

A clean bill of health?

A review of domestic services in Scottish hospitals

PUBLISHED BY AUDIT SCOTLAND

APRIL 2000



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ACKNOWLEDGEMENTS

This report was commissioned and prepared by the Accounts Commission as part of its previous responsibility for the audit of NHS bodies in Scotland.

This study was carried out by Lucy Johnston and John Simmons, under the general direction of Caroline Gardner, Director of Health and Social Work Studies.

We are grateful to the staff of the 114 hospitals who took the time to collate the management and financial information, good practice case studies and other material requested for this report. We are also grateful to our advisors for their support and constructive suggestions through the course of this study. (Advisors are listed in Appendix 2).

Audit Scotland takes sole responsibility for the contents and conclusions of this report.

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Summary

Introduction

Effective cleaning of hospital wards is essential for the health and safety of both patients and staff, and makes an important contribution to the quality of care patients experience. However, there is a growing perception that standards of cleanliness in hospitals have been declining¹. Domestic services play a key part in minimising the risk of hospital acquired infections, which have serious consequences for patients and lead to significant costs to the NHS. A recent National Audit Office report² estimates that about 9% of inpatients have a hospital acquired infection at any one time, and that the costs of treating these infections may be as much as £1,000 million each year. If the same infection rates apply in Scotland, this would equate to 10,000 infections a year at a total cost of some £100 million.

As well as their importance in maintaining the quality of care, cleaning services account for significant expenditure, at around £54 million in 1998/99³. The service employed over 8,000 people (4,000 whole time equivalents) in 1997. The vast majority (95%) are women who work part time. Our report shows, however, that there is wide variation in the costs of cleaning. Some of this variation is explained by factors such as the size of the hospital. But there is also wide variation due to differences in the role of domestic staff, and in the level of the cleaning service provided. Understanding and reducing these differences will help hospitals to improve the quality of cleaning and lower costs.

Assuring quality

Managing domestic services is a complex activity. Choices need to be made about where domestic staff should be based and what their role should be. There can be real advantages in basing domestic staff on individual wards, so that they can work as part of the ward team and develop more flexible roles. Domestic staff are based on 93% of the wards in our sample. However, we found few instances where hospitals have gone further to develop truly multi-functional working; it is still rare for domestic staff to carry out other tasks for patients, such as making beds and changing linen.

It is vitally important that the required level of cleaning service is specified in ways which can be monitored and action taken when problems arise. Because of the importance of achieving adequate standards of cleanliness, and the difficulty of assessing whether this has been achieved in practice, services are best specified by a combination of clear minimum frequencies for specific cleaning tasks, and descriptions of the results that are required. We found that almost 90% of hospitals have set minimum frequencies, but there are 14 hospitals where no minimum has been specified. These hospitals run the risk

¹ Infection Control Nurses Association and the Association of Domestic Management, 'Standards for environmental cleanliness in hospitals', April 1999.

² National Audit Office, 'The management and control of hospital acquired infection in acute NHS trusts in England', HC 230 1999-2000, February 2000.

³ NHSIS Information & Statistics Division, 'Scottish Health Service Costs', Year ended 31 March 1999.

that problems with their cleaning service may be difficult either to identify, or to resolve by agreeing corrective action.

Recommended minimum frequencies for cleaning were set by the Scottish Health Management Efficiency Group (SCOTMEG) in 1987⁴, with the recommendation that they should be considered as a baseline to ensure acceptable standards of cleanliness and hygiene. Most trusts accepted these recommendations. Our evidence shows, however, that many trusts have since changed their planned frequency for specific tasks; overall, the planned frequency for cleaning ward toilets, sinks and baths is below the recommended frequency in 30% of wards. Other tasks are carried out more frequently than the recommendations; for example hard floors are cleaned more often in 56% of wards.

Eighty one percent of hospitals report that their current cleaning frequencies have been approved by the infection control team. This leaves 21 hospitals which either have not specified minimum frequencies, or where frequencies have not been approved by the infection control team. And, since our data show that many hospitals have minimum frequencies which are below those recommended by SCOTMEG, this suggests that some hospital infection control teams are approving under-cleaning (against the SCOTMEG standards), or are being consulted at too broad a level to affect the hygiene of individual wards. Neither is satisfactory.

Equally important, our evidence suggests that many hospitals may have trouble achieving the cleaning frequencies or output standards that they have specified because of high levels of absence due to sickness and high turnover. Data collected at one hospital demonstrated that nearly one third of planned cleaning hours were lost due to vacancies, sickness absence and leave. Only 2% of this shortfall was made up by overtime. This level of under-cleaning raises serious concerns about quality, and risks failing to achieve minimum levels of infection control.

Managing costs

There is a wide variation in the cost of hospital cleaning. The cost per m² ranges from £6.53 to £49.63, while the average is approximately £24.50. As staff costs account for 90% of expenditure on hospital domestic services, the composition of the staff bill has a direct effect on total costs. The staff cost per input hour ranges from £3.68 to £8.21. This variation is not explained by basic pay, but instead by differences in enhanced payments for overtime, weekend working and bonuses, and by differences in productivity.

The proportion of the wages bill which is accounted for by non-basic pay varies significantly between hospitals, from 8% to 48%. Higher enhanced payments are associated with higher costs overall. These payments offer scope for savings to hospitals, both by planning cleaning work to be carried out in core working hours as far as possible, and by negotiating pay structures with staff which minimise enhanced payments and concentrate instead on fair, flexible basic pay rates.

⁴ Scottish Health Management Efficiency Group, 'Domestic Services Part 1', August 1987.

Productivity is more difficult to analyse, since there are few reliable and comparable indicators of the quality of cleaning. However there are some clear patterns. First, economies of scale are important: small hospitals cost more to clean per m² than larger hospitals. At the same time, though, there is significant variation among hospitals of similar size, and these variations cannot be explained by the type or age of the hospital, the staff cost per hour, or the role of domestic staff. This means that there are two main possibilities:

- high productivity is a result of good management, which ensures that cleaning is well organised and that staff costs are tightly controlled, or
- high productivity is a result of poor quality or low frequency of cleaning.

At present, hospitals cannot demonstrate that their cleaning services are effective and achieve value for money because of the lack of any comparative indicators of the quality of cleaning. This has taken on new importance with the introduction of a formal responsibility for clinical governance. Hospitals with low levels of productivity clearly need to take action to tackle this while maintaining or improving the quality of cleaning, but those with high productivity also need to act to ensure that this is not achieved at the expense of standards of cleanliness. And further work is required by all hospitals to develop information which will allow meaningful comparisons to be made in future. This means agreeing, collecting and analysing information which can be used to identify potential problems and explore their causes, including indicators of the quality of cleaning which is achieved in practice.

Introduction

Background

Domestic services play a key part in ensuring a safe environment for patients and staff of the NHS in Scotland. Effective cleaning is essential in maintaining a healthy and safe hospital environment, and contributes to the quality of care which patients experience. However, there is a growing perception that standards of cleanliness in hospitals have been declining⁵, together with an increasing concern for hygiene and cleanliness in clinical environments. High standards are necessary to minimise the risk of infection.

As well as the importance of the quality of cleaning, there are important cost issues. Domestic services are a major NHS support service, accounting for around £54 million in 1998/99⁶. The service also employs a large, though reducing, number of staff within the NHS: over 8,000 people (more than 4,000 whole time equivalents) in 1997⁷. The vast majority (95%) are women who work part-time.

In the 1980s, SCOTMEG produced two action plans that recommended ways to achieve revenue savings and improve the efficiency of domestic services. These recommendations included minimum frequencies for key cleaning procedures and tasks, and it was anticipated that cost variations would reduce as hospitals implemented consistent cleaning procedures and standards. However, despite the SCOTMEG recommendations being almost universally adopted at the time, new data collected for this study confirm that costs still differ widely. Domestic services managers have in the past identified a range of possible reasons for the wide variation, including hospital characteristics such as size, age, and type of hospital, and the floor covering used.

Our findings show that some of the variation is explained by differences in hospital size, and by problems in determining the true cost of cleaning. However, cost and quality differences also arise from variations in management, in the role of domestic staff, and in the level of the cleaning service provided. Understanding and reducing these differences will help hospitals to improve the quality of cleaning and reduce costs.

The importance of domestic services was reinforced by the NHS Management Executive's guidance '*Management of support services in the NHS in Scotland: quality and value*'⁸, which emphasised the contribution that domestic staff make to the overall quality of the patient environment and their experience in hospital. The guidance also set out the expectation that trust boards should systematically assess the quality and value of their support services, measuring their performance against that of other trusts and comparable organisations.

⁵ Infection Control Nurses Association and the Association of Domestic Management, '*Standards for environmental cleanliness in hospitals*', April 1999.

⁶ NHSIS Information and Statistics Division, '*Scottish Health Service Costs*', Year ended 31 March 1999.

⁷ NHSIS Information and Statistics Division, '*Scotland Workforce Summary*', 1999.

⁸ MEL(1998) 32, '*Management of support services in the NHS in Scotland: quality and value*'.

This report will support trusts in reviewing, comparing and improving their domestic services, by:

- providing national data to help trusts interpret and understand their current performance
- providing information on the policies and practices which affect the cost and quality of domestic services
- helping managers to improve the standard of cleanliness in hospitals by identifying the impact of different work practices
- assisting non-clinical support services managers to devise effective ways to review and compare domestic services.

Scope and methodology

We requested data from all Scottish trusts for hospitals with at least 75 staffed beds; in some smaller trusts, this was reduced to 50 staffed beds. In addition data was requested for wards in four clinical specialties:

- medical assessment/admissions
- orthopaedic
- acute psychiatric
- long stay (care of the elderly).

The data included:

- the size and layout of the hospital
- management and organisation of domestic staff
- staffing
- cost
- some basic quality information, such as cleaning frequencies and standards.

