

Patients' and clinicians' views of comparing the performance of providers of surgery: a qualitative study

Zoe Hildon PhD,* Dominique Allwood MSct and Nick Black MD‡

*Lecturer in Social Research, †Honorary Research Fellow, ‡Professor of Health Services Research, Department of Health Services Research & Policy, London School of Hygiene & Tropical Medicine, London, UK

Correspondence

Nick Black MD
Department of Health Services
Research & Policy
London School of Hygiene & Tropical
Medicine
15-17 Tavistock Place
London WC1H 9SH
UK
E-mail: nick.black@lshtm.ac.uk

Accepted for publication

2 November 2012

Keywords: patient-reported outcome measures, patients' views, provider comparisons, surgery

Abstract

Objectives Comparison of providers' outcomes is intended to encourage patient choice and stimulate clinicians to improve the quality of their services. Given that success will depend on how patients and clinicians respond, our aim was to explore their views of using outcome data to compare providers.

Method Qualitative data from six focus groups with patients ($n = 45$) and seven meetings with surgical clinicians ($n = 107$) were collected during autumn 2010. Discussions audio-taped, transcribed and a thematic analysis carried out.

Results Patients and clinicians confirmed the value of making comparisons of the outcomes of providers publicly available. However, both groups harboured three principal concerns: the validity of the data; fears that the data would be misinterpreted by the media, politicians and commissioners, and the focus should not just be on providers but also on the performance of individual surgeons. In addition, patients felt that information on providers' outcomes would only ever have a limited impact on their choice because there were other important factors to be taken into account: accessibility, waiting time, the size of the provider and the quality of other aspects such as cleanliness and nursing. Also patients acknowledged the importance of friends' and relatives' experiences and that they would seek their GP's advice.

Conclusions While comparisons of providers' outcomes should be available to patients to stimulate improvements in performance, information should be directed principally to hospital clinicians and to GPs. Impact may be enhanced by providing data on individual clinicians rather than providers. The extent to which these findings are generalizable to other areas of health care is uncertain.

Introduction

In many countries, data that compare the outcomes achieved by providers, particularly hospitals, are increasingly being used to stimulate improvement.¹⁻⁴ Two of the principal audiences are patients and clinicians, as it is anticipated that comparisons will encourage patients to exercise choice of provider^{5,6} while clinicians will use the data to review and improve their practice. In England, from April 2012, information will be required not only on providers (institutions) but also on individual consultant-led teams. Despite considerable political and public support, evidence that the provision of comparative information on outcomes leads to improvements in the quality of services is still limited.⁸⁻¹⁰

The potential benefits of provider comparisons will depend on patients' and clinicians' perceptions and opinions of such information.¹¹ Studies in the UK have largely concentrated on their views of which metrics to use and how best to present data in terms of format and content.^{12,13} This has shown that clinicians have concerns about the accuracy of the data used, difficulties in interpretation due to chance variation, the instability of measures over time, inadequacies of risk adjustment and lack of timeliness of reports.¹⁴⁻¹⁶ Meanwhile, investigations of patients' views^{17,18} have revealed some interest in having a choice of provider but greater interest in having a choice of how their condition should be treated.⁹ Underlying the lack of interest in choice of provider was mistrust of the data and a lack of understanding of statistical comparisons,^{5,8,19} leading to suggestions that patients require additional education on how to interpret and use outcome data.²⁰⁻²³

Given the key roles that patients and clinicians are expected to play in driving improvements in the quality of health care, we need to understand better both groups' views of provider comparisons. One of the most ambitious examples in England is the National Patient Reported Outcome Measures (PROMs) Programme. Established in April 2009, all providers of four elective

operations (hip and knee replacement, hernia repair, varicose vein surgery) are required to invite patients to complete pre- and post-operative questionnaires.²⁴ Providers can be compared in terms of the effectiveness of surgery (risk-adjusted improvement in symptoms, disability and quality of life) and its safety (incidence of complications). Taking the National PROMs Programme as an example, our aim was to discover patients' and clinicians' views of provider comparisons in the area of elective surgery.

Methods

Methods are described following the consolidated criteria for reporting qualitative research (COREQ).²⁵ Eliciting views from clinicians and patients was undertaken through meetings and focus groups, respectively. Although these sessions had been established to explore participants' views of the metrics, format and content for reporting the results from the National PROMs Programme (using a PowerPoint presentation), views of the Programme itself emerged organically and occupied about a quarter of the discussion time. Although views were not directly elicited, they were probed when they arose.

