

Performance management and metric manipulation in the public sector

Research executive summaries series

Vol 5, Issue 3

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ISSN 1744 - 7038 (online)
ISSN 1744 - 702X (print)

1. Overview

This research executive summary explores the circumstances that might influence managers in the public services, particularly within the National Health Service (NHS), to manipulate the target and performance measures (often known as metric manipulation) that are used to assess performance; and if they do what level of deception they might use. The research findings suggest ways that governance of performance management systems can be improved, by removing factors that might encourage metric manipulation and by enhancing the factors that encourage good practice.

2. Objectives and research approach

2.1 Objectives of the research

The research sought to understand the contexts and mechanisms that cause deception and manipulation of performance management systems, as a way of identifying means to improve the governance of these systems. The research focused upon the National Health Service (NHS), where performance management and measurement has been, and will continue to be, an important aspect of management. The key research questions to be answered were:

- What are the factors in the NHS influencing the probability that a manager will seek to manipulate performance measures and information?
- What are the types of manipulation or deception likely to be chosen?

2.2 Research approach

2.2.1 Realistic evaluation

The research adopted an approach called realistic evaluation (Pawson and Tilley, 1997), which was originally developed for policy evaluation. This approach provides a framework that can be used, in this case, to explain why the rates and seriousness of metric manipulation may vary in different contexts.

Realistic evaluation focused on three elements that connect with each other in what are called context mechanism outcome configurations (CMOC):

1. Underlying mechanisms – these are causal mechanisms that bring about the events that people experience. There are many mechanisms that may influence events, but they are likely to be hidden and not immediately obvious to the observer.
2. Contexts – the mechanisms are triggered by certain contexts but not by other contexts.
3. Outcomes – these are the desirable or undesirable consequences of the mechanisms that have been triggered by the contexts.

Tilley (2000) gives the example of evaluating the impact of installing CCTV in car parks on the rate of car crime to illustrate the realistic evaluation process. He labelled one of the possible mechanisms 'the nosey parker mechanism'. People see the CCTV cameras in a car park and this makes them feel secure. More people therefore use the car park, which becomes busier. Because there are more people about the criminals are deterred. However, this mechanism will only be triggered in certain contexts. If the car park is one that people use to park their cars while they are at work then it will be busy at the start and end of the working day but will be quiet in the middle of the day. Criminals will be able to steal cars and their contents undisturbed. In this context CCTV will not reduce the amount of car crime. Other contexts may well trigger other mechanisms that would lead to a reduction in crime (Phillips 1999).

2.2.2 Research methodology

The research used two methods:

- The Delphi technique, a method of obtaining a consensus view from a panel of experts. The panel consisted of 30 NHS managers and professionals who were asked to respond to a questionnaire about CMOCs and the likelihood of hypothetical scenarios relating to metric manipulation
- Semi-structured interviews with 31 staff from five NHS trusts. They were asked to describe specific 'critical incidents' where they had witnessed or been involved in occasions relating to metric manipulation.

3. Findings

3.1 Levels of metric manipulation

The research suggests that metric manipulation of performance measurement information in the NHS is perceived to be less of a problem than it has been in the past. Certainly, outright deception appears rare. However, selective presentation (being economical with the truth) and gaming (taking advantage of the loopholes in rules and systems) are still in evidence.

3.2 Mechanisms

The mechanisms leading to metric manipulation were identified as:

1. The avoidance of hassle and scrutiny mechanism – metrics are manipulated to avoid the attention of superior managers or bodies.
2. The principled mechanism – metrics are manipulated because people feel the measures used are inappropriate or unjust.
3. Frustration at inaccurate data and information mechanism – people manipulate the metrics because they feel the data is misleading and untrue.
4. Large bonus mechanisms – metric manipulation to achieve a target that triggers a large bonus.
5. Small bonus mechanisms – metric manipulation to achieve a target that triggers a small bonus.
6. Proportionate bonus mechanism – bonuses increase pro-rata with metric improvements.
7. Bidding for resources mechanism – making performance look worse than it is to argue for increased resources.
8. Maximising income mechanism – making performance look better than it is where income is based on activity or outcomes.

Figure 1 Mechanisms and probability and levels of deception

		Level of deception	
		Low	High
Probability of deception	High	High probability and low level manipulation <ul style="list-style-type: none"> • bidding for resources • maximising income • large bonus 	High probability and high level manipulation <ul style="list-style-type: none"> • nil
	Low	Low probability and low level manipulation <ul style="list-style-type: none"> • avoiding hassle • principled objection • small bonus 	Low probability and high level manipulation <ul style="list-style-type: none"> • frustration at inaccurate data • proportionate bonus

Figure 1 shows which mechanisms trigger the greatest probability of metric manipulation and the greatest level of dishonesty.

