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HEALTH & SAFETY LABORATORY

Cleaning activities and slip and trip accidents in NHS Acute Trusts - a scoping study

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CONTENTS

EXECUTIVE SUMMARY

HSE recognises that slip and trip accidents are a serious problem in the healthcare sector, and is working to reduce the injury rate. HSE's Health Services information sheet number 2 states that "Slips and trips resulting in falls are the most common cause of major injuries in all workplaces in Great Britain and the second biggest cause of over 3 day injuries. Over 2000 injuries to employees in healthcare, attributed to slips and trips, are reported each year. Many patients and visitors also receive injuries."

This project explores cleaning operations as a contributory factor to slip and trip accidents.

Staff at five NHS Acute Trusts were interviewed in order to gain an initial understanding of the objectives outlined below.

Objectives

The objectives of the project were to identify:

- Current levels of awareness of the impact of cleaning on slips and trips held by health and safety, housekeeping, supervisory and cleaning staff;
- Factors that impact on the number of slip and trip accidents;
- How cleaning procedures, techniques and materials are specified and monitored;
- Interventions that could help reduce the number of slip and trip accidents in hospitals.

Main Findings

Interviewees generally believed that members of cleaning teams were aware that their work has the potential to impact on the number of slip and trip accidents. It was believed that the two main slip and trip hazards that cleaning teams create are wet floors and trailing cables. Other factors impacting on slips and trips in hospitals included: best practice not followed by cleaning staff; public, patient and staff behaviour; risk assessments; staffing levels/time pressure; building design; weather; team motivation; damaged flooring and tardy reporting of spillages.

Recommendations

Recommendations for further research are made. These concentrate on validation of the findings of this project by conducting more extensive research and developing guidance on good practice. Other suggestions for reducing the accident rate given by interviewees include raising the awareness of all hospital staff (not just cleaners), the public and patients about the severity of slip and trip accidents; consultation with cleaning departments when designing and constructing new buildings or refurbishing older buildings; introducing near miss reporting systems and considering how to influence the healthcare sector at a wider level.

1 INTRODUCTION

1.1 BACKGROUND

HSE does not yet fully understand the processes relating to cleaning operations and regimes in NHS Trusts such as:

- cleaner control/supervision (including where contractors are involved);
- the specification of appropriate cleaning methods and techniques;
- the specification of appropriate cleaning materials and;
- how all these factors relate to the slip and trip accidents.

However, HSE does recognise that slip and trip accidents are a serious problem in the healthcare sector, and is working to reduce the injury rate. HSE's Health Services information sheet number 2 states that "Slips and trips resulting in falls are the most common cause of major injuries in all workplaces in Great Britain and the second biggest cause of over 3 day injuries. Over 2000 injuries to employees in healthcare, attributed to slips and trips, are reported each year. Many patients and visitors also receive injuries."

This project explores cleaning operations as a contributory factor to slip and trip accidents.

This project is a scoping study which aims to explore these issues with appropriate staff in NHS Acute Hospital Trusts. This project will only explore these issues in a small number of trusts so the results will be very limited and not able to be generalised, however, the project should give a flavour of the level of knowledge that Trusts have regarding the link between cleaning activity and slip and trip accidents and how Trusts deal with the slip and trip hazards raised by cleaning activities. This knowledge will enable HSE to target its future research in the area. This project was commissioned by the Health and Safety Executive's (HSE's) Health Services Unit.

1.2 OBJECTIVES

In order to address the current gaps in HSE's knowledge on cleaning operations in hospitals, and the need to reduce the number of slip and trip accidents, the objectives of this project are to identify:

1. Current levels of awareness of the impact of cleaning on slips and trips (held by health and safety, housekeeping, supervisory and cleaning staff);

2. Factors that impact on the occurrence of slip and trip accidents;

3. How cleaning procedures, techniques and materials are specified and monitored;

4. Interventions that could help reduce the number of slip and trip accidents in hospitals.

2 METHODOLOGY

Semi-structured interviews were conducted with staff from five NHS Acute Hospital Trusts throughout England. In all interviews a senior member of the Health and Safety or Housekeeping team was present. In some cases other members of hospital staff contributed to the interviews. These included a contract manager, supervisory staff and operational cleaning staff. In total, 12 members of staff were interviewed. Information was also gained from a sixth Acute Hospital Trust via email. This Trust had recently terminated a contract with a cleaning company, but did not have the resources available for an interview.

