Perceptions, attitudes, and beliefs of staff anaesthetists related to multi-source feedback used for their performance appraisal

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Editor’s key points
- In general, anaesthetists accepted multi-source feedback (MSF) as a tool for self-improvement.
- The feedback from nurses and registrars was considered valuable.
- The opinions were split on the value of the feedback from surgeons or technicians.
- A more professional approach is required to turn MSF into a tool for sustained improvement.

Background. The aim of this study was to explore anaesthetists’ perceptions and experience of the implementation of multi-source feedback (MSF) for their performance review.

Methods. Twelve semi-structured thematic interviews were conducted with staff anaesthetists and their director to explore the perceptions of, and responses to, the MSF system, the feedback given, and their work context. An inductive thematic cross-comparative analysis of the interview data was conducted.

Results. The themes that emerged clustered around the anaesthetists’ understanding of MSF, the facilitation process, and the value anaesthetists placed on feedback from the different professional groups available as actual and potential sources of feedback data.

Conclusions. The anaesthetists interviewed in this study accepted performance review and the role of MSF in it. Anaesthetists thought anonymity an important feature of MSF, and viewed the process as an opportunity for self-improvement. To the extent that MSF was viewed by the anaesthetists as surveillance by management, this was seen as being largely benign. Rather a view of the acceptance of self-responsibility for using the information gathered to improve their own performance was held by the majority of those interviewed. While broad sampling of sources within and outside anaesthesia was desired, most value was placed on feedback from both nurses and trainees within anaesthesia. The value of feedback from surgeons was contentious, and this may reflect underlying issues with this important relationship that are yet to be explored.

Keywords: anaesthetist; education, continuing

Accepted for publication: 26 April 2011

With increasing public expectations and a broadening of the understanding of professional practice beyond medical knowledge and technical proficiency, as expressed in the CANMEDS principles, the GMC guidance ‘Good Medical Practice’, and similar documents,1 2 assessment of medical specialists in the workplace has become more important. Multi-source feedback (MSF), which uses data gathered from observations of routine performance by different stakeholders using structured questionnaires, is one assessment method that has been adopted for this purpose.3

MSF is relatively inexpensive, reliable, and there is evidence that the majority of doctors are satisfied and report subsequent improvement in performance.4 A recent review of workplace-based assessment methods found that MSF can lead to performance improvement.5 The use of MSF has been documented in various medical disciplines for both junior doctors6 and specialists,7 including in anaesthesia.8

In contrast to the general belief that feedback is beneficial, there are examples where feedback was detrimental to subsequent performance9 and this occurred in one-third of studies in a review of MSF use outside medicine.10 How MSF is implemented is therefore critically important; not only may it be ineffective, its effect may actually be harmful. The response of recipients to their feedback has been identified as an important determinant of its effect.5 10 11 For example, Sargeant and colleagues12 demonstrated a sustained resistance to behaviour change among family physicians in Canada after their receipt of feedback perceived as negative. Recipient perception of whether the feedback provides new insight and the value recipients ascribe to the sources of feedback also influence its effectiveness.13

A system of MSF has been introduced to facilitate feedback on performance for staff anaesthetists in our institution.14 The aim of this study was to explore the anaesthetists’
perceptions and the context and experience of this implementa-

tion of MSF in anaesthesia.

**Methods**

The study took place within the Department of Anaesthesia of an Australian teaching hospital after the introduction of a system of MSF focused on non-technical skills for specialist anaesthetists. This system was developed by the department director and deputy director and has been described elsewhere. In summary, the items assessed were derived from the anaesthesia non-technical skills (ANTS) framework developed by Fletcher and colleagues and were adapted for the local environment by the designers. Feedback is sourced anonymously from colleagues, nurses, and specialist trainees in anaesthesia selected without the feedback recipients’ knowledge. The collated results are confidential and are used in a performance review interview facilitated by the department director.

