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Hospital contract cleaning and infection control

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Steve Davies of Cardiff
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[Steve Davies](#) is a Senior
Research Fellow in the
Global Political Economy
Research Group at Cardiff
University School of Social
Sciences.

Global Political Economy
School of Social Sciences
Cardiff University
King Edward VII Avenue
Cardiff CF10 3WT

www.cf.ac.uk/socsi/CREST

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Executive summary

The latest crisis facing NHS hospitals is the increase in hospital acquired infections (HAI), sometimes called healthcare associated infections and in particular that of Methicillin Resistant Staphylococcus Aureus (MRSA). In October 2004, the Secretary of State for Health, John Reid appointed a new Chief Nursing Officer identifying her top priority as the reduction of MRSA and dealing with hospital acquired infections. In November 2004, he announced a target to halve MRSA bloodstream infections in hospitals by March 2008. This is an ambitious target and this paper argues that, whilst certainly not the only factor in controlling hospital acquired infections, high quality cleaning can play a major part in reducing the spread of such infections.

This paper brings together research on two distinct but related subjects: infection control in hospitals and the contracting out of public services. It argues that despite some reluctance to acknowledge a link between hospital cleanliness and infection, such a link exists and the standards of hospital cleaning have declined.

The first section of the report draws on audit reports and a wide range of academic research to demonstrate that:

- cleaning standards have fallen: patients, staff, the public and the Government know that since the introduction of market testing of cleaning services in 1983, standards in hospital cleanliness have fallen;
- a link between infection control and hospital cleaning is plausible. Even if it has not been proven, the author concurs with the Auditor General for Wales, such a link is possible, so the need for effective cleaning cannot be overstated.

Even without such a link the recent Revised Guidance on Contracting for Cleaning notes:

- cleanliness is of paramount importance to patients and the public and has a role to play in the prevention and control of healthcare associated infections.

The paper then goes on to examine the regime of market testing or competitive tendering which by its very nature, is a process of squeezing costs to gain 'efficiencies'. In a labour intensive industry such as cleaning where staff costs account for up to 93% of the cost of cleaning:

- such 'efficiencies' are borne by the workforce either through reduced staff numbers or cuts in wages and conditions;
- this impacts on recruitment and retention of staff, staff absence, turnover and morale – all of which in turn affect the quality of hospital cleaning services.

The fact that cleaning standards in hospitals have fallen as a result of contracting out is not disputed and led to this Labour Government in 2001 ending the compulsory element of market testing/competitive tendering of cleaning services in the NHS. The Secretary of State said that 'compulsory competitive tendering has gone because it failed to raise standards.' (NHS Estates, 2001a)

There are other elements of the contractual relationship that work against high quality hospital cleaning. The contract culture atomises functions within a hospital and contributes to the breakdown of a team-based approach that unifies clinical and non-clinical staff, thereby damaging flexibility and overall effectiveness. An examination of the various elements highlights:

- difficulties in drawing up contracts to cover every eventuality;
- poor financial and management information which is often not shared due to the

- private company's view of commercially confidential information;
- lack of flexibility, contrary to the view that the private sector offers a flexibly deployed workforce;
 - lack of trust and monitoring leading to a negative impact on performance;
 - difficulties of imposing sanctions;
 - separation of cleaning services from the rest of the healthcare team;
 - damage to the public sector ethos;
 - problems of health and safety, including infection control training.

Finally, the paper concludes:

- there should be an end to a tendering regime that – regardless of whether or not the service is eventually contracted out – puts cost ahead of quality, at the expense of jobs, pay and conditions;
- the economic costs of infection and infection control should inform decisions about resource allocations for cleaning. Improving the quality of cleaning is likely to be more effective than specific MRSA-related, or similar virus, control measures. Resources would be more effectively directed at areas of more fundamental importance, including education, cleaning and the improvement and maintenance of ward fabric.

Introduction

Despite large scale funding increases for the NHS (Lewis and Gillam, 2003), the recruitment of thousands of doctors and nurses, and improvements in many areas, problems continue to dominate public discussion of the health service in the media and Parliament. The latest crisis relates to the growing incidence of patient acquisition of hospital acquired infections (HAIs), sometimes called healthcare associated infections. There is particular concern over infections caused by Methicillin Resistant Staphylococcus Aureus (MRSA). MRSA is one of many HAIs: its significance being that infections caused by MRSA are difficult to treat because of the bacterium's resistance to antibiotics.

The Chief Medical Officer (CMO) has conceded that until publication of his Infectious Diseases Strategy for England (Chief Medical Officer, 2002), the control of infectious diseases had too low a profile in NHS practice. One of the aims of the CMO's Strategy was to raise the status of infectious disease control (Chief Medical Officer, 2003).

The CMO's document, *Winning Ways* (2003) recognised that infection of patients is common and sometimes life threatening, that multi-resistant bacteria such as MRSA present a particular problem, that good information has not been available in the past, that other European countries have a better record than Britain, and that counter-measures are not being implemented either consistently or rigorously.

Drawing on the published literature this paper brings together research on two distinct but related subjects: infection control in hospitals and the contracting out of public services. It examines evidence for a decline in hospital cleanliness, an increase in HAI, and whether the two are linked.

The paper reviews some of the contributions to the wider debate about the contracting out of public services and examines the history of contract cleaning in the NHS over the last two decades. It then identifies some of the problems of contracting out both in terms of the effect of a regime of market testing or competitive tendering on staffing levels, wages and conditions, and the effect of contractual relationships on hospital cleaning (particularly the impact contracting out has on a team-based approach unifying clinical and non-clinical staff).

Finally, the economic costs of infection and infection control are considered and the paper ends with a consideration of whether such 'efficiencies' are too expensive for the NHS.

Infection rates and standards of cleanliness

This section looks at the evidence of an increase in HAI in hospitals, of a decline in hospital cleanliness, and the relationship between the two. It is not a straightforward exercise to attempt to track trends over time in HAI rates in hospitals or standards of hospital cleanliness. Obviously if the data is not collected it is not possible to demonstrate a direct link between the two. However there is a considerable body of evidence from case studies and infection outbreak investigations that shed some light on the connections. This will be examined later in this paper.

The absence of appropriate data sets is now recognised within the NHS as a serious weakness. In 2000, a report from an expert group chaired by the Chief Medical Officer, noted that one of the difficulties in transforming the NHS into an organisation that learns from its experiences, is that its reporting and information systems provide only a patchy and incomplete picture of serious failures of healthcare or 'adverse health care events' (Department of Health, 2000).

Since 2000, when the House of Commons Public Accounts Committee (2000) concluded that the NHS did not have a grip on the extent and cost of HAIs, attempts have been made by the government to remedy this lack of information. Some data is now available, and this will be referred to in the following section.

Trends in infection rates

In the infectious diseases strategy for England (Chief Medical Officer, 2002), the Chief Medical Officer (CMO) noted that 19th century hospitals were dangerous places. At that time there was little understanding of how infectious diseases were transmitted, hygiene was poor and consequently many died as a result of infections acquired during surgery or childbirth. Improvements came with the growing understanding of the link between hygiene and infection, and later with the use of antiseptics during surgery. But the CMO also noted that the last thirty years of the 20th century saw the return of HAI as 'a major problem for the NHS' (Chief Medical Officer, 2002).

Of these HAI, MRSA has received the most media coverage because of its resistance to antibiotics and its spread. However, it is not the only multiple antibiotic resistant organism, and maybe not even the most dangerous. Of perhaps even more concern is another - vancomycin (or glycopeptide) -resistant enterococci (VRE or GRE). This appeared in the mid 1980s in Dulwich hospital. Its threat lies in the fact that for the first time since the introduction of antibiotics, here is a strain of clinically important bacteria that are resistant to all available antimicrobials. Unknown in the UK before 1985, it is still not common here. However, the CMO reports that by 1995 VRE had affected about 60 hospitals and the figure is certainly higher today. As vancomycin resistance could transfer to staphylococci, an untreatable *Staphylococcus aureus* infection is a potential danger (Chief Medical Officer, 2002).

The CMO points out that although MRSA has been known since the 1960s, it only became a serious problem after an outbreak in 1990 at Kettering Hospital. The incidence of MRSA infection spread across the country in the decade that followed despite attempts to contain it and the publication of new guidelines for controlling the epidemic. According to the Central Public Health Laboratory, as a proportion of all *Staphylococcus aureus* causing blood stream infections, MRSA rose from around 2% in 1990 to over 40% in 2000 (Chief Medical Officer, 2002).

In order to measure the incidence of HAI, the Nosocomial [hospital acquired] Infection National Surveillance Service (NINSS) was established in 1996 and began an annual collection of data on surgical site infection (with voluntary participation from hospitals). The 1997-1999 NINSS report, covering 96 English hospitals, showed that 47% of organisms causing surgical site (wound) infection were staphylococci, of which 81% were *Staphylococcus aureus* and 61% of these were MRSA (Chief Medical Officer, 2002). Participation in the scheme has gradually increased and the fifth annual report for the surgical site infection module contains the combined data from 168 hospitals that participated in the surveillance between 1st October 1997 and 30th September 2002. The overall figures show a slight increase in the prevalence of MRSA (Health Protection Agency, nd).

In its 2000 report (Comptroller and Auditor General, 2000), the National Audit Office (NAO) criticised the fact that HAI was not a priority within the NHS, and that there was a need to strengthen the strategic management of HAI both nationally, and at NHS trust level. In a much quoted section of the report, the NAO noted that about nine per cent of inpatients (around one in 11) have a HAI at any one time, equivalent to at least 100,000 infections a year. The effects of HAI on patients range from discomfort to death in at least 5,000 cases and are a contributory cause in a further 15,000 deaths per year.

As part of its response to such criticism, in April 2001, the Department of Health in England began a mandatory MRSA bacteraemia surveillance scheme in which all 187 NHS acute Trusts in England participated. In June 2003, the surveillance was extended to include the reporting of bacteraemias due to glycopeptide resistant enterococci (GRE) with further extensions to follow; a move from quarterly reporting to regular routine laboratory reporting of MRSA bacteraemias; and reporting of Serious Untoward Incidents associated with infection (Chief Medical Officer, Chief Nursing Officer, 2003).