All Scottish trusts responded, returning data for 114 hospitals. Of these, 90 have in-house domestic services. In addition we received data for 213 individual wards, covering 92 hospitals. All trusts were given the opportunity to review and confirm the data they provided. A profile of the hospitals and wards is given in Appendix 1. A number of hospitals were unable to provide all the data requested, so some of our analysis does not cover all 114 hospitals; we have identified where gaps may affect our findings or conclusions.

It is not possible to make direct comparisons between the figures we have collected and those available in '*Scottish Health Services Costs*'⁹, since there are differences in the areas included. For example, we have included theatres and laboratories which are excluded from the nationally available data. The problems associated with data on hospital domestic services are discussed later.

External auditors will be auditing hospital domestic services in Scottish trusts until October 2000. If new data are generated by these audits, Audit Scotland will update the indicators for use by managers locally.

⁹ NHSIS Information and Statistics Division, '*Scottish Health Service Costs*', Year ended 31 March 1999.

Assuring quality

Introduction

A high quality domestic service will:

- maximise the contribution which domestic staff make to the quality of patient care
- work closely with the infection control team, and have their approval for minimum cleaning frequencies which ensure high standards of cleanliness and minimise infection risk
- be supervised and monitored to ensure compliance with agreed inputs, processes and outcomes
- be managed actively to minimise absence and turnover levels among staff.

Maximising the contribution of domestic staff

Recent guidance from the NHS Management Executive¹⁰ reinforced the importance of domestic services, by emphasising their contribution to patient care. This contribution can be maximised by widening the role of domestic staff to include more generic support functions, and by including them in the core patient care team.

Although it is unusual now for domestic services to operate as a separate function, the way in which domestic services are managed does vary among trusts. The service is usually grouped with other non-clinical support services, particularly catering and portering, but also security and estates. We found two examples of domestic services managed by clinical directorates.

We have investigated two aspects of the role of domestic staff:

- where they are based in the hospital
- the extent to which their remit goes beyond traditional cleaning tasks.

Our data show that it is most common for domestic staff to be based in individual wards, as they are in 93% of the wards in our sample. The benefits of this way of organising domestic staff include¹¹:

- greater continuity of staffing
- better integration of domestic services with the ward routine
- a consistent approach
- increased job satisfaction for domestic staff (with associated benefits from improved retention and lower absence rates)
- increased flexibility at ward level
- a less fragmented service to patients.

A key issue for hospitals with ward-based domestic staff is how they are managed and supervised. This is discussed later in the report.

¹⁰ MEL(1998) 32, 'Management of support services in the NHS in Scotland: quality and value'.

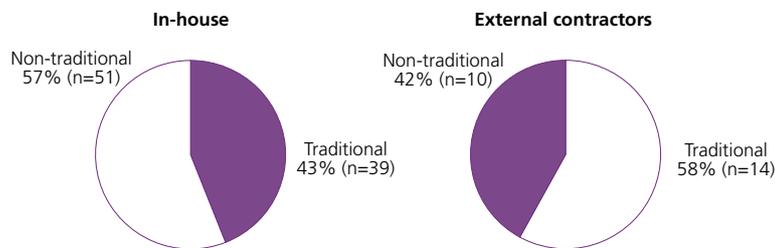
¹¹ Bernadette Friend, 'Role Dispersal', Health Service Journal, 21 September 1995.

There is significant variation among hospitals in the roles played by domestic staff. In broad terms, there are three main roles:

- domestic staff with a strictly domestic remit
- domestic staff with a wider remit, for example one which includes basic catering duties
- generic non-clinical support staff, with a remit covering many functions, including domestic services.

For the purposes of analysis, we have grouped those hospitals whose domestic staff have wider remits under 'non-traditional' remits. In-house domestic services are more likely to have non-traditional remits than those provided by external contractors. More than half of hospitals with an in-house service operate a non-traditional domestic service (Exhibit 1). Long-stay hospitals are more likely to employ domestic staff with non-traditional remits; this accounts for 69% of long-stay hospitals compared to 50% of acute hospitals.

Exhibit 1: Remit of domestic staff by type of provider



Source: Accounts Commission survey (n=114)

However, although our sample demonstrates that more than half of hospitals have widened the remit of their domestic staff, we found few examples of truly multi-functional working. This was recommended by SCOTMEG in 1994. The benefits of multi-functional or generic staffing include¹²:

- increased staff flexibility
- easier and more cost effective cover for sickness absence
- domestic staff can contribute more effectively to patient care
- training costs are shared with other functions
- increased job satisfaction, morale and staff retention.

Good practice examples

Hospitals in the Yorkhill Trust (Queen Mother's Maternity and the Royal Hospital for Sick Children) operate domestic services as part of the General Services Department. Staff are trained to cover portering, linen, reception and bed store services in addition to their core domestic duties. This broader range of duties means that there is less downtime, for example on night shifts. The more flexible working practices introduced, with an emphasis on training, have allowed the General Services team to meet financial and quality targets.

Ayrshire and Arran Primary Care Trust has a policy of introducing domestic services via housekeepers, who are also responsible for patient meals, drinks, linen, bedmaking, transfer and messenger services. For one hospital ward, the introduction of this service resulted in an estimated 18% drop in required nursing hours.

Kelso and Hay Lodge Hospitals, part of Borders Primary Care Trust have introduced multi-skilling between porters and domestic assistants. This was done to improve staff flexibility in these small hospitals. Multi-skilling improves the support services to wards and helps managers cover unplanned absences.

¹² Linda Phillips, 'Domestic Bliss', Health Service Journal, 16 October 1997.

However, there are also a number of risks in employing multi-function staff. Most importantly, hospitals have to ensure that the core work of the service - maintaining standards of cleanliness - is not compromised. Moreover, multi-function staff have different induction and training needs. Inadequate training of multi-function support staff increases risks¹³, and may undermine any anticipated benefits such as reduced cost and increased flexibility. Introducing generic staff may also increase costs, for example if tasks are transferred from care staff or nurses, which frees their time for other work, but releases no budget savings.

Although half of hospitals (53%) report that they employ non-traditional domestic staff, our findings show that the work of domestic staff remains very traditional in most wards. Where their roles have been widened from core cleaning tasks, the new responsibilities are only at the margin of patient-related activities, most frequently in preparing, serving and clearing patient drinks and snacks. Domestic staff are only involved in these types of duties in around half of responding wards. Wards with non-traditional domestic staff are only slightly more likely to have domestic staff serve patients drinks and snacks. It is still rare for domestic staff (whether traditional or non-traditional, ward-based or not) to carry out other patient-related tasks, although there is a blurring of lines between domestic and catering responsibilities (Exhibit 2).

Exhibit 2: Sample of patient-related tasks carried out by domestic staff in Scottish wards

Task	Percentage of wards where domestic staff carry out task
Fill water jugs and serve	70%
Make and serve beverages	57%
Patient flowers	21%
Serve plated meals	20%
Messenger service	15%
Make beds	10%
Change linen	4%
Portering service	2%
Helping patients eat	2%

Source: Accounts Commission survey (n=196)

Whether they have an extended remit or not domestic staff have sole responsibility for carrying out basic cleaning tasks such as cleaning floors, dusting surfaces, and cleaning toilets. The more frequently a cleaning task has to be carried out, the more likely domestic staff are to have sole responsibility for it. The only exception to this is the collection and disposal of refuse, a frequent task which is a shared responsibility between domestic staff and porters in 20% of wards.

¹³ Bernadette Friend, 'Role Dispersal', Health Service Journal, 21 September 1995.

The domestic duties of auxiliaries and nurses are limited to ad hoc tasks, such as cleaning spillages in bed and kitchen areas. It is very unusual for staff other than domestic staff to have responsibilities for cleaning sanitary areas.

Recommendations

- *All trusts should review:*
 - *how best to integrate the work of domestic staff with clinical care teams*
 - *how domestic staff contribute to the quality of patient care*
 - *how this contribution can be improved or maximised, including the implications for the cost and quality of the domestic service of widening domestic staff remits.*
 - *Trusts should assess the cost and the benefits of using generic support staff, addressing in particular the increased training requirements and the need to ensure that core cleaning duties are carried out.*
 - *The non-cleaning duties and hours of domestic staff should be made explicit in job descriptions.*
 - *Additional non-cleaning duties should not be incrementally added to the responsibilities of a post unless they are formally agreed and resourced.*
-

Cleaning frequencies

In the late 1980s SCOTMEG set out definitions and minimum frequencies for the main cleaning procedures in hospitals¹⁴. It recommended that these should be considered as a baseline to ensure acceptable standards of cleanliness and hygiene. Most trusts adopted these recommendations. However, these have been adapted over time in most hospitals, for example as the size, use and budget of the hospital has changed. These changes may have happened as part of a formal review of the service, or incrementally for individual areas of the hospital

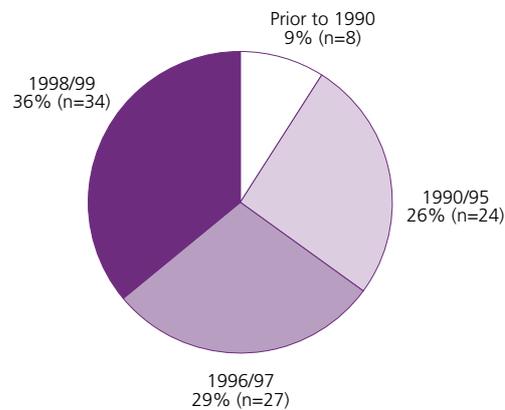
Case study - An independent review of domestic services

The Southern General Hospital, part of South Glasgow University Hospitals Trust, has used the British Institute of Cleaning Science (BICS) on a number of occasions to provide professional, independent verification of their domestic service specification. In particular, BICS assessed whether the service was appropriate for the hospital environment, and evaluated the actual standards of cleanliness achieved against this standard and their normal industry standard.