Any research with knowledge translation goals pertaining to the behaviour change of health professionals must involve the development of an intimate understanding of the groups and the context in which they practice. Qualitative methods are well placed to achieve this, in that they allow researchers to explore the participants’ interpretations and experiences within their natural settings. The importance of using qualitative study methods in anaesthesia to explore how anaesthetists actually behave and think has previously been recognized. Given that our aim was to explore the anaesthetists’ perceptions and the context and experience of MSF in anaesthesia, our study was designed as an interpretivist qualitative in-depth interview study.

The sampling approach involved a purposive, criterion based, and maximum variation sampling frame. Interviewees were selected from full-time staff anaesthetists to represent the gender, age, and experience range within the department. This sampling technique involves recruitment of subjects as required to achieve the goals of analytical saturation, whereby no new themes are emerging from the interview data. The investigators were independent from the collection and delivery of the MSF and the study was approved by the Southern Health Research Ethics Committee (Approval No: *08171A). There were 20 staff anaesthetists available for interview, and 10 were interviewed before data saturation occurred. The interview subjects ranged in age from 34 to 57 (median 45) yr, with experience as consultant anaesthetists ranging from 1 to 18 yr. To help contextualize the responses from the feedback recipients, the director and deputy director who designed the MSF system were also individually interviewed. This enabled a comparison of the understanding and intentions of the MSF process from a managerial/designer perspective with the understandings and experiences of the interviewees. This brought the number of interviews to a total of 12.

**Interview structure**

After obtaining informed consent, a semi-structured thematic interview with open-ended questions was used. Semi-structured interviews are a means to access activities and events which cannot be observed directly and are a measure of individual appraisals of behaviour rather than their actual, observable behaviour. They are ‘repeated face-to-face encounters between the researcher and informants directed towards understanding the informants’ perspectives on their lives, experiences, or situations as expressed in their own words’. The aim was to facilitate participants’ own description of their perceptions and allow exploration of their individual responses to the MSF system, the process and nature of the feedback given, its source, and their underlying attitudes to feedback, change, and their work context. The interviews lasted ~1 h and were recorded and professionally transcribed before subsequent coding by the investigators. Discussing issues of performance with medical professionals in the workplace is a sensitive issue which requires close attention to the stressful nature of reflection on clinical performance for participants outside the confidential MSF formal process. Following best practice qualitative interviewing principles, the interviews were scheduled in advance at a place and time of convenience and comfort to participants to attain the optimal environment for discussion. In addition, the interviews were conducted by both a medical sociologist experienced in qualitative research who was not connected to the Department and an anaesthetic consultant who was not in a position of authority over their colleagues. This allowed for a high degree of anonymity and safety for the interviewees and ensured a free and frank discussion about the experiences and understanding of the MSF process.

**Analysis**

An inductive thematic cross-comparative analysis of the interview data was conducted. Data analysis began concurrently with data collection in order to develop an emergent understanding of the findings. This emergent technique informed additional sampling and interview probes. The actual process involved the collection and analysis of the interview data iteratively, that is, in a cycle involving data collection and data analysis, until analytical saturation was reached. Saturation is ‘the point at which the ongoing analysis of new data is not producing any new insights relevant to the emergent theory’. Analytic rigour was ensured through researcher triangulation, which involved both investigators (staff anaesthetist and medical sociologist) in the coding of data, discussion of emerging themes, and the generation of different interpretations to allow discussion and revision as the data collection and analysis progressed. The use of an insider/outsider approach to data collection and analysis enables a comprehensive analysis through allowing emic and etic views of the world of anaesthesia to be applied to the data.

**Results**

The major themes that emerged in analysis relate to the nature of the feedback, the perception of its purpose, and its facilitation.

