

Benchmarking Patient Satisfaction: Do we have a level playing field?

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Back in 1991, the Crown Company Monitoring and Advisory Unit¹ stipulated that each public hospital should monitor inpatient satisfaction on an ongoing, quarterly basis. The rationale for this was that it would provide the then Department of Health with a performance indicator that, unlike other more traditional measures, was based on the patients' perspective. To assist them with this task, CCMAU provided a few pages of instruction that outlined the methodology to be followed. An appendix contained the questionnaire that featured 26 items with, in most cases, a five point Likert scale response category set (very poor, poor, average, good, very good).

So, over the last nine years or so, all HHSs dutifully complied by monitoring (often in their own fashion) their inpatients' satisfaction with the care they received from their hospitals. At the end of each quarter, they would calculate the average of the "very good" scores on each of the 26 items on which service delivery was measured and then submit an average of these averages to CCMAU.

Each quarter, CCMAU would produce a "league table" that showed how each HHS compared with another in terms of this average percentage "very good". Although some HHSs at the top of the list would regard that comparison as useful, and perhaps as valediction of their business or organisational strategy, others, in particular those whose resulting satisfaction rates tend to be relatively lower in rankings, often questioned its accuracy and validity.

Over time, it became obvious that the patient satisfaction survey suffered from quite a few methodological shortcomings: the questionnaire was found to be wanting, the prescribed methodology was not detailed sufficiently to allow consistent implementation and consequently the scientific validity and reliability of the results left a lot to be desired.

Congruent with our own misgivings, which we expressed in the local medical press in 1999 (see Zwier and Clarke)², CCMAU convened a working party that set itself the task to write the guidelines for a new Patient Satisfaction Survey. The 100-page report which this group produced in June last year outlines in great detail the methodology that all HHSs now are asked to implement so that they can correctly monitor patient satisfaction among their inpatient and outpatient populations.

However, while the previous methodological and implementation problems have, at least to some extent, been resolved, the next issue that presents itself is this: assuming that HHSs will soon be generating more accurate data, how should this information be used? More specifically with a view to benchmark satisfaction rates

between public hospitals, how can we be sure that when we compare HHSs with one another, we are comparing like with like?

While some researchers have expressed serious reservations about the feasibility and desirability of national benchmarking (see Draper & Hill, 1996), others applaud the results of its state-wide implementation (e.g. letters of comment, Massachusetts Health Quality Partnership, 1998 Report). However, everyone agrees that there are a number of factors influencing patient satisfaction scores. Literally hundreds of publications discuss and criticise the factors that have been found to correlate with satisfaction ratings. Among these are the usual sociodemographic variables such as age, sex, socio-economic class, ethnicity, income, marital status, occupation and education (Fox and Storms, 1981) but also variables more specific to the health sector such as hospital size (Rice, 1996), population catchment area (i.e. urban or rural), type of service offered (Aday et al, 1980), expectations of care (Stimson and Webb, 1975), perceived health status (see the Picker Institute) and interpersonal attributes of medical staff (Joos et al, 1993).

So how do some of these extraneous factors influence patient satisfaction in New Zealand? To attempt to answer this question, we examined our own (South Auckland Health) inpatient survey results. What we found may be of interest, and we offer some conclusions that may prompt discussion and debate.

Hospital aspects: size, location and services offered

It is well documented that patient satisfaction rates in big city hospitals is generally lower than in small country hospitals (Rice, 1996), if only because of their sheer size. This is borne out by the above mentioned "league table" produced in past years by CCMAU which shows that the largest hospitals, i.e. Auckland and South Auckland, are at the bottom of the list while Healthlink South, Coast Healthcare and Wairarapa Health, which have the lowest number of discharges, find themselves at the top of the list (see table 1)³

(Although the HMD has recently replaced this league table by one that shows the achieved percentages in each of the five response categories and is not ranked, its report to the Ministry of Health still speaks about "comparative hospital tables" and its intent appears to remain the same.)

As we do not have access to satisfaction ratings of non-SAH rural hospitals, an analysis of our own hospitals suggests that the percentage of patients who respond with "very good" in a small maternity hospital such as Pukekohe is considerably greater than the percentage of those who respond likewise in a large city hospital such as Middlemore (see fig 1).

