

### **Public Finance Act**

The Public Finance Act sets out the specific requirements regarding what should be included in a Statement of Intent in Section 41D. Subsection (1)(c), in particular, relates to performance targets and measures.

Section 41G (not shown) gives the Minister the power to require Crown entities to modify their Statement of Intent, which implies that he or she can decide what measures are to be included, and what targets the Board should be aiming to achieve.

#### **41D. CONTENTS OF STATEMENT OF INTENT–**

- (1) Each statement of intent shall specify for the Crown entity or, where relevant, the Crown entity group, in respect of each of the financial years to which it relates, the following information:
  - (a) The objectives of the Crown entity or group:
  - (b) The nature and scope of the activities to be undertaken by the Crown entity or group:
  - (c) **The performance targets and other measures by which the performance of the Crown entity or group may be judged in relation to its objectives:**
  - (d) A statement of accounting policies:
  - (e) Where required by the Responsible Minister, the ratio of consolidated shareholders' funds (or equivalent) to total assets, and definitions of those terms:
  - (f) Where required by the Responsible Minister, a statement of the principles adopted in determining the distribution of profits to the Crown, together with an estimate of the amount or proportion of annual tax paid earnings (from both capital and revenue sources) that is intended to be distributed to the Crown:
  - (g) Where applicable, the procedures to be followed before the Crown entity, or any member of the group, subscribes for, purchases, or otherwise acquires shares in any company or other organisation:
  - (h) Where the Crown entity is named or described in the Fifth Schedule to this Act, a [statement of output objectives] specifying the classes of outputs to be produced by the Crown entity or group:
  - (i) Any activities (not being activities related to a class of outputs specified pursuant to paragraph (h) of this subsection) in respect of which the Crown entity or group will be seeking compensation from the Crown (whether or not the Crown has agreed to provide such compensation):
  - (j) Such other matters, including the kind of information to be provided to the Responsible Minister during the course of those financial years, as are agreed by the Responsible Minister and the governing body of the Crown entity.

responsibility for monitoring has been delegated to CCMAU, which collects appropriate performance information from HHSs and reports it to the Minister.

## **12. RESPONSIBILITY OF MINISTER OF HEALTH–**

The Minister of Health is responsible to the House of Representatives for–

- (a) Monitoring the extent to which–
  - (i) The purpose of this Act has been achieved; and
  - (ii) The objectives of the Crown and the Health Funding Authority have been achieved; and
- (b) The performance and exercise of the functions, duties, and powers given to him or her by this Act.

Section 39 says that the operational decisions of every HHS must be made by its Board of Directors, in accordance with its Statement of Intent. This section limits the power of the Minister, or the Minister's representatives, to intervene in the day-to-day operations of each HHS.

## **39. BOARDS OF HOSPITAL AND HEALTH SERVICES–**

- (1) All decisions relating to the operation of a hospital and health service must be made by or under the authority of its board in accordance with its statement of intent.

Finally, section 14 says that the Statement of Intent is one of the accountability documents specified in the Public Finance Act.

## **14. APPLICATION OF PUBLIC FINANCE ACT 1989--**

The Health Funding Authority and every hospital and health service is a Crown entity for the purposes of the Public Finance Act 1989; and, in particular, the Authority and every service must prepare statements of intent, annual financial statements, and annual reports in accordance with its obligations under that Act.

## Statutory Authorities and Obligations

This appendix sets out the law, as it applies to measuring the performance of Hospitals and Health Services. There are two Acts that set out the formal requirements: the Health and Disability Services Act and the Public Finance Act.

Neither explicitly requires patient satisfaction surveying, however the general provisions of these Acts imply that it should be included among the range of appropriate performance measures. The decision whether to include it rests with CCMAU, which has monitoring responsibilities on behalf of the Minister of Health.

### ***Health and Disability Services Act***

This Act says what the objectives of HHSs are, and emphasises the importance of the Statement of Intent as an accountability document. It is the statutory basis of the Minister's accountability to Parliament for monitoring the performance of HHSs, and of each HHS Board's management decisions.

#### **11. OBJECTIVES OF HOSPITAL AND HEALTH SERVICES–**

- (1) The principal objective of every hospital and health service is–
  - (a) To provide a range of health services, or disability services or both, to improve health outcomes and to enhance the health status of the people it serves; and
  - (b) To assist in meeting the Crown's objectives under section 8 by providing such services in accordance with its statement of intent and its service agreement with the Health Funding Authority and any other agreement for the provision of services.
- (2) Every hospital and health service must meet its principal objective while operating–
  - (a) In a businesslike and effective manner; and
  - (b) On a not-for-profit basis.
- (3) Without limiting subsection (1) or subsection (2), every hospital and health service has the following objectives:
  - (a) To exhibit a sense of social responsibility by having regard to the interests of the community in which it operates:
  - (b) To uphold the ethical and quality standards generally expected of providers of health services or disability services, or both, as the case may be:
  - (c) To be a good employer.

Section 12 says that the Minister of Health is responsible for monitoring the performance of HHSs, and is accountable to Parliament for doing so. The

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- John, J. (1992) "Getting Patients to Answer: What Affects Response Rates?" **Journal of Health Care Marketing** 12(2): 46-51.
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- Rice, B. (1996) "Are Patient Satisfaction Surveys Fair to Doctors?" **Medical Economics** 73(23): 55-68.
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- Terry, K. (1996) "How To Get the Best Reading of Patient Satisfaction" **Medical Economics** 73(13): 101-122
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## Bibliography

There is a considerable amount of research available on patient satisfaction surveys, much of it undertaken in the USA since the introduction of Health Management Organisations (HMOs). The list below is a selection of information sources we referred to or found useful when developing this proposal.

### Software

This software was developed by South Auckland Health and will help in the selection of the patient sample. It can be downloaded free of charge from this internet site [www.datasyn.co.nz/PatientSurveyDB.htm](http://www.datasyn.co.nz/PatientSurveyDB.htm).

### Internet Sites

<http://www.amhpi.com/eyeonpatients> Describes the Picker institute method and philosophy for surveying patient satisfaction.

<http://www.hna.ffh.vic.gov.au/ahs/patsat/> Results of a single in-depth patient satisfaction study undertaken in Victoria, Australia (1997)

[www.pressganey.com/research/resources/pubarticles/bin/7.shtm](http://www.pressganey.com/research/resources/pubarticles/bin/7.shtm)

Discusses methods for reducing non response

### Books

Fitzpatrick, R. and A. Hopkins, eds, (1993) **Measurement of Patients' Satisfaction with their Care** London: Royal College of Physicians

Fitzpatrick, R. et al, (1984) **The Experience of Illness** London: Tavistock Publications

Te Puni Kokiri: Ministry of Maori Development (1999): **Evaluation for Maori Guidelines for Government Agencies.**

### Articles

Alt, S (1995) "Patient Satisfaction Rates are too High" **Health Care Strategic Management** 13(8)

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Courts, N. (1995) "Steps to a Patient Satisfaction Survey" **Nursing Management** 26(9)

Dansky, K. and J. Miles (1997) "Patient Satisfaction with Outpatient/Daypatient Care Services: Waiting time and filling time" **Hospital and Health Services Administration** 42(2): 165-178

DiMatteo, R and R. Hayes (1980) "The Significance of Patients' Perceptions of Physician Conduct: A Study of Patient Satisfaction in

**Reporting Dates**

The completed template and electronic data set must be received by the dates outlined in the table below.

June 2000 Quarter	5pm Friday 21 July 2000
September 2000 Quarter	5pm Friday 20 October 2000
December 2000 Quarter	5pm Friday 19 January 2001
March 2001 Quarter	5pm Friday 20 April 2001
June 2001 Quarter	5pm Friday 20 July 2001
September 2001 Quarter	5pm Monday 22 October 2001
December 2001 Quarter	5pm Monday 21 January 2002

**Age****Definition**

The age category identified by the patient.

**Valid Values**

1 = 0-4 years

2 = 5-14 years

3 = 15-24 years

4 = 25-44 years

5 = 45-64 years

6 = 65-74 years

7 = 75-84 years

8 = 85+ years

**Field Length**

1 character

**Gender****Definition**

The gender identified by the respondent.

**Valid Values**

M = Male

F = Female

**Field Length**

1 character

**Ethnicity****Definition**

The ethnicity identified by the respondent.

**Valid Values**

11 = New Zealand European

21 = New Zealand Maori

31 = Samoan

32 = Cook Island Maori

33 = Tongan

34 = Niuean

42 = Chinese

43 = Indian

54 = Other

**Field Length**

2 characters

Below is an example of what one patient record would look like.