Annual reports of MRSA bacteraemia by English NHS Trust are now published and the information used as the basis of a new performance management indicator, which contributes to the Star Ratings system for acute hospital Trusts (Chief Medical Officer, Chief Nursing Officer, 2003).

Nevertheless, despite the guidance issued and initiatives taken, data available suggest that progress is slow and the degree of improvement small. An analysis of trends in surgical site infection (i.e. infection after operations) from the National Nosocomial Infection Surveillance System illustrates the problem (Chief Medical Officer, 2003). Based on data from over 60,000 operations in six categories of surgery between 1997 and 2001, just 12% of hospitals reduced their rates of surgical site infections, while 2.5% showed an increase. Almost three quarters (72%) had no improvement, although most of these had low levels of infection to begin with.

A separate 2002 study of death certificates showed that infections due to MRSA seem to be an increasing cause of mortality in England and Wales and that this is unlikely to be explained by improved reporting (Crowcroft and Catchpole, 2002). Further research found that death certificates involving MRSA increased from 51 in 1993 to 800 in 2002, and mortality rates for deaths involving MRSA increased over 15-fold during the period 1993 to 2002 (Griffiths et al, 2004).

Some international comparative data on HAI in general and MRSA in particular is also available. The level of HAI among hospitalised patients in England (and by extension the UK) is broadly comparable to other industrialised countries

Table 1: Estimated prevalence of healthcare associated infection

Country	% of hospitalised patients contracting HAI
Australia	6
Denmark	8
England	9
France	6-10
Netherlands	7
Norway	7
Spain	8
USA	5-10

Source: Various, cited in Chief Medical Officer (2003) *Winning Ways: Working together to reduce Healthcare Associated Infection in England*. Department of Health.

By contrast, data on levels of MRSA bloodstream infections as a proportion of all *Staphylococcus aureus* bloodstream infections show that the UK has high rates compared with many of our European neighbours. Between 1999 and 2002, the UK recorded 'significant increases' in the prevalence of MRSA among blood isolates and the country is in the highest prevalence group in terms of MRSA in Europe (Tiemersma et al, 2004) (see Table 1).

Table 2: Proportion of Staphylococcus aureus bacteraemia isolates resistant to methicillin in various European countries

Country	%
Greece	44.4
UK	41.5
Republic of Ireland	41.2
Italy	40.9
Croatia	36.7
Portugal	34.7
Bulgaria	33.9
France	33.1
Spain	24.8
Belgium	23.6
Slovenia	18.4
Poland	17.7
Germany	13.8
Slovakia	10.5
Austria	8.8
Hungary	7.1
Czech Republic	5.9
Finland	1.0
Estonia	0.9
Sweden	0.8
Netherlands	0.6
Denmark	0.6

Source: *European Antimicrobial Resistance Surveillance System (EARSS), Tiemersma et al, 2004.*

Perhaps unsurprisingly, given the information in the previous section, in its most recent report (Comptroller and Auditor General, 2004), the NAO is critical of the limited progress made despite the high profile of the issue in the media. Responding to such public and political pressure, John Reid the Secretary of State for Health concedes that 'MRSA is a growing problem' (Department of Health, 2004).

Trends in cleanliness

Alongside these reports of growing incidence of HAIs, are the much reported claims of a decline in standards of cleanliness within the NHS. Again, there is little longitudinal data to draw upon. Despite this, that there has been a long term decline in cleanliness is agreed by clinicians, researchers and the Department of Health itself (Comptroller and Auditor General, 2004, French et al, 2004, Dancer, 1999, Rampling et al, 2001, NHS Estates, 2001).

Even Ministers have conceded this. In 2001, the then Health Secretary, Alan Milburn wrote:

Standards of cleanliness have been poor in too many hospitals. The cleanliness of any hospital environment is important for infection control and patient well-being. Cleaning staff play an important role in quality improvement, in the confidence the public has in hospitals and in reducing infection-related risks. This role should be recognised and supported by management (NHS Estates, 2001a).

Since 2000, recognition of concerns over cleaning standards has been translated into a number of initiatives (Chief Medical Officer, 2003). The NHS Plan in 2000 led to the launch of the Clean Hospitals Programme as part of a programme to redress low cleanliness standards (NHS Estates, 2001). With this came a pledge of more money for cleaning services; new national cleaning standards; a new NHS Healthcare Cleaning Manual; an increase in the numbers of ward housekeepers; an emphasis on the role of the 'Modern Matrons' in ensuring high standards of cleanliness and infection control, with the provision for Matrons to advise that payment be withheld when services persistently fail to achieve the standards set at local level; the inclusion of cleanliness and infection control standards as part of the Commission for Health Improvement's reports on acute hospitals; and annual inspections of hospitals by Patient Environment Action Teams (PEATs).

PEATs consist of NHS staff (including nurses, matrons, doctors, catering and domestic service managers, executive and non executive directors, dieticians, estates directors); patients, patient representatives and people from patient organisations (such as The Patient Association and WRVS); and members of the general public. Cleanliness is one of a number of elements in the 'patient environment' that PEATs examine. Beginning in 2000/01, PEATs have undertaken reviews every year using standard criteria and protocol. They use a 'traffic-light system' * to grade hospitals (green represents high standards that meet the needs and expectations of patients; yellow provide standards that are acceptable; red hospitals provide a poor quality environment for patients). As can be seen from the table below there has been some improvement. However, the reviews do not focus solely on cleanliness and are seen as a 'broadband indicator', not a technical review (they include patient environment – ranging from cleanliness to parking, food and food service and privacy and dignity).

Table 3: Results of PEAT reviews

	Red (poor)	Yellow (acceptable)	Green (good)
Autumn 2000	253 (35.5%)	297 (41.7%)	163 (22.3%)
Spring 2001	42 (6.1%)	368 (53.4%)	279 (40.5%)
Autumn 2001	0 (0%)	387 (56.3%)	300 (43.7%)
2002	0 (0%)	317 (40%)	464 (60%)
2003	0 (0%)	186 (21.3%)	686 (78.7%)

Source: NHS Estates

http://patientexperience.nhs.gov.uk/clean_hospitals/ch_content/home/home.asp
Accessed 24 November 2004

National Standards of Cleanliness were first published in November 2001 and hospitals across the country undertook a baseline audit using them to measure their 'technical' cleanliness. The Standards have recently been revised and renamed, 'Standards of Cleanliness in the NHS – A framework in which to measure performance outcomes'. They are now used to provide Trust Cleanliness Scores as part of the Estates Returns Information Collection (ERIC) (NHS Estates, 2004).

Despite all this activity, several recent reports indicate that cleanliness remains a problem. In 2003, the Department of Health published its first Acute Inpatient Survey with its results for 2001/02. These revealed that more than one in ten patients (11%) reported toilets and bathrooms to be not very clean or not clean at all (Department of Health, 2003). The Healthcare Commission took over the work of the CHI in April 2004 (including the national patient surveys), and conducted another inpatient survey in 2004 (Healthcare Commission, 2004). Both surveys had a response rate of between 63 and 64% covering almost 90,000 respondents in each case.

Comparing the results, patients reported a slight worsening of the position in 2004. 54% of respondents rated the ward as very clean (a slight decline from 2002), 38% rated it clean and 9% thought the ward was not clean. In 2004 fewer patients, than in 2002, thought the toilets

* This traffic light system has since been replaced by a new system for 2004, details of which were published after this report had been compiled – December 2004.

and bathrooms in hospital were 'very clean', with 51% reporting them as very clean in 2002 and 48% in 2004. Twelve per cent of respondents in 2004 thought the toilets were not clean.

Table 4: Patient ratings of cleanliness in ward 2002-04

	2002 %	2004 %	Difference%
Very clean	57	54	-3
Fairly clean	36	38	2
Not very clean	6	7	1
Not at all clean	2	2	0

Source: Department of Health, 2003; Healthcare Commission, 2004.

Table 5: Patient ratings of cleanliness in toilets and bathrooms 2002-04

	2002 %	2004 %	Difference %
Very clean	51	48	-3
Fairly clean	37	39	2
Not very clean	8	9	1
Not at all clean	3	3	0

Source: Department of Health, 2003; Healthcare Commission, 2004.

Similarly, in one of its last reports, the Commission for Health Improvement (CHI) document, *Getting Better?*, reported that half of all CHI reviews raised concerns about décor, cleanliness, privacy or security (Commission for Health Improvement, 2003).

It is not just among patients that concern has been expressed. The NAO (Comptroller and Auditor General, 2004) reports that only a third of Infection Control Teams believe that standards have improved in over half of the clinical areas in their trust over the last two years. Two in every five believe there are improvements in less than 25% of the clinical areas and one in ten see no improvement in cleanliness at all. Similar concerns were expressed by the leads of orthopaedic and vascular directorates. 23 per cent of orthopaedic and 19 per cent of vascular directorates report a decline in standards over the past three years (although around 40% believe that the standard of cleanliness within their directorate has improved). And finally, in September 2003 a poll of 100 matrons conducted at a Healthcare Events conference identified preventing infection and improving hospital cleanliness as the most challenging of their ten areas of responsibility (Comptroller and Auditor General, 2004).

Despite many initiatives, difficulties remain. In a survey conducted by the NAO (2004) 70% of infection control teams reported an increase in monitoring of cleaning in clinical areas since March 2000, but only 12% reported that the mandatory reporting of MRSA bacteraemia has led to improved cleaning of clinical areas.

The link between cleaning standards and infection

Given the parallel trends of increasing infection rates and almost universal view of declining standards of cleanliness in the NHS, evidence of some kind of causal link is hardly surprising, even in the absence of longitudinal data comparing the two.

However, this lack of comparative longitudinal data appears to be behind a reluctance or ambiguity on the part of some ministers to accept evidence of a link between cleanliness and infection control. The Department of Health's summary of action (Department of Health, 2004) largely separates the issues of cleanliness and infection control. In his foreword to the document, John Reid the Secretary of State says:

Patients rightly expect hospitals to be clean. Just like a clean hotel, a clean hospital gives

a good first impression and can make a difference to how patients feel about the NHS and how they feel they have been treated.

Cleanliness in a hospital is of rather more importance than in a hotel. Most guests at a hotel are likely to be in reasonable health, would be extremely unlikely to have major surgery on site and therefore less prone to post-operative surgical wound infection while in a weakened physical state.

