If the patient has a smart phone they can click on the link to complete the survey online on their phone. If they have a standard mobile phone they can go to a web page in their PC's internet browser,

⁵http://www.stats.govt.nz/browse_for_stats/industry_sectors/information_technology_and_communications/HouseholdUseofICT_HOTP2012.aspx

enter a short code (that is in the SMS message) and complete the survey online. If the patient has not completed the survey within 7 days they will receive a [SMS reminder](#). After 21 days the survey link will expire.

3.3.3 Mail notification, online or paper collection

Finally, if the patient extract record contains neither an email address nor a mobile phone number, the national survey provider will create an extract of the remaining sample containing a unique code and the patient name and postal details. This file will be provided back to the DHB within 8 working hours of the initial upload.

The DHB can then use this file to mail merge with address labels, to code the paper form and to send each patient a paper survey. The patient will have two options:

1. They can go to the same web page used by the people with standard mobile phones, enter the short code off the paper survey and complete the survey online.
2. They can fill out the paper form and post it back to the DHB. The DHB can then either collate the responses in accordance with Appendix 7 or enter responses straight into the survey system.

The DHB will be responsible for sending reminders to people who have not responded to the paper survey invitation. The national survey provider will send a reminder list to each DHB showing the outstanding records in time for the reminders to be sent by the DHB.

3.4 In situ collection

In areas where there is such low access to the internet that an on line approach to delivering the survey presents a substantial risk of unrepresentative responses and/or very low response rates, DHBs may discuss with the Commission using an in situ alternative for the collection of data.

There are many cautions and concerns about this sort of approach therefore the Commission will only support this approach where there is no practical alternative which is likely to produce reasonable response rates. We see this as a last resort where no other method is likely to garner enough data.

The arguments against in situ reporting are:

- Questioning in the middle of the event is premature, there is insufficient time for the respondent to collect and compose their thoughts about what they have experienced.
- Further, if undertaken in the middle of a hospital stay, the response could be unrepresentative with experience improving or deteriorating through the remainder of the stay.
- The power imbalance between patient and professional may be such that the patient feels intimidated into giving unrealistically positive responses.
- Of even more concern, there is anecdotal evidence of staff seeking out more positive patients to complete the survey in order to gain more positive responses.

There are some approaches that can be undertaken to reduce the risk of these negative effects, which we set out below, but even with these in place, the results risk being incomparable to post hoc collected surveys. For this reason, DHBs which use the in situ

methodology will have the difference in methodology made clear, and the results will not be directly compared with other DHBs using the post hoc methods.

The process for in situ survey collection is:

1. Use of an in situ method survey collection method needs to be agreed with the Commission before it is undertaken.
2. Agreement of technical requirements and method for transmitting the data to the national system needs to be made with the national system provider before undertaking this method.
3. Data must be collected in a consistent manner for all patients surveyed so that:
 - The administration of the survey is the final interaction with the patient prior to discharge
 - The survey should not be administered by a member of clinical staff
 - The person administering the survey does not stay with, advise or otherwise prompt the person taking the survey
 - The survey is physically completed by the person taking it or a carer with them, not by the member of staff administering the survey
 - An introduction, based upon the survey letter (at Appendix 5), emphasises that the DHB staff member (or volunteer) administering the survey is unable to view the surveyed patients response.

3.5 DHBs uses alternative system

A DHB may have an alternative survey system in place. In this case they would still need to complete the quarterly national survey in accordance with the methodology described in this document to meet the mandatory requirements. The survey results would be sent to the national system provider in accordance with [Appendix 7](#).

3.6 Frequency of collection

For national reporting purposes and consistency, the survey will be sent to patients discharged within the same two week period in each quarter in each DHB. The two week period chosen avoids public holidays, but it is not intended as a representation of the quarter in which it sits. Rather, it will be one of a series of snapshots recorded over the course of a year. This fits with our recommendation that DHBs collect patient feedback constantly to monitor changes and stimulate improvement in patient experience.

The timetable for the survey is shown in Table 1 below.

Table 1: Survey timetable

Process	Q1 Jul-Sep14	Q2 Oct-Dec14	Q3 Jan-Mar15	Q4 Apr-Jun15
Inpatients discharged from DHB for set 2 week period	4Aug-17Aug14	3Nov-16Nov14	2Feb-15Feb15	4May-17May15
DHB extracts patient data	26-Aug-14	25-Nov-14	24-Feb-15	26-May-15
Extract uploaded to national survey provider	26-Aug-14	25-Nov-14	24-Feb-15	26-May-15
Survey emailed or text to sample group of patients	26-Aug-14	25-Nov-14	24-Feb-15	26-May-15
Reminder sent 7 days later	2-Sep-14	2-Dec-14	3-Mar-15	2-Jun-15
Survey closes after 21 days	16-Sep-14	16-Dec-14	17-Mar-15	16-Jun-15
All DHB data in national providers database	7-Oct-14	7-Jan-15	7-Apr-15	7-Jul-15
Reports available 14 days after the quarter end	14-Oct-14	14-Jan-15	14-Apr-15	14-Jul-15
DHB Quarterly performance reports due 20 days after the quarter end	20-Oct-14	20-Jan-15	20-Apr-15	20-Jul-15

3.7 Eligible patients

The survey is designed to be answered by inpatients aged 15 and older with at least one night's overnight stay, where the hospital event ended with a routine discharge or self-discharge. Specific exclusions are patients admitted to a mental health specialty, patients who were transferred to another health facility, and patients who died in hospital. Full details of the patient data extract including rules for inclusions and exclusions are set out in [Appendix 3](#).

In order to use the online system effectively, email addresses and mobile phone numbers (for SMS contact) need to be included. We appreciate that DHBs have different approaches to collection of this data and strongly recommend that efforts to capture this information on admission be made to make administration of the survey as simple and cost effective as possible.

3.8 Sampling

Adequate sample size is essential to ensure the recorded results represent a population as a whole. At least three risks need to be addressed:

- too small a sample of responders, leading to excessively wide confidence intervals and unstable results which make changes hard to interpret
- a sample unrepresentative of the population structure
- response bias (ie, responders with unrepresentative opinions – more or less content with their experiences than the average - being more likely to respond).

Well-designed samples can mitigate these risks.

3.8.1 Sample size

Determining the correct sample size for a given survey is both an art and science. While the statistics of determining the size of confidence levels are well understood and comparatively straightforward to derive mechanistically, the art lies in balancing this with ideas about what are acceptable (and affordable) samples, understanding likely response rates (which play a

fundamental role in the reliability of the results) and the size of confidence limit ('margin of error') that we are prepared to accept.

We have modelled various options and, based on a reasonable expectation of a response rate of about 40 per cent (which is around an average response rate internationally); have set the sample size at 400 patients to be contacted. In five or six DHBs this is more than the number of patients treated within the average two weeks. In these cases all eligible patients should be contacted. This gives confidence intervals of about 6-7 percent at a 40 per cent response rate and of about 5 percent at 60 percent response rate.

[Appendix 4](#) sets out the calculation of this sample size in greater detail, including the use of finite population adjustment.

3.8.2 Reminders

There is good evidence that the use of reminders increases survey response rates. Evidence shows that a reminder will generate a third to half of the responses the original survey letter achieves. We need to send a reminder to achieve as close to the 40 percent response rate as possible (vital for ensuring reliable results). For that reason we include a reminder 7 days (or 10 days for mail) after the initial contact of the patient in our methodology. From an administrative perspective, this is easier through an email or SMS reminder.

As the time increases between the patient's discharge from hospital and the sending of the survey and reminder, the greater the risk of the patient's circumstances having changed, and this may include their death. It can take up to three months for DHB systems to be updated following a patient's death.

While there is no way to entirely remove the risk of sending a survey or reminder to the family of someone who has died, we can mitigate this by minimising the time after admission that the survey and reminder are sent. We have also included a 'sensitivity' statement in the correspondence.

The national system provider will facilitate reminders for the mandatory quarterly survey. Reminders are not required for the fortnightly survey.

3.8.3 Sampling method

Regardless of sample size, if the sample is systematically unrepresentative of the population the results will be misleading⁶. There are two ways to mitigate this, either stratify the sample so the sample looks like the overall population, or use a random sample and apply weights in line with the local population to the results post hoc.

Of these two approaches we prefer the latter, as for a stratified approach to completely address this risk we would have to assume that each strata had a similar response rate (and if they didn't, a further exercise in weighting would be required). In contrast, weighting according to demographic characteristic (we are capturing age, gender and ethnicity on the survey) allows the results to be adjusted to reflect the differences that are actually recorded. This is an approach used widely by opinion polling organisations.

⁶ Famously, the Literary Digest miscalculated the 1936 US election as a victory for the Republican challenger Albert Landon, despite a sample size of over 2 million(!), at least in part because of using a telephone directory as the basis of its sample at a time when telephones were a far from ubiquitous luxury item. <http://issuu.com/chilesoc/docs/why-the-1936-literary-digest-poll>

3.8.4 Demographic weighting

Weighting is a relatively straightforward process which takes either a local or national population structure, compares this with the sample structure, and creates a co-efficient which is applied to the results of the survey. This then increases or decreases a particular score and provides a weighted result.

The national system will show un-weighted results online for local purposes. The Commission will prepare quarterly patient experience indicator reports that will show weighted results in accordance with the method described in this document.

The national population of eligible patients is structured as shown in Table 2.

The issue that needs to be considered is what variables should be used in the weighting. In the proof of concept we analysed age, gender, ethnicity, method of admission and method of survey administration as potential sources of bias in response. Our analysis presented at [Appendix 6](#) shows that only the first two of these variables showed material differences in response between different groups.