Quotes from the managers are followed by a (M); quotes from anaesthetists are followed by an (A).
The purpose of MSF: moving beyond informal feedback

The designers recognized that the existing system of staff performance review was inadequate and sporadically implemented. There was a need to gather more ‘objective’ performance data as these were lacking in the past when problems were reported. ‘I was going on people’s say-so … one of the first answers I got back was, “Well, where’s the proof?”’ (M). In addition, it was difficult for the manager to observe problematic behaviour due to the Hawthorne effect (34). ‘If he stands in theatre and watches people they’ll be on their best behaviour’ (M).

The designers reported modifying and supplementing ANTS with their own views on acceptable and unacceptable behaviours. They ‘started off with the ANTS criteria… then we brainstormed things that we like people to do, and then things that drive us crazy’ (M). The MSF instrument thus reflected the workplace behaviours desired by the department leadership: ‘there are things that we think are good behaviours and things that we think aren’t’, (M) so that the MSF system is ‘targeting particular behaviours that we didn’t want to see’ (M).

The items developed are presented in Supplementary Appendix 1.

Nature of feedback: interprofessional, interdisciplinary, and anonymous

Sampling a broad range of co-workers was broadly recognized as an important and desirable characteristic of MSF. More importantly, some anaesthetists clearly indicated that it would be desirable to have sources of feedback outside anaesthesia, that is, sources other than the anaesthetic registrars, anaesthetic consultants, and anaesthetic nurses that had been included by the designers.

The idea is to provide feedback from as many sources as possible of the people that you’re working with. So you can get a more well-rounded, complete picture of how you’re perceived as a professional (A).

Anonymity of the sources of feedback was considered an important characteristic of MSF. Anaesthetists and designers felt that this enabled co-workers to report honestly, without fear of reprimand or of an adverse effect on their working relationship. ‘It’s anonymous so people feel they can be really honest about what they think’ (A). One reason professed for this was the relatively senior position of anaesthetists in the hospital hierarchy. ‘Hospitals are hierarchical. And as a specialist, it’s unlikely the trainee’s ever going to tell you your teaching is bad’ (A).

Perception of purpose: inadequacy of past review, surveillance, self-improvement, and self-responsibility

The perception of most recipients was that MSF was introduced because past performance review was infrequently performed, that it ‘virtually never happened’ (A). As the designers had also reported, many commented on it as both infrequent and inadequate: ‘You would have a yearly talk with the boss, … maybe not every year… (but) they wouldn’t have had hard data’ (A).

Implicit in this understanding of the inadequacy of past performance assessment by both the system designers and the anaesthetists is that performance appraisal is to be expected, that this scrutiny is inevitable in modern workplaces. ‘To stay in the system and continue you have to accept it’ (A) and ‘As long as the employer knows that there is some value for money, there is some fair exchange’ (A).

One anaesthetist and the designers anticipated that being placed under scrutiny by MSF could be interpreted as threatening ‘professional independence’ (A), and anticipated an adverse reaction, for example, ‘how dare you question my bona fides?’(A). Another anaesthetist did express concern that this scrutiny may become undesirable. ‘If I was really scrutinized, I think I may feel a bit threatened’ (A).

To the extent recipients did perceive the collection of MSF data as surveillance, they viewed it as benign. One less experienced anaesthetist conceptualized it as a form of distant supervision, ‘a way of the more senior people in the department keeping an eye on what everybody is doing’ (A). Surprisingly, this was not seen as prescriptive or controlling.

One perception of MSF was as an opportunity to align individual performance with the expectations of the institution. ‘It tries to reflect … how you and the institution are matching up with each other’ (A).

Again surprisingly, given the items were developed by the managers, the items in the MSF system were acknowledged as legitimate determinants of desirable professional behaviour. However, the recipients who expressed this understanding of the purpose of MSF also viewed it as positive and functional. The dominant view among recipients was that MSF is a tool to provide performance information that they could use to improve their own performance. ‘I probably see this as a tool for me. It’s not the department that needs to be responsible for me. It’s facilitating in that it’s collecting information for me, about me, and presenting it to me’ (A).