But the Department of Health goes so far as to suggest that it is debatable whether there is much of a link between cleaning and infection rates at all:

Cleanliness and infection control are closely linked in the public mind, but there are important distinctions to be made. Cleanliness contributes to infection control, but preventing infections requires more than simple cleanliness. Cleanliness produces a pleasant, tidy, safe environment that makes us feel better; however, the scientific evidence that the environment is an important contributor to infection rates is not always clear cut (Department of Health, 2004).

This contrasts with the NHS Scotland Code of Practice which describes poor cleanliness of the healthcare setting as a proven infection risk and notes that ensuring appropriate cleanliness not only protects against acquisition of infection but also reduces the risk of onward transmission of disease (Scottish Executive, 2004).

Of course, hospital cleanliness is not the only factor in preventing infections but cleanliness in a hospital is a lot more than just a pleasant and tidy comfort blanket for overwrought and over imaginative members of the public. Despite this apparent desire to separate cleanliness from infection control, the government is obliged to respond to growing concern among patients, professionals, the media and the general public.

This may explain the change in tone of John Reid in October (Carvel and White, 2004) when he said that one of the reasons for the growth in MRSA was a decision by the previous Conservative government to contract out cleaning work, putting cheapness before cleanliness. He also acknowledged that cleaners did not always feel part of the healthcare team.

Even if there were no conclusive evidence of a link, the precautionary principle should apply. Griffith et al (2000) refer to the advice of the Infection Control Nurses Association: 'Until unequivocal evidence against the role of the environment in the transmission of MRSA is available, rigorous standards for hospital cleaning are advised'.

However, evidence does exist. Many studies have demonstrated that there is a relationship between cleanliness and HAI. Guidelines commissioned by the Department of Health in 2001 explained: 'there is a large body of clinical evidence, derived from case reports and outbreak investigations, which identifies links between poor environmental hygiene and the transmission of micro-organisms causing hospital acquired infection' (Pratt et al, 2001).

Evidence from the audit bodies

Several reports from different audit bodies have reviewed the evidence and concur that there is a link. In its recent critical report on the government's handling of the growing problem of HAI, the National Audit Office accepts the point (echoing the Department of Health's summary of action) that 'the public and the media believe that there is an undisputable link between cleanliness and hospital acquired infection' but then, adds: 'a review of international literature highlights a growing recognition of the relationship between the effective cleaning of hospitals and the health and safety of patients and staff' (Comptroller and Auditor General, 2004). Just so there is no misunderstanding, this section of the NAO report is entitled 'There is growing recognition of a relationship between hospital cleanliness and infection'.

The Auditor General for Wales (AGW) is equally unequivocal stating that research shows that dirty hospitals increase the risk of spreading infection (Auditor General for Wales, 2003). In support of this statement, the Auditor General refers to various governmental and parliamentary reports (European Antimicrobial Resistance Surveillance System, 2002; Comptroller and Auditor General, 2000; House of Lords, 1998). The AGW accepts that there is no direct evidence linking the recent increase in MRSA cases with falling cleaning standards, but suggests that such a link

is possible (Auditor General Wales, 2003) and emphasises the importance of hospital cleanliness as part of a counter infection strategy:

A clean hospital not only limits the risk of infection but also helps to provide the socially acceptable environment which patients, staff and visitors all expect and deserve. In major acute hospitals the importance of effective cleaning cannot be overstated because the mixed nature of activity in these hospitals, and the large numbers of patients being treated, result in significant potential health risks (Auditor General for Wales, 2003).

The Auditor General for Scotland's review of domestic services in Scottish hospitals found that cleaning services 'play a key part in minimising the risk of hospital acquired infections, which have serious consequences for patients and lead to significant costs' (Auditor General for Scotland, 2000).

Evidence from the research literature

Case study research shows that cleanliness can play both a preventative and a control function in dealing with infections. A number of studies of outbreaks of infection have both examined the pre-outbreak cleaning routine and the control measures (including thorough cleaning) in response. Other studies have studied various combinations of response to infection outbreaks in order to attempt to assess the effectiveness of different options. Several examples are referred to below.

Reviewing both the micro-organisms associated with HAI and a series of case studies, Dancer (1999) approaches the question of whether there is a link between HAI and cleaning by first examining the prevalence and location of these micro-organisms and their ability to survive in a hospital environment and then reviews a series of studies that suggest that thorough cleaning breaks the chain of infection between these organisms and patients. She argues that hospital cleaning is a 'neglected component of infection control' and a valuable means of dealing with environmental contamination in hospitals.

As Dancer points out some instances of HAI result in patient death, but infection control is not just about prevention and control of life-threatening infections. Even relatively minor infections can have a major impact on hospital efficiency if they are allowed to spread. Also, they are obviously more harmful to those recovering from surgery than healthy members of the community. Caul (1994) argues that thorough cleaning forms a critical component in controlling outbreaks of infections caused by small round structured viruses (SRSVs). These cause mild self-limiting epidemic gastroenteritis, and as they can be spread by airborne transmission, the cleanliness of the environment plays a vital part in infection control. These types of infection occur widely in society and it is unrealistic to believe that they can be prevented from entering hospitals. However, once identified they can be contained and dealt with, through a combination of measures including thorough cleaning. On the other hand, if they are allowed to spread throughout the hospital, it can lead to ward closures or even the closure of an entire hospital. In a similar study of the spread of Noroviruses - a major cause of gastroenteritis - researchers found that while an essential part of infection control, hand washing alone was inadequate and must be combined with thorough cleaning of the environment, particularly contact surfaces (Barker et al, 2004).

Focusing on the built environment, a study of the design of Intensive Care Units (ICU), environment and infection control, (O'Connell and Humphreys, 2000) identified a number of vital features and emphasised that appropriate cleaning and disinfection programmes are essential to render the ICU relatively pathogen free.

Chadwick and Oppenheim (1996) draw attention to the association between environmental contamination and acquisitions of glycopeptide-resistant enterococci (GRE). After implementing a thorough cleaning programme in the affected ward, it was noted that there followed reductions in both the level of environmental contamination and the numbers of new GRE acquisitions.

In their evaluation of cleaning regimes and standards, Griffith et al, (2000) assessed cleanliness on 113 environmental surfaces in an operating theatre and a hospital ward. The authors were unambiguous in their view that there is 'no doubt that environmental surfaces can act as a source of pathogens which can give rise to nosocomial [hospital-acquired] infections'. In other

words, infections can be spread by contact with dirty surfaces within hospitals. Importantly, they monitored the surfaces both before and after routine cleaning and found that visual assessment was a poor indicator of cleanliness. They drew attention to the effects of cost-cutting on cleanliness and by contrast the cost-effectiveness of cleaning services in terms of infection control (an issue which is developed elsewhere in this paper). To underline the importance of cleanliness within the hospital they pointed to recent research that suggests that for every case of SRSV notified there are over 1500 others that are not, and that a cycle of infection may exist between hospitals and the community linked by contaminated environmental surfaces.

Other cases (Corcoran and Kirkwood, 1999) suggest that the absence of good quality cleaning increases the risk of an outbreak of infection. In this particular case, the outbreak occurred in a ward in which the routine level of cleaning was 'suboptimal' (one cleaner for two hours a day). In response a major cleaning programme was introduced with other measures to bring the outbreak under control.

Again, a study by Rampling et al (2001) illustrates the vital importance of thorough cleaning, even when other standard responses have been taken. An outbreak of MRSA was met by a panoply of standard infection control responses (an emphasis on hand hygiene, isolation of affected patients and staggered closure and cleaning of ward bays). However this failed to control the outbreak, and it dragged on for nearly two years until it was decided to double the cleaning hours (from 66.5 to 123.5 hours per week) with an emphasis on dust removal through vacuum cleaning and allocation of responsibility for the routine cleaning of shared medical equipment. This finally resulted in the control of the outbreak. The researchers concluded: 'Hospital dust is important in the epidemiology of MRSA, *C. difficile* and other organisms that cause hospital-acquired infections' (Rampling et al, 2001)

Murphy (2002) cites similar research in France which found that environmental objects were a source of infection for an outbreak of *A. baumannii* and that this was only brought under control through a combination of measures including handwashing and meticulous cleaning of the Intensive Care Unit (Pina et al 1998).

Other researchers have noted that while hand-washing is widely recognised as the single most important factor in preventing infection, 'the hospital environment may be another important, but neglected, factor in hospital cross-infection' (French et al, 2004). Dealler (2004) relates several anecdotal reports in support of the view that environmental contamination is significant in MRSA colonization and infection.

History of competitive tendering and contracting out

In 1979 when the Conservatives came to power there was no mention of competitive tendering or contracting out in their manifesto of that year. They simply claimed that 'the reduction of waste, bureaucracy and over-government will [also] yield substantial savings', referred to the waste of 'local direct labour schemes' and pledged to 'provide safeguards against unfair competition from direct labour' (Conservative Party, 1979).

The 1983 election manifesto contained references to tendering for services in the NHS, central government, local government and transport:

To release more money for looking after patients, we will reduce the costs of administering the Health Service. We are asking health authorities to make the maximum possible savings by putting services like laundry, catering and hospital cleaning out to competitive tender. We are tightening up, too, on management costs, and getting much firmer control of staff numbers (Conservative Party, 1983).

Perhaps unsurprisingly, there was no noticeable increase in the money available for patient care, although there were several rounds of tax cuts.

What may have begun as a pragmatic way of meeting a number of different but related objectives (cutting public expenditure, reducing staffing levels in the public sector, weakening public sector unions) came to be seen as part of the emergence of neo-liberal ideology at governmental level in the UK (Grimshaw et al, 2002).

Although influenced by principal-agent and public choice theories and enthusiastically embracing both contracting out and its cousin privatisation, the Conservatives imposed their own pragmatic limits on their crusade. Happy to sell off state owned enterprises and to contract out support services in the public sector, they stopped short at what was seen as the politically risky option of large scale private sector involvement in the clinical side of the NHS or core activities in other public services (ironically, it took a Labour government to make that step).