HHS	DATE	PATIENT POPN	QUESTION RESPONSES															AGE	GENDER	ETHNICITY			
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15				16	17	
1011	15/04/2000	1	0	0	5	2	4	5	5	5	4	2	3	1	4	3	4	3	4	4	4	M	11

## Reporting Format

The format for sending patient response records is outlined below. NZHIS definitions from the National Minimum Dataset have been used where possible.

### HHS

#### Definition

The HHS that sent out the questionnaires.

#### Valid Values

1011 = Northland Health	3082 = Good Health Wanganui
1021 = Waitemata Health	3091 = Capital Coast Health
1022 = Auckland Healthcare	3092 = Hutt Valley Health
1023 = South Auckland Health	3093 = Wairarapa Health
2031 = Health Waikato	3101 = Nelson-Marlborough
= Pacific Health	4111 = Coast Health Care
2042 = Lakeland Health	4121 = Canterbury
2051 = Tairāwhiti Health	4122 = Healthlink South
2071 = Taranaki Healthcare	4123 = Health South Canterbury
3061 = Hawkes Bay Health	4131 = Healthcare Otago
3081 = Midcentral Health	4141 = Southern Health

#### Field Length

4 characters

### Date

#### Definition

The date the survey was sent to the patient

#### Valid Values

dd/mm/yyyy

#### Field Length

8 characters

### Question Response

#### Definition

The coded response for each question.

#### Valid Values

- 1 = Very Poor
- 2 = Poor
- 3 = Average
- 4 = Good
- 5 = Very Good
- 6 = Does not apply

#### Field Length

1 character

**Table 6: Chi-square Test on Gender**

Gender	Inpatients	% Inp	Expected (e)	Actual (a)	$\frac{(a-e)^2}{e}$	$\chi^2$
Male	2,756	39.6%	146	128	2.22	
Female	4,211	60.4%	224	242	1.45	
	6,967	100.0	370	370	<b>3.67</b>	<b>3.841</b>

This shows that with  $df = 1$  (1 degree of freedom) is no difference in gender distribution between the sample and the population, at the 5% level of significance.

**Table 7: Chi-square Test on Age**

Age	Inpatients	% Inp	Expected (e)	Actual (a)	$\frac{(a-e)^2}{e}$	$\chi^2$
0-4	657	9.4%	35	28	1.40	
5-14	985	14.1%	52	50	0.08	
15-24	1,435	20.6%	76	82	0.47	
25-44	1,104	15.8%	59	72	2.86	
45-64	879	12.6%	47	45	0.09	
65-74	1,203	17.3%	64	60	0.25	
75-84	521	7.5%	28	21	1.75	
85+	183	2.6%	10	13	0.90	
	6,967	100.0	370	370	<b>7.80</b>	<b>14.067</b>

With  $df = 7$ , there is no difference in age distribution between the sample and the population, at the 5% level of significance.

**Table 8: Chi-square Test on Ethnicity**

Ethnicity	Inpatients	% Inp	Expected (e)	Actual (a)	$\frac{(a-e)^2}{e}$	$\chi^2$
European/Pakeha	3,241	46.5%	172	172	0.00	
Maori	983	14.1%	52	44	1.23	
Pacific Island	1,536	22.0%	82	83	0.01	
Asian	425	6.1%	23	20	0.39	
Other/Not stated	782	11.2%	42	51	1.93	
	6,967	100.0%	370	370	<b>3.56</b>	<b>9.488</b>

With  $df = 4$ , there is no difference in ethnic distribution between the sample and the population at the 5% level of significance.

- To find out if the statistic is “small enough” it has to be compared to the figure shown at the bottom of the sixth column, which has to be looked up in the standard table for the chi-square distribution, (see Table 5 below).

When we look up the chi-square table, we only need to know one thing about the data: the number of categories of information we are testing. If there are  $N$  categories, then the distribution has  $N - 1$  degrees of freedom. The first column of Table 5 gives the *degrees of freedom* ( $v$ ) for the distribution.

As we have five categories, there are four degrees of freedom. We look down the first column to find the degrees of freedom, then across the row to find where our statistic fits, then up to the top row to determine the significance level. A full table of the chi-square distribution can be found in the back of almost any statistics textbook.

**Table 5: Subset of the Chi-square distribution**

$V$	0.05	0.025	0.01	0.005
1	3.841	5.024	6.635	7.879
2	5.991	7.377	9.210	10.597
3	7.815	9.348	11.345	12.838
4	9.488	11.143	13.277	14.860
5	11.070	12.832	15.086	16.750
6	12.592	14.449	16.812	18.548
7	14.067	16.013	18.475	20.278
8	15.507	17.534	20.090	21.955
9	16.919	19.023	21.666	23.589

We are using the chi-square statistic to test a hypothesis. The “null hypothesis” is that there is *no difference* between the sample and the population. The “alternative hypothesis” is that there *is a difference*. The alternative hypothesis is the one we are testing. Understanding this helps us interpret meaning of the 5% level of significance.

Recall that the calculation means that bigger numbers mean larger differences. If the chi-square statistic we calculated was greater than 9.488 then there would be a greater than 95% probability that there *is a difference* between the sample and the population.<sup>12</sup> If the statistic was greater than 11.345, then there is a greater than 99% chance that there is a difference, and so forth. Since the statistic we calculated is less than 9.488, we would say:

*“There is no difference between the sample and the population, at the 5% level of significance.”*

We can repeat the exercise for each of the demographic variables, but because the number of categories is different for each variable, we have to look up the correct number of degrees of freedom each time.

<sup>12</sup> The top row of the table shows 0.05 or 5%. So  $1 - 0.05 = 0.95$ , or 95%. The idea of probability, in this context, means that if we repeated this same experiment 100 times, we would expect 95 results to show a significant difference and 5 results to show no significant difference.

## The Chi-square Test

A chi-square test is used to test whether two populations are similar. In this case, we want to test whether the demographic characteristics of the patients who responded to a survey are similar to the demographic characteristics of the patient population from which the sample was drawn. If they are, then we can be confident that the sample is representative.

The table below demonstrates how a chi-square test works:

**Table 4 : Chi-square Test on Services**

Service	Inpatients	% Inp	Expected (e)	Actual (a)	$\frac{(a-e)^2}{e}$	$\chi^2$
Medical	2,780	39.9%	148	155	0.33	
Surgical	2,345	33.7%	124	117	0.40	
Preg/Child	1,125	16.1%	60	63	0.15	
Disability Support	410	5.9%	22	17	1.14	
Mental	307	4.4%	16	18	0.25	
	6,967	100%	370	370	<b>2.27</b>	<b>9.488</b>

The total number of inpatients is nearly 7,000. If we look at Table 1 in section 4.2.1, the required sample size is 364. 560 survey forms would need to be sent out to achieve a sample size of 364 (calculated on a 65% response rate). In reality, the number of actual responses will probably vary from the 364 required to achieve the desired level of precision. The example has been calculated using 370 responses.

- The first column of figures shows the number of patients in each service category.
- The second column shows the *percentage* of total inpatients in each service category.
- The third column shows how many responses we would **expect** to get in each category, if we achieved a sample size of 370 (that is; 39.9% of 370 in the first row, 33.7% of 370 in the second row, and so on).
- The fourth column shows the **actual** number of responses in each category.
- The fifth column shows the calculation of the chi-square statistic. For each category we calculate; the actual responses minus expected responses, square the result, then divide that by expected responses. At the bottom of the fifth column is the chi-square statistic, which is the sum of the results. E.g. In Table 4, the  $\chi^2$  statistic of 2.27 is obtained for this data by summing 0.33, 0.40, 0.15, 1.14 and 0.25. This is compared to the tabulated  $\chi^2$  statistic.
- As you can see from the equation, the closer all the actual results are to the expected results, the smaller the chi-square statistic will be. A smaller statistic therefore means the sample is more representative of the patient population.

## Targeted Reminders

Targeted reminders are a procedure for following-up non-respondents. This requires non-respondents to be identified, which could compromise their anonymity. There is an appropriate procedure that must be carefully followed:

- (a) The HHS sends out the questionnaires with randomly assigned ID numbers on them. A list that contains the randomly assigned IDs, *but not the patients' name or address*, is sent to someone who does not have access to the address list.
- (b) Patients return the questionnaires to this person, who records the IDs and the patients' responses to the items in the questionnaire. Once data input is complete and has been checked, the questionnaires must be destroyed.
- (c) Two weeks after the questionnaires were sent, a list of non-respondents' ID numbers is sent to the person who sent out the questionnaires. That person can send out reminder letters to non-respondents.

