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### **Abstract**

A significant feature of the 'New Public Management' has been the particular emphasis it placed on public sector organisations measuring their performance. However, in practice, this has often been carried out in ways which proved dysfunctional: for example, by concentrating on a single dimension of performance, perverse incentives and unintended consequences arise.

The previous performance measurement regime for the English ambulance service was regarded as a classic example of this since it concentrated on response times at the expense of other aspects of performance, such as the outcomes of treatment at the scene. However, that regime has been replaced by a 'dashboard', containing a wider range of performance indicators. At the same time, NHS organisations (including ambulance services) have to produce annual Quality Accounts. Thus English ambulance services are now faced with two new performance measurement regimes. Both of these seem, in principle, an improvement on the old regime; but also seem somewhat contradictory in their 'philosophies'.

These developments are worthy of further exploration and, in this paper, we set out a research agenda, whilst placing the issues in the context of debates concerning multi-dimensional approaches to performance evaluation, such as the Balanced Scorecard and Tableau de Bord, and, more generally, the 'paradox of performance' in public services.

## **Introduction**

Attempts to measure and manage performance are a long standing feature of the public services, despite the inherent difficulties. De Bruijn (2002) sets out the potential advantages, disadvantages and risks of performance evaluation systems, together with principles for their successful design. Indeed, an enhanced role for performance management is a key feature of the 'New Public Management' (NPM). (See, for example, Pollitt, 1986; Hood, 1991; Hood, 1995; Pollitt & Bouckaert, 2000; Talbot, 2005). There is an extensive academic literature on the topic (Johnsen, 2005), much of which points to potential perverse incentives and unintended consequences and debates about targets and performance indicators, therefore, are an integral part of the NPM literature (Wankhade, 2011). Heath & Radcliffe (2007) attempted to draw on these critiques in examining the performance measurement regime which then applied to the English Ambulance service.

That regime concentrated on only one aspect of performance: response times. Therefore, evaluation was based on a fairly crude set of measures, which gave an unbalanced assessment of service delivery. In particular, the lack of measures evaluating the *outcomes* of ambulance service interventions has been much criticised. (See Heath & Radcliffe, 2007; Heath & Radcliffe, 2010; Wankhade, 2011.) This was a significant criticism because the role of the ambulance professional has evolved from only being concerned with stabilisation of patients and transportation to the hospital towards the utilisation of a greater range of skills in a wider variety of situations; including an expanded range of activities at the scene (Commission for Health Improvement, 2003; Department of Health, 2005; Healthcare Commission, 2008; National Audit Office, 2011).

Recently, however, the performance measurement regime for English ambulance services has been altered significantly. A larger number of indicators now apply addressing more dimensions of performance, with many relating to outcomes. These are reported monthly in the form of 'dashboards', which are intended to give a more balanced assessment of the work of each ambulance service. While this is to be welcomed in principle, a number of issues arise. For example, do the new indicators form a sort of balanced scorecard for ambulance services or, instead, is there just a multiplicity of indicators which may lead to confusion and unintended consequences? In addition, all NHS organisations, including ambulance services, are required to develop and publish Quality Accounts. These are a form of annual performance report and the logic behind them is somewhat different to that of the Ambulance dashboard. Thus the dynamics of the interplay between the two new approaches to performance reporting are likely to be significant.

In this paper, we discuss intriguing issues which arise from the new arrangements and set out a potential research agenda. This discussion is informed by brief accounts of the development of multiple performance score cards, such as the Balanced Scorecard and Tableau de Bord and of the 'puzzle of performance' in the public sector.