Table 2: Demographic make-up of eligible patients proportion by age/gender New Zealand 2012/13

Gender	Age groups	Proportion of eligible patients
Female	15-44	26.11%
	45-64	12.14%
	65-74	7.36%
	75-84	7.62%
	85+	5.09%
Male	15-44	10.25%
	45-64	12.35%
	65-74	8.19%
	75-84	7.44%
	85+	3.45%

If we look at the (notional) response of a particular DHB, we can demonstrate how this base population can be used to create weightings. Table 3 shows DHB A has 391 respondents to the survey who are divided into groups as follows

Table 3: Demographic make-up of DHB A survey respondents by age/gender

Gender	Age groups	Respondents
Female	15-44	111
	45-64	42
	65-74	26
	75-84	32
	85+	22
Male	15-44	39
	45-64	40

65-74	37
75-84	29
85+	13

When expressed as a proportion (Table 4), this gives the following table which shows at a glance the variance between the survey response and the notional population. Some differences become immediately apparent. There is an over-representation of European women aged 15 - 44 and under-representation of men in general. This is addressed through weighting. The process for this is straightforward. The actual sample proportions are divided by the population proportions to create a weighting factor for each sub-group in the sample (to avoid individual sub-groups with very small numbers having too much weight in the final weighting, weighting factors are limited to a maximum of five).

Table 4: Demographic make-up of DHB A survey respondents proportion by age/gender/ethnic group

Gender	Age groups	Respondents
Female	15-44	28.4%
	45-64	10.7%
	65-74	6.6%
	75-84	8.2%
	85+	5.6%
Male	15-44	10.0%
	45-64	10.2%
	65-74	9.5%
	75-84	7.4%
	85+	3.3%

Table 5: Weighting factors by age/gender for DHB A

Gender	Age groups	Respondents
Female	15-44	0.9194
	45-64	1.1346
	65-74	1.1152
	75-84	0.9293
	85+	0.9089
Male	15-44	1.0250
	45-64	1.2108
	65-74	0.8621
	75-84	1.0054
	85+	1.0455

These factors can then be applied to individual responses received to provide weighted scores for individual questions at each DHB. The effect of this is to give different values to responses effectively reflecting how many patients of a different age, gender and ethnicity

each respondent is representing. The more over-represented a particular group among the responders, the fewer actual patients each responder represents and thus the response is down weighted and vice versa.

3.9 National survey process

As part of developing the national survey, the Commission conducted a ‘proof of concept’ that involved testing implementation of the survey tool within a defined system and criteria. Five DHBs participated in this process – Auckland (advisory only), Bay of Plenty, Waikato, Canterbury and South Canterbury. The decision to employ a national provider is to minimise the demands on DHBs. The minimum demand being placed upon DHBs, apart from contributing financially to the provision of the national system, is to run an extract according to the rules set out in [Appendix 3](#) once a quarter, and to review and respond to the results being provided via the live dashboard. The process that the national provider will undertake is:

1. Creation and maintenance of the secure portal and data warehouse required for online completion of the inpatient survey and secure storage, analysis and reporting of the results.
2. Import the patient data extracts to the data warehouse and draw a random sample of 400 from the extract of eligible patients provided by the DHB. If the extract is fewer than 400 patients, then the whole extract can be used.
3. Contact the sample of patients using, in order of priority, email then SMS, inviting participation in the survey using the invitations attached at [Appendix 5](#).
4. Ensure that the branding, email signature and survey conclusion signature viewed by each respondent to the electronic survey matches the branding of the DHB they were discharged from.
5. Provide DHBs administering mail surveys contact details and a unique survey link to be printed on the paper survey if the DHB sample includes records without email or mobile phone details.
6. Send electronic reminders to complete the survey seven days following initial contact, using the same method as initial contact (for quarterly surveys only).
7. Create and maintain real time dashboards to allow reporting of the weighted results, in accordance with the methodology prescribed. DHBs will be able to filter results and download reports in multiple formats.
8. Create login access for system users, which DHBs will then manage themselves to reflect changes in required staff access.
9. Send an email alert to a nominated DHB contact person when a respondent indicates they wish to be contacted by the DHB. Provide contact details and reason for contact to DHB for those respondents who wished to discuss some aspect of their response.
10. Import survey data from DHBs administering their own system (or contracted third party) in to the national database so that all 20 DHBs data is reported in the dashboards where this extract is provided in the format specified in [Appendix 7](#).
11. Create and provide a survey data extract to DHBs and the Commission for local analysis on request once per quarter in the format prescribed in [Appendix 7](#). Ensure DHBs running the fortnightly survey and reporting cycle can access and download their DHB data at any time they require it.

12. Provide a national extract to the Commission at least quarterly to allow calculation of the national indicators.
13. Conduct the above process in accordance with the national timetable.
14. All data received from DHBs should be validated (batch files and records) with error reports sent back to DHBs.

3.10 Local survey process

You can choose to work outside the national system either using paper collection or another system which you already have in place. However, you must follow consistent procedures in the administration of the national survey, and must upload a survey data file containing the results to the national provider in the format described in [Appendix 7](#).

The process required to undertake the survey manually and produce a survey data file as required is as follows:

1. Extract all relevant patients for the specific two week period under review. A definition of relevant patients is given in [Appendix 3](#).
2. If there are fewer than 400 patients in the extract, then the survey can be sent to all patients. If there are more, then a random sample of 400 patients should be drawn.
3. The sample of patients is to be sent a letter and copy of the survey, with a post-paid return addressed envelope. The survey tool at [Appendix 1](#) and correspondence at [Appendix 5](#) are to be used.
4. A reminder (as set out in Appendix 5) to complete the survey should be posted to the patients 10 days following initial contact.
5. The responses received need to be manually entered verbatim into a spreadsheet or database to allow the production of a .csv file containing all required data (as set out in [Appendix 7](#)).
6. Provision of the .csv file of data no later than 7 days after the quarter end to the national system provider, in the format advised by the provider.

The above process is conducted in accordance with the [annual survey timetable](#).

4. Use of the survey results

4.1 National accountability

The survey is designed to encourage local improvement and provide four national indicators by DHB on each of the domains. This will consist of the weighted average of the 0 - 10 rating. The weighting will apply the factors set out in [section 3.8.4](#) above. To allow comparability, this will be based on the national population of eligible patients (this will be tested as we go along).

4.1.1 Calculation of four national indicators

Each responder is given a weighting factor based on the method set out at [3.8.4](#). The 0 - 10 rating given by the individual is multiplied by the weighting factor to give a weighted rating; these are then summed and divided by the total number of responders to give a weighted average.

The following shows a worked example using the notional “DHB A” survey responders set out in [section 3.8.4](#).

Step 1 find ratings for each individual

Respondent	Gender	Age group	Communication rating (0-10)
1	Female	15-44	9
2	Female	15-44	10
...
390	Male	85+	9
391	Male	85+	7
Average			7.45

Step 2 apply appropriate sub group weighting for each individual

Respondent	...	Communication rating (0-10)	Weighting factor
1	...	9	x 0.9145
2	...	10	x 0.9145
...
390	...	9	x 1.0455
391	...	7	x 1.0455
Average		7.45	

Step 3 calculated weighted average

Respondent	...	Communication rating (0-10)	Weighting factor	Weighted rating
1	...	9	X 0.9145	8.2305
2	...	10	X 0.9145	9.145
...
390	...	9	X 1.0455	9.4095
391	...	7	X 1.0455	7.3185
Average ...		7.45	Weighted Average	7.54

In this worked example, an arithmetic average rating of 7.45 increases to 7.54 once the weighting factors are applied.

This calculation will be applied to each rating for each DHB for each national quarterly snapshot in order to provide a weighted indicator.

4.2 Online Reports

All DHBs will have the same report view when they login in to the national survey and reporting system (this may vary where additional services have been agreed with the national provider). Reports will be presented at a range of levels – overall scores for domains and question scores within domains.

The reports will be able to be filtered (drop down box selection) for:

- DHB
- discharge date ranges
- age
- gender
- ethnicity
- health speciality code
- facility code
- admission type
- optional fields provided in the background extract

DHBs will also be able to download reports in formats such as PDF, image and csv/excel for easy internal reporting.

A survey tracking report will be included so that DHBs can easily analyse the response rate. This also enables us to analyse the response rates across different collection methods.

The 'mock-up' reports at [Appendix 8](#) indicate what some of these might look like once the national system is implemented.

4.3 Quantitative and Qualitative Analysis

The national provider will provide a survey data file in accordance with Appendix 7 to DHBs and the Commission so that further analysis can be performed. Analysis will not be performed by the national provider.

DHBs will be able to further analyse or report the patient survey information as they choose for internal purposes. The patient comment boxes will be of particular interest to DHBs. This information will be viewable in the comments reports where you will be able to filter, view word clouds and search on particular terms. Further qualitative analysis can be undertaken by the DHBs using the data extract provided.

4.4 Continuous improvement

The patient experience survey is about improving the quality of health services in New Zealand by enabling patients to provide feedback that can be used to monitor and improve the quality and safety of health services.

Being able to capture, understand and act on patient experiences in a timely manner, is a vital contributor to improving health service delivery and also prioritising attention and resources.

A critical element of this programme is to deliver value to DHBs, while meeting the national reporting needs. DHBs need a programme that provides value to them, is simple for them to participate in, that provides actionable information that they can use for improvement activities and that enables them to follow up promptly with patients requesting contact.

DHBs also need flexibility so that those wishing to undertake more continuous surveying or to tailor their initiatives outside the national programme can do so efficiently and cost-effectively.

The national requirement is a quarterly 'temperature check' but the national system provider also offers (at no additional cost for email surveys) a fortnightly survey that means a consistent flow of real-time patient feedback to DHB staff. This can be tailored so that staff see the information that is important to them and can act on patient comments (eg. something obvious and simple is raised that can be acted on straight away).

5. Annual review

In general changes to the national inpatient survey and reporting system and the methodology and procedures document will be made on an annual basis. This is to minimise the impacts on trending reports, process changes and costs.

An annual evaluation of the programme will be conducted by the Commission. As part of this annual evaluation the national provider will survey all system users across national and DHB users to understand the user experience with the tools, how the system is being used and outcomes at DHB and national level.

The evaluators would provide the questions to be asked of users through the survey and undertake the analysis of results and reporting to the Commission, DHBs and the national system provider. At this time we would agree how the programme could be enhanced to lead to better patient safety and quality of health service delivery.

Appendix 1: Survey tool

Patient experience survey

This survey is about your **most recent** stay in the hospital. Please do not include any other hospital stays in your answer. Remember this is anonymous unless you would like us to contact you. No-one from the DHB can see your name or email address, so please be open and frank in your feedback.

Let's get started...

Could you tell us if you are answering this survey on behalf of yourself or someone else?