To ensure that responses remain totally confidential:

- At no time during this process should the patient's responses to the questionnaire be associated with information that identifies who they are.
- People who do not have contact with patients should carry out this follow-up procedure.

Many respondents prefer not to answer a survey that has an ID number on it, so this method may actually reduce response rates to the initial questionnaire. The covering instructions should explain what the ID number is there for.

**Note:** Anonymity and confidentiality are separate concepts. If a response is totally anonymous, the respondent cannot be identified at all. If a response is confidential, the respondent can be identified, but their response cannot be associated with them – it is confidential. Targeted reminders therefore guarantee confidentiality of responses, not the anonymity of respondents.

If you wished to stratify sampling by service area, for instance, then this list should be sorted by Service and then, using either an automated randomising procedure or a manual fixed interval method, select the appropriate number of discharged Medical patients, then Surgical patients, and so forth.

The list can now be used for a simple word-processed mail out.

If the selection within each service area is truly random, the distribution of the sample on the three other demographic variables (i.e. sex, age and ethnicity) should closely approximate the distribution of the entire patient base.

**Step 4:**

When the survey results are received, chi-square tests should confirm that there is no statistically significant difference between the chosen characteristic(s) of the patient sample and those of the entire patient population.

- If there is a significant difference in the response rates for one or more patient characteristics then you should investigate why that is so.

Over time, the characteristics of the patient sample should match those of the patient population.

**Step 2:** Match as closely as possible the above proportion of inpatients to the proportion of patients you wish to include in the sample. There are approximately 7000 patients in the period we wish to draw the sample from. The number of patients that need to be surveyed is 560, which should produce an adequate sample of 364 based on a 65% response rate.

<b>Service</b>	<b>Inpatients</b>	<b>%</b>	<b>Sample</b>	<b>%</b>
Medical	3,524	50.6%	283	50.6%
Surgical	1,608	23.1%	129	23.1%
Preg/Child	1,125	16.1%	90	16.1%
Disability Support	410	5.9%	33	5.9%
Mental	300	4.3%	24	4.3%
	6,967	100.0%	560	100.0%
<b>Gender</b>				
Male	2,756	39.6%	222	39.6%
Female	4,211	60.4%	338	60.4%
	6,967	100.0%	560	100.0%
<b>Age</b>				
0-4	657	9.4%	53	9.4%
5-14	985	14.1%	79	14.1%
15-24	1435	20.6%	115	20.6%
25-44	1104	15.8%	89	15.8%
45-64	879	12.6%	71	12.6%
65-74	1203	17.3%	97	17.3%
75-84	521	7.5%	42	7.5%
85+	183	2.6%	15	2.6%
	6,967	100.0%	560	100.0%
<b>Ethnicity</b>				
European/Pakeha	3,241	46.5%	261	46.5%
Maori	983	14.1%	79	14.1%
Pacific Island	1,536	22.0%	123	22.0%
Asian	425	6.1%	34	6.1%
Other/Not stated	782	11.2%	63	11.2%
	6,967	100.0%	560	100.0%

### **Step 3:**

Obtain another list, which shows the name and address of all patients discharged during the sample period, together with:

- the service they used
- their gender
- their age group
- their ethnicity

## Stratified Random Sampling

Stratified random sampling can be used to ensure that samples are more likely to be representative of one or more patient characteristics. A stratified random sample is obtained by dividing the population into non-overlapping groups called strata, and then selecting a simple random sample from within each strata. Sampling from every strata helps to ensure full representation of the different subgroups.

Computers can do this, and South Auckland Health has developed a simple programme for doing so, that is available to all HHSs. However, it may be useful for people to understand the underlying principle.

**Step 1:** Obtain a list that shows the total number of inpatients during the last half-month period in each of the following categories, for example:

<b>Service</b>	<b>Inpatients</b>	<b>%</b>
Medical	3,524	50.6
Surgical	1,608	23.1
Preg/Child	1,125	16.1
Disability Support	410	5.9
Mental	300	4.3
	6,967	100.0
<b>Gender</b>		
Male	2,756	39.6
Female	4,211	60.4
	6,967	100.0
<b>Age</b>		
0-4	657	9.4
5-14	985	14.1
15-24	1435	20.6
25-44	1104	15.8
45-64	879	12.6
65-74	1203	17.3
75-84	521	7.5
85+	183	2.6
	6,967	100.0
<b>Ethnicity</b>		
European/Pakeha	3,241	46.5
Maori	983	14.1
Pacific Island	1,536	22.0
Asian	425	6.1
Other/Not stated	782	11.2
	6,967	100.0

**(i) Personal contact**

Personal contact from someone at the hospital about conducting the survey tends to increase a patient's perception that their response is important to the HHS. South Auckland Health gets the call centre staff at their Superclinic to make reminder telephone calls, for instance.

**Improving Maori response rates**

As reported in Zwier & Clarke (1999)<sup>11</sup>, previous surveys have suffered from an under representation of Maori and Pacific Island patients. As Maori and Pacific peoples of New Zealand do not currently enjoy the same level of health status as other New Zealanders, it is important to address this under representation so any areas of dissatisfaction particular to these groups can be identified. Providing a service that is satisfactory could lead to improved access to services and eventually improved health status.

Feedback from Dr Fiona Cram, Research fellow at the International Research Institute for Maori and Indigenous Education, University of Auckland and Te Ropu Rangahau Hauora a Eru Pomare identified three key points with regards to improving Maori response rates: -

- Create ownership of the research by involving Maori representatives at the hospitals (endorsing the research).
- Include Maori language on the survey materials (i.e. a salutation or proverb).
- Provide an opportunity for respondents to talk about their experiences as well as filling out the questionnaire (e.g. through an 0800 number).

Te Ropu Rangahau Hauora a Eru Pomare (the Maori Health Research Unit of Wellington Medical School) advise that Maori have low initial response rates, but will respond if followed up by letter or phone call. Using Maori personnel to contact non-respondents can improve response rates as the potential respondent may more readily identify with the caller.

Each HHS has to use its own best judgement about which of these strategies it will employ to improve response rates.

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<sup>11</sup> Zwier, A.G. & Clarke, D. (1999) How well do we monitor patient satisfaction? Problems with the nationwide patient survey. New Zealand Medical Journal Vol 112, No 1097, Pg 371-375.

- Post blank questionnaires in waiting areas along with lists of improvements made based on responses.
- During the registration/admission process: Staff can use this opportunity to invite patients to complete a questionnaire when it is sent to them at home. Laminated copies of blank questionnaires can be posted in admission areas.
- During orientation to the unit/area: Staff can inform patients that a questionnaire may be sent to them and motivate them with examples of improvements made as a result of previous responses.
- In patient handbooks: Include a statement about the survey process in patient handbooks.
- During discharge/ follow-up care instructions: Staff can remind patients that they may get a survey form and the benefits of this.

**(b) Ensure the patient receives the envelope**

Ensuring that patients' contact address details are current so that the questionnaire can be received. This is especially important if the patient is not returning to their home address immediately after discharge e.g. they may be staying with relatives whilst they recuperate.

**(c) Ensure the patient opens the envelope**

Make the envelope look as much like a personal envelope as possible – if it looks like junk mail it is less likely to get opened. Likewise if the envelope looks like a bill. Using address labels can also increase the risk of the patient not opening the envelope.

**(d) Presentation of the survey**

The colour of the paper the survey is presented on as well as the layout and quality of the print can affect response rates. i.e. If the survey looks as if its been photocopied a 100 times this will reduce the response rate.

**(e) Inform patients about the value of the survey**

Draw their attention to improvements that have been implemented as a direct result of previous responses.

**(f) Inducements**

Offering inducements, such as prizes or gifts, is **not** an acceptable method of increasing response rates for the patient satisfaction survey.

**(g) Universal Reminders**

Every person who has been sent a questionnaire in any sample batch could be sent a "thank you/reminder" postcard. This should thank those who have responded, and remind those who haven't that the HHS would appreciate it if they could fill in and return the questionnaire.

**(h) Targeted Reminders**

HHSs can send out a reminder note with a duplicate questionnaire to only those patients who did not respond. This requires non-respondents to be identified, so an anonymous follow-up procedure must be used. Such a procedure is described in Appendix 2D.

## Non-Response

Response rates tend to be lower for mailed-out surveys than they are for face to face or telephone surveys. Appendix 2A explains how low response rates affect the validity of the statistics. The other potential problem associated with low response rates is non-response bias.

