NHS Staff Management and Health Service Quality

Results from the NHS Staff Survey and Related Data

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Executive Summary

This report draws on the vast amount of information about the cultures, processes and performance of health service organisations in the National Health Service (NHS). Drawing on data from the annual NHS Staff Survey and other sources, the report shows how good management of NHS staff leads to higher quality of care, more satisfied patients and lower patient mortality. It also demonstrates how good staff management offers significant financial savings for the NHS, as its leaders respond to the challenge of sustainability in the face of increasing costs and demands.

The results, despite coming from a variety of methods, data sets and years, deliver a clear general message about the importance of staff experience for outcomes. In general terms, the more positive the experiences of staff within an NHS trust, the better the outcomes for that trust. This is shown across many different domains of staff experience. Engagement is shown to be particularly important: having significant associations with patient satisfaction, patient mortality, infection rates, Annual Health Check scores, as well as staff absenteeism and turnover. The more engaged staff members are, the better the outcomes for patients and the organisation generally.

Engagement can be fostered through good staff management. Having well-structured appraisals (where clear objectives are set, the appraisal is helpful in improving how to do the job, and the employee is left feeling valued by their employer) is particularly important, as is working in a well-structured team environment (where teams have clear shared objectives, work interdependently and meet regularly to discuss their effectiveness). Supportive line management is also key here, as is having good job design – meaningful, clear tasks with some opportunity to be involved in appropriate decision making. These factors too are linked to employee health, which is also important for engagement: high levels of work pressure and stress can lead to disaffection and disengagement.

Many of these factors are also important predictors of outcomes for trusts and patients. The proportion of staff receiving well-structured appraisals is related to patient satisfaction, patient mortality, staff absenteeism and turnover, and better performance on the Annual Health Check. Working in well-structured teams is a predictor of patient mortality, staff absenteeism and turnover, and Annual Health Check performance. Supportive leadership from line managers is linked with patient satisfaction, patient mortality and staff turnover.

Training is another important predictor: where more employees receive training, learning and development that is felt to be relevant for the job, the better the outcomes. There are also effects of some specific elements of training: the number of staff having health and safety training in the previous 12 months is associated with patient satisfaction and with staff turnover. Training in equality and diversity is associated with lower levels of absenteeism.

Having a safe working environment is critical, in addition to this training: where staff feel under too much work pressure, outcomes are generally worse. When aggression is experienced – either physical violence or bullying, harassment or abuse – from patients, members of the public or colleagues, this creates poorer outcomes, not just in terms of staff turnover and absenteeism, but also in terms of patient satisfaction. The same is true for discrimination experienced by staff.

Above all, a positive organisational climate helps. The extent of positive feeling – exemplified by communication, involvement of staff, and an emphasis on quality – is a predictor of both staff outcomes (absenteeism and turnover) and patient outcomes (satisfaction and mortality). It is not always clear how best to foster this – there is perhaps a "chicken and egg" situation with some of the other management practices in terms of which comes first – but the results suggest that there is a virtuous circle with the experiences of staff and the experiences of patients.

By giving staff clear direction, good support and treating them fairly and supportively, leaders create cultures of engagement, where dedicated NHS staff in turn can give of their best in caring for patients. The analysis of the data shows this can be achieved by:

- Focusing on the quality of patient care
- Ensuring that all staff and their teams have clear objectives
- Supporting staff via enlightened Human Resource Management practices such as effective appraisal and high quality training
- Creating positive work climates
- Building trust
- Ensuring team working is effective

Such steps produce high quality and improving patient care along with effective financial performance. The challenge to NHS managers and leaders is to respond by putting the findings into practice and ensuring that the way staff are managed and cared for is a model for all organizations. That will lead irrevocably to the quality of patient care we wish for our communities and sustain the service in the face of the many challenges it faces.

Staff management and Engagement

There is a long history of research in organisations that attempts to link people management, staff experience and outcomes. Human resource management, staff attitudes and behaviours, and organisational culture and climate, have all been demonstrated as correlates and predictors of effectiveness and innovation. In the last 20 years a series of studies has shown more detailed associations between many variables; Mark Huselid's seminal study of human resource management and financial performance in US sales teams put real figures on the potential effects of HR practices, and has paved the way for many similar studies.

Within healthcare, and the NHS in particular, research over the past decade has progressed in a similar way. Studies linking HR practices with patient mortality in acute trusts (West et al., 2002, 2006) have shown that there may be a meaningful effect of people management on health outcomes in hospitals. The 2009 Boorman Review of NHS staff health and well-being demonstrated significant associations between staff well-being and a series of outcomes, including absenteeism, turnover, patient satisfaction, organisational performance ratings and infection rates. A series of studies at different levels (from small teams to entire trusts) have found relationships between the experiences of staff and the experiences of patients. With over 1 million staff employed by the NHS in England alone, the experiences of employees are of importance for many people for their own sake, but with the potential effects on patient care considered, the potential consequences are even more vital.