It is good practice for services to be reviewed regularly, particularly during times of fluctuating clinical service levels and changing NHS estate. One third of hospitals have not reviewed the service in the last four years (Exhibit 3).

¹⁴ Scottish Health Management Efficiency Group, 'Domestic Services Part 1', August 1987.

Exhibit 3: Year frequencies were last reviewed



Source: Accounts Commission survey (n=93)

It is important that the required level of cleaning service is specified in ways which can be monitored and action taken when problems arise. Because of the importance of achieving adequate standards of cleanliness, and the difficulty of assessing whether this has been achieved in practice, services are best specified by a combination of clear minimum frequencies for specific cleaning tasks, and descriptions of the results that are required.

Almost 90% of hospitals reported that they have set minimum frequencies for tasks. Of the 14 hospitals with no minimum frequencies, 10 use output specifications (which are discussed below). We compared the planned frequency of a selection of key domestic tasks with the frequency recommended by SCOTMEG. When they were issued, these frequencies were generally accepted to “maintain an acceptable standard of cleanliness within the NHS without the need for additional resources”. Nothing has happened over the intervening 13 years to suggest that the recommendations are not applicable to hospital cleaning today.

All hospitals were asked to record the planned frequencies for a range of tasks in wards over a seven-day period (Monday to Sunday). Data were returned for 196 wards in 114 hospitals.

The results demonstrate that the minimum standards for frequencies set by SCOTMEG have been reduced in many areas of the NHS (Exhibit 4). For example, SCOTMEG suggest that the toilets, sinks and baths of ward areas are cleaned fully seven times a week. The planned frequency is lower than this recommendation in 30% of wards. In many other wards, domestic staff clean above the recommended frequencies for some tasks; for example floor areas are cleaned more frequently than the recommendation in more than half of wards.

Exhibit 4: Comparison of ward and SCOTMEG frequencies for a selection of tasks

Area of ward	SCOTMEG recommended frequency of full task per week	Percentage of wards complying	Percentage of wards over-cleaning	Percentage of wards under-cleaning
Clean hard floors in bed area	5	34% (57)	56% (93)	10% (17)
Clean soft floors in bed area	5	40.5% (67)	51% (85)	8.5% (14)
Damp clean furniture and fittings in bed area	7	58% (96)	0% (0)	42% (70)
Clean basin, taps and surrounds in bed area	7	57% (95)	5.5% (9)	37.5% (63)
Clean hard floors in sanitary areas	5	26% (43)	66% (111)	7% (11)
Clean basins, WC, baths etc, in sanitary areas	7	52% (85)	18% (30)	30% (50)
Clean dispensers and holders in sanitary areas	7	50% (80)	8% (13)	42% (68)
Clean hard floors in ward offices	5	26% (38)	42% (62)	32% (48)
Clean basin, taps and surrounds in ward utility areas	7	57% (92)	4% (6)	39% (63)

Source: Accounts Commission survey

We also found differences among specialties. Orthopaedic and medical assessment/admission wards are more likely to have planned cleaning frequencies which meet the SCOTMEG recommendations for cleaning the floors of sanitary areas. On the other hand, under-cleaning of toilets, baths, sinks and dispensers in sanitary areas was most common in medical assessment/admission wards.

These figures relate only to planned cleaning frequencies. It may well be that the actual frequency of cleaning is lower than these figures suggest. The frequencies show only what is planned for a week with a full staff complement. Sickness absence rates and vacancies resulting from high turnover can reduce the level of domestic service that is achieved in practice (see case study).

Case study - Planned vs actual input hours and the impact on quality

Data gathered at one hospital illustrate that it is not unusual for staffing problems to greatly reduce the planned input hours for domestic services.

For the first quarter of 1999, an average of 17% of planned hours were vacant. For the same period, sickness absence reduced the hours by 6% and planned leave by a further 10%. The managers managed to cover only a fraction of these lost hours (2.5%) by using excess part-time hours at basic rate and overtime and enhanced rates.

Overall for this hospital during a 12 week period nearly one-third (30%) of the planned input hours were not provided in practice. This level of under-cleaning raises serious concerns about quality, and risks failing to implement the standards of cleaning required to control infection.

We found that wards with non-traditional domestic staff are more likely to implement SCOTMEG's cleaning frequencies for tasks in sanitary areas. Non-traditional staff are most likely to be employed by in-house providers (see Exhibit 1).

Trusts may have reduced the recommended frequencies for a number of reasons, including:

- general pressure to reduce expenditure in lower priority, non-clinical areas
- local circumstances, such as low patient throughput or changes in the types of patient treated
- demands from individual clinical areas or staff for a different level of service
- results of monitoring
- requests by contractors
- results of cost benchmarking.

It is important that these decisions are formally recorded and their impact monitored, to avoid making incremental changes which put infection control procedures at risk.

A number of hospitals have moved away from the SCOTMEG minimum frequencies because they use output specifications, which only detail the expected results of the service. Inputs such as staff hours and frequencies for tasks are not determined by the hospital, but by the providers, who are usually external contractors. Output specifications are used by 45% of the external contractors in our survey, compared to 16% of in-house providers. Overall, around a quarter of hospitals use this type of specification.

Output specifications can give the provider more flexibility in the use of their resources. However, they have been criticised since hospitals using them may relinquish control over minimum cleaning frequencies. Ambiguities in specifications can lead to less work being carried out than the hospital intended, and also make it difficult to monitor and control standards of cleanliness¹⁵.

Given the close link between inputs, processes and outcomes for domestic services, all hospitals should specify and implement minimum cleaning frequencies. The combination of clearly specified minimum frequencies and expected outputs should allow trusts to comply with MEL(1998)32's requirement to assess the quality and value of support services. This is important both to maintain the appearance of the environment and to help minimise the risk of infection within hospitals.

Recommendations

- *Changes to domestic services, especially frequencies, must be formally planned and documented and their impact monitored.*
- *Domestic services should be reviewed regularly. Particular attention should be given to reviewing the frequencies currently applied throughout the hospital, to ensure resources are not being wasted on over-cleaning, especially in non-priority areas.*
- *The review should also compare frequencies with SCOTMEG recommendations, and document the reasons for lower standards.*
- *Over-cleaning against SCOTMEG levels should be reviewed and justified.*
- *Regardless of the type of service specification used, all hospitals should specify the required minimum cleaning frequencies, especially in wards and other clinical areas.*

¹⁵ Cumming, M and Hill, B, 'Clearing away the cobwebs', The Health Service Journal, 31 January 1991.

Infection control

Hospital acquired infection is a major problem¹⁶. Around one in ten patients acquires an infection after admission to an acute hospital¹⁷. Such an infection can result in a longer stay in hospital, a longer recovery period, and extra stress and pain for the patient.

A recent study found that a patient in England with a hospital acquired infection spends two and a half times longer in hospital and costs an additional £3,000¹⁸. The report estimates that in England alone the problem costs the NHS £1 billion each year. If the same infection rates apply in Scotland, this would equate to 10,000 infections a year at a total cost of some £100 million. Domestic services play an important role in reducing the risks of infection in hospitals.

In recent years, at least four major reports have emphasised the importance of a consistent, high quality domestic service in minimising the risks of infection. In 1998, the House of Lords Select Committee on Science and Technology reported that it considers “hospital cleanliness, hygiene and related infection control to be at the heart of good hospital management and practice”¹⁹. In the same year, the Standing Medical Advisory Committee Sub-group on Antimicrobial Resistance stated that thorough work by domestic staff is “fundamental to preventing the spread of resistant organisms in hospitals”²⁰. This committee also highlighted the importance of setting standards for domestic services and handwashing.

The importance of high standards of ward cleaning to stop the spread of Methicillin resistant *Staphylococcus aureus* (MRSA) was highlighted in revised guidelines on the control of MRSA infection in hospitals²¹. And the Scottish Infection Manual recommends that hospital control of infection policies should cover domestic cleaning, and include descriptions of the way in which domestic staff should carry out their duties²². It also recommends that changes to domestic services, such as frequencies or service levels, should be made only after consultation and agreement with the hospital’s infection control team.

Eighty-one percent of hospitals report that the frequencies they currently use have been approved by the infection control team (Exhibit 5). For the 21 hospitals whose cleaning frequencies do not have infection control team approval, one third use output specifications, where the frequencies are decided by the provider and in many cases are not known by the hospital.

¹⁶ National Audit Office ‘*The management and control of hospital acquired infection in acute NHS trusts in England*’, HC 230 1999-2000, 2000.

¹⁷ Department of Health ‘*Hospital Acquired Infection: A Framework for a National System of Surveillance for the NHS in Scotland*’, The Scottish Office, May 1999.

¹⁸ Public Health Laboratory Service and the London School of Hygiene and Tropical Medicine, ‘*Socio-economic burden of Hospital Acquired Infection*’, 2000.

¹⁹ The House of Lords Select Committee on Science and Technology, ‘*Resistance to antibiotics and other antimicrobial agents*’, The Stationery Office, 1998.

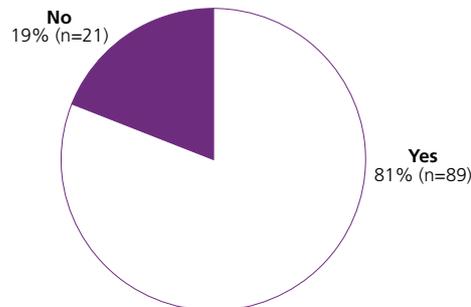
²⁰ Department of Health, Standing Medical Advisory Committee Sub-Group on Antimicrobial Resistance, ‘*The path of least resistance*’, 1998.

²¹ Ayliffe, J. et al, ‘*Hospital acquired infection: principles and prevention*’, 3rd edition 1999.

²² Department of Health ‘*Scottish Infection Manual*’, The Scottish Office, 1998.

These data, along with findings shown in Exhibit 4, suggest that some hospital infection control teams are either approving under-cleaning (against SCOTMEG standards), or are being consulted at too broad a level to affect the hygiene of individual wards. Neither is satisfactory.