### **Performance Score Cards**

It has been recognised for some time in the accounting literature that reliance on a single measure of performance, such as Return on Investment, can be misguided and, therefore, multiple models of performance evaluation have been developed. The best known is the *Balanced Scorecard* (BSC), which was introduced by Kaplan & Norton in 1992 and has been developed by them and others through a number of versions since (see, for example, Kaplan & Norton, 1992; Kaplan & Norton 1996a; Olve, Roy & Wetter, 1999.) The BSC is a framework to assist the design and implementation of strategic performance management in organisations by integrating external and internal perspectives, short term and long term objectives, financial and non-financial measures, and leading and lagging indicators. In the original version of the BSC, the dimensions of organisational performance are classified as follows:

- **Financial Perspective:** How do our investors see us?
- **Customer Perspective:** How do our customers see us?
- **Business Process Perspective:** What must we excel at?
- **Organisational Learning and Growth Perspective:** How can we innovate and improve?

The four perspectives are held to be inter-linked and none is pre-eminent. (See Figure One.) However, as originally formulated they have proved to be of limited relevance for many organisations. Consequently the BSC has been adopted flexibly in practice and, subsequently, more perspectives suggested, such as one for corporate social responsibility or sustainability (Olve *et al.*, 1999).

There have been problems of appropriately trading-off and weighting performance on one perspective against that on another (success on other perspectives, for example, may be accompanied by increased cost). Also the BSC is a strategic instrument and initially there were some difficulties in linking the strategic to the tactical and operational levels. Therefore, Kaplan & Norton went on to advocate using *strategy maps*, which are 'visualisations' of an organisation's objectives, targets and plans, to counter difficulties in 'drilling down' from the strategic level (Kaplan & Norton, 1996b).

Intriguingly, a similar approach, called the *Tableau de Bord* (TdB), has been practised in France since the 1920s (Lebas, 1996). The TdB was developed

originally by industrial engineers. It is less formal than the BSC and is intended as a 'piloting' instrument (hence it is sometimes translated as the 'dashboard'). Any particular dashboard is customised around critical success factors and key performance indicators (financial and physical) specific to the organisation.

There has been considerable debate regarding the merits of the BSC versus those of the TdB. (See, for example, Epstein & Manzoni, 1998; Nørreklit, 2003; Bourgignon, Malleret & Nørreklit, 2004; Bessire & Baker, 2005; Bukh & Malmi, 2005.) Nevertheless, despite these disagreements and some difficulties in practice, it is generally agreed to be logical to adopt some form of multiple performance evaluation model rather than to rely on a single indicator.

### **Performance Indicators and the Ambulance Service**

However, the previous performance measurement regime did not fit with this. There were four key performance indicators, varying according to category of patient, but all related to the timeliness of responses (Department of Health, 2005 - Figure Two). Therefore, ambulance services were not being judged on the total package of care they provided.

It is revealing to view this regime in relation to developments in the ambulance service. Rapid response times are clearly important, but what happens *at* the scene is also significant. Traditionally the role of emergency ambulance staff was seen as solely transporting patients rapidly to hospital Accident and Emergency (A&E) units. This no longer applies because of the changing roles and capabilities of ambulance staff and the availability of NHS facilities in the community (Department of Health, 2005; Healthcare Commission, 2008). Indeed it has been policy under successive governments to promote an enhanced role for paramedical activities at the scene, in terms of providing care and giving advice, and to reduce significantly the number of patients taken to A&E departments by ambulance. Instead the role of ambulance clinicians is emphasised. They are qualified to provide clinical assessment and care to patients, not just transportation (Department of Health, 2005; National Audit Office, 2011).

The performance management regime contrasted to this development (Heath & Radcliffe, 2007; Heath & Radcliffe, 2010), as did the prevailing culture within ambulance services (Radcliffe & Heath, 2009; Wankhade, 2012). The narrowness of the indicators was particularly significant because most services perform well against national standards; but performance is more variable in those aspects which receive less national attention (Healthcare Commission, 2008). Therefore, aspects of performance other than response times tended to be downplayed. Moreover, the narrow range of indicators was notorious for promoting gaming (Bevan & Hamblin, 2009; Hood, 2006; Radnor, 2008). Thus the performance management regime for ambulance services exemplified the

potential of performance measures to promote dysfunctional behaviour as it fell into many of the pitfalls identified in the literature (Heath & Radcliffe, 2007; Wankhade & Brinkman, 2011).