- Myself
- Someone else unable to answer this survey (Please tell us why)

Physical and emotional Needs

(Treating patients, consumers, carers and families/whanau with dignity and respect and providing the necessary physical and emotional support)

12. If you needed help from the staff getting to the toilet or using a bedpan, did you get it in time?

- Yes, always
- Yes, sometimes
- No
- I did not need help

13. Do you think the hospital staff did everything they could to help control your pain?

- Yes, definitely
- Yes, to some extent
- No
- I did not need pain control

14. Overall, did you feel staff treated you with respect and dignity while you were in the hospital?

- Yes, always
- Yes, sometimes
- No

15. Overall, did you feel staff treated you with kindness and understanding while you were in the hospital?

- Yes, always
- Yes, sometimes
- No

16. Was cultural support available when you needed it?

- Yes, always
- Yes, sometimes
- No
- I did not need cultural support

17. Overall, how well were your physical and emotional needs met... (please circle a number)

Very poorly		Very well								
0	1	2	3	4	5	6	7	8	9	10

Can you give us some examples why you rated it that way? It is these examples that help us understand your point of view.

Surgery

During your stay in hospital, did you have an operation or surgery?

- Yes – Go to question 18
- No – Go to question 20

18. Before the operation did staff explain the risks and benefits in a way you could understand?

- Yes, completely
- Yes, to some extent
- No
- I did not need an explanation

19. Did staff tell you how the operation went in a way you could understand?

- Yes, completely
- Yes, to some extent
- No

Overall

20. Did you have confidence and trust in the staff treating you?

	Yes always	Yes, sometimes	No	N/A
Doctors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nurses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other members of your healthcare team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

About you

If you are answering on behalf of a patient, please complete this section using their details.

What is your gender?

- Male
- Female

What is your year of birth?

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Which ethnic group or groups do you belong to?

- European
- Māori
- Pacific Peoples
- Asian
- Middle Eastern/Latin American/African
- Other Ethnicity

Is there anything else you would like to tell us about your hospital stay?

If you would like us to contact you, please provide the following contact details and we'll get in touch with you as soon as possible. **You only need to complete this section if you need to discuss something with someone at the DHB.**

First name: _____

Last name: _____

Phone number or email: _____

Please provide some information on what you would like to talk to us about. We can then ensure the right person at the DHB contacts you. _____

Thank you for your time and feedback. You have now finished this survey. Your feedback, along with that from others who have completed the survey, will be used to improve the quality of the services we provide.

Appendix 2: Tested optional additional questions

The following questions have been tested and are found to test well. In order keep the core survey down to a manageable size these have been made optional questions.

1. Did you feel you were involved in decisions about your discharge from hospital?
 - Yes, definitely
 - Yes, to some extent
 - No
 - I did not want to be involved

2. Were you given enough privacy when discussing your condition or treatment?
 - Yes, always
 - Yes, sometimes
 - No

3. Was religious or spiritual support available when you needed it?
 - Yes, always
 - Yes, sometimes
 - No
 - I did not need religious or spiritual support

4. In your opinion, how clean was the hospital room or ward that you were in?
 - Very clean
 - Fairly clean
 - Not very clean
 - Not at all clean

Appendix 3: Patient experience – import file

This document describes the rules surrounding the data extract and resulting file format required for importing patients information into the national system's data warehouse.

Data extract rules

Each DHB is responsible for extracting the patient data for importing into the data warehouse (for sending survey invites, reminders and generating dashboard reports). The patient extract should include all inpatients discharged that satisfy the following rules:

1. Frequency – minimum one fortnight per quarter according to the survey timetable. Extracted at approximately 9 am Tuesday (this allows for most public holidays which fall on Mondays).
2. Date Range:

Patients discharged for 14 day period from Monday 00:01 to Sunday 23:59.

Example: Extract performed on 26 August 2014 includes patients discharged from 4 August 00:00 until 17 August 23:59

Note: A means of generating an extract for a date range may be required in the event that the extract was not run successfully or needed to be re-run.

3. The extract file should exclude any patients if they have been previously included in an extract file supplied in the last 12 weeks. The DHBs will exclude these patients using NHI prior to FTP upload.
4. Exclude patients who have had less than 1 overnight stay (eg. Day stay patients excluded) – [Discharge date] – [admission date] > 0.
5. Exclude children under 15 – [Discharge date] – [Date of birth] > 15 years.
6. The Event End Type codes to include are highlighted:

Event End Type code	Description
DA	Discharge to acute specialist facility
DC	Psychiatric patient discharged to community care
DD	Died
DF	Change of funder
DI	Self discharge from hospital, indemnity signed
DL	Committed psychiatric patient discharged to leave of more than 14 days
DN	Psychiatric remand patient discharged without committal
DO	Discharge of a patient kept sustainable for organ donation
DP	Psychiatric patient transferred for further psychiatric care
DR	Ended routinely
DS	Self discharge from hospital (no indemnity signed)
DT	Discharge of patient to another healthcare facility
DW	Discharge to other service within same facility
EA	Discharge from ED acute to specialist facility (neonates & burns only)
ED	Died while still in Emergency department acute facility
EI	Self discharge from an ED acute facility with indemnity signed
ER	Routine discharge from an Emergency department acute facility
ES	Self discharge from an ED acute facility without indemnity
ET	Discharge from ED acute facility to another healthcare facility

This will therefore exclude:

- Patients who have died
- Statistical Discharge for transfer between specific care type (as they remain with us but under another visit)
- Statistical Discharge for change in funder (as they remain with us but under another visit)
- Discharge for Organ Donation
- Patients transferred to other DHB's
- Etc

Table sourced <http://www.health.govt.nz/nz-health-statistics/data-references/code-tables/common-code-tables/event-end-type-code-table>

7. Mental health – DHBs to exclude any patient who within the admission in question was either discharged from, or transferred to or from a mental health inpatient unit. Our intention is to not exclude patients who may have contact with the mental health service during their inpatient stay, but to exclude patients who had an inpatient mental health component during this admission.

The Health Speciality codes to be excluded commence with a “Y”. See the health specialty code table <http://www.health.govt.nz/nz-health-statistics/data-references/code-tables/common-code-tables/health-specialty-code-table>

8. All deceased patients should be excluded from the extract (as at the date that the extract is run, not the extract date range). This includes where the patient was discharged home or elsewhere and the DHB has been notified that the patient has subsequently died.
9. Only the patient’s primary ethnicity is to be provided.
10. Boarder patients – the New Zealand Casemix framework defines these patients as:
 “5.2.4 Non-treated Patients...
 “Events where no treatment is provided are excluded from casemix funding. These include Boarders who may be admitted or admitted patients whose procedure is subsequently cancelled.” “Boarders are tested for by checking that the principal diagnosis code is: Z763 *Health person accompanying sick person* or Z764 *Other boarder in healthcare facility*”.
 DHBs will need to use a local exclusion process to remove Boarder patients from the extract if clinical coding is not complete by the time of the extract.
11. Each patient should only appear once in the extract file – DHBs to check for and remove duplicates.
12. Only the patient’s most recent discharge within the extraction period should be included.
13. Patients treated by a private hospital (identifiable by the facility code) under a sub-contract with the DHB **should** be included in the extract.

File format

The file received from the DHB is expected to meet the following:

- The file must be in comma delimited format (conforming to <http://tools.ietf.org/html/rfc4180> standard).
- All column headings must be provided as the first line and must match the Field name specified in the table below.
- Where required, use ‘0d0a’ as a record terminator. ‘0’ is a zero.
- The extract file must be named using the following convention: e.g. BOPDHB_PE_From_yyyymmdd_To_yyyymmdd.csv, where “yyymmdd” is the formatted date/time of the date range used for the extract.
- Codes as opposed to descriptions will be used in columns wherever possible.
- DateTime values should be provided using yyyyMMdd hh:mm:ss

Field	Data Type	Mandatory Value	Allowed Options (If Restricted)	Example Data	Comment
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Field	Data Type	Mandatory Value	Allowed Options (If Restricted)	Example Data	Comment
NHI	Text	✓	-	CHB2702	
Salutation	Text	-	-	Mrs	Where salutation is provided patients will be addressed “Dear Mrs Smith”, where not provided “Dear Mary Smith”.
First Name	Text	✓	-	Mary	
Last Name	Text	✓	-	Smith	
Address1	Text	✓	-	1 Story Street	1 Story Street
Address2	Text	✓	-	Timaru	RD1
Address3	Text	-	-		Waitahora
Address4	Text	-	-		Dannevirke
Post code	Text	-	-	0931	
Cell phone	Text	-	-	0279876543	
Email address	Text	-	-	david@gmail.com	
Gender	Text	✓	F I M U	F	Allowed codes from: http://www.health.govt.nz/nz-health-statistics/data-references/code-tables/common-code-tables/sex-type-code-table
Age	Integer	✓	-	38	The patient’s age on admission.
Discharge date	Date	✓	-	20110816 22:14:00	
Ethnicity	Integer	✓	Only those codes in the Level 2 code table.	21	Allowed codes from: http://www.health.govt.nz/nz-health-statistics/data-references/code-tables/common-code-tables/ethnicity-code-tables
Health Specialty Code	Text	✓	Only those codes in the Health Specialty code table	S00	Allowed codes from: http://www.health.govt.nz/nz-health-statistics/data-references/code-tables/common-code-tables/health-specialty-code-table

Field	Data Type	Mandatory Value	Allowed Options (If Restricted)	Example Data	Comment
Facility code	Text	✓	Only those codes in the Health Facility Code table	D706	Allowed codes from: http://www.health.govt.nz/nz-health-statistics/data-references/code-tables/common-code-tables/facility-code-table
Admission type	Text	✓	Arranged Acute Waiting list	AC or AA or WN	Allowed codes from: http://www.health.govt.nz/nz-health-statistics/data-references/code-tables/common-code-tables/admission-type-code-table
DHB of domicile	Integer	✓	DHB Area codes	123 or 011	See DHB codes below
DHB of service	Integer	✓	DHB Area codes	123 or 011	See DHB codes below
Optional 1	Text	-	-	-	Optional fields for local DHB analysis purposes to further drill down eg. department, ward, or areas (a DHB may wish to analyse responses by areas within their district, ensuring patients remain anonymous).
Optional 2	Text	-	-	-	
Optional 3	Text	-	-	-	

DHB Codes

11 Northland
 21 Waitemata
 22 Auckland
 23 Counties Manukau
 31 Waikato
 42 Lakes
 47 Bay of Plenty
 51 Tairāwhiti

61 Hawke's Bay
71 Taranaki
81 MidCentral
82 Whanganui
91 Capital and Coast
92 Hutt
93 Wairarapa
101 Nelson Marlborough
111 West Coast
121 Canterbury
123 South Canterbury
131 Otago
141 Southland
999 Overseas

Appendix 4: Sample size

The science of appropriate sample sizing is well established. This depends upon calculating the size of sample required to generate standard errors and thus 95 per cent confidence intervals of a desired size⁷, and then as this sample will be close to the actual number of patients in a number of DHBs (and actually greater than the total number of patients in others) applying a technique known as ‘finite population correction’ to this calculation.