Only five Trusts were interviewed because this project is a scoping study only. It hoped to explore the issues found at five sites before a larger scale project was commissioned.

Acute Hospital Trusts were chosen because they generally have large hospital sites. These sites provide a wide range of services with many different types of areas from operating theatres and intensive care units to general wards, outpatient departments, canteens, vestibules with very large footfall and staff office areas. These areas have different flooring types, different footfall levels and different cleaning needs. Because of this, it was thought that Acute Hospital Trusts would provide an all-round picture of cleaning in the health services sector, and would be appropriate for this study.

Questions were asked about the following topics:

- accidents known to have been attributed to cleaning activities;
- awareness of the impact cleaning activities have on slip and trip accidents;
- knowledge of how cleaning practices relate to slip and trip risks;
- management and supervision of cleaners;
- training of cleaners;
- staffing levels of cleaners;
- how cleaning regimes are decided;
- signage of wet areas/ alternative routes;
- where cleaning is done by a contractor, control and supervision of the contractor.

Because the interviews were semi-structured, other topics were discussed as they arose. An interview schedule was constructed (Appendix 1) based on information from a subject matter expert. The interview schedule was quality assured by the customer to ensure that it fully addressed the objectives of the project.

The data was analysed following the themes used in the interview schedule. Additionally, an ‘other’ category identifies factors that emerged which were not covered in the interview schedule.

3 RESULTS AND CONCLUSIONS

The key findings from the interviews conducted with NHS staff are described below.

3.1 AWARENESS OF WIDER IMPACT OF CLEANING ON SLIP AND TRIP ACCIDENTS

Interviewees at all of the hospital Trusts identified that cleaning staff can have some degree of an impact on the numbers of slip and trip accidents. None of the interviewees could, however, provide an objective figure of the number of slip and trip accidents that were directly attributable to cleaning activities. One of the hospital Trusts interviewed provided the authors with an audit of accidents. Whilst this audit broke down the accidents into type (e.g. slip and trip) and location (e.g. ward or kitchen), it did not identify the underlying cause of the accidents (e.g. whether it was caused by cleaning practices). In some cases the audit identified actions that had been taken to remedy the cause of accidents (e.g. through training, repairs etc.), but the cause itself was still somewhat unclear from this information.

It was also noted that generally cleaning staff have an awareness that cleaning practices can impact on health and safety, including slip and trip accidents. Interviewees suggested that this awareness is developed during training and, in some cases, through monitoring by supervisory staff.

3.2 IMPACT OF CLEANING PRACTICES ON SLIP AND TRIP ACCIDENTS

3.2.1 Common causes of slip and trip accidents related to cleaning practices

Causes of slip and trip accidents were reported to vary for different hospital sites. Whilst some Trusts identified wet floors as the most significant causal factor, others suggested trailing cables were the most significant cause.

It was suggested that wet floors and trailing cables (e.g. from cleaning equipment and medical equipment) are a common cause of slip and trip accidents. However, it was also highlighted, that peoples' attitudes are also a major cause of slip and trip accidents; for example by ignoring wet floor signs, and in some instances walking on wet floors regardless of signs, or, moving wet floor signs. Individuals who ignored or moved wet floor signs included hospital staff and the public. One interviewee added that ignorance of signs might not always be intentional. It was noted that when visitors are on hospital premises they are usually there to visit ill relatives. The interviewee suggested that worry and anxiety of visiting an ill relative or friend might impact on their situational awareness, reducing the amount of information they take in from the hospital environment, because they focus on finding their relative or friend as quickly as possible. One Trust reported that while they accepted that trailing cables are a trip hazard; they felt that people in hospitals, including staff and visitors, did not always display much common sense in avoiding them. They reported that they felt it was hard for the Trust to influence this behaviour.

One interviewee identified that they had observed a member of cleaning staff working in a manner that conflicted with correct procedures, which had the potential to lead to a slip accident (i.e. mopping the floor, then walking over it while still wet). It was noted that when such behaviours are observed they are reported to a supervisor, who should then raise this issue with the member of staff in order that it does not happen again.