Now, with the benefit of multiple large data sets, this report summarises some of the questions posed by this previous research. In particular, it focuses on staff engagement as a key variable – both as an outcome of people management practices and as a predictor of organisational performance. Engagement is a concept not easily defined – some definitions are relatively narrow, featuring concepts such as motivation or involvement in decision making – but the importance of engagement to the NHS is exemplified by its inclusion in the annual staff survey. As this is one of the key data sets for the analysis contained in this report, we use the same definition of engagement here: it comprises three parts; the first is psychological (intrinsic) engagement, characterised by vigour, dedication and absorption; the second is being able to contribute to relevant decisions; and the third is advocacy, or the recommendation of one's trust as a place to work or receive treatment.

The analysis summarised in this report is not a single study, but a combination of a series of reports written between 2009 and 2011. These link the experiences of staff, as measured by the NHS staff survey, with a variety of trust outcomes. The full analysis is available in the original reports, which are available on the department of health website[1].

Methods

The analysis presented in this report is a summary of wide-ranging analysis conducted at Aston Business School as part of a two-year project investigating engagement, management practices and outcomes in the NHS. Full results can be found in a series of separate reports (listed in the

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[1] http://www.dh.gov.uk/en/Publicationsandstatistics/index.htm

appendix), each of which includes full details of the methods used. Here, though, we give a brief summary of the data used and the different analyses conducted.

Data

All staff experience variables in the report come from the NHS National Staff Survey (NSS), that has run annually since 2003, but the analysis used in this report comes from between 2006 and 2009. Most of the analysis involves organisational outcome variables, and therefore NSS scores are aggregated to the organisational (trust) level for this analysis (this involves averaging individual scores or calculating a percentage where applicable). The number of respondents and trusts varied across the surveys, but the most recent one used here (2009) included 390 trusts and 154,726 individual employees.

The NSS data used included the following variables:

- "Overall" engagement, a combination of the following three variables:
    - Employee motivation (intrinsic psychological engagement)
    - Ability to contribute towards improvements at work (staff involvement)
    - Staff advocacy of the organisation (recommending the trust)
- Extent of positive feeling in the organisation (organisational climate)
- Staff job satisfaction
- Discrimination
- Presenteeism
- Line manager support
- Job design
- Witnessing of errors and reporting thereof
- Work pressure
- Bullying harassment and abuse
- Physical violence
- Team working
- Training
- Appraisal
- Stress
- Incident reporting procedures

Organisational outcome data were taken from a variety of published measures:

- Patient satisfaction came from the National Acute Inpatient Survey[2], using the data on patients' overall ratings of care [acute trusts only]

- Patient mortality data was the hospital standardised mortality ratio, as published by Dr Foster[3]

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[2] www.nhssurveys.org
[3] www.drfosterintelligence.co.uk

- "Quality of services" and "Use of resources" are the two Annual Health Check ratings published annually for trusts by the Healthcare Commission between 2005/6 and 2008/9

- Infection rates are the rates of Meticillin Resistant Staphylococcus Aureus (MRSA) infections per 10,000 bed days, as published by the Health Protection Agency[4]

- Staff absenteeism rates are those measured by the Electronic Staff Record, collated by the NHS Information Centre

- Staff turnover is also as collated by the NHS Information Centre

Analyses

The analyses conducted for the reports combined here include:

- Detailed correlation analysis between staff survey responses and adult acute inpatient survey responses, at the trust level (first conducted with the 2007 data and then repeated with later years)

- Multiple and multilevel regression analysis on individual level 2009 staff survey data, using HR practice variables to predict engagement (controlling for a range of demographic and work background factors)

- Regression and ordinal logistic regression analysis using staff survey scores to predict patient satisfaction (2009), patient mortality (2009/10), staff absenteeism (2009/10), staff turnover (2009/10), infection rates (2009/10), and Annual Health Check ratings (2008/9), controlling for trust type, size, and location (whether located in London or not)

- Regression and ordinal logistic regression analysis using changes in staff survey scores to predict changes in the above outcomes, using prior years' data as appropriate

- Latent growth curve modelling using staff survey scores (from 2007 or later) to predict changes in the above outcomes (over a three-year period where possible)

- Additional ad-hoc analyses included to supplement the above.