Research team and reflexivity

Discussions were facilitated by one of the three authors (a senior male doctor, a junior female doctor and a junior female social scientist) whilst another took notes. The project's aims and funding source were described. Participants were not known personally to the authors. Patient groups were organized by ZH who had prior telephone contact with most participants; clinicians' meetings were organized by DA. It was assumed that clinical groups would have a better understanding and familiarity with the material shown and that some clinicians would be concerned about public disclosure of their performance. For patients, it was assumed that participants would vary considerably in their numeracy and understanding of quantitative data. In all meetings and groups, the facilitator

ensured balance by testing individual's views with the other participants.

Study design

Clinicians were asked to consider the outcome comparisons with regard to stimulating quality improvement²⁶ while patients were asked to consider choosing a provider.²⁷ These different starting points informed the analytic strategy.

For the clinicians' meetings, six hospitals were chosen from those that had participated in the Patient Outcomes in Surgery (POiS) Audit.²⁸ A pragmatic approach was taken to participation due to the limited time that clinicians could devote to the project. Staff involved in providing one or more of the elective operations included in the National PROMs Programme were invited to attend, resulting in 107 participants across the six sites. Consultants attended all six meetings, nurses or allied health professionals attended five and junior doctors were present at four (Table 1). A seventh meeting was held at a national conference for staff involved in pre-operative assessment. The meetings lasted about an hour and took place between September and December 2010. Although the meetings were structured around the PowerPoint presentation of different presentations of data, the facilitator allowed and

encouraged participants to express their views not only on technical aspects but on the place and usefulness of PROMs.

Patients were recruited through purposive sampling among people who had undergone one of the procedures included in the National PROMs Programme. Research ethics approval was obtained from an MREC. Arthritis Care identified 11 participants for one group, of whom eight agreed to take part. Participants for the other five groups were selected from those who had taken part in the POiS Audit. Of the 376 people invited, 76 agreed to participate (20%). Of these, selection was stratified by the operation they had undergone, age (under 55; 55–74; 75 and above), sex and socio-economic status [based on the index of multiple deprivation (IMD)]. Overall, 45 people attending the six focus groups held between October and December 2010, including six partners or lay carers, were asked to participate (Table 2). Participants were representative of patients who undergo these procedures as regards age and sex. There was some under-representation of people from the most deprived IMD quintile. Meetings lasted about an hour and a half and were held in local community centres or hotels. At the start of the meetings, consent to participate and for the discussions to be audio-taped was obtained.

Table 1 Characteristics of participants of clinicians' meetings

	Specialty	Type of meeting	Number of participants	Consultants	Junior doctors	Nurses/AHPs	Others
1	Orthopaedic surgery	Departmental clinical governance meeting	7	4	3	–	–
2	Pre-operative assessment staff	Session at national conference	17	5	–	10	2
3	General surgery	Specially arranged meeting	7	4	–	1	2
4	Orthopaedic surgery	Departmental clinical governance meeting	30	5	16	9	–
5	General & Orthopaedic surgery/Anaesthetics	Specially arranged meeting	6	2	–	4	–
6	General surgery/Care of the elderly	Hospital-wide teaching meeting	20	4	16	–	–
7	Orthopaedic surgery	Departmental clinical governance meeting	20	5	9	4	2
Total			107	29	44	28	6

AHP, Allied Health Professionals; Others: managers, administrators, IT staff, clinical audit staff.

Table 2 Characteristics of participants of patients' focus groups

Location	Sex		Operation				Age (years)			Socio-economic status (IMD quintiles)					
	M	F	Hip	Knee	VVs	Spouse or carer	40–54	55–74	75+	1	2	3	4	5	NK
London	3	5	5	2	0	1	3	2	3	2	0	0	0	0	6
London	4	3	2	3	0	2	2	3	2	0	2	1	3	0	1
Birmingham	4	2	0	4	0	2	0	3	3	0	2	2	2	0	0
Sheffield	4	4	0	8	0	0	2	4	2	3	2	2	1	0	0
Liverpool	5	4	8	0	0	1	1	4	4	1	2	3	2	1	0
Bournemouth	2	5	0	0	7	0	1	5	1	1	1	4	1	0	0
Total	22	23	15	17	7	6	9	21	15	7	9	12	9	1	7

IMD, Index of Multiple Deprivation (1 = least deprived; 5 = most deprived); VVs, varicose veins; NK, not known.

Data analysis

Recordings were transcribed verbatim, and transcripts were independently analysed by all authors (clinicians' data: DA and NB; patients' data: ZH and NB), beginning with descriptive coding that identified views of the programme. These were then coded for the first- and second-order themes. Authors then met to agree how themes might be mapped across patients and clinicians. In both the descriptive and the thematic analyses, there was a high level of agreement between authors. Where differences occurred, a consensus was achieved through discussion.