3.3 Contexts

The various mechanisms may be switched on by particular contexts such as:

1. Where the risk of being caught and punished for metric manipulation is low.
2. Where performance metrics are highly embedded in activities, such as appraisal and budgeting, that generate resources and rewards.
3. Where metrics are primarily used to satisfy external bodies and not for internal managerial use.
4. Where there is a lack of a balanced approach to interpreting metrics.
5. Where the informal culture of an organisation tolerates metric manipulation.

Figure 2 shows the frequency with which the contexts figured in critical incidents of metric manipulation.

3.4 Governance issues

There was evidence that at local trust level, a balanced approach to performance management is not always taken, despite national endorsement of the balanced scorecard approach to performance management. Trust managements often focus on the achievement of a small number of politically sensitive targets to the neglect of others. This context can trigger the avoiding hassle mechanism and lead to selective presentation and gaming.

Figure 2 Frequency with which the various contexts could be discerned as triggers for manipulative mechanisms

Balance of benefits, risks and sanctions	Integration of performance management	Organisational response to external performance management	Lack of balanced, multi-dimensional performance measurement	Attitude of informal culture towards metric manipulation	Total
14	32	26	18	15	105
13%	31%	25%	17%	14%	100

N = 89 critical incidents. Some incidents involved more than one trigger.

The lack of balance can also be seen in the way that performance measurement has become embedded in the resource allocation processes within trusts but has not become embedded in the performance review processes used to appraise individuals. This context, in conjunction with other triggers, can activate the bidding for resources and maximising income mechanisms; leading in turn to selective presentation and gaming.

Whilst the performance measurement systems meet the needs of some stakeholders, notably the strategic management of the NHS and the Department of Health, other stakeholders (such as the clinicians) can feel the measures are inappropriate. The performance measurement system can seem to be something that is externally imposed and of limited value within the organisation. These contexts can trigger the principled and the avoiding hassle mechanisms that can lead to minor forms of metric manipulation. However, within the trusts, managers who are responsible for working with the metrics and targets, whilst having many criticisms, concede that the system can lead to more effective and efficient services.

Whilst the measures used within the performance measurement system are not routinely or systematically audited, the normal managerial processes of reviewing and checking measurement data appear to be effective against serious metric manipulation. However, the 'wriggle room' that exists within the rules for classifying and calculating performance measures does allow gaming and selective presentation, especially for example in the case of metrics that involve deciding when the clock for measuring lead times should be started.

The research found that frustration at inaccurate data, which can result from poor validity and reliability of data, was not an important mechanism in causing metric manipulation but that when it occurred the manipulation could be at a serious level.

4. Implications of the findings

The CMOCs' developed in the research can be used to identify possible means of improving governance of performance measurement, by:

- disabling those mechanisms that encourage metric manipulation
- removing those contexts that trigger manipulative mechanisms
- enhancing those contexts that trigger good practice.

4.1 Implications for policy makers

4.1.1 Value of targets to stakeholders

The mechanisms that lead to manipulation are triggered, to a large degree, by the belief that targets and performance measures are imposed for the benefit of central government and have little value to those running the service. If performance measurement and targets were used more frequently to improve managerial and clinical practice within the NHS then the amount and seriousness of performance information manipulation might reduce.

4.1.2 Balanced approach to performance management

The absence of a balanced, multi-dimensional approach to performance management within some trusts triggers mechanisms and leads to gaming and system manipulation. The development of such an approach to performance management within trusts should enable a more proactive and developmental approach to performance measurement to be taken.

4.1.3 Performance related pay

Performance related pay (PRP) is not currently widely used in the NHS, which has focused more on competency related pay. The research does warn, however, that if trusts were to employ PRP schemes that delivered significant proportions of remunerations as bonuses then, in the view of NHS staff, the risk of serious metric manipulation would be increased.

4.2 Implications for finance and performance managers

4.2.1 Random monitoring

Bevan and Hood (2006) have argued that when highly specific targets are set and when the time at which, and the method by which, those targets will be monitored is known, then managers will be tempted to practice gaming. This temptation could be removed by either making the targets less specific or by making the monitoring process more ambiguous.

If using the same psychology that applies to speed cameras that may or may not be active, managers do not know if or when they will be monitored against targets, then gaming becomes a much more demanding and less tempting option. Bevan and Hood proposed introducing randomness into monitoring and evaluation in order to limit gaming (2006).