Results

The results that follow summarise those found in the reports listed in the appendix. Whereas the previous reports examine similar variables using different methods, here we report the main findings for each outcome variable (work engagement, patient satisfaction, patient mortality, staff turnover, staff absenteeism, Annual Health Check ratings and infection rates). The results reported are not exhaustive: more statistically significant findings can be seen in the original reports. Instead, we limit those reported here to the most consistent findings across the different methods, and the most important in terms of the practical consequences.

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[4] www.hpa.org.uk

Work Engagement

Engagement of staff, in all its various forms, is seen as a key factor in promoting organisational effectiveness, whether that means patient experience, quality and safety outcomes, or efficiency and financial performance. The following sections of this report show how engagement, along with other elements of staff experience, are linked to such outcomes; here we consider what elements of staff management in the NHS promote higher engagement.
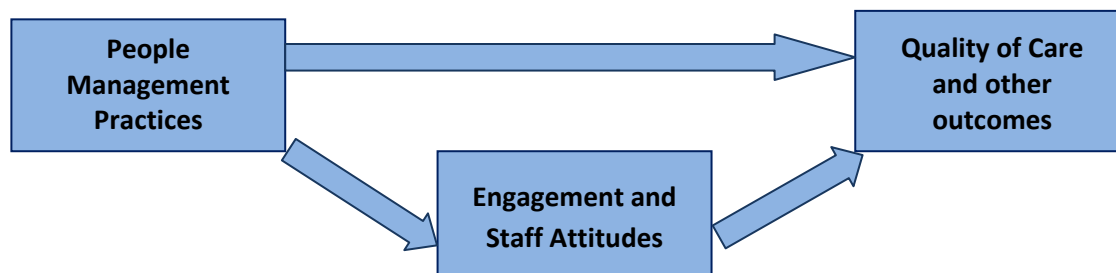
One of the key people management practices found in previous research to predict organisational performance was staff appraisal. In the NHS staff survey appraisal was measured in one of two ways: either having a "well-structured" appraisal, where the respondent indicates that the appraisal or performance development review (including KSF reviews) they had received in the previous 12 months helped them improve how they did their job, involved setting of objectives for their work, and left them feeling valued by their trust, or another type of appraisal (where at least one of these things did not happen). In the 2009 survey, 32% of staff had received a well-structure appraisal in the previous 12 months, and a further 39% a non-well structured, or poor quality, appraisal.

Our analysis showed that the type of appraisal is a key factor in predicting engagement. Overall engagement was substantially higher amongst staff who had received a well-structured appraisal. Conversely, for staff who had received a poor quality appraisal, engagement levels were slightly lower than for staff who did not receive an appraisal at all. Likewise, staff who had agreed a personal development plan with their line manager had higher engagement levels than those who had not.
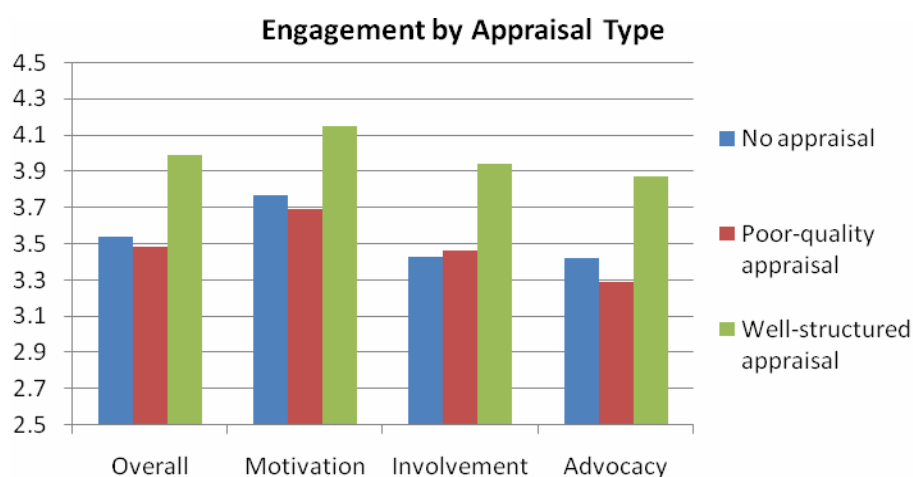

When staff feel that they work in a well structured team environment (one where teams have clear objectives, have to work interdependently to achieve these objectives, and meet regularly to discuss their effectiveness and how it might be improved) their engagement levels are also higher than

those who do not. Staff who report that they have an interesting job also report higher levels of engagement, and associations are also found with other aspects of job design, in particular having good support from the immediate manager, feeling that the role makes a difference, having low levels of work pressure, and having clear job content, feedback, and the opportunity to be involved in decision-making.