### Non-Response Bias

If non-response is associated with population characteristics such as literacy, age, or culture it may introduce bias into the sample where some patient groups are under represented.

However, it may also be that the defining characteristic for non-response is that mostly people who don't like answering surveys do not return them. When this reason for non-response is not related to their experience of care, or to a relevant personal characteristic, a low response rate affects only the margin of error, not the representation of patient groups in the sample.

If it becomes evident that non-response is associated with an identifiable patient characteristic, such as age, ethnicity, or gender, then the HHS should attempt to identify whether there is a patient satisfaction issue or some other characteristic (such as low literacy rates, language difficulties, socio-economic status) associated with that patient group's low response rate, which the survey does not identify.

In that case, it may be necessary to employ other methods of determining the satisfaction of those patients. Producing reliable statistics is supposed to be a means to an end, not an end in itself!

### Reducing Non-response

Some methods for reducing non-response have already been addressed in the questionnaire design and covering letter such as

- Keeping questionnaires short and simple
- Keeping questionnaires relevant to the target population
- Including a motivating cover letter
- Keeping the return period relatively short

There are other documented methods for reducing non-response. These are summarised below.

For further detail refer to Kaldenberg, D.O., Malone, M.P. *Techniques to Increase Response Rates by Managing the Critical Events in the Survey Process*. ([www.pressganey.com/research/resources/pubarticles/bin/7.shtm](http://www.pressganey.com/research/resources/pubarticles/bin/7.shtm))

#### (a) Pre-notification

People respond better if they have some idea about what will happen.

Below are some examples of ways to notify the patient about the questionnaire.

- Include a simple statement that patients will be given the opportunity to share their evaluations of the facility on the materials sent to patients prior to their use of the facility,

**Table 3 : Effect of response rates on the margin of error**

For a patient population of 15,000:		
Number of responses	Response rate	Margin of error
375	100%	5.00
350	93%	5.18
325	87%	5.38
300	80%	5.60
275	73%	5.86
250	67%	6.15
225	60%	6.48
200	53%	6.88
175	47%	7.36
150	40%	7.96

In all of this, we are assuming there is no *response bias*. That is, the non-responders do not systematically experience different levels of satisfaction from those who respond.

To obtain the desired sample size, we then use the formula:

$$n = Nn'/(N+n')$$

Where:

n = the desired sample size taking into account the finite population correction

N = the population size

n' = initial estimate of sample size

Thus, for a population of 15,000:

$$n = 15,000 \times 384.16 / (15,000 + 384.16)$$

$$n = 374.56$$

The numbers in Table 1 are calculated using this formula (with some rounding adjustments).

Using this table will produce patient satisfaction statistics with a confidence level of 95% and a confidence interval, which is  $\pm 5\%$  of "true" patient satisfaction, if all patients who have been sampled return their survey forms.

Reverting to the language of journalism, the table is designed to produce a statistic with a 5% margin of error.

### **Confidence Intervals and response rates**

We know that not all patients return their surveys. Because the confidence level is a function of sample size, low response rates will affect the margin of error. If the number of responses were fewer than those sampled, the margin of error will be greater.

We can calculate the effect response rates have on the margin of error by reversing the equation we used to determine sample size. Table 3 demonstrates the effect that response rate has on the confidence interval, for a patient population of 15,000 (assuming a confidence level of 95%).

## Sample size and margin of error

The objective of sampling is to produce an *estimate* of a number that would be accurately known if we measured a whole population (the “true” result).

Since we only have an estimate, we would like to know how accurate the estimate is. When you hear about poll results, journalists often talk about a “margin of error”. A statistician is more likely to talk about a confidence level.

Confidence levels are based on probabilities. If a figure is known with a confidence level of 0.95 (or 95%), it means: if we repeated this sample 100 times, at least 95 of the results (estimates) would fall within a known value of the “true” result. The confidence interval is the known value, or distance, from the true result within which the estimated results will fall.

A confidence level is determined by the sample size and the standard error or variance of the results. If we want to know how many patients to sample from a given population, we can work backwards from a desired confidence level to determine the sample size.<sup>9</sup>

When using simple random sampling, the standard error for any population is given by the formula:

$$SE(p) = \sqrt{(PQ/n')}$$

Where:

p = the sample percentage (the actual result)

P = the population percentage (the “true” result)

Q = 100 – P

n' = initial estimate of the sample size

We can rearrange the equation and, using a known standard deviation and an estimate of P, work backwards to find n'. If, for instance, we are aiming to produce a statistic that has a confidence level of 95% and a confidence interval of  $\pm 5\%$  of the “true” value, we can calculate the initial sample size estimator:<sup>10</sup>

$$n' = (1.96)^2 (PQ)/5^2$$

$$n' = 384.16$$

The number P is set to 50, since we do not know the actual population percentage, this gives us the most conservative estimate of P (i.e., the product of PQ is largest at this value.)

<sup>9</sup> This explanation is derived from; Kalton, G. (1983) *Introduction to Survey Sampling* Sage, Newbury Park, pp13-16 and 82-84.

<sup>10</sup> The figure 1.96 represents the 95% confidence interval of 1.96 standard deviations from the mean of a normal distribution. The figure 5 represents the desired confidence interval (as a percentage).

## **Appendix 2 – Sampling Methodology**

This Appendix contains all the technical information in relation to the survey design, handling of non-response, the required statistics and reporting.

### **Contents**

Appendix 2A: Sample Size and Margin of Error

Appendix 2B: Non Response

Appendix 2C: Stratified Random Sampling

Appendix 2D: Targeted Reminders

Appendix 2E: The Chi-square Statistic

Appendix 2F: Reporting Format

Appendix 2G: Reporting Dates

HHSs should also endeavour to identify, and to ask questions about, what matters most to their patients.

Patients should be asked to assess events and encounters that occurred during their episode of care, rather than report their own reactions to those events and encounters. Respondents should therefore be asked to rate performance on a five-point scale from *Very Poor* to *Very Good*, rather than report their own feelings using, for instance, a scale from *Very Dissatisfied* to *Very Satisfied*.

As much as possible, questions should relate to identifiable actions that people can change in order to improve patient satisfaction.

Questions should not ask patients to report on things that can be more appropriately measured by other means. For instance, the length of wait at an outpatient clinic could be more accurately measured by the HHS.

**(a) Standard questions**

Section Two can also be used if two or more HHSs want to benchmark a particular aspect of performance from time-to-time. A standard set of commonly asked questions would facilitate this type of benchmarking.

The Project Group has noted that it would be useful to have a collection of commonly asked questions, which HHSs can choose from, for inclusion in section two. It is our intention that these will be available for use by March 31<sup>st</sup>.

**(b) Open-ended questions**

We also recommend that section two should contain open-ended questions, which ask the patient if there is anything else they would like to say, and allow room for detailed comment. Experience has shown these verbatim responses are particularly valuable for providing feedback to staff.

Common open-ended questions are:

- Were you *impressed* by anything in particular?
- Were you *disappointed* by anything in particular?
- Do you have any other comments or suggestions?

We recommend between 4 to 6 lines be left for comments after each open-ended question.

## Section Two Question Development

The questions in section one were developed according to some general principles that HHSs should have regard for when developing their questions for section two.

The selected questions and wording took into consideration:

- An extensive search of the academic literature on patient satisfaction surveys and the determinants of patient satisfaction.<sup>7</sup>
- Questions developed for use in inpatient and outpatient questionnaires by New Zealand's HHSs.
- Studies undertaken at New Zealand HHSs into the determinants of patient satisfaction and the importance given to each determinant by patients.
- The practical and professional experience shared by members of the Project Group who drafted the questions.
- Feedback from consultation with HHSs.
- Feedback from the Maori Reference Group.
- Feedback from pilot testing.

HHSs are able to include any questions they wish to in the second section. These must conform to appropriate ethical and legal guidelines. There are two sets of guidelines that HHSs should have particular regard to when developing questions:

- Health Funding Authority's *Guidelines for Consumer Surveys*
- Statistics New Zealand's *Protocols for Official Statistics*

Both documents are available from CCMAU. The latter is important because patient satisfaction surveys fall within the meaning of the term "official statistics" as defined in the Statistics Act 1975, and your surveys should therefore comply with the protocols.