4.2.2 Auditing and training

The research suggests that making it more likely that metric manipulation will be discovered and punished is an important way of diminishing its likelihood. Our finding, supported by Bevan and Hood (2006), that the quality of the performance management data is not systematically audited (whilst the performance based on this information is carefully scrutinised), suggests that more could be done to make uncovering metric manipulation easier.

One way of doing this is to remind people that the organisation is alert to the possibility of manipulation. Biros et al (2002), from a study of the use of computer information systems, suggest that employees are more likely to identify deception if they are sensitised to the possibility of it by the issuing of warnings and provision of training. Training programmes on the use of performance information that also discuss the issue of metric manipulation and its consequences could diminish its likelihood. This idea can be related to Bevan and Hood's (2006) suggestion that greater face to face scrutiny through peer inspections can be effective in reducing gaming behaviour.

4.2.3 Codes of Ethics

Not all forms of metric manipulation are necessarily unethical. The argument that being economical with the truth and gaming are ethically acceptable, is made in a classic but contentious article by Carr (1968) in which he argues that bluffing, amongst other behaviours, is an acceptable part of business negotiation. This argument implies that the border between acceptable and unacceptable metric manipulation is not a straightforward one that can be defined by a code of conduct that sets out in terms what is allowable and what is not. It is an area for individual judgement; and judgements can be assisted by the publication of a code of ethics. A code of ethics, as opposed to a code of conduct (Fisher and Lovell 2006), sets out broad principles as a guide for judgement rather than prescriptions to be followed. The use of performance measurement data and information may be an area in which a code of ethics, such as the CIMA Code of Ethics for Professional Accountants (CIMA 2007), would be useful.

5. Conclusions

There are some clear findings about the propensity to practice, and the level of seriousness of the data manipulation within the NHS:

- serious metric manipulation, in the form of falsifying data and information, appears to be rare in the NHS according to the opinion of informants in the research project
- selective presentation, gaming (or system manipulation) and misclassification were reported to be more frequently practiced
- metric manipulation, of the less serious form of selective presentation, was considered to be practised relatively commonly.

The findings suggest a number of ways in which governance of performance management systems can be improved:

- using targets and measures that are valuable to all stakeholders
- ensuring a balanced, multi-dimensional approach to performance management
- being aware that performance related pay systems could increase the temptation to manipulate performance data
- introducing random monitoring processes
- strengthening audit processes and staff training
- encouraging adherence to appropriate codes of ethics.

References and further reading

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Additional outputs

Fisher, C. and Downes, B. (2008) *Performance measurement and metric manipulation in the public sector*, In *Business Ethics: a European Review*, Vol. 17, no. 3, pp. 245-258.

Further reading

The paper by Bevan and Hood (2006) was published whilst this paper was being revised. It is excellent further reading on the topic of metric manipulation.

Appendix A

Case study: to fiddle or not to fiddle?

The respondent was a nurse manager in a hospital trust. She, and her colleagues, recognised that the performance measurement system had been instigated to provide government with a means of monitoring and controlling trusts. However, they had also developed the system to be useful to management within the trust. The trust's informal culture was not sympathetic to metric manipulation. They thought it was better, if the figures looked bad, to find out what the problem was and to fix it.

The quality of care for long term patients was an important issue in the Department of Health's agenda. One of the statistics used to measure this was the hospital re-admission rate, which was thought to be a good proxy measure for the quality of long term care. The respondent was sent some statistics by the primary care trust (PCT) that showed that the target of reducing the re-admission rate by a certain percentage had been met. She was sceptical because her own monitoring showed the situation had become worse. However, she recognised that when two trusts were calculating the same performance measure, using different systems and data sets, it was likely that the various figures would not tally.

The sensible thing, she thought, was to contact the PCT and propose a meeting to reconcile the figures and produce reliable information. She was rather shocked when the PCT replied that a meeting would not be worthwhile. After discussing it with the PCT manager she formed the impression that he was not interested in using the measures to improve the internal operations of the service. The PCT were interested only in presenting good news to the Department of Health. If their figures gave good news they saw no point in challenging them, and perhaps converting good news into bad news. They wanted to 'feed the beast' to avoid interference and questioning from those bodies higher up the NHS hierarchy.

Refusing to review some information when it might be necessary to do so is being economical with the truth, a form of selective presentation. The PCT had an informal culture that accepted metric manipulation and saw performance measure as an externally focused system. These two contexts seem to have triggered the avoidance of hassle mechanism which resulted in willingness to selectively present information. The respondent, however, worked in a trust where the informal culture disapproved of manipulation, and there was a proactive approach to performance measurement. In these circumstances the avoiding hassle mechanism was not triggered and the respondent would have preferred to review the statistics.