Exhibit 5: Whether frequencies approved by Infection Control Team



Source: Accounts Commission survey (n=110)

Good practice example

Aberdeen Royal Infirmary of Grampian University Hospitals NHS Trust has an infection control policy specifically for domestic services departments. It covers cleaning methods, equipment and materials; specialised clinical areas, such as theatres and burns units; and staff health, including hand care and personal hygiene. This policy is updated annually.

The infection control nurse works closely with the domestic manager. This joint working has helped domestic staff overcome any unease or fears they may have about working in areas where there is a risk of infection. For some tasks, such as barrier cleaning, domestic staff are allocated time to shower if they wish.

The infection control nurse and domestic manager are currently working together to devise solutions for perceived high levels of dust. This multi-disciplinary approach helps ensure that the cause is accurately identified and resolved.

Nurses who are interested in becoming infection control link nurses are offered training which includes presentations and discussions with domestic management.

Hospital domestic staff need to be trained in the importance of their work in controlling infection, and how this can best be achieved. Most of what hospital domestic staff learn about the role they play in infection control is taught during their induction. It is therefore essential that induction training and all subsequent 'on-the-job' training is comprehensive in its coverage, and involves practical demonstrations of key risk minimising procedures, including the correct way to wash hands.

Good practice example

Ayrshire and Arran Primary Care Trust has an infection control guidance manual designed specifically for its hotel services staff. It was developed in conjunction with the infection control nurse and includes a related training programme.

Recommendations

- *Trust boards should be aware of the important role domestic services play in infection control and manage it as a key tool in minimising risk.*
 - *Trusts should ensure that the recommendations in the Scottish Infection Manual are implemented.*
 - *Hospital managers should ensure that there are effective links between domestic services and infection control teams.*
 - *Hospital control of infection policies should cover domestic cleaning and include descriptions of the way in which domestic staff should carry out their duties.*
 - *The infection control team should be proactive in approving the cleaning frequencies in use throughout the hospital. Approval should only be given after a review of detailed frequencies, other inputs, processes and outcomes rather than just of an overall service specification.*
 - *Consultation with the infection control team on proposed service changes be carried out to enable the team to have a genuine input to ward level cleaning frequencies and standards.*
 - *All hospitals should review their practice against the standards given in the 'Standards for environmental cleanliness in hospitals'.*
 - *Induction and ongoing training for domestic staff must cover infection control issues.*
-

Supervision and monitoring

Supervision and monitoring are essential in ensuring that domestic services are being delivered as planned. Failure to monitor and supervise domestic services can lead to a number of problems:

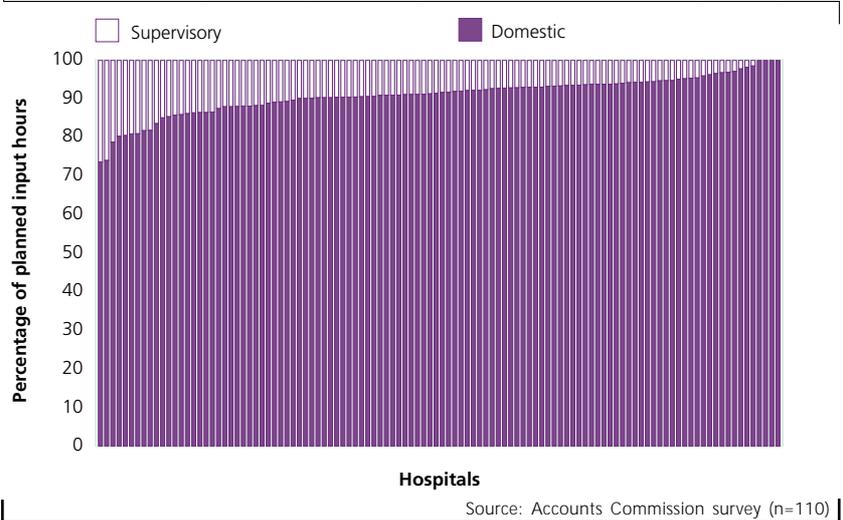
- staff not working to expected levels of productivity
- inadequate levels of cleanliness
- areas being cleaned unnecessarily or under-cleaned
- increased risk of infection
- accidents and injuries to staff, patients and the general public.

Every hospital should have an effective monitoring system in place. Our research shows that separate monitoring resources or teams are now rare for domestic services. In some hospitals domestic supervisors are also responsible for implementing the monitoring system, in addition to general oversight and supervision. Fewer than three-quarters (72%) of hospitals operate what they termed a 'formal' monitoring system for domestic services. Practically all of those without a formal system (90%) are hospitals with in-house providers. These 26 hospitals with in-house providers and no formal system are within 12 separate trusts.

All but four hospitals employ domestic supervisors who are responsible for overseeing the work of domestic staff. They are paid a higher rate per hour (on average 15% higher). Many supervisors undertake domestic cleaning duties in addition to their supervisory role. Planned, non-supervisory hours for these higher paid staff range from 2% of their weekly total to over 80%. This is not a cost-effective use of higher paid staff.

In many cases domestic supervisors are also responsible for matters such as discipline, recruitment, induction and on-going training. Supervisors need protected time for supervision and related administration. There is no recommended ratio of domestic to supervisory staff hours. Our survey reveals that the average ratio is one hour of supervisory staff to ten hours of domestic staff, but there is wide variation about this mean (Exhibit 6).

Exhibit 6: Percentage of total planned input hours - domestic and supervisory staff



There are two common concerns about the role of domestic supervisors in hospitals. First, supervisory staff are often not adequately trained or supported in their role. Supervisors are usually promoted from domestic staff roles; it is rare for supervisors to be employed in a hospital without first having worked there as a member of the domestic staff. For this type of career progression to work effectively, hospitals need to recognise that supervisors require different skills and experience. This means providing adequate training in managing people and in hospital policies such as sickness absence, together with support from their line managers in implementing these.

The second concern is that supervisors, because of their administrative workload (such as rota planning and organising cover), are often unable to oversee the work of domestic staff on-site. As many problems with cleaning services are identified through observation, it is essential that supervisors are out and about, witnessing the work being done and noting problems.

The majority of hospital domestic staff are based within wards. While this will assist the integration of their work with the core patient care team, it also raises issues about supervision. Members of domestic staff in effect have two 'managers' - the ward sister and the domestic supervisor. To ensure the smooth and effective provision of domestic services, the supervisory responsibilities of each should be explicit and clear, cleaning priorities should be set and the responsibility for monitoring should be shared.

One way of structuring the supervision of hospital domestic services is through formal quality processes such as Kings Fund accreditation. However, these paper-based systems should not be viewed as a substitute for a robust and tailored monitoring process and adequate supervision.

The role of staff, patients and visitors in monitoring

Patients and visitors are usually only involved in monitoring domestic services in a negative way, through making formal or informal complaints. Half the hospitals (49%) reported that formal complaints about their domestic services are the key way for patients to comment on the service. Two-fifths (39%) also said that patients could comment on the quality of domestic services by making ad hoc or informal complaints.

One third (33%) reported the use of questionnaires or surveys to ask for patient and visitor views. Of these 38 hospitals, five use a questionnaire to gather views annually, while seven are still developing their surveys.

Hospitals reported a range of other ways for involving patients in commenting on their domestic services; half (55%) of those with a formal monitoring system include the views of patients as part of this system.

While obtaining patient views is important, the responsibility for monitoring cleaning standards rests with the services management and all staff of the hospital. It is a management responsibility to ensure safe standards, as it is impossible for patients and visitors to comment on more than the appearance of cleanliness.

All hospital staff have a duty to ensure that the hospital does not just appear clean, but meets the standards required for the control of infection. Three-quarters of hospitals (76%) use formal methods to gather staff views. Staff who comment on domestic services should be aware of the planned processes and expected outcomes, to ensure their comments contribute to improved standards of cleanliness and not just appearance.

Recommendations

- *Hospitals should ensure that domestic services are monitored regularly and formally. The results of all monitoring should be reported to the appropriate managers, and appropriate action taken.*
- *Monitoring systems should be capable of reviewing the processes of cleaning and not just the inputs and outcomes.*
- *Hospitals should review the way in which their domestic staff are supervised. There may be gaps between the planned service and its implementation due to unplanned changes, staff shortages, inadequate training etc.*
- *The cleaning priorities and standards for ward-based services should be agreed with the ward manager. These standards should be supervised and monitored jointly.*
- *Hospitals should minimise the number of planned hours for which supervisors are paid a higher hourly rate for non-supervisory duties.*
- *Domestic supervisors should receive adequate and appropriate training and support, including protected time for administrative duties.*

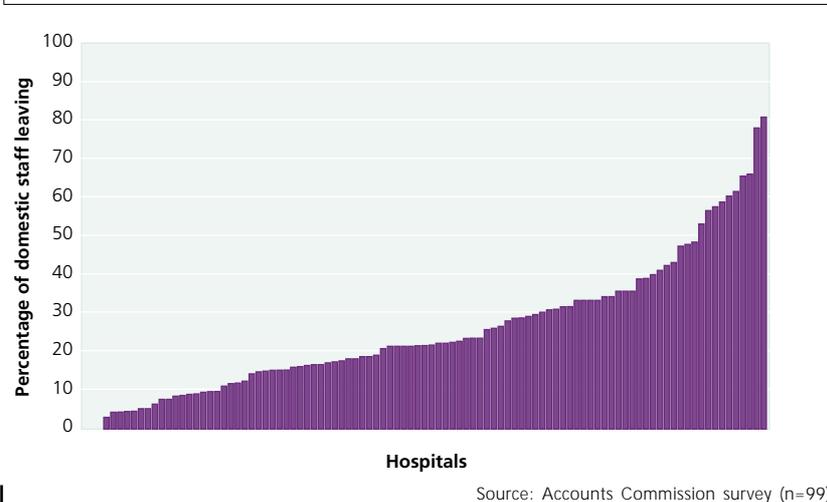
- Staff should be aware of the cleaning procedures and standards they can expect in the area of hospital in which they work.
- All staff should be encouraged to report where cleaning is not to the expected standard, whether due to under-cleaning or the result of events after a cleaning procedure has been completed.
- Patients and visitors should be encouraged to report their perceptions of poor cleaning standards. They should be provided with an apology and an explanation of the action taken to rectify the situation.