The Project Group was attracted to the patient-centred survey approach developed by the Picker Institute, which identifies eight key determinants of patient satisfaction. These can be organised into three categories:<sup>8</sup>

**Table 2: Key Determinants of Patient Satisfaction**

<b>Quality of Care</b>	<b>Art of Care</b>	<b>Facilities</b>
<ul style="list-style-type: none"> <li>• Access and timeliness.</li> <li>• Co-ordination of care.</li> <li>• Information, education and communication.</li> <li>• Preparation for discharge.</li> </ul>	<ul style="list-style-type: none"> <li>• Respect for personal preferences.</li> <li>• Emotional support and alleviating fear and anxiety.</li> <li>• Involving family and friends.</li> </ul>	<ul style="list-style-type: none"> <li>• Promoting physical comfort.</li> </ul>

<sup>7</sup> A select bibliography is included on page 44.

<sup>8</sup> Suggested in Mummalaneni, V. And P. Gopalakrishna (1995) "Mediators vs Moderators of Patient Satisfaction" *Journal of Health Care Marketing*, 15(4): 16-22

Please answer the questions by ticking the box or boxes which apply to you

Which of these age groups do you belong to?

- 0-4 years
- 5-14 years
- 15-24 years
- 25-44 years
- 45-64 years
- 65-74 years
- 75-84 years
- 85+ years

Which ethnic group do you belong to?

- New Zealand European
- New Zealand Maori
- Samoan
- Cook Island Maori
- Tongan
- Niuean
- Chinese
- Indian
- Other (*such as Dutch, Japanese, Tokelauan*)

↳ Please state

What is your gender?

- Male
- Female





**This survey is subject to laws and guidelines that protect your interests.\***

- Your opportunity to receive services, and the quality of services you receive, will not be affected if you fill in this survey.
- The information you provide is confidential and can not be linked to you in any way.
- You should not sign the survey, or identify yourself in any way.
- You do not have to fill in this survey if you would prefer not to.
- Filling in this survey is **not** the same as making a complaint. If you do want to make a complaint, or you need a patient advocate to help you make a complaint, please contact any of these people:

*<Insert details about whom to contact and how>.*

**We value your answers. We can only make our best efforts to improve services if we know what you really think.**

If you need some help to complete this survey, please ask a relative or friend to help you.

If you are a parent or care-giver and this letter has been sent to your child, or a patient unable to complete the survey, please help him or her to complete this survey, or do it for them.

If you need us to help you complete the survey you can contact any of these people:

*<Insert contact details. Maori or cultural advisors, details should be included here>*

If you require the questionnaire to be provided in Maori or another language please contact

*<Insert contact details>*

**When you have finished, just put the form in the enclosed envelope and put it in the post. You don't need a stamp.**

**It would help us if you do this as soon as possible, so our information is up to date.**

\* The Health Funding Authority's *Guidelines on Consumer Surveys*, the Official Information Act, the Privacy Act, the Statistics Act and the Government Statisticians' *Protocols for Official Statistics*.

*[HHS Letterhead]*

## **Patient Satisfaction Survey**

Dear Patient,

<name of HHS> wants everyone to get the best possible care.

As you have recently been treated here, we would like to find out what you think about the quality of care that we gave you. We would appreciate it if you could take the time to fill out the enclosed survey.

This survey will help me and my colleagues make better decisions about managing <name of HHS>. The survey is one way that we are held accountable for providing quality services. The results of this survey will be reported to the Government and to <name of HHS> Board of Directors. The report will also be available to the public and through the news media.

Your answers will make a real contribution to <name of HHS> and the quality of service it provides to your community.

I give you my personal assurance that your answers will be treated with the utmost confidence.

Thank you very much for your assistance.

Yours sincerely,

*(signature)*

*(name of CEO), Chief Executive Officer*

## **Appendix 1 - Letter, Instructions & Questions**

This Appendix contains all the extra information pertaining to the development of a cover letter, instruction sheet and questionnaires tailored to meet the needs of your HHS.

### **Contents**

Appendix 1A: Draft Cover Letter

Appendix 1B: Draft Instruction Sheet

Appendix 1C: Inpatient Questionnaire: Section One

Appendix 1D: Outpatient/Daypatient Questionnaire: Section One

Appendix 1E: Both Questionnaires: Section Three – Demographics

Appendix 1F: Section Two – Question Development

## 7. Future Developments

The input of the project group has enabled the patient satisfaction survey to develop into a comprehensive and useful quality monitoring tool.

To assist facilitating the widening application and continuous improvement of the survey, please forward requests for clarification and supply of feedback to: -

Rachel Hamlin

Analyst

[rhamlin@ccmau.govt.nz](mailto:rhamlin@ccmau.govt.nz)

## 6. Auditing

We intend that HHS patient satisfaction surveying should be audited from time to time. Audit criteria will focus on:

- Random sampling
- Assurance of patient confidentiality.
- Integrity of analysis and reporting.
- Awareness of ethical standards and protocols
- The handling of potential complaints
- Techniques used to improve response rates.

## **5.2 Supply of electronic patient records**

HHSs are required to supply CCMAU with a complete electronic record of patient satisfaction data. The data should be supplied in a form that can be easily imported into Microsoft Access or Microsoft Excel. See Appendix 2F for the required format.

## **5.3 Quarterly reporting from CCMAU**

Starting with the quarterly report for the period ended June 2000, each quarterly report produced by CCMAU will show, for inpatients and outpatient/daypatients:

- The patient population size, sample size, response rates and data entry error rates for each HHS.

With no detailed previous patient satisfaction data, it is not known what level of analysis will be required. However, use will be made of the demographic data supplied, to try and establish whether satisfaction levels differ in different age, ethnicity or gender groups. Different HHSs will have different mixes of these demographic groups and will therefore not be penalised for satisfaction levels associated with these groups.

Where HHSs have provided further analysis and explanations for their results, these may also be noted in CCMAU reports.

These reports are provided to the Minister of Health and Minister of Finance, the Treasurer, Associate Ministers with relevant portfolio responsibilities, HHS boards and associated Government agencies.

## **5.4 Official Information Act**

Management information collected by HHSs may potentially be obtained under the Official Information Act.

The Act permits information to be withheld from release for a number of reasons (e.g to protect the privacy of natural persons). The HHS would have to consider the release/withholding of the information in terms of these grounds.

However, once the information has been analysed and summarised into reports it may be obtained as official information, either from the HHSs or from CCMAU. Some or all of the information CCMAU holds may be released as a result of Official Information Act requests.

CCMAU may be required to publicly release some patient satisfaction statistics as a matter of course.
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## 5. Reporting

### **Key Points**

- The number of inpatients discharged (or outpatient/daypatient attendances), the sample size, the number of responses, and the data entry error rate are to be included in the quarterly reporting template.
- The complete electronic record of patient satisfaction data and comments are to be supplied to CCMAU by the 28<sup>th</sup> of the month following the close of the quarter.

These guidelines refer only to the requirements for HHS reporting to CCMAU, and the content of the reports that CCMAU produces.

### **5.1 Quarterly reporting from HHSs to CCMAU**

#### **5.1.1 Timeframe**

HHSs are required to return their survey results to CCMAU by the end of the third week in the month following the end of each quarter. This allows two weeks for the return of the questionnaires covering the last half of the final month in the quarter, and a week for data entry and processing. Appendix 2G details the dates that the data should reach CCMAU for each quarter.

#### **5.1.2 Information to report**

A template for returning results will be provided by CCMAU. The following information for both the inpatient and outpatient/daypatient questionnaires **must** be reported:

- The number of inpatients discharged (or outpatient/daypatient attendance's),
- The number of questionnaires posted.
- The number of questionnaires received.
- The data entry error rate.

HHSs **should** also report (in a word document):

- Whether there is a significant difference between patient population and sample at the 5% level using the chi-square test – see Appendix 2E for a full explanation.
- A brief explanation of any methodological issues identified during the reporting period that might have influenced the results.
- A summary of further analysis undertaken that explains or interprets the overall results.

Data entry checks should be undertaken to ensure high accuracy levels are being attained. Randomly checking 10% of completed questionnaires is recommended. Data entry error rates will be reported each quarter by HHSs as part of the quarterly reporting template.

HHSs will be expected to keep complete electronic records of every questionnaire received, in a database format that allows the records to be used for sector-wide or inter-HHS data analysis. At time of writing, that means a file format that can be read by Microsoft Excel or Microsoft Access.

#### 4.2.2 *Generating the sample population*

- The HHSs patient management system should be used to generate a patient population file for each of the two patient populations defined in section 4.1.
- The sample should be randomly selected from that file. Selection of the sample can be achieved using **simple random sampling** where the sample is drawn from the whole patient population. Alternatively **stratified random sampling** may be used. Stratified random sampling separates the target population into non-overlapping groups (e.g. different age groups) and then samples proportionally from these groups to ensure that members from all these groups are included in the sample population. A more detailed description of stratified sampling is given in Appendix 2C.