Instead they introduced a whole series of reforms in the public sector (the NHS internal market, Local Management of Schools, the Financial Management Initiative and Next Steps Agencies, the Private Finance Initiative) designed to introduce markets or to replicate some of the market's disciplines within the public sector by various proxy measures such as the purchaser provider split.

The Conservative government abolished the Fair Wages Resolution in 1983. This was seen by the unions as timed to coincide with the introduction of competitive tendering (Wing, 2003). The Resolution obliged contractors carrying out work for the public sector to abide by the wage rates of the equivalent public sector worker. It had effectively operated as a disincentive for contractors to cut wages and conditions as a way to compete for contracts with in-house teams. Its repeal marked a move away from, if not an abandonment of, the 'model employer' approach in which the public sector set an example to the private sector. From the 1980s on, the public sector was urged to emulate the private sector.

What Le Grand and Bartlett (1993) called public service 'quasi-markets', with some amendments, have continued under the post 1997 Labour governments. This reinvention of government model (Osborne and Gaebler, 1992) around an 'enabling state' using markets and contracts has the state focus on its 'core' activity, leaving peripheral activities to the private or voluntary sector - 'sticking to the knitting' (Peters and Waterman, 1982).

As Deakin and Walsh (1996) pointed out, under the Conservatives the market did not completely replace hierarchical control in the public sector although the balance shifted towards a contract-based service. Under new Labour the aspects of this change identified by Deakin and Walsh – purchaser-provider split, development of contracts and quasi-contracts, and trading systems based on prices and user choice – have all continued and been developed further.

The election of the new Labour government in 1997 saw a process of continuity and

development rather than complete change. The language of new Labour is less hostile to the public sector and there is more public money available for investment. However, despite the talk of first, stake-holding (Hutton, 1995), and then partnership, the fundamental line of march remains the same: private sector solutions are required for public sector problems (Grimshaw et al, 2002).

Public sector reform through competition and markets is now part of the received wisdom of both major UK parties. Although the details may be disputed, 'modernisation' is bipartisan. 'What matters is what works' (Blair, 1998) has joined the other clichés like 'steering not rowing' (Osborne and Gaebler, 1992) in the lexicon of public sector managers and politicians.

The NHS has been a prime laboratory for public sector reform for both main parties (Pollock, 2004). A landmark in this process was in 1983 when the then Tory Health Minister Gerard Vaughan issued Department of Health and Social Security Circular HC (83)18 - Health Services Management: Competitive Tendering in the Provision of Domestic, Catering and Laundry Services. This instructed Health Authorities to put catering, cleaning and laundry services out to competitive tender.

Up until this time, there was little NHS contract cleaning (Milne and Wright, 2004). Only 2% of current expenditure on NHS cleaning in England went to contractors in each of the financial years 1982-83 and 1983-84 (Milne, 1993; Milne and Wright, 2004). What NHS contract cleaning did exist was usually for the cleaning of NHS offices. Not many English NHS hospitals used contract cleaners and not a single Scottish hospital did so (Milne and Wright, 2004).

By ordering NHS management to contract out cleaning (as well as catering and laundry services), a new market was created for private sector firms, and contract cleaning in the NHS became big business. As in other areas of the public service opened up to contractors (Davies, 2002), large multinationals gradually moved in to take advantage and build dominating market shares.

The motivation for contracting out was a mix of political and economic reasoning. Pollock (2004) argues that it formed part of a more generalised programme of 'efficiency savings', and the tactical advantage of contracting out (as opposed to cutting nationally agreed staff wages or conditions) was that it could be passed off as a local decision. Dancer (1999) speculates that cost cutting targeted cleaning services because such cuts did not directly affect waiting lists.

The general economic justification was that contracting out would result in lower costs. A number of studies on the cost impact of competitive tendering in the NHS suggested that it leads to savings of around 20% (Domberger et al, 1987) or even more (Milne and McGee, 1992). However a recent study of contract cleaning in Scotland (Milne and Wright, 2004) argues that previous research over-estimated the cost savings, and the authors raise the possibility that the relatively small cost savings observed could simply be the result of 'small reductions in the quality of the cleaning services delivered'.

Although the new Labour government ended the "Compulsory" element of Compulsory Competitive Tendering (CCT), contracting out cleaning in hospitals has continued. If anything the NHS is a growing area for the private sector, partly because of the increased use of NHS Private Finance Initiatives schemes and other attempts to bring in private sector providers. Cleaning contracts often form part of PFI schemes or cleaning is covered in wider support services or facilities management contracts within a PFI.

Extent of contracting out in the NHS

Information on the extent of the contracting out of cleaning services across the NHS is not held centrally (Hansard, 2000) although Unison estimates it to be 30% of cleaning services (Unison, 2002). Neither does the government, or the Department of Health, hold a central list of recommended contract cleaning companies (Hansard, 2002).

Today the NHS contract cleaning business is dominated by a few large companies, several of which are foreign multinationals. Unison (2003) report that the contract cleaning market in the NHS was worth £330 million in 2000. They also report that contracts awarded in the last seven years show a trend towards multi-service contracts in the NHS combining a number of services

together into one contract. According to Unison this is because of the increased number of long term PFI contracts and the desire of companies to cut costs by targeting large contracts which offer economies of scale.

The large multinationals that dominate cleaning, are repositioning themselves as facilities managers able to provide a range of services to the NHS. Long term multi-service contracts are very attractive to the companies for obvious reasons. For example, Danish multinational ISS was awarded a 30 year contract worth more than £5 million a year, to provide facility services for the Hairmyres and Stonehouse Hospitals NHS Trust in East Kilbride, Scotland. The company was also given the option to extend the contract by another 30 years (ISS, 1998)

The top four firms (ISS, Compass, Sodexho and Rentokil Initial) are estimated to have 51% of all NHS contracted out services (Unison, 2003). No longer restricting themselves to one or other service, these companies now offer combinations of services including cleaning, catering, portering, reception, parking and security services.

During the 1980s and 1990s market concentration took place as the major companies grew through acquisitions. This concentration in the industry and the shift to a multi-service, facilities management role can be seen from the following table.

Table 6: Contractors in the NHS

Company	Country of parent company	Share of all NHS contracted out services %	Share of all NHS PFI facilities management contracts %
ISS	Denmark	18	14
Compass	UK	15	N/A
Sodexho	France	11	5
Rentokil Initial	UK	7	N/A
Davis Service Group	UK	5	N/A
OCS group	UK	4	N/A
Interserve	UK	N/A	12
Carillion	UK	N/A	9
Jarvis	UK	N/A	7
Balfour Beatty	UK	N/A	5
Other	N/A	40	48

Source: Unison 2003

The government clearly does not see any potential conflict of interest in the National Health Service developing an increasing reliance on a small group of large multinationals for the provision of an essential support service. This is unsurprising given the government's enthusiasm for the involvement of the private sector in the NHS (Department of Health, 2002)

Even where competition exists at first, evidence from the US healthcare system suggest that even 'highly competitive systems eventually default into systems where competition reduces and may cease' (Smyth, 1997). There is a danger that 'repeated competition and contracting will weaken government and its elected leaders in relation to private providers who may be completely unaccountable' (Smyth, 1997).

The problems of responsibility can become far worse if there is a chain of sub-contractors involved in the service provision with blame for service failure being passed up and down the line. In this situation, far from improving transparency, a contracts system is more opaque than a traditional hierarchy.

Identifying the problems

Introduction

As the 1990s wore on and the decline in standards of hospital cleanliness began to be apparent, a growing number of researchers, medics and politicians blamed this decline on costcutting in general and contracting out in particular.

Cost cutting and contracting out blamed for dirty hospitals

In an evaluation of cleaning regimes and standards, Griffith et al (2000) note that 'there are concerns that trends in cost containment may be contributing to dirtier hospitals and a decline in the provision of domestic services'. In doing so, they echoed the fears of the Infection Control Nurses' Association (ICNA/ADM, 1999). In its report (1998), Resistance to antibiotics and other antimicrobial agents, the House of Lords Science and Technology Committee reported that contracting-out of cleaning services has 'complicated' hygiene in hospitals. According to the Committee, cleaners are not responsible to the ward sister, it has become difficult to instil high standards and pride in the job and that although there are wider problems of basic hygiene within the NHS, the situation has been 'exacerbated by the contracting out of cleaning services' (House of Lords, 1998).

Other researchers share this view, observing that 'during the past 15 years, hospital cleaning services have been targeted for cost-cutting in the NHS' (Rampling et al, 2001). They remarked that it is now openly acknowledged that many hospitals are unacceptably dirty. In her review of studies of hospital infection, Dancer (1999) observed that contracting out of hospital cleaning services has 'further contributed toward falling standards'. This point is emphasised by Barrett et al's call for an improvement in the quality of cleaning 'where direct control has now often been lost to outside organizations' (Barrett et al, 1998).

The government's own data shows the extent of the problem. It hardly seems a coincidence that in one of the government's first surveys of hospital cleanliness (the 2001 Patient Environment Action Team review, referred to earlier) four of the five trusts running the ten hospitals identified as having the worst standards of cleanliness in the NHS employed private contract cleaners (Butler and Batty, 2001). More broadly, 20 out of 23 of the hospitals that had poor standards of cleanliness used contract cleaners (Unison, 2002).

The House of Lords Committee of Science and Technology (1998) highlighted an example of the dangerous implications of cost cutting in contracting out, in what the economists call the 'quality-shading hypothesis'. This occurs when a contractor's incentive to reduce costs overrides the incentive to maintain or improve service quality (Domberger and Jensen, 1997). The ICNA drew the Committee's attention to the problem of cheap soap – especially important given the place of regular hand washing in infection control:

Purchase of soap is usually the responsibility of the cleaning contractor; some contractors buy cheap substandard soap. With repeated use of such soap, nurses may acquire chronic skin lesions on their hands, which render them vulnerable to chronic colonisation with MRSA. This poses no special threat to their own health; but of course it carries a risk to their patients, and sometimes means that the staff concerned must spend long periods off work (House of Lords, 1998).

