

# Effective Human Resource Management & Lower Patient Mortality

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## Summary of Results

There is a strong association between the sophistication and extensiveness of staff management practices in NHS hospitals and lower patient mortality.



Appraisal systems have the strongest association with lower patient mortality - better appraisal of staff is associated with lower patient mortality.



The more sophisticated and extensive the staff training policies in hospitals, the lower the patient mortality.



The higher the percentage of staff working in teams within a hospital the lower the patient mortality.



When the HR director is a voting member of the hospital board, the link between HRM practices and lower patient mortality is stronger than when the HR director is not a voting member.

## The NHS Context

The NHS Plan set out a vision of what the NHS must become over the next ten years, with faster, more accessible services based on patients' needs. Delivering this depends crucially on the efforts of the biggest workforce in Europe - the more than 1.2 million people who are employed by the NHS.

To ensure that these employees can deliver high quality services requires the NHS to become an exemplary employer, creating a healthier workplace. The NHS Plan "recognises that a modern NHS must offer staff a better deal in their working lives. Improving the working lives of staff contributes directly to better patient care through improved recruitment and retention - and because patients want to be treated by well-motivated, fairly rewarded staff".<sup>1</sup> The HR in the NHS Plan states that, "the delivery of high-quality, effective healthcare requires all executives, including professionals in management positions, to appreciate HRM issues and the strategic role they play in enabling organisational excellence. HR is everybody's business".<sup>2</sup>

Managing staff is not an incidental function in the NHS. It is essential to the success of a modern health care system.

**This report details the findings from a national study, funded by the London Region NHS Executive, on the relationship between human resource management and patient mortality in hospitals.**

## What is Human Resource Management?

HRM refers to practices of people management that aim to enhance organisational performance by improving the performance of individuals within the organisation. They include practices such as recruitment, selection, induction, training, appraisal, and the design and application of reward systems. HRM also refers to the strategies developed by organisations for people management and their alignment to broader organisational strategies. These include, for examples, manpower planning, skill mix, equal opportunities policies and policies on managing issues of skill retention, job security, industrial relations and redundancies.

## The Value of Human Resource Management

Research conducted in the UK and US during the 1990s shows positive support for the links between how people are managed and performance of the organisations where they work. The use of a wide range of 'progressive HRM practices' has been shown to result in 24% higher shareholder equity and 25% higher accounting profits. That is, organisations that use HRM practices that aim to maximize the knowledge, skill and motivation of employees, are more profitable. Examples include the use of validated selection procedures (e.g., structured interviews and psychometric tests), comprehensive training programs, systematic performance appraisals, non-monetary benefits, incentives, job enrichment, team working, and participation in decision-making. A number of studies have demonstrated that progressive HRM practices are positively associated with organisational productivity and profitability.

### Box 1 - Organisation, management and effectiveness in NHS Trusts

## The objectives of the research were:

- To determine whether there is a link between people management practices and hospital performance, specifically quality of health care.
- To determine which aspects of people management best predict quality of health care in hospitals.
- To identify under which conditions these relationships are strongest and weakest.
- To offer clear prescriptions for hospitals managers about people management in their organisations, based on the research findings.
- To provide evidence of likely impact of such changes upon quality of health care in hospitals.

**Stage 1** - Consultation exercise to develop a deeper understanding of the NHS organisational context, and to identify performance measures.

**Stage 2** - Survey completed by HR directors from 61 hospital trusts, half of them choosing to complete the survey during a telephone interview. Survey included questions on ten main areas of HRM: trust strategy and HRM, recruitment and selection, training, harmonisation, job security, reward and flexibility, job design and team working, staff involvement and decision-making, and appraisal.

**Stage 3** - Case study work examining examples of excellent HR practices in the NHS. The aim was to develop an understanding of the mechanisms by which employment and HRM practices contribute to enhancing hospital performance. These studies examined team working, staff involvement, harmonisation (staff having similar benefits and facilities regardless of level of occupation), reward, communication, training and development, performance appraisal.

**Stage 4** - Collect hospital performance data on health outcomes, using six measures of mortality. These were deaths following emergency surgery, deaths following non-emergency surgery, deaths following admission for hip fractures, deaths following admission for heart attacks, re-admission rates and a mortality index. The sixth was a measure originally developed by Jarman<sup>3</sup> et al. (1999), the ratio of actual deaths to expected deaths, standardised in relation to patients' ages, gender and primary diagnosis.