**Note:** Software has been developed by South Auckland Health that helps in the selection of the patient sample. It can be downloaded free of charge at [www.datasyn.co.nz/PatientSurveyDB.htm](http://www.datasyn.co.nz/PatientSurveyDB.htm).

- Compliance with these guidelines should produce a representative sample. A “chi-square test” can be used to test whether the sample is representative. (a description and example are given in Appendix 2E)

#### 4.2.3 *Dispatching the questionnaires*

Research suggests that when statistics need to be produced regularly, postal surveys provide reliable and cost-effective feedback in comparison to telephone or face-to-face surveying.<sup>6</sup>

- The survey forms **must** be posted out. If an HHS wished to hand the questionnaire to patients as they are leaving, their responses could be affected by such factors as how they felt about the person handing them the questionnaire, the environment of the hospital, or the time between treatment and completion of questionnaire.
- HHSs should ensure that each despatch is no more than two weeks after the surveyed patient has been discharged or has attended a clinic. This ensures the patient has a recent memory of events and also helps improve the response rate.
- Questionnaires should be mailed out with a postage-paid envelope included.

#### 4.3 *Recording Responses*

All questionnaire forms should be date-stamped so their batch can be identified. All returned questionnaires should be date-stamped again when they are received.

Fourteen working days after the end of each quarter, that quarter should be closed off. Any questionnaires arriving after this date, irrespective of when they were despatched to the patient, are to be excluded from *externally reported* survey results.

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<sup>6</sup> Hall, M. (1995) "Patient Satisfaction or Acquiescence? Comparing Mail and Telephone Survey Results" *Journal of Health Care Marketing* 15(1): 54-62

**Table 1: Sample Size (s) for a Given Population Size (N)<sup>5</sup>**

N	Achieved s	Sent out (at 65%)	N	Achieved s	Sent out (at 65%)
220	140	215	1,200	291	448
230	144	222	1,300	297	457
240	148	228	1,400	302	465
250	152	234	1,500	306	471
260	155	238	1,600	310	477
270	159	245	1,700	313	482
280	162	249	1,800	317	488
290	165	254	1,900	320	492
300	169	260	2,000	322	495
320	175	269	2,200	327	503
340	181	278	2,400	331	509
360	186	286	2,600	335	515
380	191	294	2,800	338	520
400	196	302	3,000	341	525
420	201	309	3,500	346	532
440	205	315	4,000	351	540
460	210	323	4,500	354	545
480	214	329	5,000	357	549
500	217	334	6,000	361	555
550	226	348	7,000	364	560
600	234	360	8,000	367	565
650	242	372	9,000	368	566
700	248	382	10,000	370	569
750	254	391	15,000	375	577
800	260	400	20,000	377	580
850	265	408	30,000	379	583
900	269	414	40,000	380	585
950	274	422	50,000	381	586
1,000	278	428	75,000	382	588
1,100	285	438	100,000	384	591

<sup>5</sup> Reproduced from Sekaran U. (1992) *Research Methods for Business: A skill-building approach* John Wiley and Sons (modified)

## 4.2 Methodology

The key outcome of good sampling is obtaining an *unbiased* sample. This requires attention to:

- **Sample Size:** the accuracy of survey results depends on the number of patients sampled from a patient population.
- **Random Sampling:** a perfectly random sample should, on average, be perfectly representative of the characteristics of the patient population. For sampling to be truly random, every patient should have an equal probability of being chosen.

### 4.2.1 *Determining the Sample Size*

Table 1 displays a table of sample sizes (S) for different population sizes (N). This table should be used to determine the sample size for inpatient and outpatient/daypatient populations separately, using the population definitions set out in section 4.1.

For external reporting purposes, the population size (N) refers to the patient population of the HHS *company*, as opposed to the individual hospitals or clinics a company operates.

Appendix 2A explains the relationship between sample size, response rate and confidence levels, and the sampling parameters on which this table is based.

In order to determine the sample size(s), the population size (N) will have to be ascertained in advance for each of the two defined populations for the whole quarter. The required sample size can then be identified from Table 1 for both of the defined populations.

The target response rate for all HHSs is at least 65%. For this reason, the table of sample sizes includes a column with the sample size required assuming the response rate will be 65%. If the response rate is less than 65% then HHSs should consider using the methods outlined in Appendix 2B to reduce the incidence of non-response. Please note that increasing the number of survey forms that are sent out is not sufficient.

#### (a) **Example**

Estimated patient population for the March quarter (N) = 5000

Required sample size for quarter = 357

Assuming 65% response rate, the number of survey forms to be sent out = 549

If the patient numbers are not expected to fluctuate greatly between half month periods, the 549 patients could be evenly spread over the 6 sample periods (sample frequency is twice-monthly). Each sample size should therefore be  $549/6 = 92$ .

#### **4.1.2 Outpatients/Daypatients**

The outpatient/daypatient survey will be sent to a sample selected from the total number of outpatients and daypatients during the quarter.

##### **(a) Definition of outpatients and daypatients**

*Outpatient – a patient who is not admitted, who receives treatment, therapy, advice, diagnostic or investigatory procedures or a pre-admission assessment at a healthcare facility, and the intent is that they will leave that facility within 3 hours from the start of the consultation.*

*Daypatient – a patient admitted for health care with a length of stay of less than one day.*

##### **(b) Exclusions**

- Patients attending clinics for sexual health matters or Terminations of Pregnancy (where discretion is paramount and receipt of a letter from an HHS may attract unwanted attention from cohabitants).
- Mental health (see below)
- Disability Support and Community Health Service clients.
- Emergency department attendance's who are not admitted as inpatients.
- AT&R follow-ups with allied health professionals.
- Patients with overseas addresses.

**Note:** Outpatients who make multiple visits should be included in the sample population only once every 12 months. This is to avoid survey fatigue.

We are aware that this means a patient could be surveyed once as an inpatient and once as an outpatient/daypatient in any 12 month period. We consider this appropriate, as the patient is being asked to respond to different experiences of care.

##### **(c) Mental Health patients**

Use of the survey for mental health patients is optional for all HHSs other than Healthlink South. However, the results of mental health patient surveying shall not be included in the reports to CCMAU. Healthlink South will survey mental health patients using the inpatient and outpatient/daypatient questionnaires as part of a pilot study.

## **4.1 Target Populations**

The survey will be sent to inpatients and outpatients/daypatients. The two groups will be treated as two separate populations, for both sampling and reporting purposes. This section sets out the definitions for each population.

### **4.1.1 Inpatients**

The inpatient survey will be sent to a sample selected from the total number of discharged inpatients during the quarter.

#### **(a) Definition of inpatients**

*A patient admitted for health care, with a stay of more than zero days. This includes patients who are transferred from another health care facility.*

Terminally ill patients who have been discharged will be included.

**Note:** We have received some feedback that indicates that surveying the terminally ill is insensitive. However, the project group believes that these patients should not be denied the opportunity to comment on the quality of their care. The decision to include the terminally ill was made after careful consideration of both viewpoints.

#### **(b) Exclusions**

Some patients should be specifically excluded from the inpatient survey. The questionnaires must **not** be sent to:

- Patients transferred to other HHSs (as they will be included in the patient population at the hospital from which they are discharged and sampled accordingly).
- Boarders (people staying in an HHS to support a sick friend or relative).
- Patients admitted for sexual health matters or Terminations of Pregnancy (where discretion is paramount and receipt of a letter from an HHS may attract unwanted attention from cohabitants).
- Patients with overseas addresses (the small numbers, additional expense and time delays for responses, mean sampling these patients is undesirable)

**Note:** We are aware this sampling method does not include long-stay inpatients, especially those receiving palliative care. The patient satisfaction survey will continue to be developed responsive to HHS feedback. In the future we anticipate that long-stay patients could be included in the sample (subject to HHS advice), if a sampling method that protects confidentiality can be developed.

## 4. Sampling Procedure

### **Key Points**

- There are two target populations: -
  - ◆ inpatients, and
  - ◆ outpatients/daypatients.

Definitions including specific inclusions and exclusions are defined in section 4.1.1 and 4.1.2
- The number of patients to be sampled each quarter is based on the patient population for that quarter and is tabulated in Table 1.
- Sampling frequency is to be twice monthly.
- Questionnaires are to be mailed out within a fortnight of the patient's discharge or attendance at the hospital outpatient clinic.
- Standard sampling procedures are to be used for all HHSs to enable valid comparisons.
- Simple random sampling or stratified random sampling can be used as the sampling method.
- A chi-square test should be used to test whether the sample is representative of the patient population.
- HHSs are to strive for response rates of at least 65%. For this reason the sample sizes in Table 1 have been calculated based on a 65% response rate.
- Data entry checks must be performed on (a randomly selected) 10% of completed questionnaires and the error rate reported to CCMAU.