In response to questions from MPs about the nature of cost savings and anecdotes about penny-pinching by contractors on cleaning materials, Sir Alan Langlands, then Chief Executive of the National Health Service Executive told the Commons Public Accounts Committee: 'what I cannot support as Accounting Officer is a false economy. There is no point in cutting back on expenditure if that creates a bigger and more difficult problem for the medium and long-term' (Committee of Public Accounts, 2000). As the example above illustrates, all too often this is exactly what happens in hospital cleaning, but as Rampling et al (2001) commented: 'In the long term, cost-cutting on cleaning services is neither cost-effective nor common sense'.

In the 2001 guidelines for preventing HAI, commissioned by the Department of Health, the authors noted the falling standards in the cleanliness of hospitals since the introduction of CCT and the internal market (Pratt et al, 2001). In the same year, the NHS Estates published its National Standards of Cleanliness for the NHS. In it the document reported that during the 'extensive consultation' with the public preceding the NHS Plan, it became clear that not only did patients believe that standards of cleanliness had dropped in recent years, but that many blamed this on the introduction of Compulsory Competitive Tendering (CCT) and the internal market. The document simply stated that 'CCT has now been discontinued.' (NHS Estates, 2001a). In his Foreword, the Secretary of State himself acknowledged that 'compulsory competitive tendering has gone – because it failed to raise standards' (NHS Estates, 2001a).

The ending of Compulsory Competitive Tendering did not mean the end of either competitive tendering or the contracting out of cleaning services. And concerns continued to be raised about cleaning service quality within the NHS.

Effects of competitive tendering and contracting out on cleaning service quality

The question that needs to be answered is: what is it about competitive tendering and contracting out that contributes to problems of service quality in hospital cleaning. Removing the compulsory element is an insufficient response if there are inherent problems associated with the process. It is the contention of this paper that this is the case and the following paragraphs develop this argument.

There are a number of serious problems resulting from the practice of competitive tendering and contracting out of hospital cleaning, many of which are well documented and are not new (PSPRU, 1992; TUC, 1994). Some of these problems arise from the nature of the tendering process itself and present themselves whether the contract eventually goes to the private sector or not. Some are specific to private contractors carrying out the cleaning work for the NHS. Our interest rests on the effects on service quality and the concomitant impact on infection control.

There are two sets of issues: those related to the effects of tendering (whether or not the service is contracted out) and those related specifically to contracting out. Both are examined in the following paragraphs.

The effects of tendering

The next section considers the impact of tendering on cleaning services under the broad headings of costs and effects on staff (including staffing levels, pay and conditions, recruitment, retention, and absence levels).

Quality or cost?

The Department of Health (2004) recently proclaimed: 'We want to ensure that cleaning contracts are driven by quality, rather than price; no matter who provides the service. Therefore we will work with NHS Estates to develop a model cleaning contract for hospitals by the autumn'. The focus on quality was welcomed by the cleaners' union, Unison. General Secretary Dave Prentis said: 'Under the previous government the cheapest bid always won the contract. It is good to see that we are moving back to quality - because quality and efficiency in health terms isn't just about saving money it's about saving lives and avoiding pain' (Unison, 2004b).

New guidance on contracting for cleaning has now been published – but however, many caveats about quality may be attached to it, one of the main objectives of competitive tendering is to drive down the cost of a particular service through competition between prospective providers.

There is a substantial literature around this issue. The proponents of contracting out argue that it produces major cost savings (and there is a body of research in support of this position). Some researchers remain unconvinced about the scale of savings possible with contracting out. Opponents of contracting out point to research that suggests that the savings are simply cuts in services or cuts borne by the workforce in one way or another. Finally, some research suggests

that any cost savings are simply the result of costs shifted elsewhere externalised*) and carried by the wider society. This argument is related to one that will be made later in this paper about the hidden costs of poor quality hospital cleaning.

From the introduction of compulsory competitive tendering in 1983, cost became the essential element of the process and among the many justifications deployed by Conservative ministers was that it would allow the public sector in general and the NHS in particular to concentrate on 'core business' (Osborne and Gaebler, 1992). It was argued that competitive tendering brought benefits even if an in-house team won the contract. It would drive down costs through market discipline; improve control and monitoring of the level and quality of service through the obligation to formally specify a contract for services; induce higher motivation and productivity among managers and workers by periodic renewal of contract, and; increase flexibility, capacity to adapt to change and potential for innovation (Domberger 1998).

Great claims were made for cost savings under competitive tendering and a significant amount of research has been carried out on the impact of contracting out on costs, most of it arguing that extensive savings are made (Bosch, Predraja and Suarez-Pandiello, 2000; Domberger and Jensen, 1997; Domberger et al, 1986; Gradus and Dijkgraaf, 1997; Ohlsson, 1998; Parker and Hartley, 1990; Reeves and Barrow, 2000; Stevens, 1978; Szymanski and Wilkins, 1993; Szymanski, 1996).

However Deakin and Walsh (1996) are sceptical about claims for the efficiency impacts of market mechanisms, claiming that many studies rely on assertion or on surveys of management perception'. They refer to Van Horn's comments about US research (1991):

When pressed, few officials could supply any hard evidence to support their claim that private contracting was cheaper than government service delivery. If cost comparisons were ever made they were forgotten. Without any pressure to change, most officials have long since decided that they would rely on private firms to perform a range of local county and state government services.

There is also a considerable literature that argues that if cost savings are made, they are at the expense of either quality of service, the jobs, pay and conditions of the workforce or other externalised costs 2 (Deakin and Walsh, 1996; Ganley and Grahl, 1988; Kelliher, 1995; Kelliher and McKenna, 1988; Kerr and Radford, 1994; Milne, 1997; Painter, 1991; Pinch and Patterson, 2000; Reimer, 1999; Sachdev, 2001; Sachdev, 2004) – in other words, where this occurs it 'does not represent a genuine improvement in overall productivity and is more like a transfer of value away from employees' (Maltby and Gosling, 2003).

The source of savings

The source of any savings made is of relevance to the extent that it affects the quality of service. If direct cuts in standards of the cleaning service are the source of the savings then obviously this will have a direct impact on infection control. However, cost savings made at the expense of jobs, pay and conditions can have an indirect (but important) impact on the quality of service, and it is this issue that will be explored in the next section.

Contract cleaning is a labour intensive service. It is estimated that staff costs account for 93 per cent of the cost of cleaning, the other seven per cent going on cleaning equipment, materials and consumables (Auditor General for Wales, 2003). Given such a position, 'efficiencies' are

** Unacknowledged externalised costs may be significant. Apparent savings at the localised level of the contract may cause higher expenditure elsewhere, for example in the social security budget (Escott and Whitfield, 1995). Research shows that competitive tendering has an adverse impact upon local and regional economic development (Pinch and Patterson, 2000) - particularly in those areas with a high proportion of public sector employment. Reimer (1999) found that local politics influenced where multinationals put in bids for local authority work and that consequently there is a development of spatial clustering which will result in the driving down of wages in particular areas of the country. Contracting out will have 'concrete impacts upon localities, ultimately reinforcing insecure and precarious employment' (Reimer, 1999). In a separate study, research showed that the damaging effect of contracting out on the regional economy particularly hit women workers (Reimer, 1999a). Rarely do any of these costs appear in equations about value for money.*

largely at the expense of staff in one way or another. Arguably, there is even less scope in cleaning than in other services for the savings and efficiencies supposedly brought by private sector management techniques or technical innovation. Quiggin (1996) claims that cleaning has very limited scope for either technical or organisational innovation and that 'the claim that there exist unexploited changes in cleaning methods permitting a twenty per cent increase in output with no increase in effort or reduction in service quality seems inherently implausible'.

In truth the source of any savings has never been much of a mystery. As early as 1986, the government accepted that 'most of the savings from contracting arises because contractors offer poorer conditions of employment' (HM Treasury, 1986). Once the Fair Wages Resolution was abolished in 1983 by the Conservatives, the Department of Health and Social Security circulated health authorities to tell them that they should not specify either rates of pay or conditions of service for the staff of contractors (Milne, 1987). This immediately put in-house teams at a disadvantage as their pay was covered by Whitley Council agreements and bonus schemes. But even if contractors matched the basic Whitley Council rates (which some did), Milne and McGee (1992) showed that the contractor was unlikely to continue with an equivalent to the local bonus scheme (which could add a third to cleaners' basic wage). Secondly, overtime and weekend premium rates were often cut or abandoned by contractors and finally, hours of work frequently reduced in order for the contractor to reduce the costs of National Insurance contributions (Sheaff, 1988). Pensions provision was also usually worse for contracted out cleaners.

Legal decisions on the application of the European Acquired Rights Directive through the Transfer of Undertakings (Protection of Employment) Regulations extended a limited degree of protection to those workers transferred to the private sector when their jobs were contracted out. Pensions protection has also since improved and contractors are now expected to provide a 'comparable' pension scheme to transferees. However, there is no guarantee against change over time and new employees were completely unprotected. A two tier workforce was created in which transferred workers from the public sector retained their pay and conditions upon transfer but new employees of the contractor could receive completely different (almost always worse) pay and conditions to their co-workers.

The limited impact of TUPE can be seen from a study which found that 'on average total costs are lower for external contractors than for in-house providers, mainly because they make fewer payments in addition to basic rates, such as Saturday enhancements, unsociable hours payments, and bonuses' (Auditor General for Scotland, 2000).

An unpublished, but leaked report from the Office of Government Commerce reportedly accepted that 'efficiency savings' came from cuts in staffing and some lowering of pay rates and that 'contracting out had led to a reduction in numbers employed, some change in the terms of transferred public sector workers, and new workers being offered different terms and conditions to transferred employees' (Wintour and Maguire, 2002).

Competitive tendering has a similar effect on staff even if the in-house team wins. 'The very process of tendering – in which labour costs are a critical component – acts as a brake upon wage increases, as the higher the pay levels, the greater the cost of the bid and the less likelihood of its success' (Sachdev, 2004). NHS cleaners often forfeited part, or all, of their bonus to make the in-house bid more attractive (Milne and McGee, 1992). Like contracted out cleaners, in-house teams also saw reductions in overtime and weekend enhancements, as well as a cut in hours worked (Office of the Deputy Prime Minister, 1997). And although basic rates were covered by Whitley Council agreements, labour costs for cleaning could be further reduced by not filling all vacancies as they occur (Milne and McGee, 1992).