However, the actual sample of responders will never actually be the same size as the total sample selected unless all people contacted actually respond. This issue of response rate adds an additional complication to the process of choosing a sample size, taking it out of the realms of pure science into something which requires a degree of judgement.

Based on international experience, we believe that a 40 per cent response rate is the maximum that is reasonable to plan for, and the calculations of sample size are based on this assumption. An important starting point is to look at how many eligible patients each DHB saw in 2012/13. This is shown in table A.

Table A – Annual and bi weekly average eligible patients by DHB 2012/13

DHB	Annual eligible patients	Bi weekly average eligible patients
Northland	16,203	623
Waitemata	47,189	1,815
Auckland	49,972	1,922
Counties M	47,901	1,842
Waikato	38,773	1,491
Lakes	10,354	398
Bay of Plenty	22,058	848
Tairāwhiti	4,322	166
Hawkes Bay	11,020	424
Taranaki	16,134	621
Mid Central	15,096	581

⁷ Confidence intervals are the range within which we are confident the true value lies. The narrower the confidence intervals the more precise our estimate is.

Whanganui	6,383	246
Cap Coast	27,246	1,048
Hutt	12,577	484
Wairarapa	3,881	149
Nelson Marlborough	11,361	437
West Coast	2,938	113
Canterbury	48,203	1,854
South Canterbury	5,190	200
Southern	27,048	1,040

We now need to calculate 95 per cent confidence intervals for different sample sizes. The 95 per cent confidence interval is calculated as 1.96* the standard error

The standard error is calculated as the $\sqrt{\frac{p(1-p)}{n}}$ where p is the sample proportion (set to 0.5 as a default as this gives the most conservative estimate of confidence intervals) and n is sample size.

Our initial model looks at a sample size of 400 invitations and a response rate of 40 percent giving a true sample of 160 responders. Where the bi-weekly average of eligible patients is less than 400 (Lakes, South Canterbury, Tairāwhiti, Wairarapa, West Coast, Whānagui) the sample size is set to the total number of patients (response rate assumed as 40 percent).

This gives for the “full size” samples an SE of

$$\sqrt{\frac{0.5(0.5)}{400(0.4)}} = \sqrt{\frac{0.25}{160}} = 0.0395$$

which gives a 95% confidence limit of $1.96 * 0.0395 = 0.077$ or 7.7% on a result of 0.5 or 50% (for other percentages the confidence limits will be smaller).

For other DHBs with fewer eligible patients the resulting confidence intervals are shown in Table B.

However, as the sample is a large proportion of all eligible patients for nearly all DHBs we need to apply what is known as a finite population adjustment. This is calculated as $\sqrt{\frac{N-n}{N-1}}$, where N is the total population of eligible patients, and n the true population size (in line with the earlier calculation this is estimated as 160 or 40 per cent of all eligible patients, whichever is smaller). Essentially this gives a result where larger total populations give results close to 1 while small total populations (where the sample represents a large proportion of the total population) rather lower. The 95% confidence limit previously calculated is then multiplied by this resulting figure and this final result becomes true 95% confidence intervals. Table C shows the working for this.

Table B Calculation of 95% confidence intervals based on a sample population of the smaller of 400 or the bi weekly average eligible patients and response rate of 40 per cent

DHB	Annual eligible patients	Bi weekly average eligible patients	Sample size based on assumptions above	95% CI calculated as $1.96 * \sqrt{\frac{p(1-p)}{n}}$
Northland	16,203	623	160	0.077
Waitemata	47,189	1,815	160	0.077
Auckland	49,972	1,922	160	0.077
Counties M	47,901	1,842	160	0.077
Waikato	38,773	1,491	160	0.077
Lakes	10,354	398	159	0.078
Bay of Plenty	22,058	848	160	0.077
Tairāwhiti	4,322	166	66	0.120
Hawkes Bay	11,020	424	160	0.077
Taranaki	16,134	621	160	0.077
Mid Central	15,096	581	160	0.077
Whanganui	6,383	246	98	0.099
Cap Coast	27,246	1,048	160	0.077
Hutt	12,577	484	160	0.077
Wairarapa	3,881	149	60	0.127
Nelson Marlborough	11,361	437	160	0.077
West Coast	2,938	113	45	0.146
Canterbury	48,203	1,854	160	0.077
South Canterbury	5,190	200	80	0.110
Southern	27,048	1,040	160	0.077

Table C Calculation of 95% confidence intervals based on previous estimate adjusted to allow for a finite population adjustment described by

$$\sqrt{\frac{(N-n)}{(N-1)}}$$

A	B	C	D	E	F	G
	Annual eligible patients	Bi weekly average eligible patients	Sample size based on assumptions above	95% CI calculated as $1.96 * \sqrt{\frac{p(1-p)}{n}}$	Finite population adjustment $\sqrt{\frac{(N-n)}{(N-1)}}$	Final 95% CI (column E * Column F)
DHB						
Northland	16,203	623	160	0.077	0.86	0.067
Waitemata	47,189	1,815	160	0.077	0.96	0.074
Auckland	49,972	1,922	160	0.077	0.96	0.074
Counties M	47,901	1,842	160	0.077	0.96	0.074
Waikato	38,773	1,491	160	0.077	0.95	0.073
Lakes	10,354	398	159	0.078	0.78	0.060
Bay of Plenty	22,058	848	160	0.077	0.90	0.070
Tairāwhiti	4,322	166	66	0.120	0.78	0.093
Hawkes Bay	11,020	424	160	0.077	0.79	0.061
Taranaki	16,134	621	160	0.077	0.86	0.067
Mid Central	15,096	581	160	0.077	0.85	0.066
Whanganui	6,383	246	98	0.099	0.78	0.077
Cap Coast	27,246	1,048	160	0.077	0.92	0.071
Hutt	12,577	484	160	0.077	0.82	0.063
Wairarapa	3,881	149	60	0.127	0.78	0.099
Nelson Marlborough	11,361	437	160	0.077	0.80	0.062
West Coast	2,938	113	45	0.146	0.78	0.113
Canterbury	48,203	1,854	160	0.077	0.96	0.074
South Canterbury	5,190	200	80	0.110	0.78	0.085
Southern	27,048	1,040	160	0.077	0.92	0.071

Modelling alternatives

The balance that we seek to achieve in deciding sample size is the accuracy and precision of results versus the cost and effort required to undertake the survey. Essentially increasing the number of responders reduces the size of the confidence intervals and makes the results more precise. There are two ways that this can be done – increase the number of patients contacted in the first place, or increase the response rate.

The first approach shown in Table D here shows the effect of doubling the number of eligible patients approached to 800. This shows that a doubling of the effort in fact yields little improvement. Over half of all DHBs would now be sending surveys to all eligible patients, yet in the best case this would only reduce the 95 percent confidence intervals from 7 to 5 percent. Of course the smaller DHBs would see no difference at all, as they are already sending their survey to everyone they can.

But should we accept wider confidence intervals still reduce the original sample of patients contacted. Table E models the effect of halving the sample size to 200. This increases the size of the confidence interval from 7 to 10 per cent.

A more effective strategy for reducing the size of the confidence intervals is to increase the response rate. Most importantly this reduces the size for all DHBs and not just those large enough to increase the number of surveys sent out in the first place. Table F shows the effect of increasing the response rate from 40 to 60 per cent.

Based upon this working through our judgement is that an initial sample of 400 patients, or all eligible patients in the two week sample period, whichever is smaller, is a good starting point for this survey. Should response rates be much higher or lower than we anticipate we can revisit this number.

Table D: Calculation of 95 percent confidence intervals based on a sample population of the smaller of 800 or the bi weekly average eligible patients and response rate of 40 per cent adjusted to allow for a finite population adjustment described by $\sqrt{\frac{N-n}{N-1}}$

A	B	C	D	E	F	G
	Annual eligible patients	Bi weekly average eligible patients	Sample size based on assumptions above	95% CI calculated as $1.96 * \sqrt{\frac{p(1-p)}{n}}$	Finite population adjustment $\sqrt{\frac{N-n}{N-1}}$	Final 95% CI (column E * Column F)
DHB						
Northland	16,203	623	249	0.062	0.78	0.048
Waitemata	47,189	1,815	320	0.055	0.91	0.050
Auckland	49,972	1,922	320	0.055	0.91	0.050
Counties M	47,901	1,842	320	0.055	0.91	0.050
Waikato	38,773	1,491	320	0.055	0.89	0.049
Lakes	10,354	398	159	0.078	0.78	0.060
Bay of Plenty	22,058	848	320	0.055	0.79	0.043
Tairāwhiti	4,322	166	66	0.120	0.78	0.093
Hawkes Bay	11,020	424	170	0.075	0.78	0.058
Taranaki	16,134	621	248	0.062	0.78	0.048
Mid Central	15,096	581	232	0.064	0.78	0.050
Whanganui	6,383	246	98	0.099	0.78	0.077
Cap Coast	27,246	1,048	320	0.055	0.83	0.046
Hutt	12,577	484	193	0.070	0.82	0.063
Wairarapa	3,881	149	60	0.127	0.78	0.099
Nelson Marlborough	11,361	437	175	0.074	0.80	0.062
West Coast	2,938	113	45	0.146	0.78	0.113
Canterbury	48,203	1,854	320	0.055	0.96	0.074
South Canterbury	5,190	200	80	0.110	0.78	0.085
Southern	27,048	1,040	320	0.055	0.92	0.071