Recipients saw it as their responsibility to act on the feedback received if action was required. ‘He will point something out to you. He’s brought it up, he has mentioned it, and he leaves it to you’ (A). An example, ‘I had to think about how I would deal with my registrars and I went away and thought about that’ (A). Some recipients reported the manager gave them advice on how they might change their behaviour; others did not think this was necessary. ‘you don’t necessarily need to be given a strategy for dealing with it, just being made aware that something in your performance is an issue, its for you to then take that on board and try and make a change yourself’ (A). There was a recognition that the onus for change was on the individual clinician rather than the system in which they worked. ‘That’s a little bit unrealistic to expect the hospital to change because of me. Obviously that would be nice [laugh]…’ (A).
Facilitation: meeting expectations, context, duration, and follow-up

Most recipients highlighted the emphasis placed on the aspects of their feedback where they did not meet expectations in the interview. ‘It was probably only some that were skewed to the sort of middle or the negative aspect that were dealt with … the positive things weren’t really dealt with at all’ (A).

In this respect, the feedback only addressed areas where the anaesthetists had failed to display the desirable behaviours. However, this narrow focus was not the stated intention of the designers. ‘You know, if your ratings are highest, usually and always on things we think are great things, that’s fantastic. And so it encourages you to keep going on all the good things’ (M).

The anaesthetists felt that the positive aspects of performance were not adequately reinforced. ‘He’s not actually looking at the benefits of the positive feedback for staff’ (A). This was recognized as an area where the system could be improved. ‘I think it probably would be useful to have a more complete understanding of how you’re performing. If you’re performing well, why are you?’ (A).

There was a belief that an agreed plan for dealing with and reviewing performance deficiencies to see if improvement occurred was absent and that such an addition would be desirable. One anaesthetist reported what they would like to happen. ‘Are there any areas there that you, talking to me, want to [improve], and I would say, yes, I want to do this and … he can add “I think it would be good if you did X and Y” … put a plan in there and give one copy to me and one copy sits in there and the next time we do this in 12 months, you can say, “well, did we address any of these things and has it changed?” Because you do need to set some goals, don’t you?’ (A).

Perceived value of the raters

When evaluating professional groups as sources of feedback, the anaesthetists valued the input of anaesthetic registrars and nurses the highest, positive and ambivalent views were held on feedback from the In-Charge Anaesthetist, ambivalent and negative views were expressed concerning input from surgeons, and finally, theatre technicians were not seen as ‘competent’ to comment on professionalism issues in anaesthesia.

Anaesthetic nurses, who work as the anaesthetic assistants in our institution, were highly valued as sources of feedback. ‘Since the nurses work with you one on one and very closely, they’re probably the best’ (A).

Within the registrar group, the input of more experienced registrars was more highly valued. ‘I think the feedback from the registrars … the most important, because we actually work much more closely with them, and so we spend time in the theatre with them for a prolonged period’ (A).

The responsibility of anaesthetists to prioritize anaesthetic registrar teaching, as a clinical teacher in a training hospital, was another reason feedback from this group was highly valued. ‘I think it’s where my priorities lie … and therefore the feedback that I get from the trainees is important to me’ (A).

There were ambivalent views on feedback sourced from Anaesthetist colleagues working in the ‘In-Charge Anaesthetist’ role, responsible for co-ordinating anaesthesia resources for the day. On the one hand, anaesthetists in this role are generally experienced colleagues, so they share a similar professional training and work perspective. ‘That’s from your senior colleagues so you perhaps place greater weight on that … they have a very good understanding of how we react to those emergency situations’ (A). Alternatively, other respondents reported they discounted the ‘In-charge Anaesthetist’. ‘Well I’d value the opinion of the in charge (anaesthetist!) the least, because they won’t see me in the operating room looking after patients’ (A).