Results

Key themes

There was widespread recognition of the value of the National PROMs Programme in stimulating improvements in the quality of services. Both audiences suggested that relatively poor performance would encourage a provider to enhance their service:

I think this can only help really, having the league table ... If you've got a bad local hospital and they're going on the chart, they're going to pull their socks up presumably (Patient).

It's a very useful thing for the public to begin to understand the differences between the various hospitals and indeed probably eventually the

various surgeons, because I think you have a right to make a choice and you want to make an informed choice (Patient)

I'd want to know who's got a service that's better than mine. And then I'd go and visit them and find out what's their secret (Clinician).

Despite welcoming the availability of PROMs data, patients and clinicians had concerns that centred on three themes: the validity of the PROMs data; damage that might result from unintended or inappropriate use of the data and focusing on providers rather than surgeons. In addition, patients were concerned that PROMs output would have only a limited influence on their choice of provider. Finally, and in contrast, clinicians recognized an unintended benefit of PROMs data: improving clinical decision-making as to whether or not surgery was the best option. Each of these five themes will be considered in turn.

Concerns about the validity of PROMs

Clinicians and patients raised several concerns about the validity of PROMs (Box 1). One concern voiced by both audiences was that the follow-up questionnaire was administered too soon before the full benefits of the operation had been realized. Clinicians had four other concerns. First, they felt some questions would be inappropriate for some patients, rendering the answer misleading (e.g. ability to climb stairs if living in a

Box 1 Clinicians' (C) and patients' (P) views of the validity of data			
C	P	Concerns	Quotes
		Outcome assessed too soon	<p>Clinicians 'I think if you did one year scores on the patients...you'd get very useful data then about how much improvement there is in the second half of their year because that's useful information...We've all got a general opinion about it but I tell patients it takes a year to recover'</p> <p>Patients 'There's a difference when you get to six months. Generally there's an improvement. But when you get to 12 months there's a greater improvement, hopefully'</p>
		Some questions not applicable	'A lot of patients get told that you can't kneel on a knee, so they automatically score themselves as zero on that because they say, "Well I've been told not to kneel", so they put zero. So that immediately makes their score out of 44 effectively. ... It's true of other things that are in there. What are you like going up and down stairs? If they live in a bungalow they just score themselves as zero because they say they don't have any stairs at home'
		Danger of combining different procedures	'You're grouping together all the hip replacements... uncemented hips, cemented hips? And re-surfacing?...It's a massive, massive issue'
		Risk adjustment inadequate	'It's possible to do it [adjust for confounders] but it doesn't produce a realistic result'
		Undue influence of patients' experience	'If the patient's been through a really good operation and somebody's been rude to them, they may well give a low score. So you might be measuring politeness with the PROMs rather than physical outcome'
		Too subjective	'Everybody's sense of pain is different, so you can't say that one person's average is another person's good, and so I think you've got problems in averaging. I know it sounds silly but some people say, "My God, I'm so suffering," where somebody else will say, "Oh, it's nothing." So gauging pain is not an easy thing to do'
		Restricted to hospital episode	'I can't remember the breadth of the questionnaire but the serious concern I had was the joined-up treatment. In other words, the surgery was great, the ward was great, the follow-up was rubbish'
		Output needs to be up-to-date	'It wouldn't really matter what the doctor did ten years ago to somebody and how well he performed because he's probably not there anyway. You're really interested in what the doctor at that hospital is now doing. I'm having my operation now not ten years ago, so I don't care if Dr So-and-So was great ten years ago. I want to know the doctor that's there now, what he's like'

bungalow). Second, there was concern about combining data on patients who had undergone similar but not identical procedures (e.g. use or non-use of cement in joint

replacements). Instead of seeing this as one of the possible explanations for any differences in observed outcome between providers, it was felt to invalidate such

comparisons. Third, there were concerns about the adequacy of statistical adjustment for differences of case mix between providers. And fourth was concern about the influence that a patient’s experience of the humanity of care (e.g. the dignity and respect with which they were treated) might have on their assessment of their outcome. A poor experience having an adverse effect on outcome assessment was seen as unfair by clinicians though, interestingly, not by patients.

Meanwhile, patients expressed three different concerns. First, recognition of the subjectivity of patients’ reports of the severity of symptoms such as pain was considered a threat to the validity of the data. The second concern arose because the post-operative questionnaire was perceived as being limited to the patient’s hos-

pital episode and not their whole clinical pathway including rehabilitation despite the fact that the questionnaire makes no such distinction. And third, patients wanted to be reassured that information on providers would be up-to-date and therefore still valid.