A number of significant improvements have been made to the statistical methodology. The emphasis is on:

- extending the patient populations being surveyed
- improving the sampling methodology to enable samples to be representative of all patients who receive care at HHSs.
- improving response rates
- selecting appropriate sample sizes
- improving CCMAU's ability to provide comparative feedback to Ministers and the sector.

### **3.3 Complaints**

The instructions sent with the questionnaire clearly state that the survey is not intended as a means of making a complaint. However, the *Health and Disability Services Commissioner (Code of Health and Disability Services Consumers' Rights) Regulations 1996* states that "Every consumer has the right to complain about a provider in any form appropriate to the consumer" (Right 10 (1)).

We recommend responses that include negative comments be treated as potential complaints if the respondent provides both:

- their name, initials, or other means of personal identification, and
- sufficient information to allow them to be contacted (such as a postal address or phone number.)

In this case, the HHS should contact the patient to ask if they wish to have their comments treated as a complaint, and explain what that involves.

**Note:** This recommendation only applies to written comments. Ticking the "very poor" box in answer to any question is not regarded as a complaint.

This section can contain up to 30 questions.

We recommend the total length of the survey, including demographic questions, should be less than 50 questions, as response rates tend to reduce for surveys with more than 50 questions. Appendix 1F provides some guidance on question development.

### **(c) Section Three: Demographic Variables**

This section collects information about a patient's age, ethnicity and gender.<sup>4</sup>

To ensure valid comparisons can be made between HHSs, all surveys will use the same demographic variables and response categories. Appendix 1E displays these standard demographic questions and appropriate response categories.

This demographic information provides a check on whether the sample is representative of different patient groups, and also enables HHSs to discover if satisfaction varies significantly among different age, gender or ethnic groups.

Care must be taken that individual patients can not be identified by cross-referencing information or via the identification number. Appendix 2D outlines protocols for ensuring confidentiality when using identification numbers.

#### **3.2.2 Format**

The questions must be presented in the same order with the same categories and tick boxes as shown (in Appendix 1C, 1D and 1E). However, HHSs are not required to present the questionnaire in exactly the same format.

When formatting the questionnaire, please be aware of the feedback from pilot testing, which indicated that:

- The use of colours or symbols and logos would make the questionnaire more attractive and this may improve response rates.
- If questions are printed on both sides of the page, it is important to include specific instructions to turn the page over.
- The labelling of the scale with 'faces' made it immediately clear to patients what was meant by 'very poor', 'poor', 'average', 'good' and 'very good'.
- Font size should be large enough to allow elderly patients to read the questionnaire easily.

#### **3.2.3 Language**

The cover letter, instructions and questionnaires are provided in English and, upon request, in Maori.

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<sup>4</sup> The age categories are consistent with those used by the Ministry of Health. Likewise, the ethnicity question is consistent with the ethnicity question used by Statistics New Zealand in the 1991 census.

- State that the survey is not intended as a means for making complaints<sup>2</sup>.
- Request that answers be frank and honest.
- Note that results will be published on a quarterly basis.
- Request that the patient complete the survey as soon as possible.
- Inform patients that they can request a copy of the questionnaire in Maori if they require one<sup>3</sup>.

### **3.2 The Questionnaires**

The questionnaire is the most important part of a survey. The choice of questions, the number of questions asked, the order in which they are presented and the choice of words may influence the integrity of the survey results.

There are two questionnaires for two separately defined patient populations –

- inpatients; and
- outpatients/daypatients.

These are defined in section 4.1.1 and 4.1.2. The determinants of satisfaction for these two populations are significantly different and require a number of different questions to be asked. The two questionnaires are presented in Appendix 1C and 1D.

The questions that are particular to each questionnaire are those questions which collect data specific to the process for each target population e.g. for inpatients the questions relate to the admission process and ward experience while the outpatient/daypatient questions focus on appointment scheduling and communication.

#### **3.2.1 Structure**

A modular approach has been used for both questionnaires, as follows:

##### **(a) Section One Questions**

The first section contains standard questions that all HHSs will use. These questions will enable comparison of HHS performance and will be reported to Ministers. These questions are placed at the beginning of the survey, so patients' responses are not biased by the questions in the second and third sections.

The first section of the new questionnaires will include 17 questions for the inpatient survey and 15 questions for the outpatient/daypatient survey.

##### **(b) Section Two Questions**

The second section is optional. Each HHS can include its own questions in Section Two, to investigate specific aspects of patient satisfaction, and help it diagnose and improve performance in targeted areas.

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<sup>2</sup> The letter should include details of who patients should contact if they wish to make a complaint.

<sup>3</sup> If the HHS has a Maori unit or similar, a contact name and details should be provided.

### 3. Cover Letter, Instructions & Questionnaires

#### ***Key Points***

- 2 questionnaires for two separately defined patient populations
- Each questionnaire has three sections:
  - Section One – Standard questions for all HHSs
  - Section Two – Optional questions specific to each HHS
  - Section Three – Three standard demographic questions for all HHSs. Further demographic questions can be added by each HHS if required.
- A maximum of 50 questions in total is to be included in each questionnaire.

#### **3.1 Covering Letter and Instructions**

A covering letter and instructions must be included with every questionnaire. These are important for encouraging patients to respond to the survey.

##### ***3.1.1 Cover Letter***

Appendix 1A displays a draft covering letter.

As the letter will be signed by each HHS's Chief Executive, the wording of the draft letter does not have to be used by all HHSs.

If a personalised letter is written, it should:

- Emphasise that the respondent has the opportunity to make a valuable contribution to improving health services.
- State that results of the survey are reported to Ministers and the HHS board.
- Guarantee confidentiality of responses.
- Be printed on the HHS letterhead, or include the HHS logo.
- Be signed by the Chief Executive and/or the Chair of the Board of Directors.

##### ***3.1.2 Instructions***

Appendix 1B displays standard instructions and information. These may be altered to improve clarity.

Instructions and information to the respondent should:

- Note the HHS's commitment to treat respondents in accordance with ethical guidelines and legal obligations.
- Assure patients that their response (or non-response) will not affect the availability or quality of services provided to them.
- Note that participation is voluntary.
- Say that a caregiver or friend can complete the survey form.

### **2.1.3 Monitoring**

Every year, HHS boards provide the Minister of Health with a Statement of Intent (SOI)<sup>1</sup>. HHS Boards need to be able to include in their SOI, meaningful patient satisfaction targets to which they are prepared to be held accountable.

CCMAU's ability to monitor and advise shareholder Ministers on each HHS's performance against its SOI commitment is greatly enhanced if patient satisfaction reporting is statistically robust.

Statistical robustness requires that appropriate survey techniques should be appropriately applied. These include:

- *Representative sampling*: the patients surveyed should reflect the characteristics of the total population of HHS users as accurately as possible.
- *Response rates*: survey results can be affected by "non-response bias", if the people who return surveys do not represent the sample of patients to whom they were sent out.
- *Data entry and processing checks*: survey results can be affected by data entry and calculation errors. All HHSs' survey processes should be checked or audited to ensure they are properly implemented.

Section 4 of this report provides guidelines of the processes that must be followed to ensure the survey produces sufficiently robust and reliable measures.

## **2.2 Quality Improvement Plans**

*It is the patients themselves who receive the benefit of patient satisfaction surveys.*

Research has shown that effective monitoring of patient satisfaction can have substantial and immediate benefits for patients. Satisfied patients are more likely to adhere to clinicians' instructions regarding care and medication. Patient surveying allows HHSs to locate areas or issues that result in low satisfaction, which in turn makes it possible to initiate remedial action.

For HHS management to regard the patient satisfaction statistics as reliable management information, the measure must be credible and robust. Attention to detail and good statistical methodology is therefore of fundamental importance.

It is expected that HHSs will use the results of patient satisfaction surveys to actively manage and improve the quality of services they deliver.

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<sup>1</sup> Statements of Intent outline how an HHS plans to improve the delivery of health services. These are tabled in parliament and HHSs must submit quarterly reports stating whether they are achieving their targets.

## 2. Patient Satisfaction Surveying

The intention of patient satisfaction surveying is to enable management to receive useful patient feedback on the quality of health service delivery.

The patient satisfaction survey is:

- a performance measure for HHSs; and
- a management tool for improving services to patients as part of HHSs quality improvement plans.