# The Link Between HRM and Hospital Performance: Evidence from the Research

The survey completed by HR directors included questions on ten main areas of HRM: trust strategy and HRM, recruitment and selection, training, harmonisation, job security, reward and flexibility, job design and team working, staff involvement and decision-making, and appraisal.

Analysis was conducted, exploring the link between each area of HRM and the overall patient mortality index. As it is possible that some other factors might have an effect on mortality, we took account of hospital size, local health needs and number of doctors per bed in hospitals.

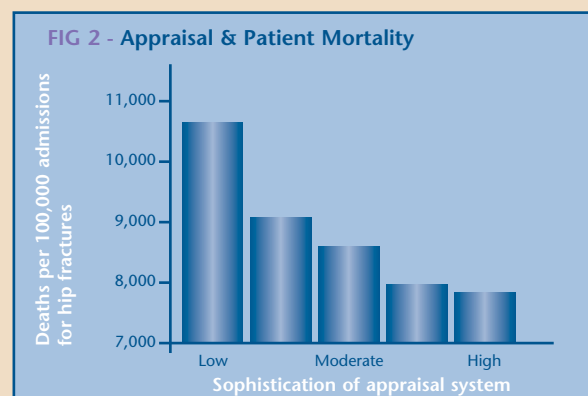
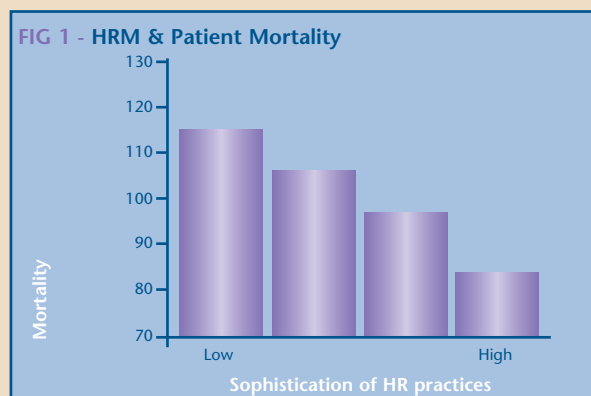
The analysis reveals a strong relationship between HRM practices and patient mortality, as shown in Figure 1.

Having established the relationship between HR practices and patient mortality, analysis was conducted to determine which practices, if any, had the strongest links with patient mortality. We found that each of the key HR practices were linked with mortality, again taking account of hospital size, local health needs and number of doctors per bed in hospitals. So that we could establish the size of HR effects in real terms, we explored the links with two specific areas of mortality - deaths after admissions for hip fracture, and deaths within 30 days of emergency surgery.

These analyses reveal that appraisal has the strongest link with overall patient mortality and had the strongest single link with deaths following admissions for hip fractures: on average, a hospital which appraises around 20% more staff, and trains around 20% more appraisers, is likely to have 1,090 fewer deaths per 100,000 admissions: this represents over 12% of the expected total. This relationship is shown in Figure 2.

Though the relationships were not as strong, we also found links between training, team working and patient mortality. We found that hospitals that had more sophisticated and extensive training policies had lower patient mortality, as shown in Figure 3. In hospitals where all staff had access to a formal training policy, mortality was on average, 3.5% lower than otherwise expected; where staff did not have this access, mortality was 3.5% higher than otherwise expected.

We also found that a higher percentage of staff working in teams in hospitals was associated with lower patient mortality, as illustrated in Figure 4. On average, in hospitals where over 60% of staff worked in formal teams, mortality was around 5% lower than would be otherwise expected.



## HRM Questions

### Appraisal

- To what extent does the Trust see introducing appraisal for ALL staff as a priority?
- What percentage of staff in each occupational group have received an appraisal in the last 12 months, and how often are staff in each group appraised?
- What percentages of staff who carry out appraisals in each of the occupational groups have received training in conducting appraisals?
- Is the appraisal system and process evaluated with any of the following?
  - Appraisers complete an evaluation form.
  - Appraisees complete an evaluation form.
  - HR department check that appraisals take place.