Engagement is also linked to the health of staff. Higher engagement levels are found amongst staff who do not report suffering from work-related stress, and amongst staff who did not feel under pressure to come to work when they were not fully fit to do so. Generally speaking, when employees rated their own health and well-being more highly, they also reported higher engagement (of all types – motivation, involvement and advocacy).

However, there were significant differences between groups of trusts and staff in terms of engagement levels. Ambulance trusts generally had much lower engagement than others (although the difference was only slight in terms of motivation), with ambulance staff having the lowest of all staff groups, while general managers usually had the highest of all staff groups.
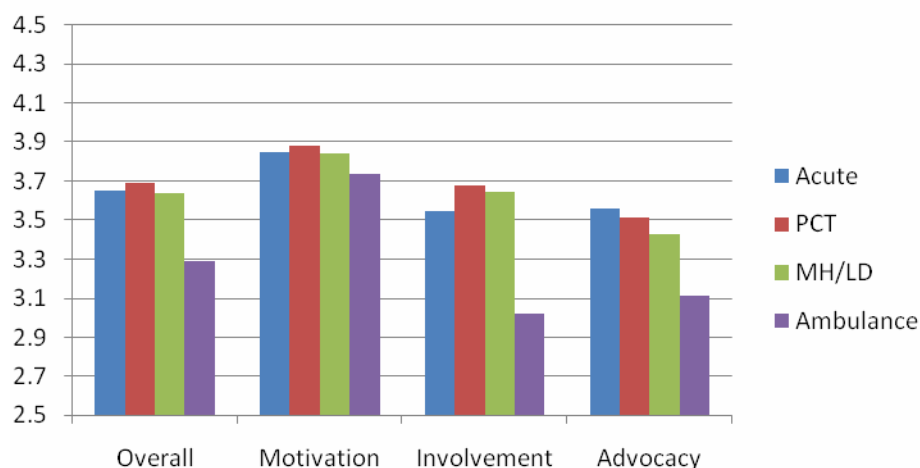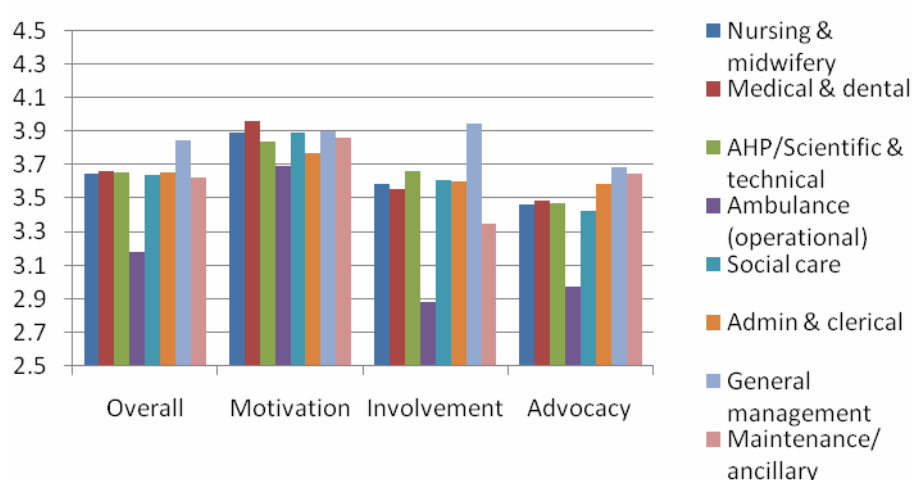
Patient Satisfaction

The quality of patient experience, as measured by inpatient satisfaction in acute trusts, is strongly linked with engagement and other aspects of staff experience.

Patient satisfaction is significantly higher in trusts with higher levels of employee engagement. The main driver for this is the "advocacy" element of engagement, which has by far the highest correlation with patient satisfaction. However, other elements of management are also clearly related to patient views.

Clarity of objectives is one such key predictor. Patient satisfaction is highest when:

- staff understand what the goals of the trust are
- care is provided by teams that have clear objectives
- individual staff members have clear goals for their jobs

Staff satisfaction is also directly related to subsequent patient satisfaction. For example, staff reports of the supportiveness of immediate managers and their perceptions of the extent of positive feeling (communication, staff involvement, innovation & patient care) in their trusts directly predicts patient satisfaction. Not surprisingly, staff intention to leave their jobs is also strongly related to lower levels of patient satisfaction.