In both respects, it assists each HHS's board and management in meeting the shareholders objectives.

### 2.1 Purposes

The survey is intended to fulfil three purposes - *Identification*, *Benchmarking* and *Monitoring*. The need to fulfil these purposes affects the structure of the survey, the questions being asked of patients and the statistical methods applied to acquiring and analysing the data.

#### 2.1.1 *Identification*

The survey should assist HHSs to increase patient satisfaction by: -

- identifying areas of dissatisfaction,
- indicating where the greatest opportunities for improvement lie, and
- identifying where other feedback methods might be usefully applied.

Using the survey for *Identification* means that:

- The survey must ask questions about aspects of service where patients are able to provide the most constructive feedback.
- Questions are focussed on actions and behaviours that can be addressed in the short to medium-term to improve satisfaction.

#### 2.1.2 *Benchmarking*

HHSs require that the results of the survey enable performance comparisons or *benchmarking* against other HHSs.

CCMAU in its role as monitor and advisor to shareholder Ministers (and facilitator of best practice) also needs to be able to compare patient satisfaction levels among HHSs.

In order to obtain valid comparisons, every HHS should ask a number of the same questions as other HHSs, presented in the same format, using the same methods for sampling patients, for sending out questionnaires, and for processing the information.

## 1. Introduction

The Crown Company Monitoring Advisory Unit (CCMAU) monitors the performance of HHSs on the Minister's behalf. CCMAU therefore has a responsibility for ensuring that performance measures required of HHSs adequately reflect the Crown's expectations, and how well HHSs are meeting them.

*The Crown, in its role as the owner of Hospitals and Health Services, is concerned that patients receive quality services.*

Patient satisfaction monitoring has therefore become an increasingly important management information tool within HHSs, and as a monitoring tool to gauge patients' perception of the quality of services delivered.

Patient satisfaction surveying commenced for all HHSs in 1993. Since then feedback from HHSs has indicated a need to: -

- Improve the statistical robustness of the survey and the consistency with which HHSs apply it.
- Expand the patient population being surveyed.
- Reduce the number of questions asked for external reporting purposes, and focus them on the key determinants of patient satisfaction.

Good data requires a high level of participation from patients (response rates) therefore attention has focused on increasing the user-friendliness of the survey format, and the relevance of questions.

The benefits over previous CCMAU requirements are that the standardisation of the surveying approach, and the inclusion of the patient experience in the ambulatory care setting, should offer more meaningful and useful information.

HHS compliance with these guidelines is intended to provide CCMAU with the ability to provide Ministers and HHSs, with balanced comparative analysis of patient satisfaction over time, and between HHSs.

The results of the patient satisfaction survey will be included in CCMAU's "balanced scorecard" approach to monitoring as a key component of the *Customer and Quality* dimension.

Initially, the data required of HHSs by CCMAU is extensive. However, once a number of quarter's data have been received, requirements may be altered depending on feedback from HHSs on the usefulness of data reported by CCMAU. The survey's structure will also continue to be developed responsive to HHS feedback.

## Table of Contents

<b>1.</b>	<b>INTRODUCTION</b> .....	<b>1</b>
<b>2.</b>	<b>PATIENT SATISFACTION SURVEYING</b> .....	<b>2</b>
2.1	PURPOSES .....	2
2.1.1	Identification .....	2
2.1.2	Benchmarking .....	2
2.1.3	Monitoring .....	3
2.2	QUALITY IMPROVEMENT PLANS .....	3
<b>3.</b>	<b>COVER LETTER, INSTRUCTIONS &amp; QUESTIONNAIRES</b> .....	<b>4</b>
3.1	COVERING LETTER AND INSTRUCTIONS .....	4
3.1.1	Cover Letter .....	4
3.1.2	Instructions.....	4
3.2	THE QUESTIONNAIRES .....	5
3.2.1	Structure .....	5
3.2.2	Format.....	6
3.2.3	Language .....	6
3.3	COMPLAINTS.....	7
<b>4.</b>	<b>SAMPLING PROCEDURE</b> .....	<b>8</b>
4.1	TARGET POPULATIONS.....	9
4.1.1	Inpatients .....	9
4.1.2	Outpatients/Daypatients .....	10
4.2	METHODOLOGY .....	11
4.2.1	Determining the Sample Size.....	11
4.2.2	Generating the sample population .....	13
4.2.3	Dispatching the questionnaires .....	13
4.3	RECORDING RESPONSES .....	13
<b>5.</b>	<b>REPORTING</b> .....	<b>15</b>
5.1	QUARTERLY REPORTING FROM HHSS TO CCMAU.....	15
5.1.1	Timeframe.....	15
5.1.2	Information to report .....	15
5.2	SUPPLY OF ELECTRONIC PATIENT RECORDS .....	16
5.3	QUARTERLY REPORTING FROM CCMAU .....	16
5.4	OFFICIAL INFORMATION ACT .....	16
<b>6.</b>	<b>AUDITING</b> .....	<b>17</b>
<b>7.</b>	<b>FUTURE DEVELOPMENTS</b> .....	<b>18</b>
	<b>APPENDIX 1 - LETTER, INSTRUCTIONS &amp; QUESTIONS</b> .....	<b>19</b>
	<b>APPENDIX 2 – SAMPLING METHODOLOGY</b> .....	<b>27</b>
	<b>BIBLIOGRAPHY</b> .....	<b>44</b>
	<b>PROJECT GROUP MEMBERS</b> .....	<b>46</b>
	<b>STATUTORY AUTHORITIES AND OBLIGATIONS</b> .....	<b>47</b>

Many others have contributed to the project, among them have been some "champions" whose input deserves special recognition:

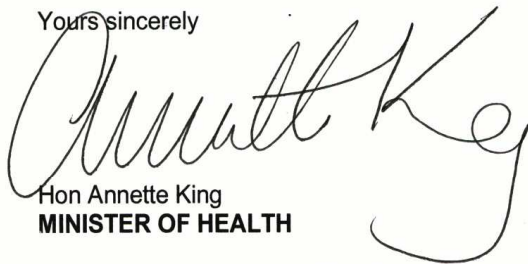
- All of the HHS's that contributed feedback during the two rounds of consultation. Health Waikato, in particular, made extensive efforts in this regard, which were greatly appreciated.
- David Clarke, at South Auckland Health, contributed Dr Gerard Zwier's time and expenses to the project. That support has been essential to the progress made by the project team.
- South Auckland Health also supported the development of a software package to assist the survey processes and made it freely available to all HHS's over the internet.
- Good Health Wanganui and South Auckland Health also provided valuable contributions by participating in pilot-testing the questionnaire.
- CCMAU for taking the initiative and co-ordinating the development.

These guidelines provide a sound platform for ongoing improvements in the reliability, validity and scope of patient satisfaction monitoring. In particular, they will:

- Improve the statistical robustness of survey results and the consistency with which HHS's can apply them.
- Expand the base of patient populations being surveyed.
- Focus the questions asked on the key determinants of patient satisfaction, from the patients' perspective.

I look forward to further improvements in the measurement and monitoring of hospital performance, which build on the foundations the project group has laid.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Annette King', written in a cursive style.

Hon Annette King  
**MINISTER OF HEALTH**

cc: Director-General of Health



## Minister of Health

27 January 2000

HHS Chairs and Chief Executives

### **Patient Satisfaction Survey Guidelines**

The Labour Party's health policy is titled "Focus on Patients". It is this government's intention to ensure that the interests of individual patients and the community are given priority in health sector and hospital management.

In the past, the performance of the public hospital sector was largely measured in financial terms. More recently, CCMAU has broadened this to include other important measures and is adopting a Balanced Scorecard approach with the help of HHS's. This is consistent with the Government's policy that hospital performance measures will be expanded to include better indicators of quality and of patient satisfaction. Our health policy emphasises that providers who demonstrate performance in improving patient focus will be encouraged.

I am aware that some hospitals are already implementing patient-focused management strategies. It is very encouraging to see that the effort to improve the quality and scope of patient satisfaction surveying was initiated by hospitals, and that hospital quality managers have been closely involved in the development.

I wish to express my appreciation to the project group that developed this survey. They deserve a vote of thanks for the expertise, experience and dedication they brought to the task. Their task has not been an easy one: it has involved listening carefully to HHS's and recognising that most could not implement "best practice" patient surveying in one single step. The guidelines therefore tread a path between what is most desirable and what is practicable at this point in time.





**New Zealand Public  
Hospital and Health Services**

**Patient Satisfaction  
Survey Guidelines**