Concerns about adverse impacts of the PROMs Programme

Clinicians had two concerns about possible inadvertent and inappropriate effects (Box 2). Some were worried about output being misinterpreted by the media and by politicians either through misunderstanding or deliberately to further their own ends. Clinicians cited examples of how results had been (mis)interpreted as showing that many operations were of little

Box 2 Clinicians’ (C) and patients’ (P) views of the impact of the output			
C	P	Concerns	Quotes
		Misinterpretation by the media and politicians	<p>‘Yeah, it’s classic fodder for the Daily Mail.’</p> <p>‘You have to remember a politician’s going to play with these...The Sunday Times and the politicians are going to mess about with them’</p> <p>‘Some of the data that’s come out of this has already been thrown at us by a local politician... I sat in a meeting where somebody said to me “23% of knee replacements give no clinical benefit to patients and there’s data to prove that now”... and that gets bandied around and that goes out to the patients’</p>
		Misunderstanding by patients	<p>‘You’ve got to be very careful because any data that you give out will be interpreted by people who don’t necessarily understand what it all means’</p> <p>‘It would concern me that if patients have access to this data and you upscale things to accentuate differences, they will draw conclusions that probably aren’t valid because when you start looking, as we might do, at the confidence intervals, there really are no significant differences and yet the graphs will suggest there are, so I would be slightly wary of that’</p>
		Will increase waiting times	<p>‘How are the hospitals going to feel when someone publishes figures like this and say [Hospital A] is really very low...You will then automatically avoid that if you possibly can. And then you’ve got waiting lists. And everybody will be rushing to the top’</p>
		Opportunity cost of PROMs programme	<p>‘Somebody must know what this is going to cost...It costs a fortune whatever it is... Some of the money would be better spent improving the hospitals that are down in the ‘much worse than average’ bracket so that they’re all up above the average so that people don’t really have to worry. Just go in any hospital and get it done properly’</p> <p>‘You don’t know who they are unless you do this sort of questionnaire. You won’t know which hospitals are good and which hospitals are bad’</p>
		Damage GPs’ relationships with providers	<p>‘Would the GP just say “Oh I’m not going to bother with these other two then, I’m just going to take the top one and recommend everybody should go there”? Not going to be very popular if the local one happens to be the worst then, are they?’</p>

or no use, which had then been used by commissioners to justify more stringent rationing.

Clinicians' second concern was that patients would not be able to understand the data, in particular the concept of statistical certainty encapsulated in confidence intervals. Whilst most saw this as a reason for ensuring that comparisons were clearly explained, those who were unconvinced of the value of providing such information to the public saw it as an opportunity to deliberately impede patients' understanding:

Surgeon A: I like the idea of the, of specific numbers.

Surgeon B: Yeah exactly, I do.

Surgeon A: Because then it makes it more difficult for patients to be able to deduce, to work it out.

Surgeon B: Yeah, well basically which is what you want.

Patients were worried about the harmful impact the data might have on those providers identified as worse than average (whether statistically significant or not). At the same time, those identified as better than average would attract more patients, and their waiting times would increase to unacceptable levels. Patients also questioned the value for money of collecting, analysing and disseminating PROMs. Some suggested that the resources would be better spent on helping poorer performers improve, although as others pointed out, without PROMs data it would not be possible to identify those in need of help. Lastly, there was concern that the output would damage GPs' relationships with their local provider if it led to them referring patients to more distant hospitals that appeared to perform better.

Concern about a focus on providers not surgeons

Both audiences felt that the appropriate level of analysis and comparison was that of the individual consultant surgeon rather than the provider (hospital or Trust) (Box 3). Clinicians

felt that surgical outcome was largely determined by the individual surgeon, and this would be obscured by only considering groups of surgeons within providers. They felt that this was detrimental for patients who would want to know about individual surgeons' outcomes when making a choice. This was borne out by patients who recognized that the skills of surgeons within a provider varied. Indeed, there was puzzlement and incredulity that information was not available on surgeons.

Clinicians' concerns about patients not having access to information on their personal performance was also based on worries that their reputation could be tarnished. Some talked of the risk of being a 'five star' surgeon working in a 'three star' provider. The need to 'protect' themselves from their less able colleagues was seen as essential as it could harm their private practice.