Whilst wet floors were identified as a major cause of slip and trip accidents, it is important to note that all of the interviewees identified the importance of adopting dry or damp cleaning processes where they could be applied. It was highlighted that some types of flooring still need to be thoroughly wet in order to clean them effectively, but in general, wet mopping was avoided where possible. However, some participants admitted they felt that some cleaners used too much water when "damp" cleaning, leaving the floor wet afterwards. One Trust also blamed the equipment they had available for causing some of their problems, and stated that they wished to invest in better cleaning equipment but were unable to find funding.

A summary list of the factors that were identified by interviewees as having the potential to cause slip or trip accidents in hospitals is given in Table 1, below.

Table 1 - Key factors that interviewees identified as direct and indirect causes of slip and trip accidents

Potential causal factor	Explanation
Public, patient and staff behaviour	Signs and barriers being ignored or moved by the public, patients and hospital staff
Staffing levels/time pressure	Cleaning staff may 'cut corners' when the cleaning team is understaffed, which may result in an increase in accidents
Building design	Smooth flooring is potentially a greater slip hazard than carpet flooring. Lack of space/cluttering of wards and corridors also increases trip hazards
Weather	Precipitation from outside hospitals can become transferred onto hospital flooring, increasing the risk of slipping
Team motivation	A good level of motivation is potentially needed to ensure work is completed to a high standard
Damaged flooring	Cracked or broken tiles have the potential to cause slip and trip accidents in hospitals
"Freak" accidents	For example, wearing unsuitable footwear may be the cause of a slip or trip accident
Litigation culture	Individuals identifying a slip or a trip as a causal factor of an accident to make a compensation claim, even if the accident was due to that individual's own carelessness
Tardy reporting of spillages	Slow reporting results in spillages remaining on floors for longer durations giving an increased opportunity for someone to slip on it

3.2.2 Factors indirectly related or not related to cleaning practices

Whilst it was acknowledged that many accidents are potentially related to cleaning or wet floors, it was suggested by one interviewee that the majority of slip and trip accidents on their premises are "freak" trips. They also thought that some accidents were caused by people wearing unsuitable shoes (e.g. high heeled) or by people walking on floors that have been signposted as wet. A number of interviewees also identified damaged or worn out surfaces as another cause of trip accidents. For example broken tiles may create a tripping hazard. It was noted that these issues are often resolved quickly if they have occurred in areas where there is a high level of footfall. One interviewee noted that accidents can often occur with elderly or infirm patients who attempt to move around the hospital without appropriate assistance. It was believed that accidents that occur due to this behaviour are very difficult to control.

Another major cause of slip accidents that was raised at one hospital was the weather. It was suggested that when it rains the water is quickly transferred onto floor surfaces in the hospital, leading to a slip hazard. It was additionally noted that appropriate flooring at hospital entrances can reduce/prevent this problem to some degree.

It was also added that cleaning staff are easy to blame, often being used as 'scape goats'. As an illustration, it was noted that when a spillage occurs it can only be cleaned up when it has been reported. One interviewee suggested that in some cases it is the tardy reporting of spillages, rather than the response time of the cleaners that leads to spillages not being cleaned up quickly enough.

3.3 IMPACT OF MANAGEMENT AND SUPERVISION ON SLIP AND TRIP ACCIDENTS

3.3.1 Ensuring that cleaning standards are met (including consideration of slips and trips)

Generally supervisory staff were responsible for ensuring the required standards of the cleaning teams are met. There was no uniform way that this was achieved across hospitals, however, a monitoring sheet was a common tool for supervisors to enable them to run through a checklist of standards. In another instance, a less formalised approach was adopted for supervisors to check if standards were met. The monitoring sheets that were used by hospitals differed to some degree. Whilst general cleanliness and absence of dust, debris and smears and ensuring that cleaners had not caused damage were commonly identified, only one Trust also covered some issues relating to aspects of slips and trips in their monitoring sheets. Another important factor raised by most Trusts was that cleaning staff were under some pressure from the limited time they had to complete their cleaning in, before moving on to other areas. One interviewee suggested that it is highly possible that when time pressures are high, corners may be cut which may lead to a slip or trip accident. For example, a member of staff using equipment with a trailing power lead may choose not to use a closer electrical power socket in order to save time. This may increase the likelihood of a trip accident, as the lead would be trailing over a longer distance.