Staff turnover and absence

High staff turnover and absence can result in skill shortages, reduced quality of service or service disruption, under-cleaning, and increased costs. A recent study found that half the trusts responding considered that hospital cleanliness was adversely affected by poor staff retention and problems recruiting staff²³.

Turnover amongst domestic staff is high (Exhibit 7). On average a hospital will lose one in four of its domestic staff each year. This is equivalent to a fifth of annual planned input hours. In a significant number of hospitals (10%) more than half of the domestic staff leave each year. Some of this turnover may be due to domestic staff being promoted to other positions within the hospital, which many trusts encourage.

Exhibit 7: Domestic staff turnover for 1998/99



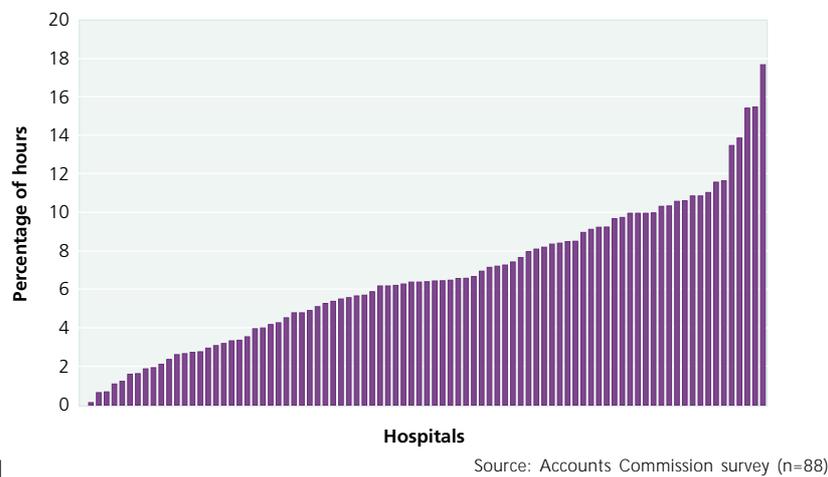
The type of hospital does not seem to affect turnover rates. There are examples of both larger acute hospitals and smaller long-stay hospitals with high turnover, in excess of 50%. Location does, however, have an affect on staff turnover, with city hospitals worst affected. Rural hospitals have the lowest levels of staff turnover.

²³ Hempshall and Thompson, 'Grime Watch', Nursing Times, 16 September 1998.

Although data are only available for two-fifths of the external contractors in the survey, average staff turnover was found to be higher among these providers than in-house (40% compared to 23% of staff in 1998/99). Turnover among domestic staff with non-traditional remits is lower. Overall, retention of domestic staff is a problem for a large number of hospitals.

The NHS in Scotland's Human Resources Strategy²⁴ set an objective of reducing the rate of sickness absence to 3% for the NHS. Nationally, the rate of sickness absence for all employees is 4.2%²⁵. The average rate among hospital domestic staff is 7.6%. Sickness absence tends to be higher among women, who make up the vast majority of hospital domestic staff, but this doesn't fully explain the high rate. Some hospitals have much higher sickness absence rates than others, but this is not explained by any single characteristic. In 15 hospitals, more than 10% of planned input hours are lost annually to sickness.

Exhibit 8: Percentage of planned hours lost to sickness



Only 49 hospitals were able to provide a separate figure for the cost of sickness absence. For these hospitals the average cost is around £11,000 per year. This is equivalent to more than £1,250,000 for all 114 hospitals in our sample. These figures underestimate the true cost, since they do not include the additional cost of covering the hours lost to sickness which are sometimes paid at an enhanced rate, or the hidden costs such as time spent on finding replacements and related administrative tasks.

²⁴ Department of Health, 'Towards a new way of working', The Scottish Office, 1998.

²⁵ Office of National Statistics, 'Labour Market Trends', November 1998.

Recommendations

- *In line with the human resource strategy for the NHS in Scotland, trusts should establish programmes to achieve a reduction to 3% in sickness absence²⁶. These programmes should cover non-clinical support services and in particular domestic staff.*
 - *Hospitals should monitor the sickness absence of domestic staff, compare performance with other hospitals and set realistic targets to reduce absence over time.*
 - *Hospitals should monitor staff retention and turnover, compare performance with other hospitals and set realistic targets to increase staff continuity.*
 - *Hospitals should identify the main causes of staff absence and turnover and devise policies for minimising the impact of the causes within their control.*
 - *Hospitals should have documented policies for providing domestic services for shifts without 100% staff cover. This should include formal criteria for deciding which areas of the hospital will not be cleaned. Levels of under-cleaning due to staff absence should be carefully monitored.*
-

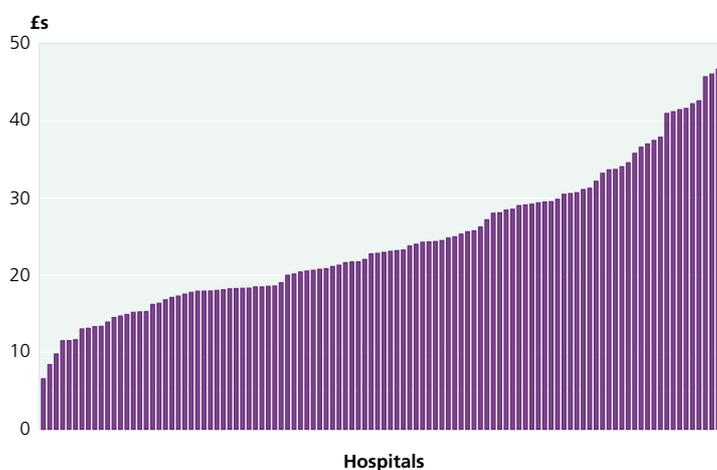
²⁶ Department of Health, 'Towards a new way of working', The Scottish Office, 1998.

Understanding and assuring value

Total costs

The most commonly used measure of the cost of cleaning is the total cost per m² cleaned. Our data reveal a significant variation in this indicator, from £6.53 to £49.63. The average cost per m² is approximately £24.50.

Exhibit 9: Total cost per m² cleaned by domestic staff



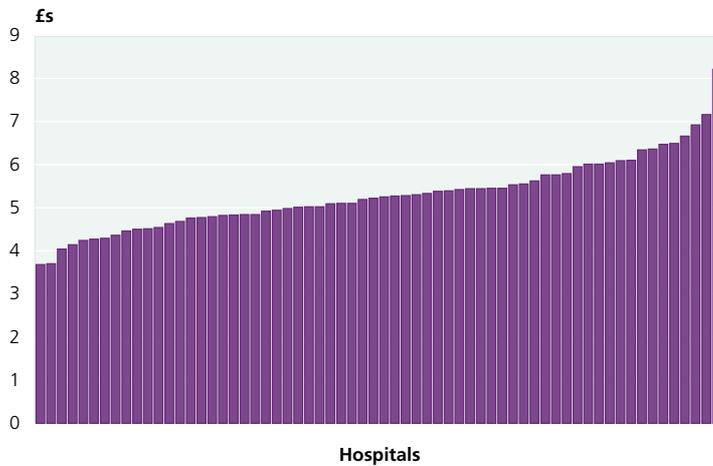
Source: Accounts Commission survey (n=107)

There is a clear relationship between the size of the hospital (measured in both m² and staffed beds) and expenditure per m² cleaned. This economy of scale is mainly linked to staff productivity, which is discussed later. First we examine the impact of staff costs.

Staff costs

As staff costs account for most expenditure on hospital domestic services (over 90% of total costs in all hospitals), the composition of the staff bill will affect costs. The staff cost per input hour varies greatly from £3.68 to £8.21, a variation of 123% (Exhibit 10). This variation is not explained by basic rates of pay, which range from £3.63 to £4.05, a variation of 11%. Basic hourly rates offered to supervisors vary by 58%.

Exhibit 10: Staff costs per hour



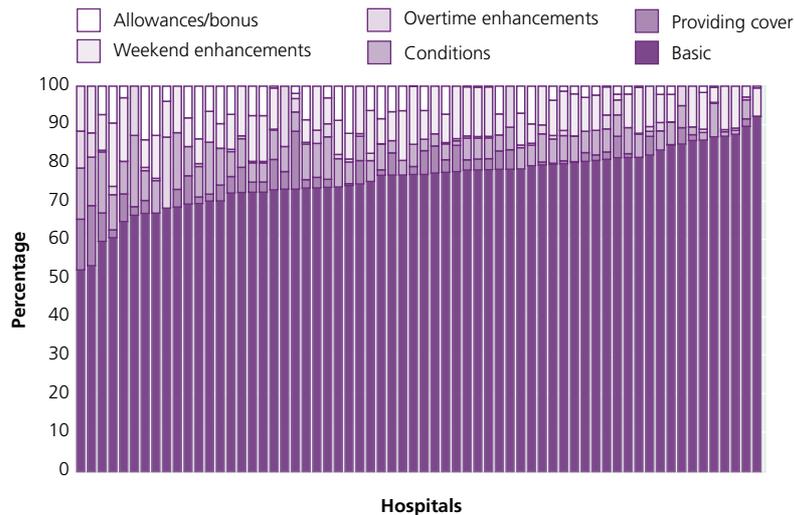
Source: Accounts Commission survey (n=64)

Staff costs are made up of basic pay (usually an hourly rate) plus other payments, not always directly related to the number of hours staff work. The key additional payments are for:

- employment costs such as pensions and national insurance
- hours worked over and above contracted hours to cover for absent colleagues, paid at the basic rate
- overtime, paid at an enhanced rate
- weekend working, paid at an enhanced rate
- allowances and bonuses.