Limited impact of PROMs output on patients' choice of provider

Despite generally welcoming the availability of PROMs output, albeit harbouring the concerns described previously, most patients felt such quantitative comparisons would have a rather limited impact on their choice of provider (Box 4). This was for three principal reasons. First, there were aspects of a provider other than outcomes that influenced their choice: the waiting time for surgery; how accessible the provider was in terms of journey time not only for patients but their visitors and the quality of the non-surgical aspects of care. Patients were as concerned about issues such as the nursing care and level of cleanliness as they were about surgical outcomes. They were also influenced by the size of the provider, although while some favoured the more extensive facilities at larger hospitals others preferred smaller establishments which were seen as providing more personalized care.

The second factor limiting the impact of outcome data was the key influence of family and friends. 'Word of mouth' from trusted people, particularly if they had undergone the same procedure, was highly valued. And the third, and probably most important, reason was the

Box 3 Clinicians' (C) and patients' (P) views of the level of comparison			
C	P	Concerns	Quotes
		Surgeon not provider is appropriate level of analysis	<p><i>Clinicians</i></p> <p>'If you take a Trust collectively it doesn't work out. I mean, I'd like to know how high I do and that's what every surgeon would like to know. How I do compared to my colleagues here, next door and nationally?'</p> <p>'If I was in [hospital A] and there were three surgeons and they averaged out at that outcome, there might be one whose score is way up the top and one is way down the bottom, and then I think I'd like the guy at the top'</p> <p><i>Patients</i></p> <p>'It doesn't really begin to mean anything till you get down to individual surgeons, because in one hospital you could have one surgeon who is performing [poorly] and four excellent and you'd show a good result there'</p> <p>'I went to a Belgian hospital that every Belgian goes to that hospital and the surgeon I had was what Mr Belgium would have had and I could Google him. I could find out everything about him, found his CV, read what he did, what he specialised in. In theory, you can do that with most surgeons if you're going abroad to have the surgery. So why can't we do that here?'</p>
		Clinicians' reputations put at risk	<p>'If I believe that I'm providing a five star service and I strive to provide a five star service, then I'm stuck with the label because I'm in this Trust that has been labelled as a three star operation'</p> <p>'You may be a very good surgeon in that Trust...but you're just performing low down because your colleagues brought you down. How do you protect yourself against something like that?'</p> <p>'[If] I feel I'm performing above two stars...then I would feel that I'm being hard done by... It's a serious issue...if people's livelihoods depend on this. Their private practice depends on this'</p>

influence of a patient's general practitioner (GP). Patients frequently reported that they would seek the advice of their GP who was seen as knowledgeable and reliable. Some patients suggested that PROMs data should be aimed at GPs rather than patients, to ensure the GP was as well informed as possible when giving advice.

Value of PROMs in improving clinical decision-making

Although the National PROMs Programme has several aims, one that has not been explicitly identified is the benefit that a large representative database of patients' outcomes could

have in informing clinical decision-making. Some clinicians went as far as to suggest that this would be the principal benefit as it would provide accurate, up-to-date information to help them assist patients in the decision as whether to undergo surgery or not:

Is it worth me having a hip replacement? rather than If I have my hip replacement here I'm going to get this chance of it being good, whereas if I go down the road... (Clinician)

It would be nice to know for each cohort ... who achieved good hip function... Then, saying that there were so many who were in the lowest quartile to start who achieved good hip function.

Box 4 Limited impact of PROMs output on patients' choice of provider		
P	Issues	
	Quotes	
	Other aspects of provider: waiting time	'When they offered me my operation I was in that much pain. I had never heard of the hospital at [Town A]. I live in [Town B], which is not that far...but I was only too pleased to get in and get it done...I didn't care who did it, as long as it was done'
	Accessibility	'You've got to bring other things into the equation though as well like visiting times. How long does it take to get there? Don't go picking a really good hospital 400 miles away.' 'There are always going to be people who won't even look at these things (PROMs data) and if they do they won't care. They just want to have the place that's most convenient and has a good car park'
	Quality of nursing and hotel services	'If you know that you're going into a hospital that is going to give you reasonable clean bedding, whatever and services, then you'll choose that hospital. Do they have MRSA or C. Difficile? Do they have good care and do they have nurses that understand what you're saying?'
	Size of provider	'If you've got a bigger hospital... you've got more chance of recovering quicker because you've got more facilities to do it with, whereas with a smaller hospital you might have exactly the same for the operation but recovery might take slightly longer.'
	Family and friends	'You can go to some hospitals and they're so busy, we're like sausages going in and out of there, it's all rush' 'When you're...in the club, having a drink and we're all talking about knees and hips and all that and they say, "Well, who did you have?" "Oh, so and so." "Any good?" "Ooh, just the job," and that's how it is; word of mouth.'
	General practitioner's view	'I chose a hospital 32 miles away from where I live... I chose because somebody said to me, this place you'll like and I went there. I wouldn't like to criticise my local hospital and say they are no use...because I don't have any evidence or anything at all. I went because it was recommended and that was it' 'If you know your GP and he knows you, so always a good place to go... Sometimes you take his advice, he recommends somewhere or something. Whether all this complications, charts and all the rest of it comes in, I don't know' 'Most people would say to their doctor..."Where do you recommend? "...He ought to know, didn't he?' 'I think this information would be more useful to our GPs than anybody because you go to your GP [because] you might need an operation and the next question you ask him is, "Well where is the best place to go?"'