Therefore, over time the performance measures became very controversial, leading to a report from the Commission for Health Improvement (CHI 2003). The Commission recognised that measuring outcomes of emergency ambulance care is complicated by the difficulty ambulance trusts may face in obtaining data from acute hospital trusts and in the problems of developing data bases across organisational boundaries. Nevertheless, the Commission concluded that

'A priority for ambulance trusts must be to develop credible measures of outcome... (which) should be included among ambulance service key targets in future.'

(Op. Cit., pp. 22)

Consequently, the Department of Health (2005, pp. 56) proposed that for patients presenting conditions which may be immediately life threatening, the first two performance measures be retained.

'For all other patients, ambulance trusts are to be assessed on the overall quality of care provided...'

The proposed wider set of indicators was not forthcoming immediately, although standardisation was attempted through the 'Call to Connect' targets. They defined response times more stringently and reduced the variation in interpretation (Wankhade, 2011), but had further perverse effects (Woollard, O'Meara & Munro, 2010).

### **New Ambulance Performance Regime**

In December, 2010, however, the new coalition government announced the introduction of a range of 'clinical' quality indicators for ambulance services to take effect in April, 2011. Timeliness was still seen as important, but not the only important factor (Department of Health, 2010a). The eleven indicators were set out initially in broad terms (Department of Health, 2010b - Figure Three.) This rather broad brush description was filled out in a paper by Cooke, who had played a major part in the development of the indicators (Cooke, 2011).

He stated that the proposals were based on three key principles: the regime should be evidence-based, move from a target-culture to one of continuous improvement in clinical care and provide information to patients and the public to enable them to judge the quality of care provided. Ambulance services were

to publish their results and a narrative explanation. The report was intended to be meaningful, by focussing on outcomes where available or on process indicators which have a proven link to outcome (Cooke, 2011). Ambulance services, therefore, are supposed to share information and work with others to develop a whole systems approach.

The results of the indicators are now published monthly in the form of a dashboard for each of the ambulance services in England<sup>1</sup> comprising four clinical indicators and eight process or systems indicators. (Calls closed via telephone advice and following treatment at the scene are separated out, as are re-contact rates.) The clinical indicators are published with a three months time lag after the systems indicators because of the time required for the outcomes of patients transported by ambulance to be established (Gov. UK, 2013). In addition, it was intended that a narrative account of the experience of ambulance service users should also be presented. Services were to be allowed to develop their approaches to these narratives individually, but the account should utilise qualitative and quantitative methods, not just statistical measures of customer satisfaction derived from questionnaires. However, it seems that patient experience is not currently reported, possibly because of the variation in approaches between ambulance trusts.

The new indicators are meant to be considered as a set which forms the basis of patient-centred continuous improvement, because each indicator taken individually has weaknesses and there is also the unacceptable danger that one can be improved at the expense of another (Cooke, 2011). The set of indicators is reviewed annually, although it is not clear how this is being done.

### **Quality Accounts**

The Health Act 2009 required all organisations which provide NHS services in England to publish Quality Accounts from April 2010, unless they provide primary care or NHS continuing care services or are defined as being a 'small' provider<sup>2</sup> (Department of Health, 2012a). This means that ambulance services in England now publish Quality Accounts annually. They are intended to promote:

- scrutiny of, debate about and reflection on the performance of NHS organisations;
- accountability of service providers, both upwards and outwards towards stakeholders;
- benchmarking of performance;
- continuous, evidence-based quality improvement programmes; and
- engagement of stakeholders.

Some parts of the Quality Accounts are mandatory and set out in guide lines. They must include:

- a statement summarising the quality of the service provided;
  - a set of priorities for improving quality in the coming year;
  - a plan of how to achieve these priorities; and
  - a more detailed review of the quality of service in the past year in terms of patient safety, clinical effectiveness and patient experience.
- (Department of Health, 2010c)

However, it was intended that most of the content of the report was to be determined locally, including the performance indicators provided. This reflected the desire that Quality Accounts be developed in an ongoing and reinforcing process of involving and engaging stakeholders, including service users and their community advocates. The accounts should be presented to be accessible, utilising both quantitative and qualitative information to give a rounded picture and based on accurate, reliable and relevant data (Department of Health, 2010c).