Exhibit 11 illustrates the composition of staff costs for 64 hospitals²⁷.

Exhibit 11: Composition of staff costs



Source: Accounts Commission survey (n=64)

²⁷ Sixty-four hospitals provided a breakdown of their staff expenditure of 1998/99. All but one of these has an in-house domestic service. Overall these 64 hospitals represent 56% of the total sample; they are the only hospitals used in the analysis presented in the rest of this chapter.

The percentage of staff costs accounted for by basic pay ranges from 52% to 92%. There is an association between the percentage of staff costs accounted for by basic pay and staff cost per hour. The higher the proportion of pay which is paid at a basic rate, the lower the staff cost per hour.

As Exhibit 11 illustrates, pensions and national insurance contribute to some of the difference in costs. On average these conditions account for 6% of total staff costs. Paying staff to cover for the absences of colleagues, whether planned or unplanned, also adds to staff costs. The bars in Exhibit 11 for cover and overtime represent this additional cost. In addition to the cost of providing cover, there are important quality issues (see case study on page 11).

However, most variation is explained by payments which do not relate directly to input hours paid at a basic rate, (which are discussed in the following sections), and by productivity (which is discussed later).

Overtime

The percentage of staff costs accounted for by overtime payments ranges from zero to more than 18%. Overtime costs may be expected to be higher than this, given the levels of sickness absence, but they are likely to be reduced by the use of part-time staff, who do not receive overtime for working additional hours up to 39 hours per week. Two-thirds of hospitals employ only part-time staff, with the vast majority of hospital domestic staff employed for less than 39 hours per week.

Savings could be made by reducing the number of overtime hours which are paid at an enhanced rate. If hospitals reduced their overtime payments at an enhanced rate to the average percentage of staff costs (2%), savings across Scotland are estimated at around £455,000. Though not a great deal of money nationally, most of this saving relates to 6 hospitals.

Weekend working

High input hours on a Saturday or Sunday drive up staff costs and total costs. Practically all hospitals pay an enhanced rate to domestic staff who work at the weekends. Slightly fewer external providers pay a higher rate for Saturdays, but there is no difference between providers in terms of enhanced Sunday pay.

For ward areas of hospitals (other than five-day wards), patterns of use do not vary much between weekdays and weekends. This is particularly true of non-acute, long-stay hospitals. However, many other areas are not used over the weekend, such as out-patient clinics and many offices. The overall level of the cleaning service required is therefore likely to be lower. This was recognised by the SCOTMEG recommendations.

Sixty hospitals provided cost data on weekend enhancements. They spent a total of almost £2 million, which is an average of around £33,000 per hospital annually, or 9% of total staff costs.

Sunday working is more expensive if staff are entitled to double time. On average 3% of staff costs relate to additional payments for Saturday working, whereas 6% relates to additional payments for Sundays. Hospitals which spend more than 7.5% of their total staffing costs on Sunday working have a higher average total cost per m² (£27.75 compared to £24.50). Since Sunday working in the majority of hospitals incurs double or at least time-and-a-half payments, this is a key area where improvements in resource use could be made, for example, by scheduling weekly and periodic cleaning tasks during weekdays when they do not incur enhanced payments. It is however vital that a safe level of service is provided at the weekend.

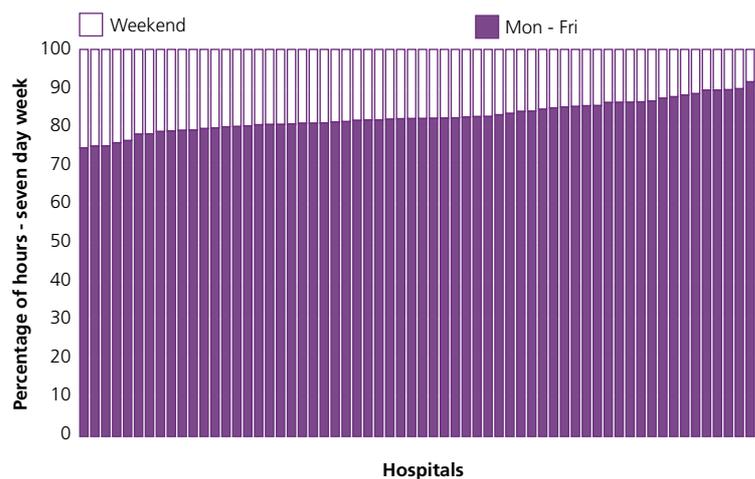
Case studies

St John's Hospital of West Lothian Healthcare Trust started to phase out enhancements for Saturday working in 1995. Staff employed after that date are not entitled to the enhanced rate. This withdrawal was balanced by an increase in the basic rate. This hospital, which has above average productivity and below average cost per m² and staff costs per hour, is actively managing the composition of its pay bill. A review of Sunday and night shift enhancements, complemented by a re-measurement of domestic work is planned for this year.

Domestic staff at most hospitals within Grampian University Hospitals Trust have not been paid enhanced rates for weekend working since 1995. This change was negotiated locally. These hospitals have lower average costs, while working an average number of hours over Saturday and Sunday.

Our survey reveals that average input hours remain constant from Monday to Friday and fall by half on the two weekend days. Although there is a discernible variation between hospitals, on average around 17% of all staff hours are worked on a Saturday and Sunday. The proportion of supervisory hours worked over the weekend is higher, at 19% compared to 17%.

Exhibit 12: Ratio of weekday to weekend hours



Source: Accounts Commission survey (n=64)

Allowances and bonuses

More than half the hospitals in the sample pay domestic staff some kind of bonus. Total expenditure on bonus and performance payments for our sample was over £830,000. Bonus payments take many forms - for example shift allowances, productivity payments and qualification allowances. The percentage of staff costs accounted for by bonuses ranges from around 1% to more than 13%. Traditionally bonus payments were related to productivity, to encourage a higher rate of cleaning. However, our findings reveal no relationship between bonuses paid and increased productivity when measured in m² cleaned per hour.

Bonus payments can also be used to decrease absences and retain staff. Our findings show an association between bonus payments and lower staff turnover, but higher sickness absence. These findings may reflect the smaller number of trusts who could provide this information.

We were unable to make comparisons of the make-up of staff costs between in-house and external providers, since data for external contractors were unavailable. However, we did collect information on what types of additional payment were made by all providers (Exhibit 13). 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.

Exhibit 13: No of hospitals making different types of payments, by type of provider

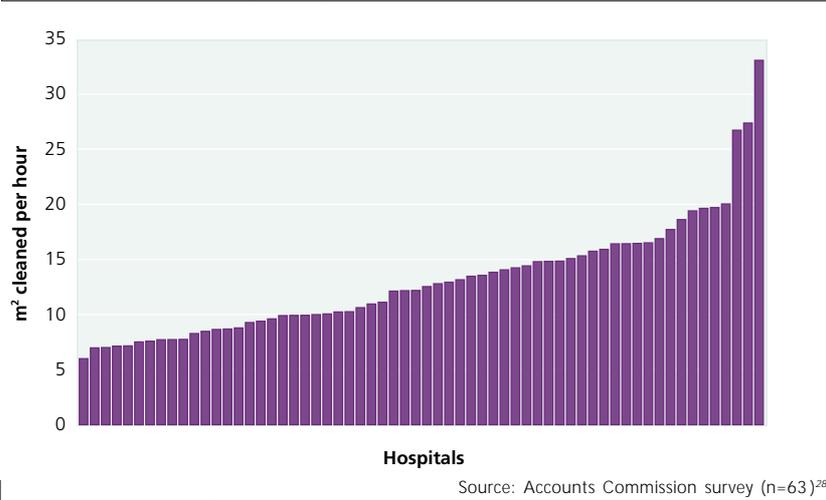
	All hospitals		In-house only		External contractors only	
	(n)	%	(n)	%	(n)	%
Overtime payments (n=107)	87	81	74	89	13	62
Excess part-time hours (n=109)	63	58	60	68	3	14
Sick pay (n=106)	85	80	69	80	16	80
Pension contributions (n=105)	87	83	80	93	7	37
National Insurance (n=108)	101	94	81	93	20	95
Geographic allowances (n=103)	4	4	3	4	1	5
Shift allowances (n=104)	15	14	12	14	3	15
Saturday enhancements (n=108)	96	89	80	92	16	76
Sunday enhancements (n=108)	103	95	82	94	21	100
Unsociable hours payments (n=106)	50	47	45	52	5	25
Performance pay/bonuses (n=105)	53	51	52	61	1	5

Source: Accounts Commission survey

Cleaning productivity

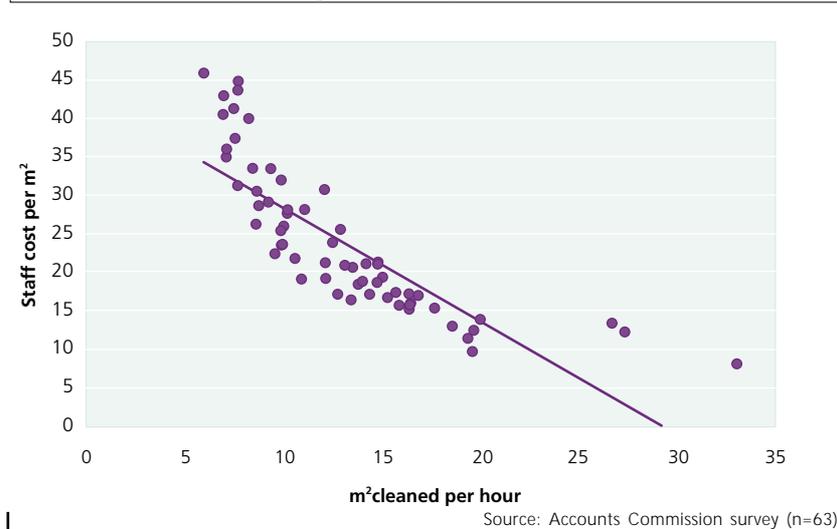
While the make up of staff salaries impacts on the variation in the cost of domestic services, the biggest contributing factor to the large variation is productivity, measured in terms of the number of m² cleaned per staff hour. There are significant differences in the level of efficiency within Scottish hospitals. The number of m² cleaned per hour ranges from 6 to over 30 (Exhibit 14). The overall average is 14m² per hour.