Table E: Calculation of 95 percent confidence intervals based on a sample population of the smaller of 200 or the bi weekly average eligible patients and response rate of 40 per cent adjusted to allow for a finite population adjustment described by $\sqrt{\frac{N-n}{N-1}}$

A	B	C	D	E	F	G
	Annual eligible patients	Bi weekly average eligible patients	Sample size based on assumptions above	95% CI calculated as $1.96 * \sqrt{\frac{p(1-p)}{n}}$	Finite population adjustment $\sqrt{\frac{N-n}{N-1}}$	Final 95% CI (column E * Column F)
DHB						
Northland	16,203	623	80	0.110	0.93	0.102
Waitemata	47,189	1,815	80	0.110	0.98	0.107
Auckland	49,972	1,922	80	0.110	0.98	0.107
Counties M	47,901	1,842	80	0.110	0.98	0.107
Waikato	38,773	1,491	80	0.110	0.97	0.107
Lakes	10,354	398	80	0.110	0.90	0.098
Bay of Plenty	22,058	848	80	0.110	0.95	0.104
Tairāwhiti	4,322	166	66	0.120	0.78	0.093
Hawkes Bay	11,020	424	80	0.110	0.90	0.099
Taranaki	16,134	621	80	0.110	0.93	0.102
Mid Central	15,096	581	80	0.110	0.93	0.102
Whanganui	6,383	246	80	0.110	0.82	0.090
Cap Coast	27,246	1,048	80	0.110	0.96	0.105
Hutt	12,577	484	80	0.110	0.91	0.100
Wairarapa	3,881	149	60	0.127	0.78	0.099
Nelson Marlborough	11,361	437	80	0.110	0.90	0.099
West Coast	2,938	113	45	0.146	0.78	0.113
Canterbury	48,203	1,854	80	0.110	0.98	0.107
South Canterbury	5,190	200	80	0.110	0.78	0.085
Southern	27,048	1,040	80	0.110	0.96	0.105

Table F: Calculation of 95 percent confidence intervals based on a sample population of the smaller of 400 or the bi weekly average eligible patients and response rate of 60 per cent adjusted to allow for a finite population adjustment described by $\sqrt{\frac{(N-n)}{(N-1)}}$

DHB	Annual eligible patients	Bi weekly average eligible patients	Sample size	95% CI calculated as $1.96 * \sqrt{\frac{p(1-p)}{n}}$	Finite population adjustment $\sqrt{\frac{(N-n)}{(N-1)}}$	Final 95% CI (column E * Column F)
Northland	16,203	623	240	0.063	0.78	0.050
Waitemata	47,189	1,815	240	0.063	0.93	0.059
Auckland	49,972	1,922	240	0.063	0.94	0.059
Counties M	47,901	1,842	240	0.063	0.93	0.059
Waikato	38,773	1,491	240	0.063	0.92	0.058
Lakes	10,354	398	239	0.063	0.63	0.040
Bay of Plenty	22,058	848	240	0.063	0.85	0.054
Tairāwhiti	4,322	166	100	0.098	0.63	0.062
Hawkes Bay	11,020	424	240	0.063	0.66	0.042
Taranaki	16,134	621	240	0.063	0.78	0.050
Mid Central	15,096	581	240	0.063	0.77	0.048
Whanganui	6,383	246	147	0.081	0.63	0.051
Cap Coast	27,246	1,048	240	0.063	0.88	0.056
Hutt	12,577	484	240	0.063	0.71	0.045
Wairarapa	3,881	149	90	0.104	0.63	0.066
Nelson Marlborough	11,361	437	240	0.063	0.67	0.043
West Coast	2,938	113	68	0.119	0.64	0.076
Canterbury	48,203	1,854	240	0.063	0.93	0.059
South Canterbury	5,190	200	120	0.090	0.63	0.057
Southern	27,048	1,040	240	0.063	0.88	0.056

Appendix 5: Letters to patients

These letters are for guidance and contain important content developed through the testing process and DHB feedback. They can be edited to suit DHBs needs.

Email correspondence

Feedback on your recent experience as a patient in our hospital

Dear Mrs Smith <or Mary Smith if no salutation provided>

I invite you to complete this survey on your recent experience as a patient in our hospital.

This is likely to take around 10 to 15 minutes. If you have something important to tell us that isn't covered by our survey questions, there is space for further comments at the end of the survey. If you need some help to complete this survey, please ask a relative or friend. You have three weeks from the date of this email to respond before the survey is closed.

We take your privacy very seriously. Unless you choose to provide your contact details in this survey, no one at the <DHB name> District Health Board will be able see your name or email address.

[Click here to begin](#)

The feedback you give here is a very valuable way for us to understand how we can improve our service so thank you in advance for your participation.

Since your discharge we may be unaware if your circumstances have recently changed. If that is the case and you are unable to complete the survey please accept our apology and discard this email.

Yours sincerely

<name>
<Quality Manager title>
<DHB name> District Health Board
<Phone & email details>

Reminder email

Reminder - Feedback on your recent experience as a patient in our hospital

Dear Mrs Smith <or Mary Smith if no salutation provided>

Recently we sent you an invitation to complete a survey on your recent experience as a patient in our hospital. We'd really value your feedback.

This is likely to take around 10 to 15 minutes. If you have something important to tell us that isn't covered by our survey questions, there is space for further comments at the end of the

survey. If you need some help to complete this survey, please ask a relative or friend. You have two weeks from the date of this email to respond before the survey is closed.

We take your privacy very seriously. Unless you choose to provide your contact details in this survey, no one at the <DHB name> District Health Board will be able see your name or email address.

[Click here to begin](#)

The feedback you give here is a very valuable way for us to understand how we can improve our service so thank you in advance for your participation.

Since your discharge we may be unaware if your circumstances have recently changed. If that is the case and you are unable to complete the survey please accept our apology and discard this email.

Yours sincerely

<name>
<Quality Manager title>
<DHB name> District Health Board
<Phone & email details>

SMS correspondence

Note that SMS correspondence is constrained by the number of characters per SMS (max 160) and associated costs.

Please respond to our survey on your hospital stay.

Click here or go to <https://myexperience.health.nz> and enter this code: XXXXX

Thanks BOPDHB

071234567

Reminder SMS

Please respond to our survey on your hospital stay.

Click here or go to <https://patientexperience.health.nz> and enter this code: XXXXX

Thanks BOPDHB

071234567

Mail

Printed on DHB letter head

Salutation First name Last name
Address1
Address2
Address3
Address4
Post code

Date

Dear Mrs Smith <or Mary Smith if no salutation provided>

Feedback on your recent experience as a patient in our hospital

I invite you to complete this survey on your recent experience as a patient in our hospital⁸.

This is likely to take around 10 to 15 minutes. If you have something important to tell us that isn't covered by our survey questions, there is space for further comments at the end of the survey. If you need some help to complete this survey, please ask a relative or friend. You have three weeks from the date of this letter to respond before the survey is closed.

We take your privacy very seriously. Unless you choose to provide your contact details in this survey, no one at the <DHB name> District Health Board will be able see your name or other contact details.

If you have access to the internet you can type the following secure link in the browser and complete the survey online <https://myexperience.health.nz> and enter this code xxxxx. Otherwise, please complete the enclosed survey as soon as possible and return to us in the Freepost envelope provided.

The feedback you provide is a very valuable way for us to understand how we can improve our service so thank you in advance for your participation.

Since your discharge we may be unaware if your circumstances have recently changed. If that is the case and you are unable to complete the survey please accept our apology and discard the survey.

Yours sincerely

<name>
<Quality Manager title>
<DHB name> District Health Board
<Phone & email details>

Reminder mail

⁸ Note that if you have multiple hospitals you may need to include the name of the hospital the patient was discharged from for clarity, especially if a hospital name is in your letterhead.

Printed on DHB letter head

Salutation First name Last name
Address1
Address2
Address3
Address4
Post code

Date

Dear Mrs Smith <or Mary Smith if no salutation provided>

Reminder - Feedback on your recent experience as a patient in our hospital

Recently we sent you an invitation to complete a survey on your recent experience as a patient in our hospital. We'd really value your feedback. If your survey is on its way back to us please accept our apology and discard this reminder.

This is likely to take around 10 to 15 minutes. If you have something important to tell us that isn't covered by our survey questions, there is space for further comments at the end of the survey. If you need some help to complete this survey, please ask a relative or friend. You have 10 days from the date of this letter to respond before the survey is closed.

We take your privacy very seriously. Unless you choose to provide your contact details in this survey, no one at the <DHB name> District Health Board will be able see your name or other contact details.

If you have access to the internet you can type the following secure link in the browser and complete the survey online <https://myexperience.health.nz> and enter this code xxxxx. Otherwise, please complete the enclosed survey as soon as possible and return to us in the Freepost envelope provided.

The feedback you provide is a very valuable way for us to understand how we can improve our service so thank you in advance for your participation.

Since your discharge we may be unaware if your circumstances have recently changed. If that is the case and you are unable to complete the survey please accept our apology and discard the survey.

Yours sincerely

<name>
<Quality Manager title>
<DHB name> District Health Board
<Phone & email details>

Appendix 6: Bias in response

The purpose of looking at results between different sub-groups of responders is to consider whether there are systematic patterns of different responses between different groups. This is important for the purposes of weighting responses (over-representation of a group which is likely to respond to questions differently will skew the overall result).

Typically age, gender, method of admission, method of response and more controversially ethnicity are included as variables on which surveys are weighted. Each is considered in turn below.