Quality Accounts must be published on NHS Choices<sup>3</sup> and hard copies made available on request. Health service organisations may also choose to publish them elsewhere; for instance, on their web sites. Organisations which are NHS acute or mental health trusts or NHS foundation trusts are now required to have their Quality Accounts externally audited; but ambulance trusts, which are not foundation trusts, do not need to do so (Department of Health, 2012a).

Foot & Ross (2010) carried out focus group research with representatives of local communities prior to the launch of Quality Accounts. Participants welcomed the idea of Quality Accounts, were keen to be involved in selecting priorities and quality indicators, and recognised the potential for increasing accountability for quality improvement. However, they were concerned that, in practice, there would be issues around the reliability of information in the accounts, presenting the information in ways which were comprehensible to lay readers, trading off national and local priorities, and establishing meaningful two way dialogue leading to action. Interestingly, they also felt that the definition of quality applied was too narrow.

Subsequently, Foot, Raleigh, Ross & Lyscom (2011) analysed a sample of the first round of published Quality Accounts, which bore out these fears to some extent. There was considerable variation in numerous respects; for example, the number of quality measures and the aspects of performance measured. The types of measures used tended to concentrate on indicators which were already required (e.g. waiting times), the measures were often presented without definition, context or discussion and presentations often used tables of diverse and unrelated measures. The usefulness of the accounts for benchmarking was limited by the lack of comparative data. Effective involvement of stakeholders was also identified as a weakness.

Foot *et al.* hold that the extreme variation in the reports over almost all dimensions led to a lack of comparability, weakening them as instruments of accountability. They argue, therefore, for greater consistency in, for example, definitions and formats and some mandatory content (including some performance measures), whilst maintaining a local dimension. Some fundamental tensions in the approach were also identified, such as comprehensiveness versus readability and simplicity versus statistical rigour. Of particular significance, there is the issue of the very broad set of audiences for Quality Accounts and, related to this, whether the emphasis should be on benchmarking for local quality improvement or on public accountability.

The emphasis on the local development of accounts should have considerable merits in terms of developing stakeholder engagement, deliberation and reflexivity and in addressing local information needs. However, it does mean that each ambulance service in England could produce markedly different types of report, hampering comparability and benchmarking. The 'bottom up philosophy' of Quality Accounts is also at odds with that of the dashboard, which is a standardised set of indicators, imposed 'top down'.

It is interesting to note, therefore, that in the 2012/13 round of Quality Accounts, mandatory reporting of a very small, core set of quality indicators is being introduced; applying initially to NHS acute, mental health and ambulance trusts (Department of Health, 2012b). The indicators which must be reported in table format in the Quality Accounts of ambulance trusts (Department of Health, 2013) are shown in Figure Four. They are drawn from the dashboard indicators, although the logic behind this particular selection is not clear.

### **Puzzles of performance**

Controversies about performance within the wider public sector include top-down, bottom-up or balanced approaches to performance measurement (OECD-PUMA, 1997); the complexities of running public services (Talbot, 2005); manipulation and deception (Bevan & Hood, 2006); unintended consequences (Smith, 1995); and the performance paradox (Meyer & Gupta, 1994). Agreement is also lacking about definitions of performance, methods of measurement, whether performance measurement increases efficiency of services and on issues of accountability (Power, 1994; De Bruijn, 2002; Greiling, 2006).

The literature reveals many models of performance but few offer clear theoretical explanation or empirical validation (Talbot, 2005). The work of Meyer & Gupta (1994) on "paradoxes of performance" suggests a weak correlation between performance indicators and performance itself over a given period of time. (The previous performance regime in the English ambulance service can



be seen as a classic example of this.) Performance measurement has also come under criticism for its lack of integration within the democratic process and poor implementation (Public Administration Select Committee, 2003).