¹ (or CCMAU, which recently changed its name to the "Hospital Monitoring Directorate" or HMD)

² Zwier G, Clarke D. How well do we monitor patient satisfaction? Problems with the nation-wide patient survey. NZ Medical Journal 1999; 112 (1097): 371-5

³ Although the HMD has recently replaced this league table by one which shows the achieved percentages in each of the five response categories and is not ranked, its report to the Ministry of Health still speaks about "comparative hospital tables"

Thus in those HHSs which consist mainly of a number of smaller hospitals, instead of one large city hospital, satisfaction rates are typically much higher. (It can readily be seen that, if we were to submit to the HMD the satisfaction rates prevalent in Pukekohe Hospital, it would feature at the top of the list!).

In addition to patient satisfaction being influenced by size of hospital, it appears that patients from rural areas are more likely than patients coming from an urban neighbourhood to answer "very good" to specific questions about their treatment. Keeping age, sex and ethnicity constant, we find that the percentage of rural patients who express great satisfaction can be close to 20% higher than that expressed by urban patients.

Patient satisfaction rates also appear to vary from service to service. For instance, figure 2 shows that the difference between the percentage of SAH Medical patients and Child Health patients responding with "very good" is 13% ($p < .01$).

Does this mean that the quality of care provided by Child Health staff is substantially less than that provided by our Medical staff? We think that is unlikely. More likely is that it reflects the type of patient being treated or procedure provided.

While it is obvious that age confounds the level of satisfaction between the various services, it is nevertheless true that HHSs that provide proportionally more paediatric services will generate satisfaction rates which are likely to be much lower than HHSs which provide more medical or ambulatory care services.

Patient aspects:

As mentioned earlier, a number of demographic characteristics of the patient population influence satisfaction rates. For instance, older patients are much more likely to express satisfaction than are younger patients (DiMatteo and Hayes, 1980). Our own data confirms that patient satisfaction tends to increase with age (see fig 3).

Table 1 Average % "Very Good" responses in CCMAU Customer Satisfaction Survey

HHSs	% "Very good" Oct-Dec 99	Rank
Healthlink South	77	1
Wairarapa Health	66	2
Coast Health Care	64	3
Nelson Marlborough Health	64	4
Canterbury Health	62	5
Taranaki Healthcare	62	6
Hutt Valley Health	60	7
Health Waikato	59	8
Waitemata Health	57	9
Health South Canterbury	57	10
Healthcare Otago	57	11
Tairāwhiti Health	55	12
MidCentral Health	55	13
Health Care Hawkes Bay	54	14
Lakeland Health	54	15
Pacific Health	53	16
Good Health Wanganui	53	17
Capital Coast Health	51	18
Southern Health	51	19
Northland Health	50	20
South Auckland Health	47	21
Auckland Healthcare	46	22

This means that HHSs with relatively smaller proportions of older patients (e.g. South Auckland) are likely to produce decreased patient satisfaction when compared to HHSs such as Canterbury Health which have half as many patients over 50 years old.

Similarly, our data shows that female patients are sometimes more, sometimes less satisfied than male patients, depending on the issue they are asked about. However, in particular with respect to issues relating to nursing care, female patients are typically less satisfied (up to 10%; $p < .01$) than their male counterparts. This suggests that HHSs that have a disproportionate larger percentage of female patients may generate less satisfaction.

A difference in patient satisfaction between HHSs can also be due to the ethnicity of the main patient population. While the difference in overall satisfaction among European, Maori and Polynesian patients is statistically not significant, our data shows that Asian patients are much less likely than Europeans ($p < .01$) to rate the service they have received as "very good". Whether this is due to higher expectations or an unwillingness to express their satisfaction more forcefully or is evidence of true lower satisfaction is not clear. But whatever the case may be, HHSs with patient populations that have a higher proportion of Asian patients are again more likely to exhibit lower patient satisfaction.

Patient satisfaction is also related to the patient's socio-economic class (Sitzia and Wood, 1997). Although the patient's socio-economic class is not recorded at SAH, it is apparent that patients living in socio-economically more prosperous South Rural districts have satisfaction rates that are typically 5% higher than satisfaction rates from patients living in relatively poorer areas such as Otara. This means that HHSs which have more affluent populations will tend to score higher on patient satisfaction.