Age – older people are happier

			15-24	25-44	45-64	65-74	75-84	85+
Communication	Q1	Qs answered	6.90	8.17	8.57	9.33	9.25	9.17
	Q2	Explanations	7.75	8.49	8.92	8.95	8.97	10.00
	Q3a	Dr Listened	8.25	8.73	8.92	9.12	9.50	8.57
	Q3b	Nurse Listened	8.33	8.67	8.77	8.77	8.38	9.29
	Q3c	Other Listened	8.42	8.97	8.81	8.27	8.82	9.17
	Q4	Side effects explained	5.71	5.20	5.87	5.81	5.17	6.25
Participation	Q6	Involved	8.33	8.15	7.73	8.33	8.82	9.29
	Q7	Family involved	7.75	7.32	7.70	6.78	7.78	9.29
Coordination	Q9	Different things said	6.90	7.88	8.23	8.95	8.75	9.29
	Q10	Discharge info	6.50	5.98	7.66	7.73	8.11	7.50
Physical and emotional needs	Q12	Toilet	7.50	8.19	8.45	8.92	8.97	8.75
	Q13	Pain	8.33	8.83	9.10	8.90	9.29	10.00
	Q14	Respect	8.33	9.09	9.38	9.04	9.63	10.00
	Q15	Kindness	8.33	8.71	9.08	9.21	9.75	10.00
	Q16	Culture	8.57	8.08	8.82	9.55	10.00	-
Overall	Q20a	Confidence Dr	7.75	8.73	9.00	9.39	9.75	10.00
	Q20b	Confidence Nurse	7.75	8.52	9.22	9.04	9.38	9.29
	Q20c	Confidence Other	7.89	8.44	8.79	9.12	9.00	9.17
Questions with Sig Low Aggregate Scores			1	1	0	0	0	0
Questions with Average Aggregate Scores			17	17	18	15	13	11
Questions with Sig High Aggregate Scores			0	0	0	3	5	6

Gender – Men are happier

			Female	Male
Communication	Q1	Qs answered	8.27	9.16
	Q2	Explanations	8.45	9.27
	Q3a	Dr Listened	8.71	9.33
	Q3b	Nurse Listened	8.34	9.18
	Q3c	Other Listened	8.70	8.74
	Q4	Side effects explained	4.69	6.84
Participation	Q6	Involved	7.98	8.66
	Q7	Family involved	7.27	7.80
Coordination	Q9	Different things said	7.83	9.07
	Q10	Discharge info	6.55	8.28
Physical and emotional needs	Q12	Toilet	8.27	9.00
	Q13	Pain	8.92	9.05
	Q14	Respect	8.90	9.69
	Q15	Kindness	8.74	9.64
	Q16	Culture	8.55	9.25
Overall	Q20a	Confidence Dr	8.81	9.48
	Q20b	Confidence Nurse	8.56	9.48
	Q20c	Confidence Other	8.60	8.97
Questions with Sig Low Aggregate Scores			0	0
Questions with Average Aggregate Scores			18	18
Questions with Sig High Aggregate Scores			0	0

(note none of these reach $\alpha=0.95$ but several reach $\alpha=0.9$, I anticipate that this will change as we get more data)

Ethnicity - no obvious variation between European and Maori responses (not enough data for other ethnic groups)

			European	Maori
Communication	Q1	Qs answered	8.75	8.24
	Q2	Explanations	8.75	8.61
	Q3a	Dr Listened	8.92	9.44
	Q3b	Nurse Listened	8.72	8.61
	Q3c	Other Listened	8.82	8.24
	Q4	Side effects explained	5.54	7.69
Participation	Q6	Involved	8.24	7.50
	Q7	Family involved	7.57	6.54
Coordination	Q9	Different things said	8.30	8.06
	Q10	Discharge info	7.14	8.24
Physical and emotional needs	Q12	Toilet	8.67	7.50
	Q13	Pain	9.03	9.12
	Q14	Respect	9.32	8.61
	Q15	Kindness	9.17	8.89
	Q16	Culture	9.11	8.75
Overall	Q20a	Confidence Dr	9.19	9.44
	Q20b	Confidence Nurse	9.07	8.89
	Q20c	Confidence Other	8.91	7.94
Questions with Sig Low Aggregate Scores		Low	0	0
Questions with Average Aggregate Scores		Ave	18	18
Questions with Sig High Aggregate Scores		High	0	0

Admission method - no obvious variation between methods

			Arranged	Acute	Waiting list
Communication	Q1	Qs answered	7.76	8.79	8.89
	Q2	Explanations	8.75	8.57	9.31
	Q3a	Dr Listened	8.75	8.97	9.38
	Q3b	Nurse Listened	8.50	8.64	8.92
	Q3c	Other Listened	8.28	8.94	8.64
	Q4	Side effects explained	5.53	5.45	5.96
Participation	Q6	Involved	8.50	7.99	8.67
	Q7	Family involved	7.22	7.64	7.55
Coordination	Q9	Different things said	7.83	8.40	8.46
	Q10	Discharge info	7.41	7.01	7.85
Physical and emotional needs	Q12	Toilet	9.29	8.71	8.30
	Q13	Pain	8.33	9.25	8.83
	Q14	Respect	8.83	9.38	9.15
	Q15	Kindness	8.50	9.22	9.15
	Q16	Culture	7.78	9.05	9.44
	Q20a	Confidence Dr	8.57	9.11	9.54
	Q20b	Confidence Nurse	8.62	8.94	9.22
	Q20c	Confidence Other	8.93	8.62	9.17
Questions with Sig Low Aggregate Scores			0	0	0
Questions with Average Aggregate Scores			18	18	18
Questions with Sig High Aggregate Scores			0	0	0

**Distribution method – email and post seem to have some more positive responses
(not clear if there is an age effect going on here)**

			cell	email	post
Communication	Q1	Qs answered	7.88	9.10	9.66
	Q2	Explanations	8.27	9.31	8.67
	Q3a	Dr Listened	8.50	9.45	8.83
	Q3b	Nurse Listened	8.51	8.77	8.83
	Q3c	Other Listened	8.85	8.50	9.04
	Q4	Side effects explained	4.94	6.01	6.43
Participation	Q6	Involved	7.70	8.58	9.11
	Q7	Family involved	7.32	7.39	8.40
Coordination	Q9	Different things said	7.63	8.86	8.83
	Q10	Discharge info	6.47	7.64	8.57
Physical and emotional needs	Q12	Toilet	8.26	8.62	9.38
	Q13	Pain	8.81	9.14	8.93
	Q14	Respect	9.09	9.27	9.33
	Q15	Kindness	8.75	9.27	9.67
	Q16	Culture	8.20	9.29	10.00
	Q20a	Confidence Dr	8.50	9.59	9.33
	Q20b	Confidence Nurse	8.50	9.27	9.14
	Q20c	Confidence Other	8.38	8.92	9.42
Questions with Sig Low Aggregate Scores			0	0	0
Questions with Average Aggregate Scores			18	15	16
Questions with Sig High Aggregate Scores			0	3	2

Appendix 7: Survey data file

The file [received from the DHBs administering their surveys] or [sent to DHBs using the national system] is expected to meet the following:

- The file will be in comma delimited format (conforming to <http://tools.ietf.org/html/rfc4180> standard).
- All column headings must be provided as the first line and must match the Field name specified in the table below.
- Where required, use '0d0a' as a record terminator. '0' is a zero.
- The extract file must be named using the following convention: e.g. BOPDHB_PE_From_yyyymmdd_To_yyyymmdd_SURVEY.csv, where "yyymmdd" is the formatted date/time of the date range used for the extract.
- Codes as opposed to descriptions will be used in columns wherever possible.
-

Field	Data Type	Mandatory Value	Allowed Options (If Restricted)	Example Data	Comment
ID	Text	✓	-	Q1396 Q2001 Q3229	A unique ID for each survey is to be allocated. This should identify the quarter it relates to and is numbered 001-400.
Gender	Text	✓	F I M U	F	Allowed codes from: http://www.health.govt.nz/nz-health-statistics/data-references/code-tables/common-code-tables/sex-type-code-table
Age Group	Integer	✓	15 – 24 25 – 44 45 – 64 65 – 74 75 – 84 85+	15 - 24	This is the patient's age on admission. Age groups are proposed to ensure patients remain anonymous.
Survey period	Date	✓		F012014	The naming of the survey period may be amended but there will need to be a unique name for each fortnight.

Field	Data Type	Mandatory Value	Allowed Options (If Restricted)	Example Data	Comment
Ethnicity	Integer	✓	Only those codes in the Level 2 code table.	21	Allowed codes from: http://www.health.govt.nz/nz-health-statistics/data-references/code-tables/common-code-tables/ethnicity-code-tables
Health Specialty Code	Text	✓	Only those codes in the Health Specialty code table	M45	Allowed codes from: http://www.health.govt.nz/nz-health-statistics/data-references/code-tables/common-code-tables/health-specialty-code-table
Facility code	Text	✓	Only those codes in the Health Facility Code table	D706	Allowed codes from: http://www.health.govt.nz/nz-health-statistics/data-references/code-tables/common-code-tables/facility-code-table
Admission type	Text	✓	Arranged Acute Waiting list	AC or AA or WN	Allowed codes from: http://www.health.govt.nz/nz-health-statistics/data-references/code-tables/common-code-tables/admission-type-code-table
DHB of Domicile	Integer	✓	DHB Area codes	123 or 011	See DHB codes
DHB of Service	Integer	✓	DHB Area codes	123 or 011	See DHB codes
Optional 1	Text	-	-	-	Optional fields for local DHB analysis purposes to further drill down eg. department level
Behalf Yes or No	Text	✓	Y N		
Why on behalf	Text	✓ (if yes)	Free text field		
Q1	Integer	✓	1,2,3,4		1 = first option in list 2 = second option in list, etc
Q2	Integer	✓	1,2,3,4		1 = first option in list 2 = second option in list, etc