### Training

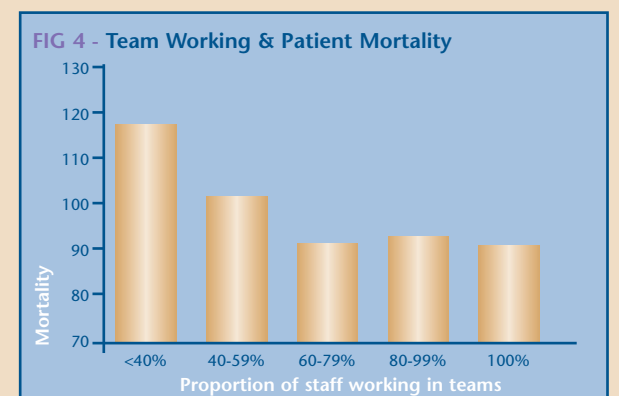
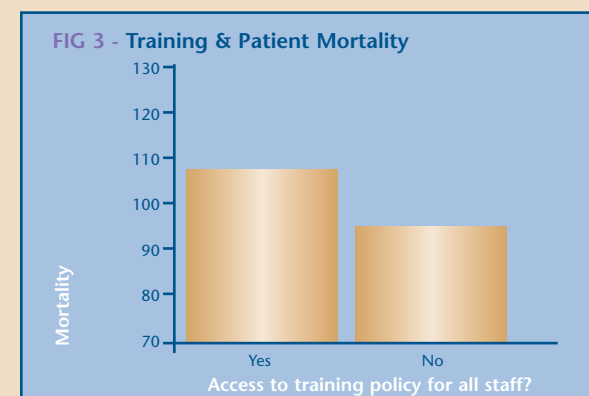
- Which occupational groups have access to a tailored and formal, written statement about training policy and entitlements?

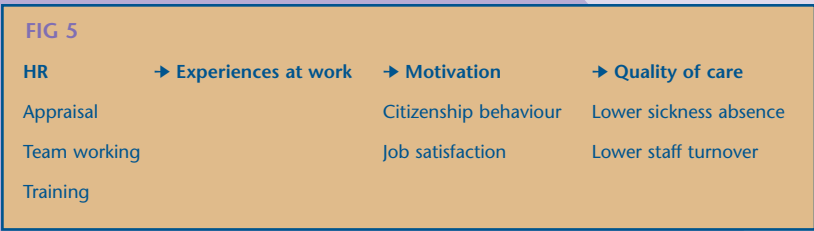
- What percentages of each occupational group have had at least 3 days formal, off the job training, in the previous 12 months?

- How often are the training needs of each occupational group assessed?

### Team working

- Does the Trust have a policy of promoting team working (groups of staff [3-15] working interdependently and relative autonomously to achieve shared work goals)?
- What percentage of staff work in teams within the Trust?
- What percentage of staff have been trained in team working?
- What percentage of teams are rewarded for team rather than individual performance?



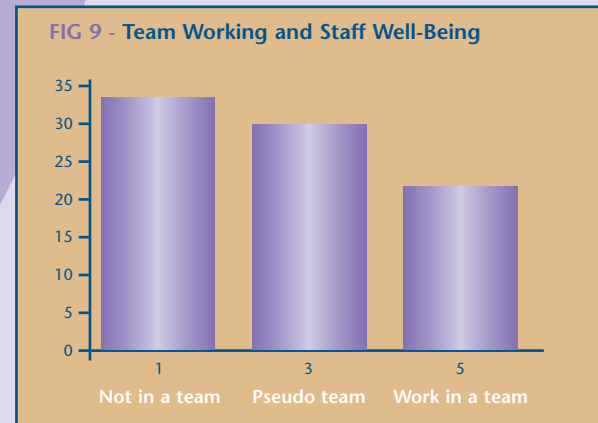
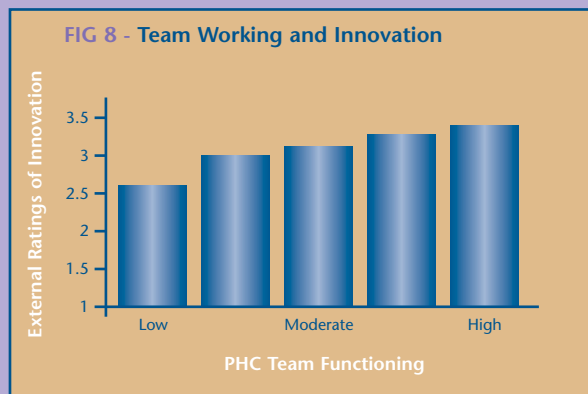
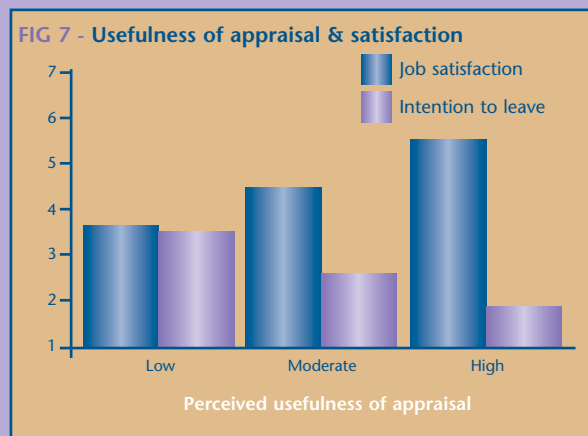
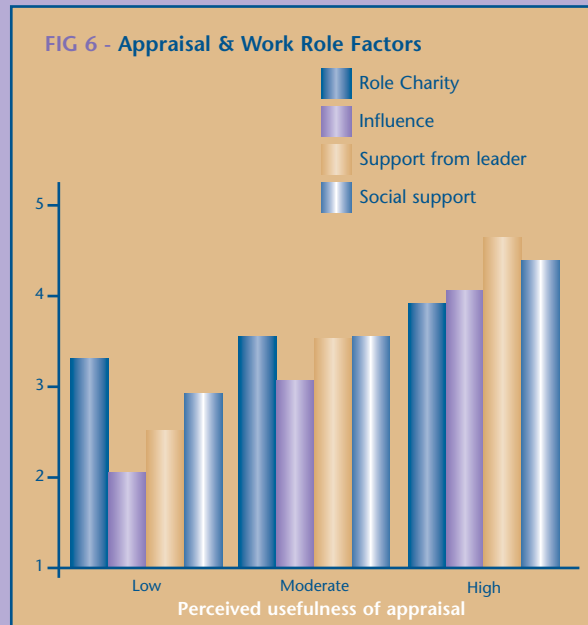