Patient Satisfaction and Staff Intention to Leave
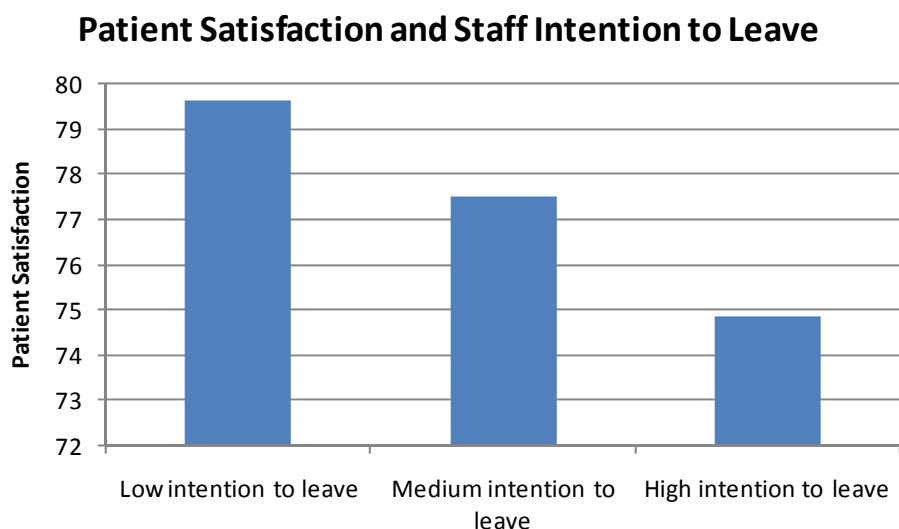
Some of the associations found suggest that there are reciprocal effects between elements of staff experience and patient experience. The extent to which staff are committed to their organisations and to which they recommend their trust as a place to receive treatment and to work is strongly related to patient satisfaction. This suggests that staff positivity may create atmospheres that are more conducive to positive patient experience, but also that staff may react to positive atmospheres by being more positive themselves.

There is also a clear link between discrimination, and aggression against staff, and patient satisfaction:

- The greater the proportion of staff from a black or minority ethnic (BME) background who report experiencing discrimination at work in the previous 12 months, the lower the levels of patient satisfaction

- Where there is less discrimination, patients are more likely to say that when they had important questions to ask a nurse, they got answers they could understand and that they had confidence and trust in the nurses
- Where there was discrimination against staff, patients felt that:
  - doctors and nurses talked in front of them as if they weren't there
  - they were not as involved as they wanted to be in decisions about their care and treatment
  - they could not find someone on the hospital staff to talk to about their worries and fears
  - they were not treated with respect and dignity while in hospital
- Likewise, when staff report bullying, harassment or abuse from patients' relatives, friends, carers and other members of the public, patients do not feel treated with respect and dignity while in hospital
- The percentage of staff experiencing physical violence from patients, their relatives, friends or carers is also associated with low subsequent patient satisfaction.

These results suggest that a spiral of negativity can emerge when staff are not treated supportively and with respect, whether by managers or by the public. Creating a positive, supportive environment is likely to produce an environment within which the best quality of care is provided. Not surprisingly, in such well-managed trusts, staff are less likely to be planning to leave than are staff in poorly managed trusts.

This message is amplified by the finding that when staff report high work pressure, patients also see the service as under-resourced, commenting that there were too few nurses to provide care. In trusts where more staff report witnessing errors, near misses or other worrying incidents in the previous month, patients too report that they did not receive sufficient support, information, privacy or respect.

In line with previous research showing that the sophistication and extensiveness of human resource management (HRM) practices in acute trusts are related to lower patient mortality rates (West et al., 2002, 2006), we found that a number of HR practice variables were linked to improvements in the level of patient satisfaction:

- Hospitals with high percentages of staff receiving job-relevant training have higher patient satisfaction
- Higher levels of well-structured appraisal meetings are associated with greater patient satisfaction
- Organisations with good support provided by immediate line managers have higher levels of patient satisfaction
- The proportion of staff who have undertaken health and safety training since joining their trust is also strongly related to patients' perceptions of the quality of care they receive.

Patient Mortality

Inpatient mortality is another indicator that only applies to acute trusts in this research, but the importance of it as an outcome is such that relationships with staff experiences found may be indicative of the significance of those staff experiences across the whole NHS.

Engagement is linked to subsequent patient mortality in these trusts, even when prior patient mortality is controlled for. This includes significant relationships with all forms of engagement, suggesting that in organisations where engagement is highest, the levels of mortality are lower. This

is such that for an "ordinary" (one standard deviation) increase in overall engagement, mortality rates would be around 2.4% lower.