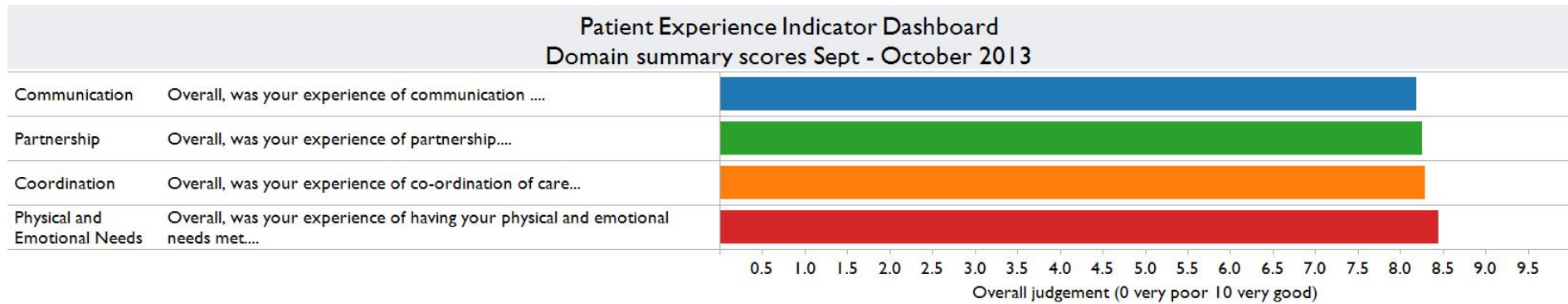
Field	Data Type	Mandatory Value	Allowed Options (If Restricted)	Example Data	Comment
Q3 doctor	Integer	✓	1,2,3,4		1 = first option in list 2 = second option in list, etc
Q3 nurse	Integer	✓	1,2,3,4		1 = first option in list 2 = second option in list, etc
Q3 other	Integer	✓	1,2,3,4		1 = first option in list 2 = second option in list, etc
Q4	Integer	✓	1,2,3,4,5		
Q5	Integer	✓	1 - 10		
Communication comments	Text	-	Free text field		Text – verbatim copy of comment given
Q6	Integer	✓	1,2,3,4		1,2,3,4 (1 first option , 2 second option etc)
Q7	Integer	✓	1,2,3,4,5		1,2,3,4,5 (1 first option , 2 second option etc)
Q8	Integer	✓	1 - 10		1-10 (actual answer given)
Partnership comments	Text	-	Free text field		Text – verbatim copy of comment given
Q9	Integer	✓	1,2,3		1,2,3 (1 first option , 2 second option etc)
Q10	Integer	✓	1,2,3,4		1,2,3,4 (1 first option , 2 second option etc)
Q11	Integer	✓	1 - 10		1-10 (actual answer given)
Coordination comments	Text	-	Free text field		Text – verbatim copy of comment given
Q12	Integer	✓	1,2,3,4		1,2,3,4 (1 first option , 2 second option etc)
Q13	Integer	✓	1,2,3,4		1,2,3,4 (1 first option , 2 second option etc)

Field	Data Type	Mandatory Value	Allowed Options (If Restricted)	Example Data	Comment
Q14	Integer	✓	1,2,3		1,2,3 (1 first option , 2 second option etc)
Q15	Integer	✓	1,2,3		1,2,3 (1 first option , 2 second option etc)
Q16	Integer	✓	1,2,3,4		1,2,3,4 (1 first option , 2 second option etc)
Q17	Integer	✓	1 - 10		1-10 (actual answer given)
Physical and Emotional needs comments	Text	-	Free text field		Text – verbatim copy of comment given
Surgery yes or no	Text	✓	Y or N		
Q18	Integer	-	1,2,3,4		1,2,3,4 (1 first option , 2 second option etc)
Q19	Integer	-	1,2,3		1,2,3 (1 first option , 2 second option etc)
Q20 doctor	Integer	✓	1,2,3,4		1,2,3,4 (1 first option , 2 second option etc)
Q20 Nurse	Integer	✓	1,2,3,4		1,2,3,4 (1 first option , 2 second option etc)
Q20 other	Integer	✓	1,2,3,4	-	1,2,3,4 (1 first option , 2 second option etc)
hospitalstaycomment	Text	-	Free text field	-	Text – verbatim copy of comment given

Note: the rows in the file returned to DHBs will be in order of patient responses received, not in the same order as the patient data exported by DHBs to the national provider. This will further ensure patient responses are anonymous.

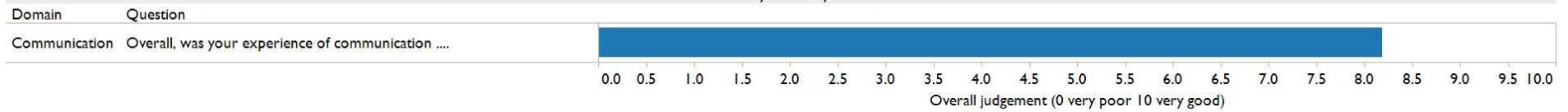
Appendix 8: Patient experience ‘mock-up’ reports

Note that the questions reported in these reports do not match those in the survey tool. These reports simply give you an idea of what can be presented on the dashboard.