Surgeons were excluded as sources of feedback in the MSF system. There were several perspectives on this. For some anaesthetists: ‘it would be interesting to know what the surgeons thought of you’ (A). Another view was that it would be valuable to know how anaesthetists are meeting surgeons’ needs. ‘I think … one of our key roles is the provision of optimal surgical conditions, then there’s no one in a better position to rate that, … than a surgeon.’ (A) The views on the value of feedback from surgeons were influenced by the perceived nature of the interaction between the anaesthetist and their surgical colleagues. A minority of anaesthetists who specialize in particular areas, e.g. paediatric or cardiac anaesthesia, work with a small number of surgeons frequently. Some of these sub-specialist anaesthetists valued surgeons as a potential source of feedback because of their frequent interaction. ‘I’m frequently working with a particular surgeon … in my case it’s pretty relevant’ (A). Others of them argued that this exposure to a small group of surgeons may have undesirable consequences. In this they concurred with the designers: ‘for some of the anaesthetists … they work with a very small group of surgeons all the time, so if the feedback was negative, that may not be a good thing to then lead into ongoing relationships.’ (M)

Most anaesthetists reported that they worked with a large number of surgeons infrequently, and that any individual surgeon would not work with them enough to be able to form a judgement that the anaesthetists would value. Some of these anaesthetists expressed the view that surgeons generally do not discriminate between anaesthetists and that surgeons’ lack of understanding and interest in anaesthesia would lead to these anaesthetists discounting their feedback. There was also recognition that the surgeon has their own work which may preclude them from noticing that of the anaesthetist: ‘once his head’s down and he’s operating, he really is oblivious to what’s happening’ (A).

In our institution, theatre technicians work under the supervision of nursing and medical staff to assist with movement and positioning of patients and the use and maintenance of operating theatre equipment. Some anaesthetists reported technicians would be in a position to provide valid feedback. ‘They’re somebody else who’s in your immediate
perioperative environment and they have a lot of interaction with the anaesthetist (A). Others disagreed that their exposure was adequate however. The major issue was that in general the anaesthetists perceived the technicians’ ability to provide feedback as highly questionable, and their feedback was therefore poorly valued. ‘I don’t know that technicians as a group collect people who are good at interpersonal skills or verbalising them’ (A).

Discussion

The reception of the MSF system by the anaesthetists is clearly positive. They accept MSF as a means for them to improve their practice, which they indicate they are ready to do. This acceptance of the feedback is recognized as a potential determinant of its effectiveness. The value recipients place on the source of feedback is also important to how it is viewed by recipients and hence will influence whether it is likely to be effective. We have found that the two most highly valued sources of feedback for the anaesthetists are the anaesthetic registrars and the anaesthetic nurses. The high value assigned to nurses is interesting, as medical specialists are not often assessed by colleagues outside medicine. Both of these groups are within the discipline of anaesthesia, however, which may indicate that this perceived insight into anaesthetic practice is the most critical determinant in assigning value to feedback. This seemed most related to their membership in the broader sense of the ‘anaesthetic community’. Social identity theory posits that people tend to favour the relationships with ingroup members over outgroup members. However, the consequence of strong group identity can be negative in that strong commitment to the group may mask failings and lead to poorer performance or even encourage intergroup conflict. In any organizational setting where teams are interdependent, competition between groups is potentially harmful to the effectiveness of the organization and in this case may be detrimental to the acceptance of holistic performance feedback by anaesthetists.

The ingroup and outgroup nature of anaesthesia in this community was most clearly defined by the interprofessional relationships with surgeons, expressed through an ambivalence about the role of surgeons in providing feedback. This may be related to long-standing interprofessional tensions between the two professions. The constituent elements of these tensions are yet to be fully explored, but two possible factors could influence the results in this paper. First, it has been posited that interprofessionalism in surgery is possibly hampered by surgeon-centric views on non-technical competencies such as leadership, communication, and collaboration. It has been suggested that this may be an effect of silo-based training of the health professions; the specific socialization processes within them, hierarchical divisions between them, and in this case, the lack of continuing interprofessional education and training in surgery that may reproduce rather than ameliorate the sources of these points of interprofessional tension. Secondly, it is possible that the nature of surgical work may hamper the interpersonal and interpersonal ‘impression management’ of surgeons. In other words, the idea that ‘once his (the surgeons) head’s down and he’s operating, he really is oblivious to what’s happening’, is seen by anaesthetists as a major barrier to surgeons’ communicating with and gathering knowledge about anaesthetists. How this practical clinical performance issue may be overcome does not lend itself easily to a solution; however, we need to be mindful that in the case of these anaesthetists at least, it does profoundly affect the professional relationship between the two clinical practitioners that is critical to good patient care.