Denhardt & Denhardt (2000) present a New Public Service (NPS) approach as an alternative to both old public administration and the NPM, calling for a greater public participation in the delivery of public provisions. The emphasis is not on steering (NPM) or rowing (public administration), but serving. Liddle (2007) argued that a new public governance model (NPG) would strengthen democratic control over decision making and citizen involvement, as well as improving public trust in government institutions and types of services provided. However, governance (like NPM in many ways) lacks a precise definition and has been used in different context and applications (Minogue, Polidano & Hulme, 1998).

It is interesting to compare the development of performance management in the ambulance service to other emergency services; i.e. the police and fire and rescue services. De Maillarde & Savage (2012) trace the ethos of performance management in the police in Britain back to the Financial Management Initiative of the 1980s. A central element of this was the measurement and assessment of outputs against organisational objectives and the construction of 'league tables'. The Audit Commission then produced the first set of statutory national performance indicators for the police, which were published in 1995. These were criticised for stressing quantitative measures of performance and the suite of indicators was extended to reflect qualitative issues (although these were still measured quantitatively as percentage satisfaction ratings). The incoming Labour government of 1997 enhanced this regime further, shifting the emphasis from performance *measurement* to performance *management*; for example, through the use of targets. The coalition government has from 2010 emphatically reversed the trend to national performance targets, but replaced this with more frequent and detailed publication of local performance information.

Performance management came relatively late to Fire and Rescue Services (FRSs). Murphy & Greenhalgh (2013) argue that the impact of performance indicators was much more muted than elsewhere until the Comprehensive Spending Review of 2005. For FRSs this entailed assessments of whole services, including operational services and emergency preparedness, rather than just 'back-office' functions. Assessments were based on national standards and benchmarks and key performance indicators, assembled in three dimensions: service assessment, 'direction of travel' (evidence of improvement) and use of resources. After 2010, the new government announced the abandonment of a number of national targets whilst emphasising the 'need to do more from less'. Murphy & Grenhalgh (2013)

expect a hybrid regime to emerge for FRSs, with some national indicators from the previous national framework persisting, alongside others designed at local discretion.

Thus the ambulance performance management regime has some similarities with those of other emergency services (e.g. embracing then rejecting 'targets'; at least, rhetorically), but also significant differences (e.g. developing from less to more indicators or *vice versa*), and there is no clear pattern of evolution.

## **Discussion**

It is noteworthy that the thinking behind the dashboard reflects the debates around the previous performance measurement regime. Both criticisms of the regime and the research on the role of the ambulance service seem to have influenced the changes.

*Taking Healthcare to the Patient* (Department of Health, 2005) envisaged involving "patients and public" in designing future services to meet the needs of a diverse and multicultural society. It focuses on increasing the range of services in primary care, diagnostics and health promotion. Rather than just being transported to hospital, ambulance services should be able to take patients to a greater range of appropriate facilities, thus improving care and experience. These intended benefits can be challenging since the emotional and physical state of the patient/user of the service may be relevant to gauge the correct level of service. Within the larger debates between NPM and NPS or NPG, it is important to examine the extent to which the current ambulance performance frameworks exhibit public involvement and patient participation.

Cooke (2011) acknowledged that time targets had been the main driver of change, but that it is necessary to know the outcomes of interventions in order to improve the system. It was accepted that delays in care lead to worse outcomes and that patient satisfaction increases when appropriate advice and care is received promptly. Nevertheless, the danger is recognised of perverse incentives from emphasising time taken alone, without examining the quality of care. Moreover, it is acknowledged that the role of emergency care has changed so that many patients previously taken to A&E are now successfully cared for by telephone advice, face to face interaction by ambulance clinicians or transfer to other health care facilities.

In the new approach, the idea of indicators as targets is rejected as they are held to give no incentive to achieve more than the target (the 'minimum becomes the maximum') and means become an end. Instead the government intends to promote a culture of continuous improvement whereby data will motivate learning and innovation to gain further improvement repeatedly. Such a culture, if developed effectively, would presumably also mitigate

against any tendency to gaming.