I think you could explain to patients, if you had that information, a lot better (Clinician).

Some clinicians felt that such information would help them enhance their communication

with, and thus improve the satisfaction of, their patients:

One of the purposes of PROMs, is to make us improve the way we communicate with the

patients because you ... sit down and actually ... you predict the future. They'd be much happier with you (Clinician).

Discussion

Main findings

Patients and clinicians recognize the value of comparisons of the outcomes of providers of elective surgery. However, both groups harboured three major concerns. First, they questioned the validity of some of the data used on the grounds that outcomes were assessed too soon, some inappropriate questions were asked, different operative techniques were not distinguished, risk adjustment was inadequate and patients' experience was ignored. However, some of these concerns are misplaced: the fact that patients may continue to make progress after completing a post-operative questionnaire does not undermine the validity of comparing providers if they are all assessed after the same time has elapsed, and some information sought from patients that may appear to be inappropriate is not so (e.g. the question on ability to climb stairs is not restricted to their home life but includes stairs or steps they may encounter outside their homes). Second, there were fears that the data would be misinterpreted by the media, politicians and commissioners, with the risk that patients' access to treatment might be inappropriately limited. And third, the focus should not just be on providers but also on the performance of individual surgeons. Patients wanted to know about their own surgeon rather than the whole hospital, and clinicians felt their personal performance could be underrated by poorly performing colleagues.

An additional concern, widely held by patients, was that comparisons of providers' outcomes would have only a minor influence on where they were treated. This was for two reasons. First, their choice of provider was also influenced by several other factors such as the ease of access to the provider, waiting time, the size of the provider and other aspects of quality such as cleanliness and nursing care. The

second reason was their reliance on other people's views: friends' and relatives' experiences and the advice of their GP, who they expected and believed to be well informed about the relative merits of providers.

An unexpected additional benefit of PROMs data, suggested by clinicians, was its value in providing relevant, applicable estimates of outcome for enhancing the accuracy of decision-making aids. This would assist clinicians in their discussions with individual patients by providing accurate assessments of expected outcomes from treatment.

The views of patients and clinicians showed similarities and differences. An example of a difference in views was patients' desire for comparative data to be kept simple whereas some clinicians favoured greater complexity. A similarity was concern about validity, although some of the specific criticisms differed. In some instances, although a concern was shared, the perceived implications differed (e.g. the potential influence of patients' experience of the humanity of their care on their assessment of outcome was seen by clinicians as invalidating the latter whereas patients viewed such an influence as acceptable and legitimate).

Strengths and limitations of the study

Patients were drawn from a wide geographical area and were representative of English NHS patients as regards age and sex, though slightly under-represented as regards the most socially deprived. Confidentiality precluded comparison of clinical characteristics of participants and non-participants. The locations of clinicians' meetings were widely distributed geographically involving half of the ten Strategic Health Authorities that existed at the time. In addition, the seventh meeting included staff from across the country. Another strength of the study was that both sets of transcripts were independently analysed by two researchers, and the comparisons of the two sets involved all three researchers.

All members of the patients' focus groups contributed to the discussions. In the clinicians'

meetings, the mix of professions and grades may have influenced the views people were prepared to express. It was, however, reassuring that junior doctors participated as much as their senior colleagues, although non-medical staff made fewer contributions. Given that the clinicians' meetings were held at hospitals that had volunteered to take part in the earlier POiS Audit, participants may have been more positive towards the use of provider comparisons than clinicians in other hospitals. If the focus of the research had been participants' views of the PROMs Programme, more detailed in-depth data might have been obtained. However, an explicit focus might have made participants less forthright and more circumspect.

How generalizable these findings are is unclear. It may be that views of provider comparisons of other areas of health care would be different. In particular, data derived from clinician-reported outcomes might be viewed differently, particularly by clinicians.