Supervisors were often employed to ensure that set standards (including those relating to slips and trips) are obtained. One interviewee did suggest, however, that supervisors could do better. It was added that continued training would help to overcome this problem.

Regular review meetings of health and safety staff were noted by some of the Trusts as beneficial to monitor accidents. Often the review meetings included checking through risk assessments that had been completed by hospital/cleaning team staff. It was suggested that this allows for the Health and Safety team to react to potential 'hot spots' if they appear in a particular area of the hospital. Some Trusts also encouraged the reporting of near misses in addition to accidents in order to assist with the reactive monitoring of accidents.

3.3.2 Creating motivated teams

Another factor raised that was suggested to be closely related to slips and trips was the motivation of cleaning teams. One interviewee highlighted the importance of having motivated teams to ensure work is done to a high standard, including the consideration of issues such as slips and trips. The interviewee suggested that this was being achieved by increasing the

ownership and responsibility of cleaning staff. The importance of having a 'team feeling' between cleaners and other hospital staff was also emphasised. It was added that relationships between cleaning staff and nurses are better than they once were, although some problems do still exist.

One interviewee suggested that in-house cleaning teams are more able to form a coherent and motivated team, as they are more likely to work with the same individuals in the longer term. It is worth noting also, however, that members of a team from a cleaning contractor also felt that they were part of a coherent team.

One Trust had recently changed the organisation of their cleaning teams and had reported that standards had greatly improved. They had changed from using a "bank" system of cleaners where each cleaner would clean a different area every shift to assigning cleaners to specific wards or areas (where possible). They reported that this had increased staff morale, as the cleaners got to know other staff on the wards. It was reported that cleaning standards had improved because the cleaners were taking more pride in their work, and they were able to co-ordinate their activity with other ward activity which resulted in less clashes with medical staff.

3.4 TRAINING, COMPETENCE AND MAINTENANCE OF STANDARDS

3.4.1 In-house health and safety training

In house training courses adopted by the hospitals varied both in their content (in terms of slip and trip education) and duration. A number of the hospitals had an induction training course, which was run within the first two weeks of a new member of the cleaning team starting to ensure that basic competence is attained, including aspects of health and safety (including slip and trip accidents). One hospital also provided an induction booklet to new starters so that the information that was covered during training could be referred to when needed. One interviewee also identified that a questionnaire was adopted to evaluate competence (this included aspects of slip and trip management).

Another of the hospitals highlighted the importance that is placed on staff to ensure that they keep themselves safe whilst ensuring the safety of staff and the public around them. This included protecting themselves from slip and trip hazards.

Different hospitals also had different methods of ensuring that staff were kept up to date and refreshed with information. Several interviewees identified that supervisory staff were given an information pack, which covered health and safety in addition to the core cleaning information. Another interviewee highlighted that the use of annual refresher days are soon to be introduced to ensure that cleaning staff do not forget all of the information that they learn during their initial training. Another hospital Trust already had a similar refresher course in place. Yet another Trust ensured that staff had one full day each month dedicated to training and development.

It was suggested by one interviewee that modular type courses are good, as this gives staff time to consolidate what is learned. It was added that staff need to understand the logic to the principles that are given (i.e. 'why'). This then enables staff to understand why the procedures exist, potentially increasing the likelihood of them ensuring that they follow the procedures.

Although all Trusts said that slip and trip management was included in their health and safety training, it generally appeared that it was a minor topic, and that the training was focussed on other matters such as control and use of chemicals. Increasing staff awareness of the number

and type of accidents caused by cleaning activities, and emphasising their important role in the prevention of these accidents could increase their adherence to procedures designed to minimise slip and trip hazards. This could be included in a health and safety training module.

3.4.2 Externally recognised qualifications

Training was a factor that was taken seriously by all hospitals that participated in the research; they all offered accredited courses to some extent including NVQs (Levels 1 and 2) and British Institute of Cleaning Science (BICS) qualifications. All of the Trusts were aware that health and safety (including slips and trips) was covered in these training courses. Often this level of training was given to more senior cleaning staff (e.g. supervisors), although one of the hospital Trusts noted they were happy for any staff to progress to this level if the individual in question aspired to do so, with approximately half of the cleaning staff working to or holding such qualifications. The interviewee from this Trust also added, however, that staff are not pressured into training to this level.