Exhibit 14: m² cleaned by staff per hour



There is a clear relationship between m² cleaned per hour and cost per m² cleaned (Exhibit 15). This relationship between higher productivity and lower unit cost is to be expected and it shows how important productivity is in controlling costs.

Exhibit 15: Staff cost per m² by m² cleaned per hour



Understanding the relationship between quality and productivity is important. Unfortunately at present it is not possible to compare quality and productivity across hospitals due to the lack of comparable and objective quality measures

²⁸ One hospital whose data resulted in a figure of 74m² cleaned per hour has been omitted from this and the subsequent analysis of productivity.

for domestic services. This need is discussed later in the report. Without these quality indicators it is only possible to comment on productivity and cost. A number of broad relationships were identified and these are discussed below.

Smaller hospitals (less than 25,000m²) tend to be more expensive to clean per m² (Exhibit 16). The type of hospital has less impact on total cost per m² than size. The type of floor covering used (hard or soft) has some impact on the cost, with hospitals with wider hard floor coverage being less expensive to clean per m². Large hospitals have higher proportions of hard flooring and this in part explains why larger hospitals are less expensive to clean.

Exhibit 16: Size of the hospital cleaned in m² by cost per m² cleaned

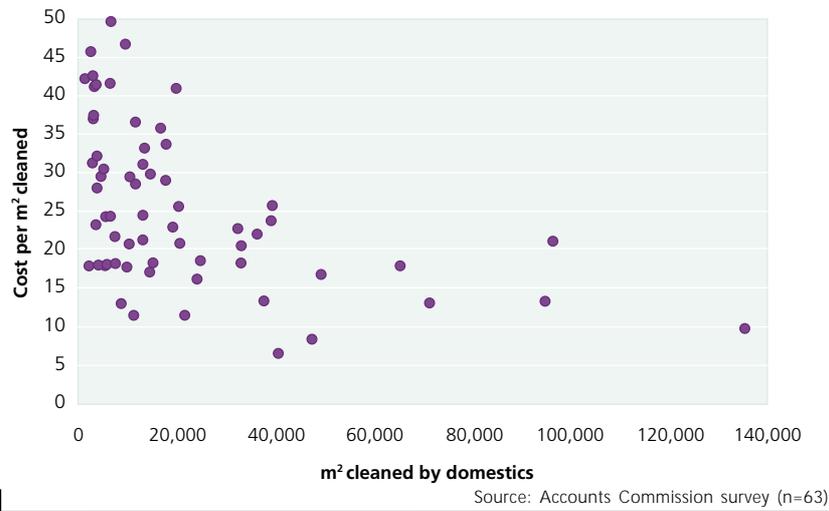


Exhibit 17: Size of hospital cleaned in m² by m² cleaned per hour

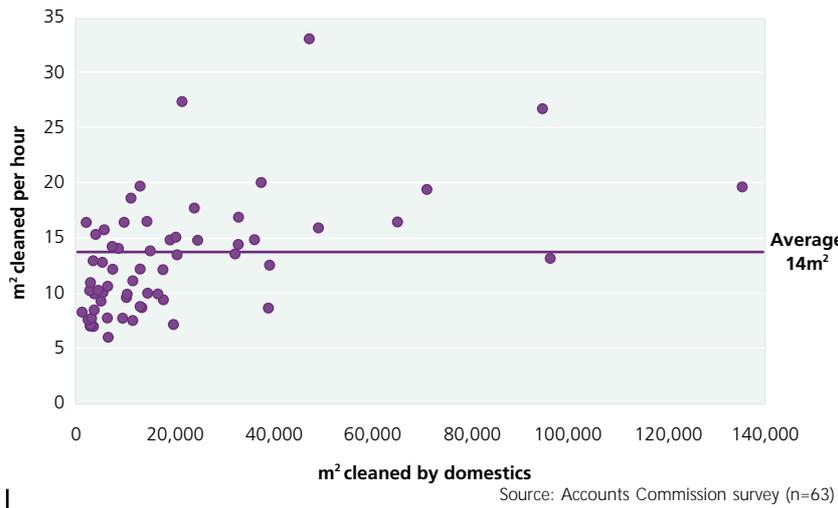


Exhibit 17 shows that all but three of the larger hospitals (over 25,000m²) are on or above average for the number of m² cleaned per hour.

Domestic services in larger hospitals were found to be more productive (30% more productive on average). Hospitals where domestic staff cleaned more than 25,000m², were found to clean an average 17m² per hour, compared to 13m² in hospitals of less than 25,000m².

However, although there is a relationship between productivity and size of hospital, there is more variation in productivity among hospitals of a similar size than there is among hospitals of different sizes (Exhibit 16). This suggests that although size affects productivity measured in m² cleaned per hour it is not one of the main drivers.

No relationship was found between higher productivity and staff cost per hour nor between productivity and the split of traditional and non-traditional remits, except in the few cases where there has been a major shift to non-traditional remits.

Hospitals with in-house providers are statistically less productive than those with external contractors. In-house providers clean on average 12.7m² per hour, compared to 14.9m² by staff of external contractors.

A link between productivity and sickness absence or turnover cannot be investigated, as the data represent planned input hours and planned productivity. However, these staffing problems will negatively affect cost and quality.

At present, it is not possible to demonstrate whether high productivity is due to effective management of the cleaning service, or, instead, to poor quality, because there are no comparative indicators of the quality of cleaning achieved. However, we have been able to rule out a number of factors which have been suggested as the main causes of variations in productivity. These include:

- the size of the hospital
- the type of hospital
- the type of floor covering
- the age of the hospital
- staff cost per hour
- whether domestic staff have a traditional or non-traditional remit (except in the few cases where their role has been significantly widened).

All hospitals need to investigate the reasons underlying their own performance. Hospitals with low levels of productivity clearly need to take action to tackle this while maintaining or improving the quality of cleaning, but those with high productivity also need to act to ensure that this is not achieved at the expense of standards of cleanliness. This will identify what needs to be done to ensure and improve the quality and value of domestic services locally.

Recommendations

- *Hospitals should compare their performance against the indicators in this report:*
 - *establish the frequency of cleaning (using SCOTMEG)*
 - *review the productivity of the cleaning service, and*
 - *review the make up of staff costs.*
-

Reviewing and comparing domestic services

Management information

Good quality management and financial information is needed for the effective and efficient operation of any service. It is also essential for robust and systematic evaluation and planning. However, for domestic services, we found that a number of trusts cannot readily produce the necessary information to demonstrate quality and cost-effectiveness. In particular, trusts find it difficult to disaggregate:

- the cost of domestic services from overall hotel or facilities service costs
- the cost of cleaning from the total cost of generic support staff
- basic pay costs from enhanced rates or overtime hours.

Moreover, a number of trusts were unable to:

- collate key staffing data from different parts of the hospital, or different sites in the trust, especially if ward domestic staff were managed by clinical staff
- separate sickness absence costs from basic pay costs
- separate basic pay from overtime and enhanced payments, without significant manual work. This work would have entailed extracting data from individual and weekly staff records or paybill.

In addition, there is little comparative management information on quality, so that comparisons of productivity are not possible.

Hospitals whose cleaning is carried out by external contractors have even less management information, particularly in relation to financial information on staff costs and input hours. When bids are submitted, contractors may provide details of input hours, staff rosters etc. However, the hospital or trust is usually left to base all subsequent assumptions on this initial information.

Many hospitals could not provide all the information requested for this study. Of those that could, many do not regularly review such information themselves. The monitoring of quality, cost and productivity is not undertaken by trusts on a regular basis. All these limitations must be addressed if valid comparisons are to be made and improvements achieved. The establishment of larger trusts provides an opportunity for better and more consistent management and monitoring across hospitals.

Good practice for management information

There is sufficient information to robustly plan and monitor the service.

Individual services can be reviewed, separate from other related functions.

Benchmarking is routinely carried out.

Action is taken as a result of management information.

There is adequate information for the service to be planned effectively and improvements accurately monitored.

There are key performance measures for the service's goals and objectives.

Benchmarking domestic services

Benchmarking is a structured and focused approach to comparing with others how services are provided and the performance levels achieved. The purpose of the comparisons is to enable organisations to identify where and how they can do better²⁹.

NHS guidance³⁰ states that “trust boards will be expected to assess systematically the quality and value of their existing support services, measuring their performance against that of other trust boards and comparable organisations”. This study identified a number of local benchmarking initiatives for domestic services. The benchmarking clubs are hampered by a lack of consistent measurement and in particular the lack of measurement of quality. These are the same data gaps which we found when undertaking our study. Hospital managers therefore find it difficult to pinpoint the real reasons for their overall performance.

Indicators for domestic services

For the purposes of this study, the Accounts Commission developed 24 performance indicators for hospital domestic services:

- seven cost indicators
- nine indicators of efficiency and/or effectiveness
- eight indicators of quality.

These are listed in Appendix 3, and a large number of them have been used in this report. There would be real advantages if domestic services managers and others participating in benchmarking exercises could agree a core set of useful and informative benchmarks, together with the underlying management information required to produce them. It is hard to see how the guidance in MEL(1998)32 can be achieved unless core quality, cost and productivity measures are agreed.