Comparison with previous research

Concerns about the validity of provider comparisons have been identified before.^{14–16} The criticisms largely derive from considering the validity of individual patient's data. Such shortcomings do not apply when data on large groups of patients are used and judgments of providers are based on comparisons of data collected for everyone in the same way. Given that, quite appropriately, patients and clinicians focus on the interests of individuals, there is a need to offer reassurance about the validity of comparisons using aggregated data on large numbers of individuals when disseminating this information.

Another previously recognized finding is that patients are more concerned about having a choice of treatment (e.g. whether to undergo surgery or not) rather than a choice of provider.^{5,8,9,19} However, two findings that have not been apparent in previous studies are the strong desire, both by patients and clinicians, for comparative information on individual surgeons and the relative lack of importance of outcome comparisons for patients when choosing a provider.

Perhaps the most important finding from the point of view of future health-care policy is the relative importance or influence that factors other than providers' outcomes have on patients' choice. This is consistent with recent quantitative studies from Denmark and the Netherlands, which also found the factors influencing patients were shorter waiting times^{29–31}; shorter distance to the hospital^{29,30,32}; the views of GPs³⁰ and patients' previous experience of the facility.^{29–31} Two studies in England have reported the influence of distance³³ and the reputation of the provider.¹⁸ This growing body of literature lends weight to the rather limited impact that provider performance data might be expected to have on patient choice. Instead, the impact is more likely to be felt via the patients' GPs and directly on the providers (hospital clinicians).

Implications

There are several implications of these findings for elective surgical services. First, despite a widely held view among policymakers and politicians that patient choice of provider is a key mechanism for driving improvements in quality, it is apparent from patients that this is unlikely to occur. Outcome comparisons are likely to have only a marginal impact on choice, and that will be mediated through patients' GPs.

Second, it is more likely that quality improvement will result from the response of providers (clinicians and managers), and as such, more attention should be paid to this audience when developing outputs. Given clinicians' concerns about validity, albeit most concerns are based on a misunderstanding of how the data are analysed and presented, it would be worthwhile to improve communication and understanding of the output. In addition, legitimate concerns, such as improving risk adjustment, must continue to be addressed.

Third, attempts must be made to minimize the misinterpretation and misuse of outcome data, otherwise there is a risk of alienating clinicians, whose engagement and support is essential if the benefits are to be realized.

Fourth, the impact of outcome data is likely to be increased if information on individual surgeons is also provided. However, the inevitable smaller volumes of patients will necessitate longer collection periods with a loss of timeliness of reporting.

And finally, the potential use of aggregated PROMs data to inform decision aids needs to be exploited as this will not only benefit decision making but also enhance the perceived value to clinicians of collecting the data.

Acknowledgements

We thank Elenor Kombou for administrative assistance, Jiri Chard for help with identifying POiS Audit participants, Arthritis Care for assistance in recruiting patients for one focus group, all those who participated in the focus groups and clinical meetings, and three reviewers.

Source of funding

The Department of Health funded our programme of research and development for the National PROMs Programme. The views expressed are those of the authors; the funder played no part in the analysis or interpretation of the data.

Conflicts of interest

None

References

- Department of Health. *The NHS Improvement Plan: Putting People at the Heart of Public Services*. Department of Health, 2010. Available at: http://www.dh.gov.uk/prod_consumdh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4084522.pdf.
- Robertson R, Thorlby R. *Patient Choice*. London: King's Fund, 2008.
- Department of Health. *The NHS in England: the operating framework for 2008/9, 2008*. Available at: http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_091446.pdf
- Bird S, Cox D, Farewell VT, Goldstein H, Holt T, Smith PC. Performance indicators; the good the bad and ugly. *Journal of Royal Statistical Society Series A*, 2005; **168** (Part 1): 1–27.
- Coulter A. Do patients want a choice and does it work? *BMJ*, 2010; **341**: 973–975.
- Raleigh VS, Foot C. *Getting the Measure of Quality: Opportunities and Challenges*. London: King's Fund, 2010.
- Department of Health. Contract implementation plans. Choice of named consultant team. Gateway ref 15616. 11 October 2011.
- Fung CH, Lim YW, Mattke S, Damberg C, Shekelle PG. Systematic review: the evidence that publishing patient care performance data improves quality of care. *Annals of Internal Medicine*, 2008; **148**: 111–123.
- Fotaki M, Roland M, Boyd A, McDonald R, Scheaff R, Smith L. What benefits will choice bring to patients? Literature review and assessment of implications *Journal of Health Services Research & Policy*, 2008; **13**: 178–184.
- Bridgewater B, Grayson AD, Brooks N *et al*. Has the publication of cardiac surgery outcome data been associated with changes in practice in northwest England: an analysis of 25,730 patients undergoing CABG surgery under 30 surgeons over eight years. *Heart*, 2007; **93**: 744–748.
- Trigg L. Patients' opinions of health care providers for supporting choice and quality improvement. *Journal of Health Services Research & Policy*, 2011; **16**: 102–107.
- Hildon Z, Neuburger J, Allwood D, van der Meulen J, Black N. Clinicians' and patients' views of metrics of change derived from patient reported outcome measures (PROMs) for comparing providers' performance of surgery. *BMC Health Services Research*, 2012; **12**: 171.
- Hildon Z, Allwood D, Black N. Impact of format and content of visual display of data on comprehension, choice and preference: a systematic review. *International Journal for Quality in Health Care*, 2012; **24**: 55–64.
- Adashi EY, Wyden R. Public reporting of clinical outcomes of assisted reproductive technology programs. *JAMA*, 2011; **306**: 1135–1136.
- Pitches D, Burls A, Fry-Smith A. Snakes, ladders and spin: how to make a silks purse from a sow's ear—a comprehensive review of strategies to optimise data for corrupt managers and incompetent clinicians. *BMJ*, 2003; **327**: 1436–1439.
- Sheldon T. Promoting health care quality: what role performance indicators? *Quality in Health Care*, 1998; **7** (Suppl): S45–S50.
- Coulter A, Le Maistre N, Henderson L. *Patients' Experience of Choosing Where to Undergo Surgical*