3.5 STAFFING LEVELS

All of the Trusts identified some problems with staffing issues. The first of these issues was that none of the Trusts had all posts for cleaning staff filled. One of the consequences of this was that many cleaning staff worked overtime. Different Trusts had different methods for filling overtime jobs but generally, staff volunteered to work overtime and were not forced to, and the Trusts monitored how much overtime was worked by whom (this was generally done with a view to trying to share out the overtime opportunities between staff, and ensuring that they did not work too many hours). Staff felt that a shortage of staff can lead to staff feeling pressured to work faster, because there is often not enough staff to carry out all the required tasks in one shift. Staff interviewed stated that this could lead to errors such as wetting the floor but not drying it thoroughly, leaving long trailing cables to avoid unplugging and replugging equipment into wall sockets and leaving wet floor signs out for too long. Some staff felt that these behaviours were all linked to an increased risk of a slip or trip accident. It was also suggested that a shortage of staff and the increase pressure it can create, could cause a motivation problem for cleaning staff. It was suggested that if they perceive that they are working in difficult circumstances, they could be less motivated to follow procedures exactly, increasing the likelihood of behaviours such as those described above.

One of the hospital Trusts highlighted that since the 'Agenda for Change[1]' there are now more applicants for the vacancies for cleaning staff. It was also suggested that the government spotlight on cleaning issues in hospitals has helped to raise the profile of cleaning so that it is now seen as more of a professional occupation than it has been in the past. The staff interviewed felt that staff shortages were lessening and that hopefully, this trend would continue.

One hospital noted that due to limited numbers of staff, occasionally supervisors are more involved with the cleaning duties. This involvement may remove their focus from the

[1] 'Agenda for Change' came into effect on 1st December 2004 and has resulted in changes to the contracts of all directly employed NHS staff, except very senior managers and staff covered by the Doctors and Dentist Pay Board. The NHS staff interviewed for this project reported that these changes had generally improved the pay and conditions of cleaning staff (see Department of Health website).

supervisory role and could therefore lead to incorrect practices (which have the potential to cause a slip or a trip) by other staff going unnoticed.

3.6 EQUIPMENT AND ENVIRONMENT

The hospital Trusts generally adopted equipment that would help to avoid cleaning where flooring is left wet. Common pieces of equipment adopted were scrubber dryer machines, which wet, clean and dry the floor. One weakness of these machines is that they cannot be used in confined spaces due to their (generally) bulky size.

A potential hazard of the scrubber drier machines was noted to be the trailing electrical leads which pose a potential trip hazard. One of the hospital Trusts employed the use of battery powered machines to avoid this problem, however, these were noted to be expensive in comparison to the standard machines. Another interviewee added that in addition to the cost of battery operated machines is the need for a space for a charging station, when space is quite difficult to acquire.

Several hospitals noted that there are now consumable cleaning materials available (e.g. micro fibre materials and flat mops) that allow the cleaning process to be completely dry. This helps to avoid leaving floors wet and could potentially reduce the number of people having accidents caused by slipping. The dilemma facing hospitals with regard to these materials is the cost. A number of hospitals noted that although they would like to use these materials, they simply cannot meet the increased costs over more standard materials.

It was identified that the Housekeeping teams can generally specify what equipment they purchase. This is done through a tendering process within a budget.

3.7 CLEANING CONTRACTORS

Only one of the Trusts was currently using cleaning contractors and the data obtained about the contract was anecdotal in nature, rather than formally documented. It was identified that the standards of work were good, and awareness of slips and trips appeared to be equally as high as in house cleaning teams. The hospital employing the use of cleaning contractors had virtually identical procedures to hospitals employing in-house cleaners. The duration of the contract is variable (between 3 to 7 years) and can be extended further if the hospital is satisfied with the work. When selecting a contractor a tender may go out or the hospital may alternatively select a contractor from a list of companies that have provided a satisfactory service. If work is not up to standard in any cases then a contractor may be removed from the list. If a tender is used to find a contractor, then a board would decide which contractor to use. The decision would be based on a variety of factors which would focus on selecting a contractor offering the best quality work and would also consider the performance of the company in the past. If an issue such as a poor health and safety record were identified (e.g. if slips and trips were notably high) then this would be taken into consideration by the selection board.