Patient Mortality by Engagement
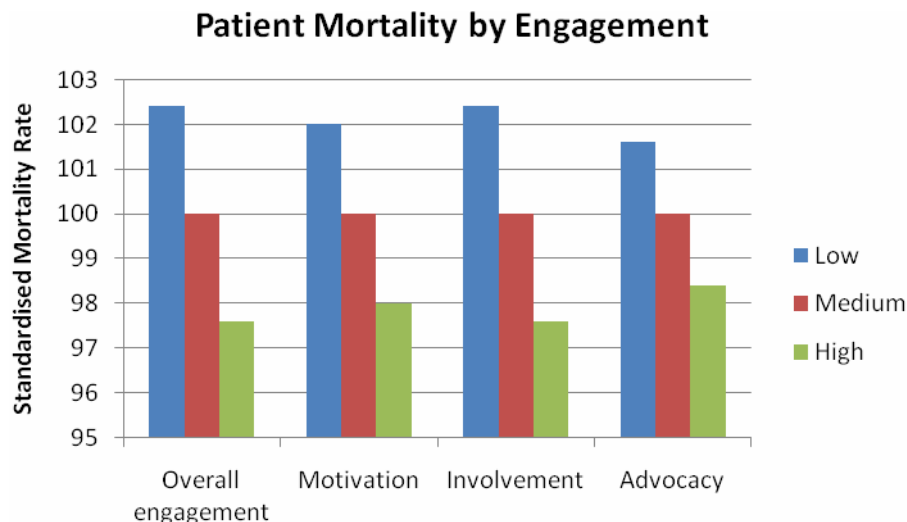
Another strong predictor of patient mortality in acute trusts is the percentage of staff working in well structured teams: those that have clear objectives, that meet regularly to review their performance and how it could be improved, and whose members work closely and effectively together. The analysis showed that, all else being equal, 5% more staff working in well-structured teams was associated with a 3.6% lower mortality rate.

Other key staff variables significantly associated with patient mortality include:

- good training, learning and development opportunities for staff
- support from immediate managers
- staff having opportunities to influence and contribute to improvements at work
- the percentage of staff receiving well-structured appraisals (those where the appraisal helps the employee improve how to do his/her job, clear objectives are set, and the appraisal is felt to be useful by the employee)
- a positive organisational climate (in terms of good communication, staff involvement, and innovation).

Turnover

Turnover is a major cost for NHS trusts, with each staff member leaving costing thousands of pounds in direct costs alone – and often more in lost productivity. Our analysis shows that several staff experience variables are related to actual turnover.

Staff engagement is strongly linked to turnover, with turnover rates approximately 0.6% lower in trusts that have a one standard deviation higher engagement score, all else being equal. Other variables that are associated with staff turnover are:

- Staff job satisfaction
- Work pressure felt by staff
- Using flexible working options
- Receiving job-relevant training, learning or development

- Receiving health and safety training
- Working in well-structured teams
- Experiencing physical violence, bullying, harassment or abuse from either patients (or their relatives) or from colleagues
- Quality of job design (clear job content, feedback and staff involvement)
- Support from immediate managers
- Fairness and effectiveness of incident-reporting procedures
- Availability of hand-washing materials
- Overall organisational climate (extent of positive feeling in the organisation)

This suggests that many areas of staff experience, including the quality of line management received, the extent of training, and the feeling of working in a safe environment, are critical factors in retaining employees. When staff work in a well-structured team environment, they are much less likely to leave the trust.

Absenteeism

According to the 2009 Boorman Review of NHS Staff Health and Well-being, NHS staff are absent from work, on average, 10.7 days each year, losing the service a total of 10.3 million days annually and costing a staggering £1.75 billion. Total absenteeism equates to the loss of 45,000 whole time equivalent staff annually. For this reason, any factors that are linked with absenteeism should be of great importance to NHS managers as they could provide the key to increase both efficiency and quality.

Engagement once again was a critical factor in explaining absenteeism. Overall engagement, as well as the three constituent parts, were all statistically significant predictors. The effects were such that high engagement was associated with much lower absenteeism than low or moderate levels of engagement. An increase of one standard deviation in engagement would be equivalent (all else being equal) to a saving of around £150,000 in salary costs alone for an average acute trust.
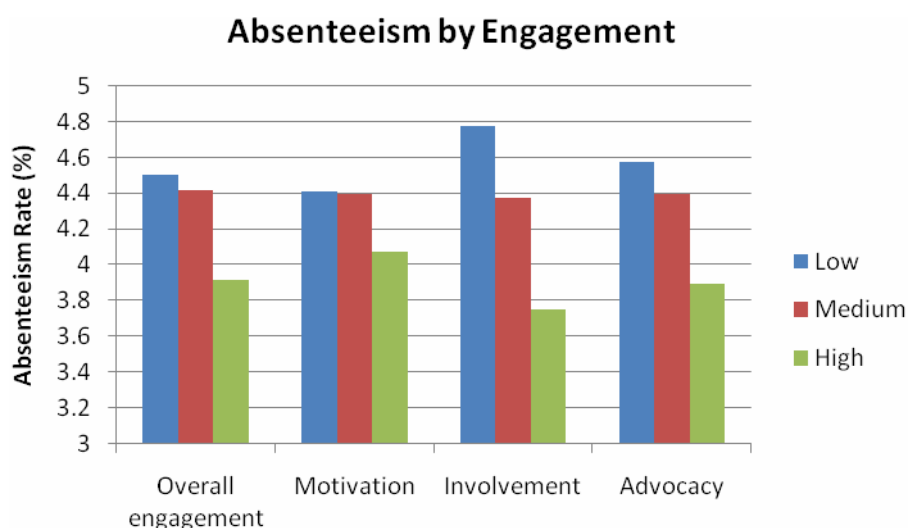
Other factors predicting the rate of absenteeism include:

- Dissatisfaction with the quality of work and patient care delivered
- Not having an appraisal in the previous 12 months
- Work-related stress

- Physical violence from colleagues or patients
- A lack of equality and diversity training

– indeed, many of the same factors that predict lower engagement. This is perhaps not surprising as when staff have bad experiences in the workplace this is likely to lead to lower engagement as well as poorer physical and mental health, and possibly greater detachment from the job, which would in turn explain why employees did not attend work so often.

Annual Health Check Performance

The Annual Health Check (AHC) provided two measures of organisational performance: Quality of services, and Quality of financial performance (previously known as Use of resources). Although relatively blunt ratings, the range of different indicators used by the Care Quality Commission (and previously the Healthcare Commission) in deriving them ensures they represent organisational effectiveness in a wide-ranging way.

Both measures were again related to engagement. In the case of Quality of services, all three sub-components of engagement were also significantly associated with the outcome; in the case of Quality of financial performance, involvement and advocacy were, but motivation was not. The differences between organisations of differing performance ratings are exemplified in the following chart. (It should be noted, however, that due to the timing of the two measurements, the AHC performance variables were released during the middle of the survey period.)
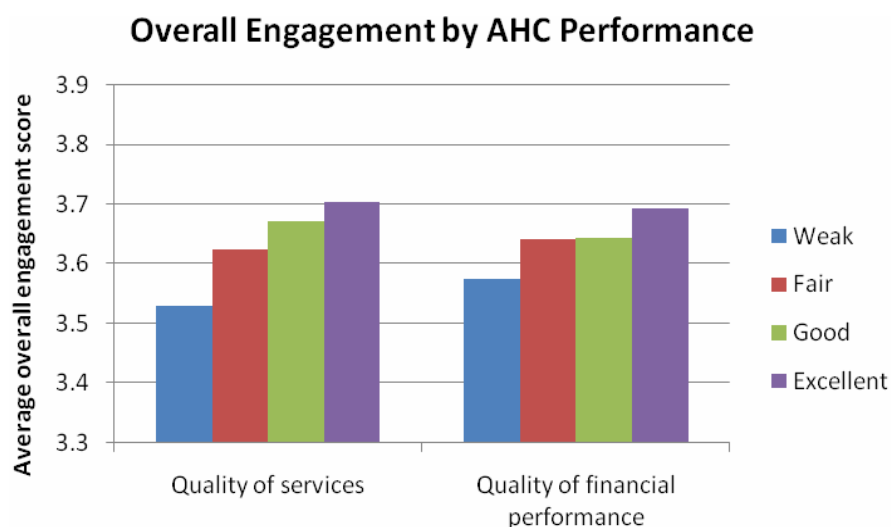
The Quality of financial performance rating was also related to the proportion of staff working in well-structured teams – those with clear objectives, requiring interdependent working, and that meet regularly. This suggests that the use of such teams not only produces better outcomes for staff (e.g. engagement and health outcomes) and patients (e.g. mortality), but also results in more efficient working.

Other factors that are associated with better ratings on both Annual Health Check scores include:

- Higher levels of well-structured appraisals
- Higher levels of training, learning and development
- Lower levels of staff stress and work pressure
- Lower levels of witnessed errors, near misses and incidents

- Higher use of flexible working options

The common themes displayed here, along with the results for most other outcomes, suggest that effective staff management and improved working environments are important not just for the quality of care and the well-being of both patients and staff, but also for the productivity of NHS trusts.

Infection Rates and Errors

In trusts where a large percentage of staff feel they can contribute towards improvements at work, infection rates are decreasing, reinforcing the value of staff involvement in service improvements and of creating cultures of engagement and innovation. This effect is such that where 10% more staff feel able to make such contributions, there would be on average .057 fewer cases of MRSA per 10,000 bed days. This may appear to be a small effect, but given the large volume of activity in most acute trusts this could easily make a real difference in the occurrence of MRSA infections in hospitals.