A number of important questions arise from this. For example, how easy will it be to establish a culture of continuous improvement and how will this be done? It seems there are links between continuous improvement and whole systems solutions in the government's thinking. However, doubts remain about approaches such as 'lean thinking' in this context and sharing information between ambulance trusts and other parts of the health service has proved difficult in the past (Heath & Radcliffe, 2010).

Moving from a very limited set of indicators to a much broader one, whilst welcome in itself, may also give rise to difficulties. The measures may indeed turn out to be a balanced set of indicators for the ambulance service or they may just make assessment of service performance too complex to be meaningful. It may be that, in practice, some of the indicators will be stressed, simplifying the issues faced but giving rise to new forms of gaming.

Interestingly, however, financial aspects do not form part of the dashboard, which may weaken it as something akin to a balanced scorecard. The extent to which the performance indicators feed into strategic management, business planning and budgeting of ambulance services is, therefore, an important issue. For example, will there be difficulties in 'drilling down'?

In any case, evidence about the use of the BSC in healthcare, is rather mixed. Reviewing the international evidence, Zelman, Pink & Matthias (2003) concluded that modifications are required, reflecting industry and organisational realities, to make it more relevant. Other commentators (Kocakülâh & Austill, 2007; Niven, 2011) also caution against indiscriminate use of the BSC. Surveying its use in the UK NHS, Radnor & Lowell (2003) suggested several underlying conceptual concerns and implementation pitfalls, arguing against 'blind' implementation without consideration of factors which may result in potential 'failure'. In another study in the NHS, Chang, Lin & Northcott (2002), highlighted the conceptual 'muddle' in claims that the new Performance Assessment Framework (PAF) was a "balanced scorecard" approach. Chang (2007) then concluded that the use of the PAF by local health authorities was primarily for legitimacy seeking purposes, with little impact on improving performance valued locally.

Whilst the emphasis on the external reporting of achievement against the indicators seems encouraging, it will be interesting to see how this develops. What difficulties are there, both in obtaining and presenting information? To what extent does the process of reporting increase genuine accountability and dialogue between the service and its stakeholders? As accountability involves not just 'giving an account' but also 'being held to account' (Stewart, 1984), could the reporting instead just become an empty ritual of giving accounts?

It is also unclear as to what extent the views of ambulance staff and other

stakeholders were accessed and used in setting up the new regime or how they participate in the revisions promised. A whole series of issues regarding training and resource allocation also arises. All of the above raises many questions, which could form the basis for research into the new performance regime and its effects on ambulance service practice.

Quality Accounts echo the NPS/NPG literature on participation. However, it is desirable to explore both the practical issues which arise and the extent to which they actually contribute towards the ambitious objectives of more debate and reflection on performance, increased accountability, better benchmarking, evidence-based continuous improvement programmes and greater stakeholder engagement. In particular, the tension between internal benchmarking and external accountability identified by Foot *et al.* (2011) is an appropriate topic for further investigation. Again, the extent to which the dashboard and Quality Accounts are based on different approaches to performance reporting and accountability seems likely to be significant.

Finally, and importantly, the effects of the new performance measurement arrangements on the culture of ambulance services and the behaviour of ambulance personnel are issues of much interest and significance.

## **Conclusion**

In this paper, we have set out issues around the measurement of performance in the English ambulance service and outlined a research agenda to explore them further. Until recently, evaluation of ambulance services related to only one aspect of performance: response times. There is evidence that the narrow set of indicators did not capture the multi-faceted nature of contemporary ambulance work and had perverse effects, such as promoting gaming. This is in line with the established literature on performance management in the public sector. Instead, it was suggested that more measures, including indicators of clinical outcome, were required to arrive at a balanced assessment of performance; but that this is difficult to put into operation effectively.

Consequently, the new performance measurement framework has welcome aspects, but the way in which dashboards are developed and applied is an important subject for research. Similarly, whilst there are encouraging features to the introduction of Quality Accounts, monitoring their progress in practice is also required. Indeed, the way the two sets of performance reporting interact should also be investigated. This is likely to be a particular issue as the 'philosophies' of the two approaches differ.