This study has demonstrated the variation in planned cleaning standards and in productivity among hospitals. These variations need to be investigated at a local level, using accurate measures of cost and quality and understanding what drives each. Without good quality measures there is a danger that the balance will tilt towards controlling costs rather than improving quality and productivity. A full understanding of the key drivers of cost, productivity and quality, will only come from more focused and targeted local reviews.

²⁹ Accounts Commission for Scotland, *Measuring up to the best: a manager's guide to benchmarking*, January 1999.

³⁰ MEL(1998) 32, *Management of support services in the NHS in Scotland: quality and value*.

Recommendations

- *To comply with MEL(1998)32, trusts must agree core indicators of quality, cost and productivity so they can compare their performance against that of others. This agreement should include the definitions for the management information required.*
 - *Comparative work or benchmarking should focus on identifying how the service can improve its quality and value.*
 - *Trusts must be aware of the weaknesses in the data used to benchmark and seek to minimise the impact of these on management decisions.*
 - *All hospitals, especially those using external contractors should 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.*
-

Summary of recommendations

Assuring quality

- All trusts should review:
 - how best to integrate the work of domestic staff with clinical care teams
 - how domestic staff currently contribute to the quality of patient care
 - how this contribution can be improved or maximised, including the implications for the cost and quality of the domestic service of widening domestic staff remits.
- Trusts should assess the cost and the benefits of using generic support staff, addressing in particular the increased training requirements and the need to ensure that core cleaning duties are carried out.
- The non-cleaning duties and hours of domestic staff should be made explicit in job descriptions.
- Additional non-cleaning duties should not be incrementally added to the responsibilities of a post unless they are formally agreed and resourced.

Cleaning frequencies

- Changes to domestic services, especially frequencies, must be formally planned and documented and their impact monitored.
- Domestic services should be reviewed regularly. Particular attention should be given to reviewing the frequencies currently applied throughout the hospital, to ensure resources are not being wasted on over-cleaning, especially in non-priority areas.
- The review should also compare frequencies with SCOTMEG recommendations, and the reasons for lower standards.
- Over-cleaning against SCOTMEG levels should be reviewed and justified.
- Regardless of the type of service specification used, all hospitals should specify the required minimum cleaning frequencies, especially in wards and other clinical areas.

Infection control

- Trust boards should be aware of the important role domestic services play in infection control and manage it as a key tool in minimising risk.
- Trusts should ensure that the recommendations in the Scottish Infection Manual are implemented.
- Hospital managers should ensure that there are effective links between domestic services and infection control teams.
- Hospital control of infection policies should cover domestic cleaning and include descriptions of the way in which domestic staff should carry out their duties.
- The infection control team should be proactive in approving the cleaning frequencies in use throughout the hospital. Approval should only be given after a review of detailed frequencies, other inputs, processes and outcomes rather than just of an overall service specification.
- Consultation with the infection control team on proposed service changes be carried out to enable the team to have a genuine input to ward level frequencies and standards.
- All hospitals should review their practice against the standards given in the *'Standards for environmental cleanliness in hospitals'*.
- Induction and ongoing training for domestic staff must cover infection control issues.

Supervision and monitoring

- Hospitals should ensure that domestic services are monitored regularly and formally. The results of all monitoring should be reported to the appropriate managers, and appropriate action taken.
- Monitoring systems should be capable of reviewing the processes of cleaning and not just the inputs and outcomes.
- Hospitals should review the way in which their domestic staff are supervised. There may be gaps between the planned service and its implementation due to unplanned changes, staff shortages, inadequate training etc.
- The cleaning priorities and standards for ward-based services should be agreed with the ward manager. These standards should be supervised and monitored jointly.
- Hospitals should minimise the number of planned hours for which supervisors are paid a higher hourly rate for non-supervisory duties.
- Domestic supervisors should receive adequate and appropriate training and support, including protected time for administrative duties.
- Staff should be aware of the cleaning procedures and standards they can expect in the area of hospital in which they work.

- All staff should be encouraged to report where cleaning is not to the expected standard, whether due to under-cleaning or the result of events after a cleaning procedure has been completed.
- Patients and visitors should be encouraged to report their perceptions of poor cleaning standards. They should be provided with an apology and an explanation of the action taken to rectify the situation.

Staff turnover and absence

- In line with the human resource strategy for the NHS in Scotland, trusts should establish programmes to achieve a reduction to 3% in sickness absence³¹. These programmes should cover non-clinical support services and in particular domestic staff.
- Hospitals should monitor the sickness absence of domestic staff, compare performance with other hospitals and set realistic targets to reduce absence over time.
- Hospitals should monitor staff retention and turnover, compare performance with other hospitals and set realistic targets to increase staff continuity.
- Hospitals should identify the main causes of staff absence and turnover and devise policies for minimising the impact of the causes within their control.
- Hospitals should have documented policies for providing of domestic services for shifts without 100% staff cover. This should include formal criteria for deciding which areas of the hospital will not be cleaned. Levels of under-cleaning due to staff absence should be carefully monitored.

Understanding and assuring value

- Hospitals should compare their performance against the indicators given in this report:
 - establish the frequency of the cleaning (using SCOTMEG)
 - review the productivity of the cleaning service, and
 - review the make up of staff costs.

Reviewing and comparing domestic services

- To comply with MEL(1998)32, trusts must agree core indicators of quality, cost and productivity so they can compare their performance against that of others. This agreement should include the definitions for the management information required.
- Comparative work or benchmarking should focus on identifying how the service can improve its quality and value.
- Trusts must be aware of the weaknesses in the data used to benchmark and seek to minimise the impact of these on management decisions.
- All hospitals, especially those using external contractors should 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

³¹ Department of Health, 'Towards a new way of working', The Scottish Office, 1998.

Appendix 1: Profile of the hospitals

The sample of hospitals is made up mostly of acute and care of the elderly (long-stay) hospitals (Exhibit A). There is however an even split of location with a third each of hospitals describing themselves as city, rural or urban. Most hospitals in the sample are more than 50 years old (Exhibit B).

Exhibit A: Type of hospital

Type of hospital	(n)	Percentage
Acute	44	39
Care of the elderly (long stay)	35	31
Psychiatric	16	14
Maternity	7	6
Learning disabilities (long stay)	7	6
Other	5	4

Source: Accounts Commission survey

Exhibit B: Year hospital was built

When built	(n)	Percentage
1990s	12	11
1980s	13	12
1960s/1970s	20	19
1900-1945	33	31
19th century	28	26

Source: Accounts Commission survey

A total of 213 ward questionnaires were received (Exhibit C). Ninety-two of the 114 hospitals (80.7%) returned at least one ward questionnaire. An average of 2.3 per hospital. One hospital returned 15 ward questionnaires. Most wards in the sample are long stay (Exhibit D).

Exhibit C: Ward questionnaires returned

Number of questionnaires	Number of hospitals	Percentage of hospitals returning number of questionnaires
One	36	39
Two	30	33
Three	12	13
Four	7	7.5
Five or more	7	7.5

Source: Accounts Commission survey

Exhibit D: Type of ward

Type of ward	Number of questionnaires	Percentage of questionnaires
Orthopedic	32	15.0
Medical assessment/admission	51	24
Long stay (care of the elderly)	67	31.5
Acute psychiatric	32	15
Learning disability	17	8
Other	14	6.5

Source: Accounts Commission survey

Appendix 2: Report and project advisors

Isabella Dickie, Hotel Services Manager, Ayrshire and Arran Primary Care NHS Trust

Andrew Elliot, Senior Management Services Officer, Argyll & Clyde Acute Hospitals NHS Trust

Marion Finc, Support Services Manager, Western General Hospital, Lothian University Hospitals NHS Trust

Carol Fraser, Public Health Infection Control Advisor, Lothian Health

Jane Gething, General Services Manager, Borders General Hospital NHS Trust

John Lambie, Assistant Scottish Secretary, UNISON

Walter Linkhorn, National Performance Advisory Group

Midge Rotheram, General Services Manager (Central Locality), Fife Primary Care NHS Trust

Helen Smith, Chair, Association of Domestic Management

The Management Efficiency Unit also provided advice to this project.

Appendix 3: Performance indicators used in this study

Cost indicators

- 1 Total annual cost per square metre of hospital cleaned by domestic staff (see page 21)
- 2 Total annual cost per staffed bed
- 3 Staff cost per domestic input hour (see page 21)
- 4 Basic pay as a % of total staff costs (see page 23)
- 5 Overtime costs as % of total staff costs (see page 23)
- 6 Cost of weekend working enhancements as % of total staff costs (see page 23)
- 7 Cost of other enhancements and bonuses as % of total staff costs (see page 25)

Efficiency/effectiveness indicators

- 8 Number of square metres cleaned per hour (see page 26)
- 9 Ratio of domestic to supervisory staff hours (see page 16)
- 10 % of hours that supervisory staff spend on domestic tasks (see page 16)
- 11 Ratio of weekday to weekend hours (domestic staff and supervisors) (see page 24)
- 12 % of full time domestic staff
- 13 Staff turnover in 1998/99 (domestic) (see page 18)
- 14 Sickness absence in 1998/99 - hours (see page 18)
- 15 % of weekly hours vacant (as at 31 March 1999)
- 16 % of domestic staff in service for over one year

Quality indicators

- 17 Whether domestic service is provided and developed in conjunction with the trust's infection control policies and procedures (see page 13)
- 18 Work schedules for domestic staff clearly state the purpose of each task and the inputs, procedures and outcomes required.
- 19 Cleaning specification have been reviewed in the last 24 months (see page 10)
- 20 Appropriate and adequate deployment of supervisory resources (see pages 15 to 17)
- 21 Adequate and appropriate targeting of monitoring resources (see pages 15 to 17)
- 22 Evidence that standards have been set for the service that can be robustly monitored by the quality assurance processes (monitoring and supervision)
- 23 All staff receive formal induction, which includes input from infection control team/nurse
- 24 The hospital provides on-going training in procedures to domestic staff and supervisors



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ISBN 1 903433 00 2