The research on savings in contracting out is supported by related evidence on the source of savings in Private Finance Initiative (PFI) schemes, particularly in the prison sector (National Audit Office, 2003; Sachdev, 2004). The following exchange between a member of the House of Commons Public Accounts Committee (PAC) and the Commissioner for Correctional Services is instructive:

Q75 Jon Trickett: Is it not a fact that the privatisation process, or the PFI process, has been used to overcome a culture of resistance to change and to reduce cost by basically cutting wages and conditions for staff?

Mr Narey: That is certainly true.
(Committee of Public Accounts, 2003)

This underlines one of the conclusions of an earlier PAC report, in which the Committee commented that the reason privatised prisons had lower running costs than publicly run prisons was explained by lower wage rates and staffing levels, less generous pension and sick leave arrangements and longer working hours (Public Accounts Committee, 1998). Five years later the NAO found that officers in privatised prisons remained at a disadvantage for these reasons, compared to prison officers in publicly run facilities (Comptroller and Auditor General, 2003).

Effect of low pay and poor conditions on recruitment, retention and absence levels

The Matron's Charter (Department of Health, 2004c) notes that cleaning a hospital is not an easy task and depends on a skilled and committed cleaning staff that is part of the wider NHS team. However, much of the way that hospital cleaning is organised militates against this.

Contracting out brings with it low pay, poor conditions, an intensification of work and a decline in job satisfaction (Hebson et al, 2003; Reimer, 1999; Young, 2000). In such circumstances, it is hardly surprising if labour turnover and absence becomes a problem. Several studies have revealed problems relating to recruitment, retention and sickness absence among cleaners in NHS hospitals.

In a tight labour market, low pay obviously causes problems. A study conducted by the Auditor General for Scotland illustrates the point. The pay offered at the time (January 2003) ranged from £4.10 to £4.86, with an average of £4.25. Significantly, the study found little difference between rates paid by external contractors or in-house teams. This suggests that the process of competitive tendering or market testing drives down wages regardless of whether the contract remains in-house or goes to an external contractor. In any event the Auditor General found that rates at all of the hospitals were well below the basic hourly rate of £5.02 offered by local authorities, which are one of the main competitors for staff (Auditor General for Scotland, 2003).

A similar picture exists elsewhere in the UK, In Wales the majority of hospitals pay their domestic staff wages at or around the minimum wage, and most hospitals experience some difficulty in attracting staff, especially long-term staff. Pressure on resources caused by staff vacancies results in parts of the hospital or parts of the day going uncovered and cleaning not completed to set specifications. About a quarter of the 2,000 domestic cleaners in major acute NHS hospitals in Wales have been in post for less than six months, with the result that experienced cleaners are thin on the ground. Management teams and supervisors often have to step in and carry out cleaning duties themselves (Auditor General for Wales, 2003).

If anything the private sector is worse. Poor pay and conditions are endemic in the contract cleaning industry – even among staff working for the larger multinationals. Unison recently highlighted one case of contract cleaners in Barnsley District General Hospital who work for Initial Hospital Services, a subsidiary of Rentokil Initial (Unison, 2004). It took a threat of strike action before an agreement was reached. Prior to this agreement staff were paid £4.50 an hour, and received only five days sick pay a year. According to the union, long hours, poor pay and understaffing contributed to heavy workloads and a 100% turnover rate. In February 2004, there were 39 vacancies out of 200 staff.

Recruitment and retention

In-house provision clearly provides management with more control over recruitment, which can be an important means of predicting the quality of service (Milne, 1987).

Half of Scottish hospitals reported difficulties in recruiting and holding on to cleaning staff (Auditor General for Scotland, 2003). This is not a problem peculiar to Scotland. In Wales, recruitment and retention of cleaning staff has also proved difficult. A high staff turnover rate causes complications in the management of cleaning services (Auditor General for Wales, 2003). Several hospitals reported that they had insufficient domestic staff to complete the required cleaning hours. One hospital had a turnover of 82 per cent in the nine months prior to the National Audit Office Wales visit.

There is evidence to suggest that the position is worse for contractors than for directly employed cleaning services. Research in Scottish hospitals showed that in 1998/1999 average staff turnover among external contractors was 40% compared to 23% for in-house staff. Furthermore, turnover among cleaning staff with traditionally defined cleaning duties (more common at external contractors) was higher when compared with staff with non-traditional job descriptions (Auditor General for Scotland, 2000).

Sickness absence

In Scotland sickness absence among hospital domestic staff was identified as a major problem. The average rate of sickness absence among domestics in Scotland is 7.6%. (Auditor General for Scotland, 2000) compared with 4.2% among all employees in the UK. Similarly, cleaning services in major acute NHS hospitals in Wales also experience high levels of sickness absence (Auditor General Wales, 2003). Calculations based on figures provided by nine of the 15 trusts in Wales suggest that ancillary workers lose 8.1% of contracted hours as a result of sickness absence (Auditor General for Wales, 2004).

Interestingly, trusts which have improved their MRSA scores also have lower levels of staff sickness as indicated by higher staff sickness grade scores (Comptroller and Auditor General, 2004).

Impact of high turnover and absence

The new Matron's Charter (Department of Health, 2004c) recognises that there are advantages in keeping the same domestic staff on the ward: they become part of a team and patients as well as nurses like to see the same staff every day. Problems of high turnover cut across this. A combination of high staff turnover and sickness absence can result in skill shortages, reduced quality of service or service disruption, under-cleaning, and increased costs (Auditor General for Scotland, 2000).

In a Welsh study, eleven of the 17 hospitals visited, reported that 'difficulty in recruiting and retaining cleaners was a major factor hindering them from cleaning their hospitals to a satisfactory standard' (Auditor General for Wales, 2003). A further study found that half the trusts responding considered that hospital cleanliness was adversely affected by poor staff retention and problems recruiting staff (Hempshall and Thompson, 1998)

A recent report (Comptroller and Auditor General, 2004) identified staff shortages and reliance on temporary agency staff as a continuing issue for many trusts, particularly in London. The NAO noted that staff shortages, reliance on temporary staff and the increased use of unqualified staff has a damaging effect on good infection control practice. This is also the view of the 1998 Working Party which produced guidelines for dealing with MRSA. One of the factors they identified as hampering infection control measures was inadequate numbers of nursing and other staff, inappropriate skill mix, poor inter-professional relationships or a shortage of senior staff involved in ward management (Ayliffe et al 1999).

The Auditor General for Scotland described how the cleaning frequencies or output standards specified were at risk from high levels of sickness absence and high turnover. 'Data collected at one hospital demonstrated that nearly one third of planned cleaning hours were lost due to vacancies, sickness absences and leave. Only 2% of this shortfall was made up by overtime' (Auditor General for Scotland, 2000).

In a study (Auditor General for Scotland, 2003) conducted three years later, the problem appeared to be just as bad. Ward staff pointed to insufficient staff hours or cleaning frequencies as the explanation for problems of lack of cleanliness. Understaffing resulted in cleaning being carried out the requisite number of times but with reduced staff time, or the correct numbers of staff but less frequently than required. Other problems included insufficient time to do the work adequately, relief staff brought in to cover areas with which they were unfamiliar and supervisors taken away from monitoring the work and having to fill gaps caused by staffing shortfalls.

The effects of contracting out

There are a number of specific problems related to the contracting out of cleaning services (including difficulties in drawing up contracts, commercially confidential information, lack of flexibility, lack of trust and monitoring, difficulties of imposing sanctions, separation of cleaning service, damage to the public sector ethos, problems of and health and safety and training). These are examined below.

Difficulties in drawing up contracts

It is acknowledged that it is extremely difficult (and expensive) to construct contracts for complex services (Deakin and Walsh, 1996). However, it is not always easy to do so even for relatively straightforward services and Deakin and Walsh argue that in building cleaning, where performance is difficult to observe, contracting out has not improved quality and may have actually deteriorated (1996).

A study published by the Association of Chartered Certified Accountants (Edwards et al, 2004) on PFI in roads and hospital stated that government advice about contracts needing to focus on output specifications is difficult to put into practice, especially in complex practical situations such as cleanliness in a dynamic environment like a hospital.

The reason for this may lie in the fact that contractors are ultimately responsible and accountable to their shareholders and therefore have little incentive to go beyond the levels specified in their contracts (Deber, 2002). Rigid working to contract by the contractor means that there is great pressure to ensure that contracts include all eventualities, unlike with the provision of in-house services in which priorities can be adjusted and changed to meet unforeseen circumstances.

The problem of contractors working strictly to contract is exacerbated in services like hospital cleaning (Toynbee, 2003) in which it is sometimes unclear whether cleaning has been done to the required standard of hygiene (ironically, when contracting out was introduced one of the Tories' aims was to remove the 'rigid demarcations' imposed by 'inflexible' unions). A surface that appears visually clean may actually be seriously contaminated and a health risk. As Collins (1988) points out: 'Unfortunately, in a dispute with the cleaning contractor claiming an area has been recently cleaned and the manager insisting that it's dirty, both can be right.'

A Scottish study (Auditor General for Scotland, 2003) found that although some hospitals had no reported difficulties with external contracts, others identified the fact that contracts with external providers are not always specific enough to ensure acceptable levels of cleanliness and may allow for repeated non-compliance with targets for levels of cleanliness.

In a separate case, a report into an outbreak of salmonella in the Victoria Infirmary in Glasgow identified the inadequacies of the contract specification as part of the problem and reported long standing staff concerns about the quality and frequency of ward cleaning (Scottish Executive, 2002). Following the outbreak, the contract had to be renegotiated with the contractor.

Contractors and commercially confidential information

Information (both management and financial) on all aspects of a hospital's activity is essential for current operations, evaluation and future planning. By introducing markets and private sector operators into the activities of the public service, there is a danger that access to information will clash with the private company's view of commercial confidentiality. Information may not be routinely shared because it is seen as having a market value. Evidence from Scotland illustrates that the provision of information on cleaning generally was inadequate, but that hospitals whose cleaning is contracted out have even less management information than is the case with in-house provision, particularly with regard to financial data on staff costs and input hours. At the time of the initial bid contractors may provide details of input hours, staff rosters, but the hospital or trust then has to base all future assumptions on this initial information (Auditor General for Scotland, 2000).