Having established the main human resource management practices linked with lower patient mortality, we then conducted more rigorous analysis to explore whether there were any factors that affected the strength of this link.

We found that the link between HRM and patient mortality was stronger when the HR director was a voting member of the Board<sup>4</sup>, the level of patient mortality was 97.8 when the HR director was a voting member, and 102.3 when the director was not a voting member.

**Why does having the HR director as a voting member of the board affect the strength of the relationships between HRM and mortality?**

The majority of hospital boards have a HR representative as a member and thus have a HR professional contributing to strategic and operational decision-making. We believe, however, that when the HR director is a voting member of the board, an executive director, this person may be in a position to ‘champion the cause’<sup>5</sup> and ensure that issues effecting the management of the hospital’s human resources are fully considered from an early stage in policy development. Thus the presence on the Board of the HR director as a voting member offers greater ‘authority, status and influence’<sup>6</sup> to the HR function, which results in more successful application of people management practices.



## How does HRM influence Hospital Performance?

The research showed a strong link between the management of employees in hospitals and the levels of patient mortality within those hospitals.

The sophistication and extensiveness of appraisal and training for hospital employees, and the percentage of staff working in teams in the hospitals, were all strongly linked with lower patient mortality.

**But how and why are these HR practices link to quality of patient care?**

Appraisal, training and team working are all what can be categorised as ‘progressive’ HRM practices that aim to maximise the knowledge, skill and motivation of employees. Such practices have been shown to be associated with organisational productivity and profitability by improving knowledge, skills and abilities of employees<sup>7</sup>, and to lead to staff carrying out more citizenship behaviours (making extra effort over and above the requirements of their job). Thus the link between HR practices and quality of patient care can be explained by the impact that these practices have on employees’ experiences of work, which subsequently affects their attitudes and behaviour, as shown in Figure 5.

Appraisals are aimed at clarifying employees’ work objectives, identifying training needs and providing feedback in order that performance can be improved. A key reason for having appraisal is to direct employee performance towards achieving organisational goals and to improve individual performance. Training policies and practices are also developed in order to promote effective job performance of employees.

Results from one of the case studies we carried out as part of the research programme, showed the positive benefits on work role for employees who found their appraisal useful, as shown in Figure 6.

NHS staff who reported that their appraisal had been useful also reported that they were clearer about their work role, had more influence over

decision making at work, that they received more support from their manager/leader, and that they received higher level of social support.

The case study research also showed a relationship between usefulness of appraisal and other positive outcomes. As is illustrated in Figure 7, NHS staff who rated their appraisal highly useful reported high levels of job satisfaction, and those who rated the usefulness of their appraisal as low, reported lower levels of job satisfaction. Staff who rated their appraisal as highly useful reported that they were unlikely to leave the hospital where they worked, while those who rated the usefulness of their appraisal as low, were more likely to say that they intended to leave the hospital where they worked.