- Treatment: Evaluation of the London Patient Choice Scheme.* Oxford: Picker Institute, 2005.
- 18 Dixon A, Roberston R, Appleby J, Burge P, Devlin N, Magee H. *Patient Choice: How Patients Choose and How Providers Respond.* London: King's Fund, 2010.
 - 19 Werner RM, Asch DA. The unintended consequences of publicly reporting information. *JAMA*, 2005; **293**: 1239–1244.
 - 20 Magee H, Davis L-J, Coulter A. Public views on healthcare performance indicators and patient choice. *Journal of the Royal Society of Medicine*, 2003; **96**: 338–342.
 - 21 Crofton C, Lubalin JS, Darby C. Consumer assessment of health plans study (CAHPS): foreword. *Medical Care*, 1999; **37**: MS1–MS9.
 - 22 Booske BC, Sainfort F, Hundt AS. Eliciting consumer preferences for health plans. *Health Services Research*, 1999; **34**: 839–854.
 - 23 Schneider EC, Lieberman T. Publicly disclosed information about the quality of health care: response of the US public. *Quality in Health Care*, 2011; **10**: 96–103.
 - 24 Department of Health 2009/10. Guidance on the routine collection of Patient Reported Outcome Measures (PROMs) for the NHS in England. Available at: http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_092625.pdf.
 - 25 Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*, 2007; **19**: 349–357.
 - 26 Allwood D, Hildon Z, Black N. Clinicians' views of formats of performance comparisons. *Journal of Evaluation in Clinical Practice*, 2011; **19**: 86–93.
 - 27 Hildon Z, Allwood D, Black N. Making data more meaningful. Patients' views of the format and content of quality indicators comparing health care providers. *Patient Education & Counselling*, 2012; **88**: 298–304.
 - 28 Chard J, Kuczawski M, Black N, van der Meulen J. Outcomes of elective surgery undertaken in Independent Sector Treatment Centres and NHS providers in England: the Patient Outcomes in Surgery Audit. *BMJ*, 2011; **343**: d6404.
 - 29 Birk HO, Henriksen LO. Why do not all hip and knee patients facing long waiting times accept re-referral to hospitals with short waiting time? Questionnaire study *Health Policy*, 2006; **77**: 318–325.
 - 30 Birk HO, Gut R, Henriksen LO. Patients' experience of choosing an outpatient clinic in one county in Denmark: results of a patient survey. *BMC Health Services Research*, 2011; **11**: 262.
 - 31 de Groot IB, Otten W, Dijks-Elsinga J, Smeets HJ, Lievit J, Marang-van de Mheen PJ. Choosing between hospitals: the influence of the experiences of other patients. *Medical Decision Making*, 2012; **32**: 764–778.
 - 32 Moser A, Korstjens I, van der Weijden T, Tange H. Patient's decision making in selecting a hospital for elective orthopaedic surgery. *Journal of Evaluation in Clinical Practice*, 2010; **16**: 1262–1268.
 - 33 Department of Health. *Report on the National Patient Choice Survey.* London: Department of Health, February 2010. Available at: http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsStatistics/DH_116958