This is a serious failing, undermining the drive to control quality and value. All hospitals, especially those using external contractors, were urged by the Auditor General to 'review the amount and quality of management information they receive, to ensure it is adequate for them to

monitor and more importantly control quality and value' (2000).

Lack of flexibility

The removal of cleaning from direct control and its replacement by a contractual relationship can cause problems relating to inflexibility of response. Before cleaning was contracted out, Collins (1988) argues that if additional cleaning was necessary in response to an infection outbreak it was relatively easy to get it done. Once a commercial contract comes into play, the 'frequency, materials and methods are defined in a contract and cannot readily be altered to respond to a change in infection hazard requirements, at least not until the task has been costed and allocated to a particular budget.'

Consequently, a sharp turn away from the routine activity of cleaning services – for example in response to a gastrointestinal outbreak - is difficult if not impossible, with serious healthcare repercussions. Collins (1988) identified this inflexibility as a likely cause of increasing disputes between health bodies and contractors as medical staff demanded responses to infection outbreaks.

Flexibility can be compromised in other respects too. Research in Scotland (Auditor General for Scotland, 2000) found that contract cleaning staff were more likely to have traditional, narrowly defined and inflexible cleaning roles, as compared with in-house cleaners with expanded, more flexible job descriptions including other duties such as bed making, plant care, and portering. This is contrary to the view that the private sector offers a flexibly deployed workforce in contrast to the sclerotic regime of the public sector.

Monitoring and lack of trust

Paradoxically, despite the fact that contracting out rests to a certain extent on the view that it is possible to both draw up an effective specification before the contract and monitor it during the contract, the attempt to do just that can damage the relationship between contractor and public body.

Once a contract exists for the provision of a service like cleaning, it changes the relationship between the actors and there is a diminution of trust (Boyne, 1998). Imposition of intense monitoring exacerbates this and thus can even be counter-productive (McMaster, 1995). The cost of monitoring can also be considerable. A World Bank study suggested that monitoring contracts can be 30% higher than monitoring the direct supply of services (Shaw, 1999).

The lack of trust embraces not only the relationship between the contractor and the public body, but as Benson and Littler (2002) point out, contracting out is associated with lower trust among the organisation's directly employed staff, and that this low trust environment almost certainly has 'a negative impact on firm performance due to lower employee effort and higher turnover'. Often seeing the presence of contractors as a future threat to their own jobs, public service workers find it demotivating working alongside staff from private agencies (Audit Commission, 2002).

Difficulties of imposing sanctions

Monitoring of contractors performance rests, in part at least, on the threat of sanctions. Most contracts with private sector providers have penalty clauses for non-performance. However there are strong pressures on the purchaser not to use these sanctions. To do so would almost certainly damage, perhaps irrevocably, the relationship between purchaser and provider. This might not matter if a market existed with many competitors ready to replace a failed contractor. However this is not always the case.

The ultimate sanction in a contractual relationship is the right of termination if the contractor fails to meet the terms of the contract. Again, this sanction may be more apparent than real. For a variety of reasons, the buyer may not wish or feel able to apply sanctions or terminate the contract despite poor performance from the contractor.

Researchers noted this in relation to Private Finance Initiative (PFI) contracts but the same applies to stand alone contracts: 'When things go right the private sector makes significant gains. When things go wrong it sometimes appears to be difficult for the public purchaser to impose very significant penalties on the private contractors' (IPPR, 2001). The Public Accounts

Committee rebuked the Prison Service, remarking that it 'should not shy away from terminating prison contracts' (Committee of Public Accounts, 2003). This 'asymmetry about risk transfer' (Ball et al, 2003) is shown in several high profile PFI cases: the Benefits Agency Payment Card Project, the Contributions Agency National Insurance Recording System (NIRS), the Passport Agency IT contract and Lambeth's housing benefits contract (Pollock and Price, 2004; Centre for Public Services, 2002; Simons, 2000).

In the NIRS case, the contractor, Andersen Consulting, paid a fraction of the cost of the delays in compensation. Dawn Primarolo, the Treasury Minister, admitted that the government would not demand compensation for fear of damaging future relationships (Pollock et al, 2001).

For NHS cleaning contracts, in the three years from May 1997, only eight cleaning contracts triggered penalty clauses (and one of those was a combined services contract covering cleaning; laundry; sterile supplies; patient transport; dairy supplies; taxi services) (Hansard, 2000a). This suggests that the contracts in these three years were either of a very high calibre; the specifications and penalty clauses were poorly drafted; or few health authorities felt able to impose sanctions. The penalties were mainly fines ranging from £4,817 to £51,000; one contract was terminated (Hansard, 2000b).

The number of cleaning contracts terminated as a result of poor performance in the NHS acute hospitals is interesting. In 2000, only one contract was ended, in 2001 there were two and in 2002 just six (Hansard, 2003).

The fact that there were so few activated penalty clauses or terminations even though the 2001 audit of cleanliness in the NHS found that the dirtiest hospitals in England were being cleaned by contract cleaning companies (Butler and Batty, 2001) suggests that these sanctions are not easily or readily applied.

Separation of the cleaning service

Another of the problems of contract cleaning is that cleaners are separated from the rest of the healthcare team. This has two affects: the first relates to the cleaners and their attitudes to the job; the second to the position of cleaning services and its place within an integrated healthcare operation. On the latter point Corcoran and Kirkwood (1999) argue that although cleaning is critical to infection control, in many hospitals its management 'has been lost to outside organizations' resulting in uncoordinated and inconsistent cleaning protocols.

It is also argued (McMaster, 1995) that cleaners in hospitals see themselves differently to more general building cleaners. They perceive themselves as part of a wider team acting within the Hippocratic ethos. Separating them away from the rest of the ward team (as contracting out does) is likely to damage the general commitment of all staff to the goals of the organisation (the hospital or the NHS), what McMaster (1995) calls the 'overall welfarist or Hippocratic objectives of the contracting authority'.

At the Scottish Executive's Ministerial Convention on HAI in 2001, it was proposed that 'a comprehensive local approach to equipment and the physical environment is required' linking estate management, domestic cleaning and infection control. Furthermore, measures should be considered to better integrate domestic staff into ward-based clinical teams:

Domestic staff are low paid yet have a significant potential role in infection control. Permanent staff are preferable to temporary staff, and in-house cleaning staff are preferable to agency staff (Scottish Executive, 2002b).

In a separate discussion at the Convention on HAI related standards, it was reported that, obstacles to implementing standards included staffing shortages, time constraints and contracting out, which diminished 'the opportunities for a teamwork, partnership approach... Contracting out of domestic services can hinder maintaining infection control procedures and standards (Scottish Executive, 2002b).

The team-based approach (linking clinical and non-clinical staff) and flexibility of response that is required for an optimal response to infection control is undermined by the use of external contractors.

Damage to the public sector ethos

This relates to a more general discussion about the public sector ethos. Problems arise at both ends of the contractual hierarchy. Rubery et al (2002) identify the presence of multiple employers as a cause of 'contradictory pressures for organisational commitment' (2002). They ask whether employees feel their responsibilities at work lie with their direct employer or with the wider enterprise or network organisation (Rubery et al, 2002).

It is not just the pull of different organisational loyalties but also of the divergent philosophies of the public and private sectors. Staff and managers in the different sectors have different perceptions and are motivated by different things. The public sector ethos values service, duty and obligation, while the approach of the private sector values financial viability, profit and shareholder value (Audit Commission, 2002). Many would agree that the public sector also embodies values relating to equity, universality, democracy and accountability, impartiality and integrity, honesty and altruism (Pratchett and Wingfield, 1996).

Concern about the damage to the public sector ethos from contracting out is not universally held. Brereton and Temple (1999) argue that the public sector ethos should be replaced by a public service ethos, reflecting the importance of the consumer, synthesising 'formal regulation and clear lines of accountability, suitably informed by the new consensus currently being forged across traditional private/public divides'. The shift from procedural matters to concern with outputs is, they argue, 'a defining aspect of the new public service ethos.'

The Commons Public Administration Select Committee agreed that Compulsory Competitive Tendering (CCT) weakened the public service ethos. By worsening employment conditions it demotivated staff and led to long term quality problems. However the Committee speculated that this may have been more to do with CCT's cost-driven private involvement in public services than from 'any intrinsic link to the private provision of services' and that while 'the profit motive may put it under strain', it is possible for private and voluntary bodies to uphold a public service ethos (Public Administration Select Committee, 2002)

A study of public service job insecurity found that workers' identification with public service goals remained quite robust. However this could be jeopardised by some aspects of public sector restructuring: 'If public service organizations abandon the kinds of employment practice which have differentiated them from their private sector equivalents... such as the avoidance of redundancy, then a likely effect will be a reduction of employee commitment.' (Heery, 2000). Hebson et al (2003) agreed, arguing that contractual relationships with private sector organisations present 'a significant threat to these [public sector] values'.

Health and safety and training

Researchers have pointed to the possibility of problems occurring because of contractors' lack of awareness of health and safety and infection control policies and the importance of cleaning standards (Ayliffe et al, 1999). Contracting out can also lead to health authorities losing control of the necessary specialized training for cleaners in the use of effective procedures, equipment and materials (Ayliffe et al, 1999).

The House of Lords Science and Technology Committee pointed out that it is 'especially difficult' to ensure training of contract cleaners. The Committee also reported the ICNA's fears that although training requirements may be written into the contract, this is often cut because of cost. This is despite the fact that domestic staff have a greater need of induction training, as a result of high turnover and lack of basic knowledge (House of Lords, 1998).

Putting infection control at the centre of hospital healthcare: externalities and the big picture

In 1998 the House of Lords Committee on Science and Technology recommended that ‘...purchasers and commissioning agencies should put infection control and basic hygiene where they belong, at the heart of good hospital management and practice, and should direct resources accordingly... such a policy will pay for itself quite quickly’.

Six years later, in its 2004 report on HAI, the National Audit Office emphasised that ‘infection control must be everyone’s responsibility, from clinicians, cleaners and ancillary workers to patients and relatives, but evidence that this message has been adopted is scarce’ (2004).

In 2000, the NAO’s report showed the marginalisation of infection control in that only half of infection control teams said they were usually consulted on the letting of cleaning, catering or laundry contracts and 25% were never consulted (Comptroller and Auditor General, 2000).