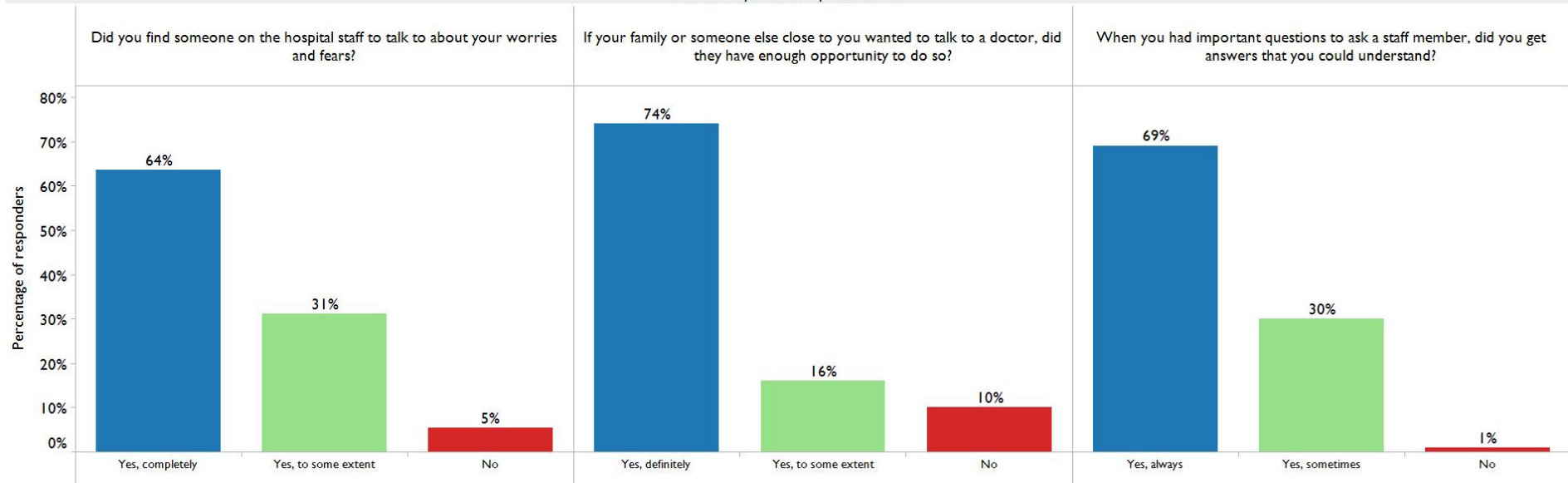


Communication domain

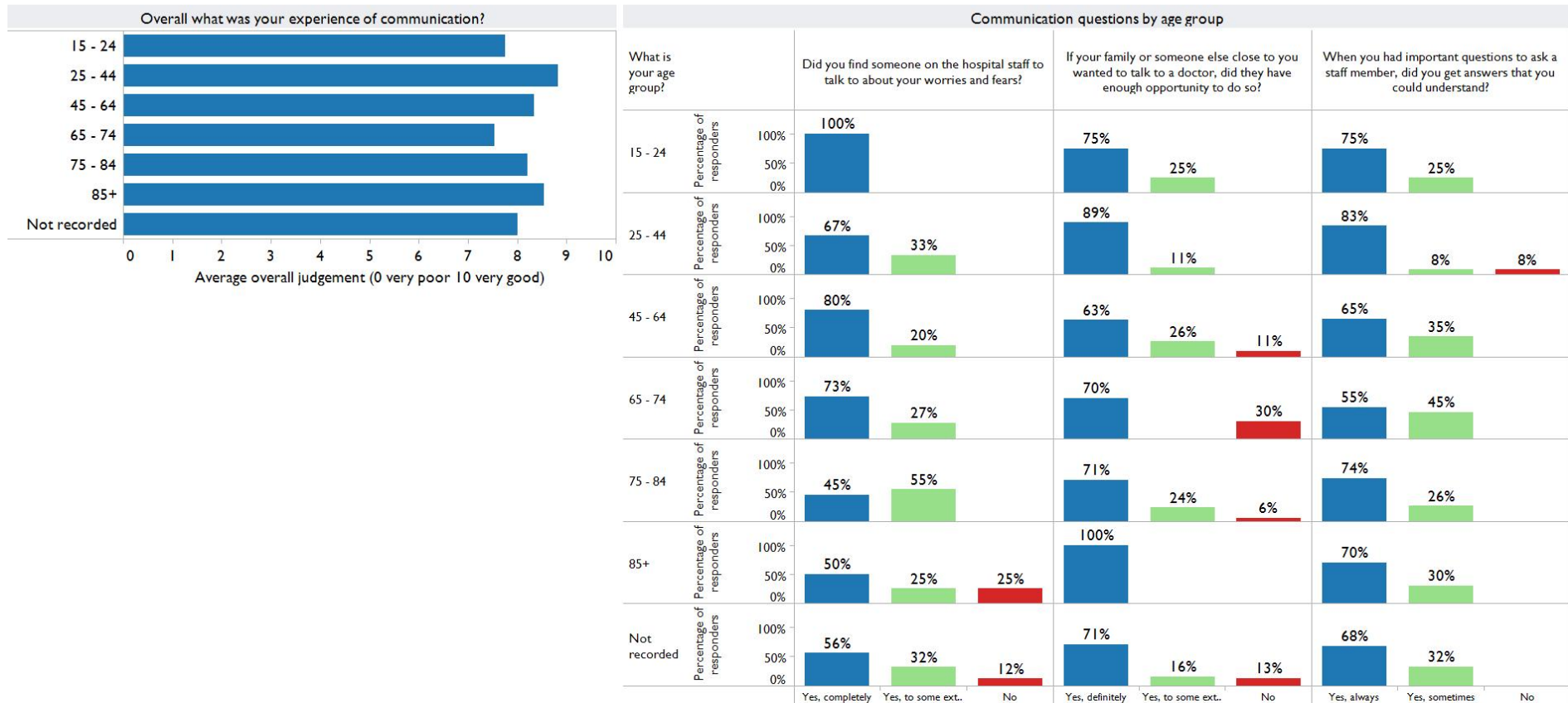
Domain Summary score Sept - Oct 2013



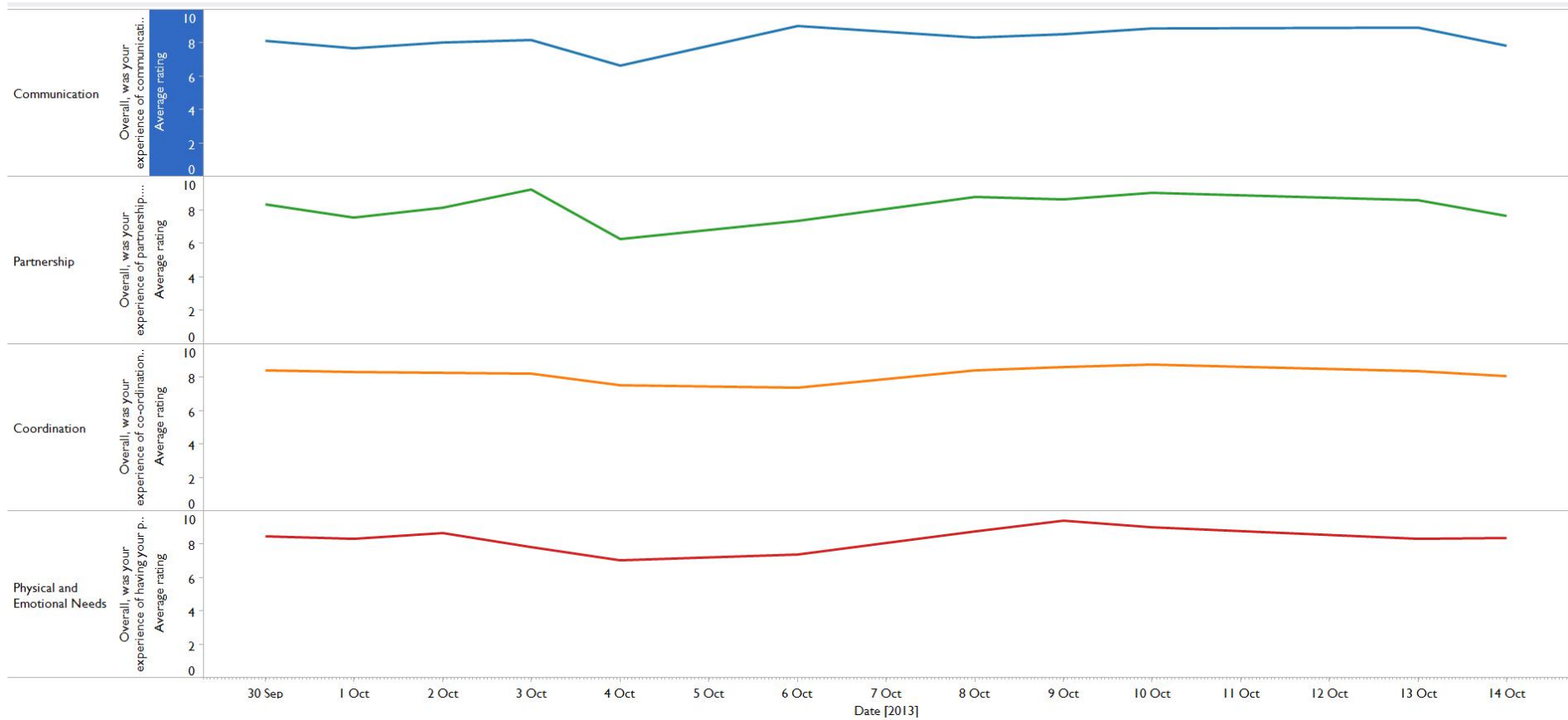
Individual questions Sept -Oct 2013



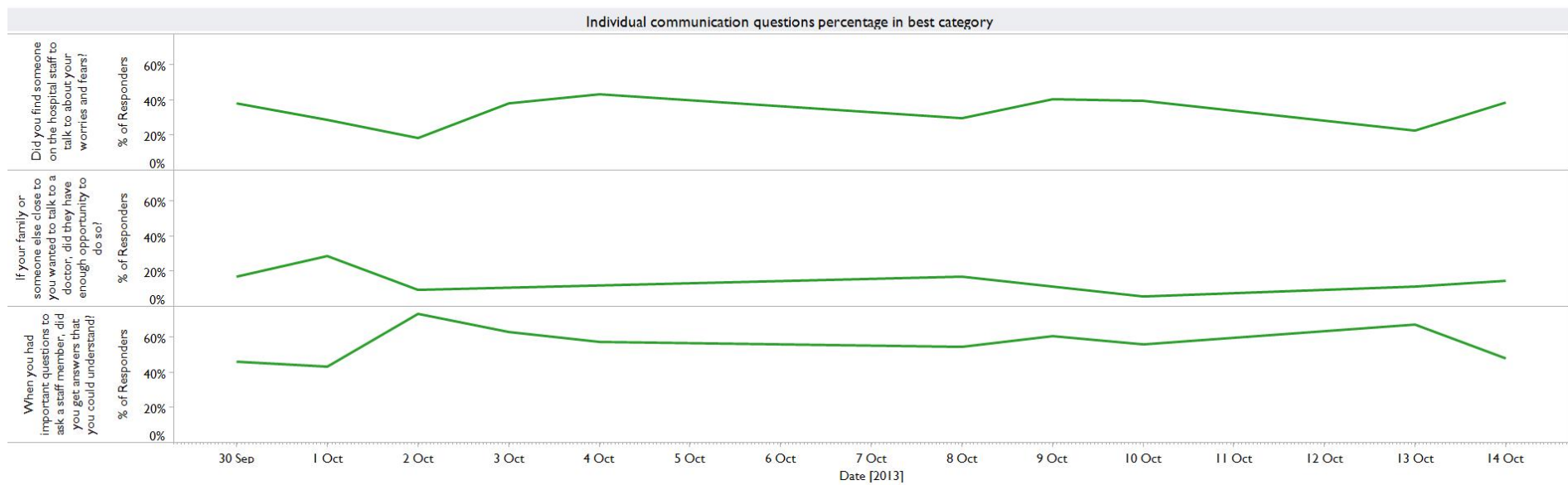
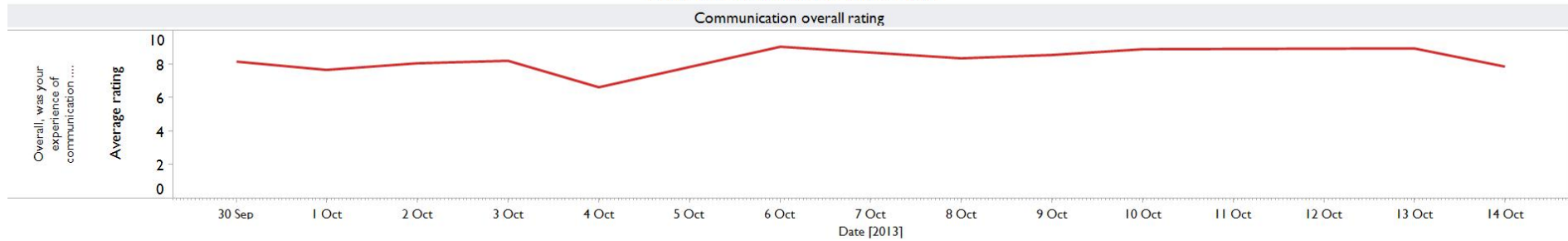
Experience of Communication by age group



Domain time series Sept - Oct 2103



Communication domain time series



Appendix 9: Licensed Software Support

The monthly fee includes:

1. Reasonable Support for DHBs through one nominated Administrator at each DHB by email and phone;
2. Reasonable Support for the Commission nominated Administrator by email and phone;
3. Access to the reporting portal for 20 users at national organisations;
4. Access to the reporting portal for up to 5 users at each DHB;
5. The ability for each DHB to add up to four of the Approved Tested Additional Questions (see Appendix 2) with reporting;
6. Receipt of a data extract from each DHB up to 4 times a year (i.e. quarterly if the DHB has elected to pay the Fixed Support Services – Quarterly monthly fee);
7. Receipt of a data extract from each DHB up to 26 times a year (i.e. fortnightly if the DHB has elected to pay the Fixed Support Services – Fortnightly monthly fee);
8. Receipt of a survey extract in the specified format from each DHB once each quarter where the DHB has opted to do its own data collection;
9. Receipt of a data extract from each DHB up to 26 times a year (i.e. fortnightly);
10. Receipt of a survey extract in the specified format from each DHB once each quarter where the DHB has opted to do its own data collection;
11. Provision of a data entry process for paper survey results at DHB level;
12. Presenting survey questions to respondents under the 20 appropriate DHB brands and signatories;
13. All email and SMS costs for the quarterly process. The Supplier will cover the cost of SMS messages for the quarterly processes if the message is under 160 characters;
14. An additional 2000 SMS messages (160 character limit) will be provided per month at no additional cost (in addition to the quarterly allowance) for the first six months of the Agreement.
15. Access to all current and future features provided within General Releases;
16. Report of automated, coded open-ended comments on a quarterly basis, provided to the Commission.
17. Secure storage of non-identifiable patient data and survey responses.
18. The Domain, secure certificates and all data storage and hosting within New Zealand.
19. DHBs adopting the continuous (fortnightly) approach to surveying will have access to the Action Register at no additional cost.

The monthly fee does not include:

1. The cost for DHBs to run continuous monitors using questions other than the Core Survey Tool and the four Optional Additional Tested Questions;
2. Data manipulation or cleansing if extracts do not meet specifications; (the upload process has an in-built error-message for incorrectly formatted or empty fields)
3. Any SMS costs other than those outlined above;
4. Any costs associated with the paper survey process;

5. Additional analysis, reporting or presentations other than the online reporting (excluding quarterly automated verbatim comment coding);
6. Significant compliance activity that may be required over and above meeting the requirements of the Request For Tender, specifically compliance activity at DHB level.