Another hospital Trust had employed the use of cleaning contractors for some time in the past, but had ceased the contract due to rising costs. In-house cleaning was then adopted as the affordable option. The interviewee identified that there were no other reasons that the contract was cancelled other than the rising costs (i.e. the accident record, standards of cleaning etc. were all satisfactory). It was added by the interviewee that in some respects it was beneficial employing contractors as the human resource issues and meeting standards were taken into the

contract manager's hands, reducing the stress of the job to some degree. The interviewee added, however, that in-house teams enable a greater sense of belonging and help to form better relationships as staff work in the same areas.

One member of staff at a hospital Trust that did not employ cleaning contractors suggested that using cleaning contracts would inevitably lead to a lowering of standards. It was noted that this is due to the primary interest of contractors being to make profit, which was believed to then force down standards. There was, however, no evidence given by this interviewee to support this claim. Another Trust that was contacted to take part in the project identified that they had recently cancelled a contract due to a number of issues and brought cleaning operations 'in house'. In this case, correct procedures were not being adhered to by the contract cleaners. This had the potential of increasing the number of slip accidents due to hazards not being effectively controlled in accordance with procedures.

3.8 OTHER ISSUES

3.8.1 Cleaning procedures

The regimes and procedures for hospital cleaning were identified anecdotally. It was noted that cleaning was generally completed when the hospitals are quiet (e.g. not during visiting times). In order to identify the appropriate times for cleaning, interviewees suggested that it is important to co-operate with other team members (e.g. nurses, ward managers) to highlight when the quiet times are likely to be. One interviewee also added that they must also consider patients when cleaning is conducted. This interviewee stated that whilst hospitals are quiet at night, making it an ideal time to clean, cleaning staff and scrubber dryer machines create noise, which would wake patients. Often areas such as corridors and other public areas are cleaned early in the morning.

To ensure that the public are not walking on wet flooring, often "half and half" cleaning practices are adopted, whereby one half of a corridor is segmented (e.g. with signs / barriers) and cleaned. Once the area is dry, the process is repeated for the opposite side. When cleaning floors in rooms, the cleaner will generally start at the far end of the room and work towards the door in order to avoid walking on the wet area.

Most hospital Trusts identified a preference for adopting cleaning procedures and materials that allowed for dry or damp cleaning to be utilised in place of wet cleaning (although it was added that this is not always possible). This was achieved by using modern equipment and materials such as flat mops and micro fibre materials. It was added by Trusts, however, that these types of equipment often cannot be purchased due to their high costs compared to standard types of equipment. When adopting wet mopping procedures, hospital Trusts noted that cleaning staff are trained to ring out most of the water from the mop where appropriate to ensure the floor will dry more quickly. In relation to using battery operated cleaning equipment, interviewees noted that although this equipment was recognised as reducing the risk of trip accidents because there are no trailing cables, it is more expensive than power cable alternatives, and space for a charging 'dock' can also be difficult to find.

Most of the Trusts have cleaners available for emergency response to work reactively when a spillage occurs. It was highlighted that cleaning staff can only respond to such incidents as quickly as they are reported. It was therefore suggested that reporting of slip hazards is key for them to be dealt with swiftly.