The NAO recommended that NHS trusts: ‘ensure that they comply with the newly published infection control standards by consulting infection control teams when purchasing equipment, planning alterations or new hospital building and the letting of service contracts etc’ (Comptroller and Auditor General, 2000).

In its response to the Health Committee’s report on the role of the private sector in the NHS, the government reassured Committee members by referring to the Department of Health’s PFI guidance for trusts which proclaims that clinical staff and other departments are to be represented on the PFI project board and project teams from the start. The government emphasised that it encouraged trusts to involve fully clinicians and other health staff throughout the design process (Department of Health, 2002).

However, the evidence does not support this. The NAO found that 27% of infection control teams were never consulted about PFI building plans and its latest report (Comptroller and Auditor General, 2004) shows what little progress has been made in other contracts as well:

Table 7:
Consultation with infection control teams on wider hospital activities

	% always/generally consulted	% sometimes consulted	% never consulted
Reviewing contracts for domestic and cleaning services	58	20	16
Reviewing contracts for laundry services	56	18	21
Reviewing contracts for catering services	34	21	38
Reviewing Private Finance Initiative building plans	40	12	27

Source: National Audit Office census of acute NHS trusts, Summer 2003 (cited in Comptroller and Auditor General, 2004)

In its 2004 report the NAO strengthened its earlier recommendation to propose that NHS trusts should require consultation with infection control teams to be a mandatory step in contract tendering procedures for new build projects, and for cleaning, laundry and catering services (Comptroller and Auditor General, 2004).

Hospital cleaning has a vital place in infection control but for too long cleaning services have been the Cinderella of hospital healthcare. Seen as a soft target in the drive for efficiencies and with little influence at court, cleaners have been under-valued, cut back and contracted out.

The aggregate costs of this policy of contracting out are enormous. Although the policy was supposedly designed to cut costs, this is only ever true if the cost consequences elsewhere are ignored. The impact on HAI victims' health is bad enough but the financial costs of both infection outbreaks and the control of such outbreaks create a heavy and unnecessary burden on both the National Health Service and on society more widely.

As Wilcox and Dave (2000) point out, there is some debate about the methods and estimates of the costs of HAI to both the health service and wider community, but there can be no doubt that 'the socio-economic burden of HAIs and the potential for savings and/or health gains if even only a small proportion of HAIs are prevented' (Wilcox and Dave, 2000).

One of the main costs associated with HAI is extended periods in hospital – HAIs are estimated to increase length of stay by an average of 11 days (Comptroller and Auditor General, 2004). Ironically there is also a positive association between length of stay in intensive care in hospital and MRSA acquisition (Marshall et al, 2004). Not only does the incidence of MRSA infection generate additional cost, but it also reduces patient through-put, and there are obvious costs to the patient and to the wider community (House of Lords, 1998)

Just as examples, 'a UK hospital outbreak of MRSA, a post-operative wound infection and a case of antibiotic-associated *Clostridium difficile* diarrhoea cost approximately £400,000, £1,000–£2000 and £4,000, respectively' (Wilcox and Dave, 2000).

The overall cost of this is estimated to be up to £1 billion a year (Comptroller and Auditor General, 2004). The NAO also reports that up to 15 per cent of these infections are avoidable, thus potentially saving the NHS at least £150 million. The authors of the report upon which the NAO figures are based (The Socio-economic Burden of Hospital Acquired Infection) argue that both the figures relating to the numbers of infections a year and the annual cost are likely to be serious underestimates – particularly the numbers of infections (Plowman and Roberts, 2000). This is because the estimates do not take into account infections occurring in adult, non-daycase patients admitted to specialties not covered in the study (approximately 30 per cent of all adult, non-day case admissions to NHS hospitals in England in 1994-95). Nor does it take into account infections occurring in day cases, children and neonates or infections which are detected after discharge from hospital. Consequently the cost estimates are also under estimates.

Plowman et al (1999) show that HAI imposes costs on the hospital, the primary health-care sector, community care services, individual patients and their family and friends. They found that patients with one or more HAIs during their in-patient stay incurred costs, on average, 2.9 times greater than those for uninfected patients. After adjusting for other factors that might influence length of stay, they estimated that these patients remained in hospital, an extra 11 days longer than uninfected patients. Those with more than one HAI incurred the highest costs (on average, 6.6 times greater than those for uninfected patients). When they left hospital they had greater contact with their GP, visited the hospital more frequently for outpatient appointments and received more visits from district nurses compared with uninfected patients. They took longer to resume their normal daily routine and longer to return to work. The researchers also estimated that HAI patients incurred additional personal expenditure for such things as drugs and dressings of £4.74 million annually.

The Department of Health has not commissioned any research on the likely economic and health impacts of improved hospital cleaning. However, some work has been done by the National Patient Safety Agency (NPSA) on the related issue of the economic case for hand hygiene (2004).

NPSA identified both financial benefits and patient benefits. The former included cost savings to the hospital as a result of reduced numbers of HAI, reduced costs incurred by primary care providers, patients and carers after discharge, reduced costs of litigation and compensation and production gains in the wider economy due to fewer working days lost.

Patient benefits include potential lives saved as a result of reducing HAI-related fatalities as well

as the benefits associated with preventing non-fatal HAIs. These were measured in QALYs (Quality Adjusted Life Years).

The NPSA research claims that with the relatively modest expenditure related to the widespread provision of alcohol rubs, there are gains for individual hospitals, taxpayers and society at large. A conservative estimate of a 9% reduction in the rate of HAI was assumed to be achievable as a result of an increase in hand hygiene compliance to 76%. Updating Plowman et al's figures, the NPSA study calculates that if each patient who contracts an HAI stays in hospital for an extra 11 days, they will generate extra costs of £3,777. Excess primary care costs for each patient would be about £24, and they would incur an extra £7 more in personal costs such as dressings and drugs. They require an additional day and a half of informal care post discharge, with an estimated average opportunity cost of around £149. Patients who contracted an HAI during their inpatient phase, on average took six days longer to return to work than uninfected patients.

Using these various assumptions, the NPSA study provides a national estimate of the financial savings suggested. By the fifth year of such a policy, total national financial savings are projected to reach almost £140m a year or a total of more than £430m over five years. The patient benefits are estimated to equate to about 450 lives saved each year.

Obviously the costs of the alcohol rub regime and promotion should be set against the prospective financial savings, but these are relatively minor.

The costs of improving the cleaning service by improving staffing levels, pay and conditions of cleaners within an in-house service would similarly represent a sound investment. Figures on the cost of infection and infection control should inform decisions about resource allocations for cleaning. It is argued that generalised approaches such as improving the quality of cleaning are likely to be more effective than specific MRSA-related control measures (Barrett et al, 1998) both against this particular virus, but also across the board in the area of infection control.

Prevention of an infection outbreak is cheaper, less disruptive and avoids or minimises risk and discomfort to patients. Rather than attempting to control an MRSA outbreak after it has begun, resources would be more effectively directed at 'areas of more fundamental importance, including education, cleaning and the improvement and maintenance of ward fabric' (Corcoran and Kirkwood, 1999).

Discussion and conclusion

Hospital acquired infections can have a devastating effect on victims' lives. The repercussions of the infections on healthcare financing add an unwelcome and unnecessary additional burden.

Research suggests that a regime of well-resourced, high quality cleaning could play a vital role in combating HAIs. However, up until now, the government has remained wedded to a doctrinaire position of competitive tendering and contracting out of cleaning services.

Much of the government's recent activity on the issue of infection control appears an attempt to mitigate the worst effects of a regime of competitive tendering and contracting out while avoiding a recognition that it is an integral part of the problem.

The recent emphasis on the power of the new matrons to withhold payment for poor cleaning services (Department of Health, 2004), the Matron's Charter, the wider use of housekeepers are all welcome but as the evidence cited in this paper shows, to create an integrated healthcare team requires more than paper powers, or inviting the contract cleaners to the staff Christmas lunch.

Many public services are difficult to measure. Even relatively straightforward services such as cleaning have added complexities in a hospital environment. Monitoring is not straightforward, particularly in a dynamic environment like a hospital. This causes difficulties in ensuring a clean environment and inflexibilities created by contractual relationships further hinder the effective deployment of resources and expertise required for infection control.

There is disagreement as to whether the alleged savings from contracting out exceed the transaction costs associated with it, but it is certainly the case that there are unacknowledged and externalised costs associated with contracting out cleaning. Patients bear these costs in terms of their health, the taxpayer in terms of the additional finance and cleaning staff in terms of job insecurity, additional workloads and erosion of conditions.

In October 2004, the Secretary of State for Health, John Reid told the new Chief Nursing Officer that her top priority is the reduction of MRSA and dealing with HAI (Department of Health, 2004b). In November 2004, he announced a target to halve MRSA bloodstream infections in hospitals by March 2008 (Department of Health, 2004a). This is an ambitious target and as this paper has argued, high quality cleaning can play a major part in this.

Contracting out cleaning services is clearly not the only reason for the spread of the HAI in general or MRSA infection in particular: poor hand washing practices and antibiotic policies, excessive movement of patients, shortage of beds and rapid patient throughput and higher than recommended levels of bed occupancy to meet performance targets, the lack of suitable isolation facilities, and a lack of sufficient beds to separate elective and trauma patients all militate against infection control (Comptroller and Auditor General, 2004; Dancer, 1999; Scottish Executive, 2002b). Hand hygiene in particular is of critical importance in infection control, but so is high quality cleaning. And the advantage of cleaning is that it is achievable whereas it will always be difficult to control antibiotic prescribing or to ensure total compliance with hand washing (Dancer, 1999).

Contracting out was introduced as part of a marketisation of public services. The associated rhetoric of 'choice' disguises its opposite with the imposition of a single model of service provision – one that may cut costs but is unable to focus on quality. Many of the current problems were inherited from previous Conservative governments with their ideological perspective that the public sector has all the problems and the private sector all the answers. Inheriting problems is perhaps unavoidable but after seven years of a Labour Government, time is long overdue for a review of the impact of market testing on hospital cleaning standards. The contention of this paper is that real progress can be made by taking the simple and effective step of bringing hospital cleaning back in-house and providing sufficient resources for decent pay and staffing levels. After all, what matters is what works.

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