Infection rates are also lower where:

- there is greater staff training
- staff report errors, near misses and incidents
- incident reporting procedures are deemed to be fairer and more effective

These results suggest that focusing on training and putting effective procedures in place may pay dividends with regards to decreasing infections in hospitals and the associated health and productivity benefits.

Conclusion

The results reported here, despite coming from a variety of methods, data sets and years, give a clear general message about the importance of staff experience for outcomes. The synthesis of the previous reports is important here: in any one individual report, some findings may appear stronger than others, but when taken in aggregate, the main points become much more obvious.

In general terms, the more positive the experiences of staff within an NHS trust, the better the outcomes for that trust. This is shown across many different domains of staff experience. Engagement, being a key focus of the report, is shown to be particularly important: having significant associations with patient satisfaction, patient mortality, infection rates, Annual Health Check scores, as well as staff absenteeism and turnover. The more engaged staff members are, the better the outcomes for patients and the organisation generally.

Engagement can be fostered through good staff management: having well-structured appraisals (where clear objectives are set, the appraisal is helpful in improving how to do the job, and the employee is left feeling valued by their employer) is particularly important, as is working in a well-structured team environment (where teams have clear shared objectives, work interdependently and meet regularly to discuss their effectiveness). Supportive line management is also key here, as is having good job design – meaningful, clear tasks with some opportunity to be involved in appropriate decision making. These factors are also linked to employee health, which is also important for engagement: high levels of work pressure and stress can lead to disaffection and disengagement.

Unsurprisingly, therefore, many of these factors are also important predictors of trust outcomes. The proportion of staff receiving well-structured appraisals is related to patient satisfaction, patient

mortality, staff absenteeism and turnover, and better performance on the Annual Health Check. Working in well-structured teams is a predictor of patient mortality, staff absenteeism and turnover, and Annual Health Check performance. Supportive leadership from line managers is linked with patient satisfaction, patient mortality and staff turnover.

Training is also very important. In various guises it predicts every one of the outcomes; in particular, where training is felt to be relevant for the job, the higher the proportion of staff receiving this, the better the outcomes. There are also effects of some specific elements of training: the number of staff having health and safety training in the previous 12 months is associated with patient satisfaction and with staff turnover. Training in equality and diversity is associated with lower levels of absenteeism.

Having a safe working environment is critical, in addition to this training: where staff feel under too much work pressure, outcomes are generally worse. When aggression is experienced – either physical violence or bullying, harassment or abuse – from patients, members of the public or colleagues, this creates poorer outcomes, not just in terms of staff turnover and absenteeism, but also in terms of patient satisfaction. The same is true for discrimination experienced by staff.

Above all, a positive organisational climate helps. The extent of positive feeling – exemplified by communication, involvement of staff, and an emphasis on quality – is a predictor of both staff outcomes (absenteeism and turnover) and patient outcomes (satisfaction and mortality). It is not always clear how best to foster this – there is perhaps a "chicken and egg" situation with some of the other management practices in terms of which comes first – but the results suggest that there is a virtuous circle with the experiences of staff and the experiences of patients.

In summary, the findings make it clear that cultures of engagement, positivity, caring, compassion and respect for all – staff, patients and the public - provide the ideal environment within which to care for the health of the nation. When we care for staff, they can fulfil their calling of providing outstanding professional care for patients.

Appendix

Reports on which the results here are based are listed below. Each was written by staff at the Institute for Health Services Effectiveness at Aston Business School, Aston University.

The reports are available at http://www.dh.gov.uk/en/Publicationsandstatistics/index.htm

- ➢ Employee Engagement – A Brief Review of Definitions, Theoretical Perspectives and Measures
- ➢ Engagement: The Grey Literature
- ➢ Does the experience of staff working in the NHS link to the patient experience of care? An analysis of links between the 2007 acute trust inpatient and NHS staff surveys.
- ➢ The Association between Appraisal and Leadership of NHS Staff and Five Key Outcome Variables
- ➢ Staff Engagement in the NHS: A Multilevel Analysis
- ➢ Outcomes of Staff Engagement in the NHS: A Trust Level Analysis
- ➢ Staff Advocacy of NHS Trusts and Related Variables
- ➢ Staff Advocacy and NHS Trust Performance
- ➢ Human Resource Management Policies and Employee Health and Well-being in the NHS
- ➢ Employee Health and Well-being in the NHS: A Trust Level Analysis
- ➢ NHS Staff Survey Scores as Predictors of Trust Outcomes: A Multi-Method Longitudinal Analysis
- ➢ Changes in Employee Engagement in the NHS 2009-2010