Whilst some compromise may be in order, we argue that the process of refining the indicators should be deliberative and involve as wide a range of

stakeholders as possible. Therefore, one aspect of future research into the new regime might focus beneficially on its utility in clarifying both how the service is actually used and how this is valued by the public and ambulance service professionals.

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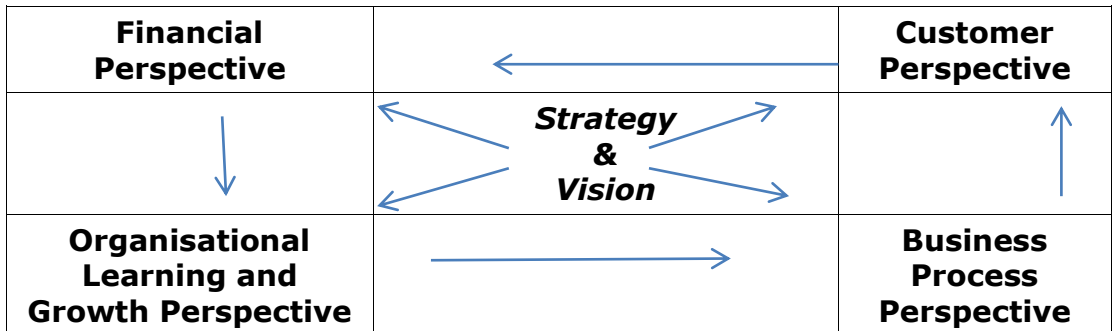
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## Figures



**Figure One: The Balanced Scorecard**

<b>STATUS</b>	<b>PERFORMANCE INDICATOR</b>
Immediately life threatening (Category A)	Response within 8 minutes irrespective of location in 75% of cases
Immediately life threatening (Category A)	Fully equipped ambulance in attendance within 14/19 minutes of initial call in 95% of cases (unless control room decides an ambulance is not required)
Urgent need for hospital care defined by doctor	Patient should arrive at hospital within 15 minutes of arrival time specified by the doctor in 95% of cases
All other patients (Category B/C)	Response within 14 minutes (urban) or 19 minutes (rural)

**Figure Two: National Performance Requirements for Ambulance Services.**

1	Outcome from acute ST-elevation myocardial infarction (STEMI)
2	Outcome from cardiac arrest – return of spontaneous circulation
3	Outcome from cardiac arrest – survival to discharge
4	Outcome following stroke for ambulance patients
5	Proportion of calls closed with telephone advice or managed without transport to A&E (where clinically appropriate)
6	Re-contact rate following discharge of care (i.e. closure with telephone advice or following treatment at the scene)
7	Call abandonment rate
8	Time to answer calls
9	Service experience
10	The eight minute response time concerning immediately life threatening cases and provision of transport within nineteen minutes where needed
11	Time to treatment by an ambulance-dispatched health professional

**Figure Three: List of Ambulance Clinical Quality Indicators.**

1	Percentage of Category A telephone calls resulting in a response at the scene of the emergency within eight minutes.
2	Percentage of Category A telephone calls resulting in an ambulance response at the scene within nineteen minutes.
3	Percentage of patients with pre-existing diagnosis of ST elevation myocardial infarction who received an appropriate care bundle.
4	Percentage of patients with suspected stroke who received an appropriate care bundle.

**Figure Four: Quality Indicators to be Included in English Ambulance Service Quality Accounts.**

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1. <sup>1</sup>There are currently ten ambulance services in England: East Midlands; East of England; London; North East; North West; South Central; South East; South Western; West Midlands; and Yorkshire. (Special arrangements apply to the Isle of Wight.)

2. <sup>2</sup>A small provider has a total income from NHS services of not more than

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£130,000 per annum and employs less than 50 staff.

1. <sup>3</sup>NHS Choices is the UK's online health information service. (It is the UK's third biggest government website.)