Other research we have carried out has shown the benefits of team working for patient care. We found that primary health care and community mental health teams<sup>8</sup> that worked well together, introduced more innovations to improve quality of patient care as shown in Figure 8.

Our research on hospital based teams<sup>8</sup> showed that the well-being of staff working in teams is much better than those working in looser groupings or working alone. Figure 9 shows that 34% of those working alone reported being stressed, as did 30% of those working in a ‘pseudo’ team, and 21% of those working in teams. We found other benefits of team membership; those working in teams reported higher levels of role clarity, higher levels of social support, and higher levels of job satisfaction. In addition, nurses working in well functioning teams were less likely to leave their organisation or profession.

## Conclusions

The results from the research show a strong association between the sophistication and extensiveness of staff management practices in NHS hospitals and lower patient mortality. The more sophisticated and extensive the appraisal system and staff training policies, and the higher the percentage of staff working in teams within a hospital, the lower the patient mortality. When the HR director is a voting member of the hospital board, the link between HRM practices and lower patient mortality is stronger than when the HR director is not a voting member. The resource implications of the research findings for the NHS are considerable.

Our analysis shows that for hospitals of equal size and local population health needs, an improvement in the sophistication and extensiveness of the appraisal system is associated with, on average, 1090 fewer deaths per 100,000 admissions - more than 1% of all admissions, or 12.3% of the mean number of deaths.

Even with a much smaller relationship, that between team working and deaths following emergency surgery, an increase in team working - equivalent to approximately 25% more staff working in teams - is associated, on average, with 275 fewer deaths per 100,000; this is 7.1% of the mean total.

The research provides compelling evidence that managing staff is not 'an incidental function in the NHS. It is essential to the success of a modern health care system', and essential for delivering quality patient care. The HRM function in the NHS has a critical role to play in the successful delivery of the NHS Plan and the delivery of quality patient care. The results suggest that there could be considerable benefits for patients from investment in improving the sophistication and extensiveness of appraisal and training policies and from increasing the percentage of staff working in teams.

## Next Steps

An Audit Tool is available from Aston Centre for Health Care Organisation Research (ACHSOR) (email a.m.harris@aston.ac.uk) that you can use to critically appraise the HRM practices within your trust. This will help you to determine the quality of your current HR practices and to consider the extent to which these support the implementation of trust strategy. If you complete and return the audit tool the researchers at Aston will compare your results to benchmarking data and provide a short report.

Below are some questions that can also be used to help you assess the contribution that HR currently makes<sup>9</sup>.

- Which strategic goals/objectives/outcomes are critical for the Trust?
- What is critical to the successful achievement of the goals/objectives/outcomes?
- How can you measure progress towards these goals/objectives/outcomes?
- What are the barriers to achieving these goals/objectives/outcomes?
- How do all staff have to behave to ensure that the Trust achieves these goals/objectives/outcomes?
- To what extent is the HR function ensuring that staff have the competencies and behaviours necessary to achieve these goals/objectives/outcomes?
- What needs to change?

## References

- 1 Improving Working Lives Standard, DoH, 2001.
- 2 HR in the NHS Plan: More staff working differently. DoH, 2002.
- 3 Jarman, B., Gault, S., Alves, B., Hider, A., Dolan, S., Cook, A., Hurwitz, B., Iezzoni, L.I. (1999). Explaining differences in English hospital death rates using routinely collected data, *British Medical Journal*, 318: 1515-1520.
- 4 Carter, M (2002). Unpublished PhD thesis. Aston University
- 5 Working Together - Training Together. DoH, 2001.
- 6 Guest, D.E. (1987). Human Resource Management and Industrial Relations. *Journal of Management Studies*. Vol 24. No 5.
- 7 Neal, A., & Griffin, MA. (1999). Developing a theory of performance for human resource management, *Asia Pacific Journal of Human Resources*, 37: 44-59.
- 8 Borrill, C.S., West, M.A., Shapiro, D. and Rees, A. (2000). Team Working and Effectiveness in Health Care. *British Journal of Health Care Management*. Vol 6, No 8.
- 9 Becker, B.E., Huselid, M.A., Ulrich, D. (2001). *The HR Score Card: Linking people, strategy, and performance*. Harvard Business School Press.