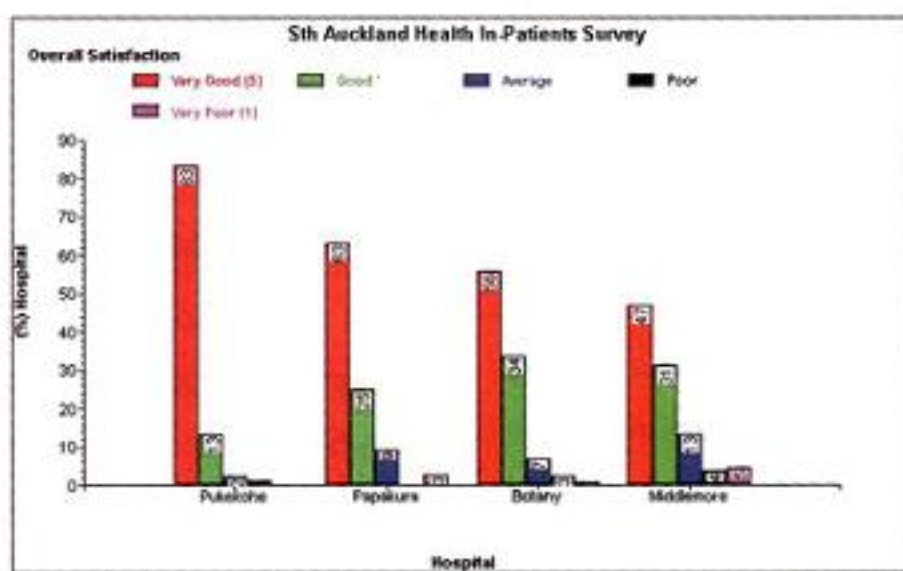


Figure 1: Overall satisfaction in four South Auckland Hospitals

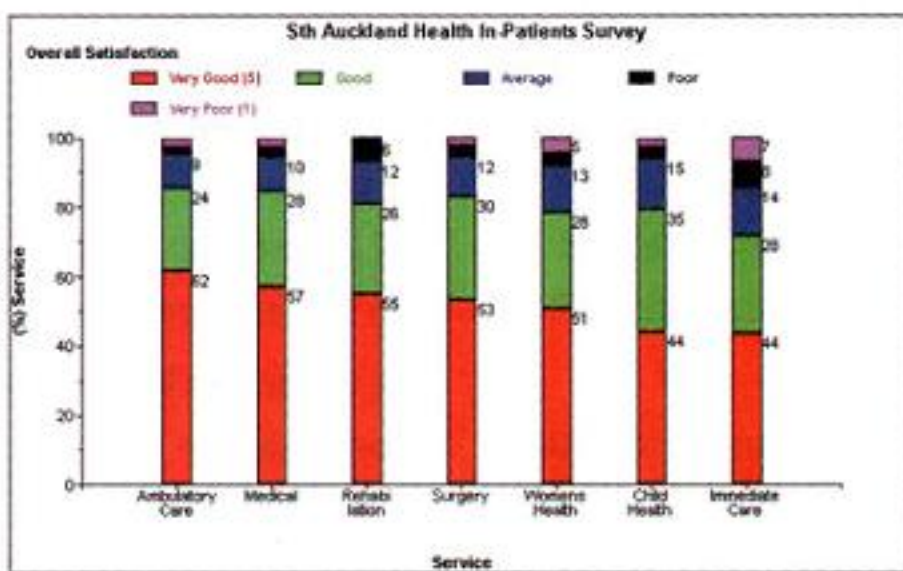


Figure 2: Overall satisfaction across disciplines

Conclusion

In summary we can say that the % "very good" responses in the nation-wide Patient Survey are inevitably influenced by hospital size (smaller hospitals generating up to 75% more satisfaction), whether or not the hospital serves an urban or a rural population (rural patients may express 20% more satisfaction than urban patients), type of service provided (Ambulatory Care patients up to 40% more satisfied than Immediate Care patients) and socio-demographic factors such as the patient's age (70+ patients report up to 60% more satisfaction than teenagers), sex (female patients up to 10% less satisfied than male patients), ethnicity (Asian patients 10% less satisfied) and socio-economic group (affluent populations 5% more satisfied).