Interestingly, the attribution of a greater value to feedback from within anaesthesia contrasts with their perception that breadth of sampling is important. Although valued less highly, input from other groups outside anaesthesia would be important to provide that broad sampling. Theatre technicians, as one possible additional source of feedback, were discounted by most of the anaesthetists interviewed. This may be explained by the long-standing divide between the health professions and occupations. This divide is founded upon the principles of autonomy and self-regulation of the medical profession, grounded within the long-standing position of medical practitioners being the holders of esoteric knowledge, both scientific and clinical. This autonomy allows medicine to direct and evaluate the work of other occupations without itself being subject to formal direction and evaluation by them. In addition, it allows control over the conditions of medical work, extending to control over other occupations in the health field. Taking this theoretical and empirically grounded premise, the reluctance of anaesthetists to allow technicians to make any judgement of their performance seems understandable and yet not fully justifiable. Given the length of time technicians spend working with and observing the theatre team, they are arguably in a position to generate useful insights into the performance by anaesthetists of non-technical competencies such as communication and teamwork.

While the current MSF system represents a marked improvement on what had gone before and is welcomed by the anaesthetists, they did identify shortcomings in its implementation. Some anaesthetists indicated that a greater opportunity to improve in areas of acceptable performance in addition to deficiencies would be desirable. The focus of the MSF system currently on ensuring adequate performance reflects the dilemma of assessing for competency vs excellence. This may be indicative of a broader issue within anaesthesia, that as our assessment practices are aimed at ensuring adequate performance, their educational impact actually mitigates against the pursuit of excellence.

In general, anaesthetists reported that they were left to plan and implement changes in their behaviour without input or assistance from the hospital. Some anaesthetists reported that it would have been better to have had assistance in this process, which would be more consistent with performance management best practices outside medicine. We would recommend that the current MSF system’s future development focus ought to evolve from...
the data collection to how the data are used. Measures that would address deficiencies highlighted by the anaesthetists in this study include imbuing the facilitation interview with greater importance by formalizing the setting and allocating a longer time, and addressing in greater detail aspects of adequate performance where anaesthetists wish to improve.

In conclusion, this study examines one group of anaesthetists in Australia who work in full-time public practice. The relationships between employers and anaesthetists in other workplaces and other countries will obviously differ. Nevertheless, it is clear that the time-honoured concept of medical autonomy and privilege is not the only determinant of how these anaesthetists view themselves. These anaesthetists perceive themselves to be in a mutually beneficial relationship with the hospital, which brings with it a requirement for them to meet the hospitals’ expectations, as expressed in the MSF system. They are willing to engage in a process where their performance is placed under scrutiny in an effort to improve that performance. Whether other anaesthetists in different environments would be willing to participate in a similar performance management system with interpersonal input via MSF would be worthy of further investigation.

Supplementary material
Supplementary material is available at British Journal of Anaesthesia online.

Conflict of interest
None declared.

References
10 Kluger AN, DeNisi A. The effects of feedback interventions on performance: a historical review, a meta-analysis, and a preliminary feedback intervention theory. Psychol Bull 1996; 119: 254–84
17 Merry AF, Davies JM, Maltby JR. Qualitative research in health care. Br J Anaesth 2000; 84: 552–5
31 Smith AF, Greaves JD. Beyond competence: defining and promoting excellence in anaesthesia. Anaesthesia 2010; 65: 184–91