While there is no doubt a complex compounding influence from all these factors, it is only to be expected that *larger* HHSs which serve an *urban* population that is relatively *poorer*, with *younger* patients and a *high birth rate* and a relatively higher proportion of *Asian patients* have one of the lowest satisfaction rates in the country. The inference is that the league table produced each quarter for the last 10 years or so by CCMAU is very likely *little more than a list of HHSs ranked in terms of their size and patient population profile*.

If our objective is to benchmark patient satisfaction among HHSs, we need to ensure that these physical and socio-demographic factors are as much as possible removed from the equation. To ensure that we base our future comparisons on a more equitable footing, we propose a two-pronged approach that takes into account hospital characteristics and patient characteristics.

(a) hospital characteristics:

In order to deal with factors such as size and locality (i.e. urban/rural nature) of the HHS and the services it provides, we suggest that we only compare patient satisfaction results within

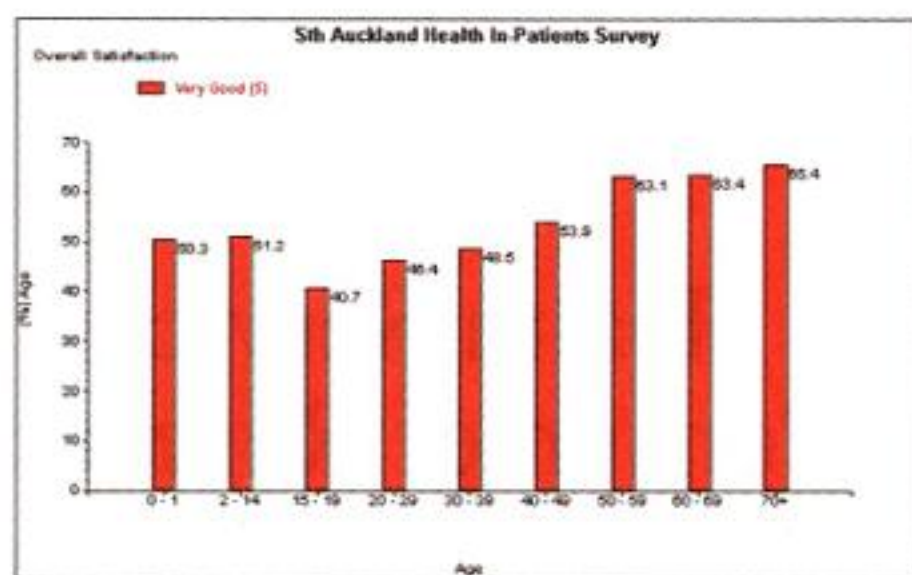


Figure 3: Overall satisfaction across age groups

three groups: i.e. (1) the larger HHSs (inpatients discharged annually >30,000) such as Auckland, Waikato, South Auckland, Wellington, Christchurch which are by definition big city hospitals; (2) the medium sized HHSs (discharges 10,000 – 30,000) such as Waitemata, Otago, etc. and (3) the smaller HHSs (discharges <10,000) such as Lakeland Health, Wairarapa, Tairāwhiti, etc which tend to be smaller country hospitals.

For the larger HHSs, we propose that we focus on patient satisfaction in the main hospital only and, each quarter, we calculate the percentage "very good" and "good" on each of the questions *for each Service*. For the medium sized HHSs, the same Service-level analysis can be carried out on an *annual* basis, while for the smaller HHSs, that may have difficulty obtaining sufficient number of responses to perform analyses at Service level, a similar comparison can be made using the *entire organisation* as the unit of analysis.

(b) patient characteristics:

In the USA and in the UK it is common practice to adjust the obtained scores for variations in patient characteristics across hospitals and report further statistics such as the range and associated confidence intervals that facilitates the interpretation of the results. So we propose that, if the HMD wants to produce useful and comparable measures, it ought to follow this example and publish scores that are adjusted for age, sex and, if necessary, ethnicity, within the above described groups based on size and locality of HHS. At South Auckland Health we use data analysis software that can incorporate loading factors where required.

Anything less than this will only lead to further confusion and detract from the insights the data may give us into how patient satisfaction *truly* varies from hospital to hospital.

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