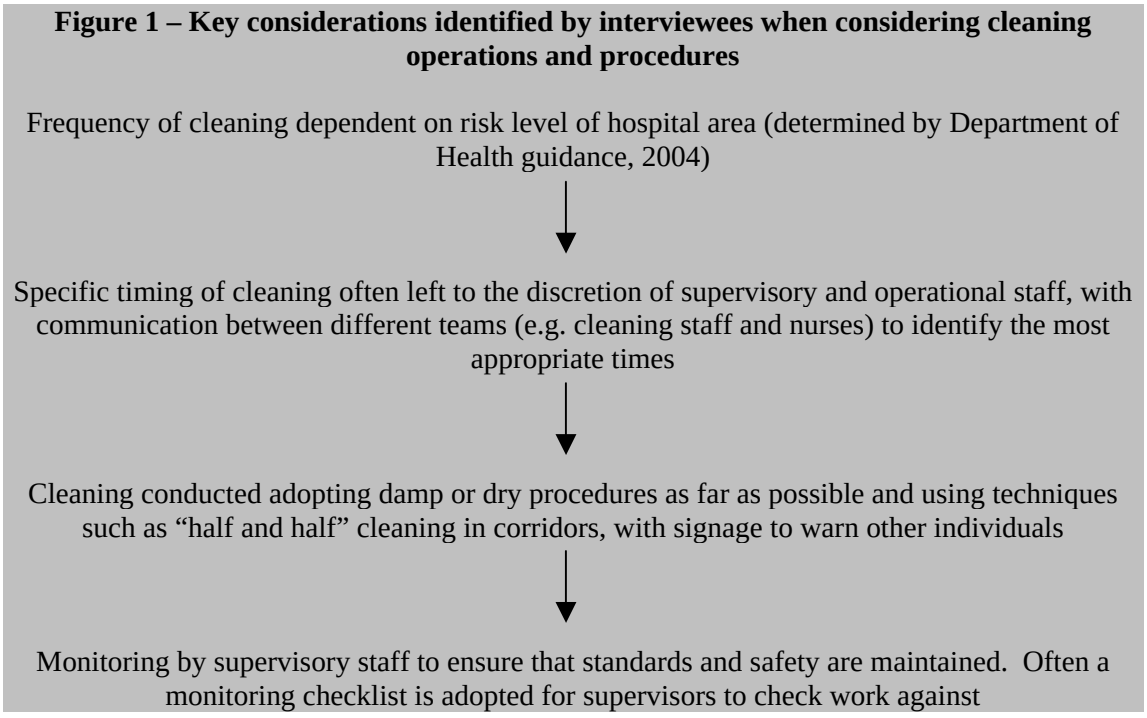
Frequency of cleaning relates to the risk level of the different areas of the hospital e.g. an operating theatre and an office require different frequencies of cleaning. Guidance on identifying the levels of risk in different areas of a hospital is given by the Department of Health (2004). This guidance covers four main components. Taken directly from the guidance, these are:

- A best practice guide on evaluating and awarding contracts so that quality is considered alongside price;
- Revised National Specifications for Cleanliness (formerly the National Standards for Cleanliness) which set out clearly the standards which hospitals should provide as a minimum;
- The recommended minimum cleaning frequencies which need to be followed to achieve the National Specifications;
- A revised Healthcare Facilities Cleaning Manual.

In relation to cleaning frequencies, however, the document does only provide a guide for hospitals, noting that cleaning frequency will also vary depending on many other factors, for example age of the hospital and staff motivation. Also, the guidance does not cover issues such as slip and trip accidents and how to avoid these. The focus of this document is currently on maintenance of hospital cleanliness and infection control.

One hospital Trust had been forced to reduce cleaning in the lowest risk areas (e.g. staff offices) to a lower level than staff would have liked due to the limited resources and the importance placed on cleaning other higher risk areas, such as wards and operating theatres. Figure 1 (below) summarises this largely informal procedure for the specification and monitoring of the cleaning process adopted by hospital Trusts in the research.

Figure 1 – Key considerations identified by interviewees when considering cleaning operations and procedures



Cleaning materials, equipment and consumables were generally noted to be selected by senior staff in the Health and Safety or Housekeeping teams. Materials, equipment and consumables were selected based on a number of factors including:

- Effectiveness of cleaning (i.e. does it allow cleaning to required standards);
- Efficiency of cleaning (i.e. can equipment save time over other alternatives);
- Cost (i.e. is there a budget available for the materials, equipment or consumables);
- Health and safety implications (e.g. does it reduce the time floor surfaces are wet; does it eliminate the need for a wet process etc).

The list below summarises some of the main procedures identified by interviewees to ensure that potential slip and trip hazards created during cleaning are kept to a minimum.

- Sectored cleaning of corridors ("half and half" approach);
- Cleaning at quieter times of the day (when there is less footfall);
- Starting mopping at the far end of a room moving back towards the door (so that the cleaner avoids walking on the wet surface);
- Providing warning to people (e.g. with wet floor signs or barriers);
- Wringing out mops as much as possible to reduce the volume of water on the floor (when appropriate);
- Use of battery powered electrical equipment (to eliminate trailing power leads);
- Ensure reporting of spillages is done quickly;
- Use of equipment that wets and dries flooring together (e.g. scrubber drier machines);
- Use of the following cleaning methods in order of priority:
  1. Dry cleaning
  2. Damp cleaning
  3. Wet cleaning (only when completely necessary).

3.8.2 Footwear

None of the Trusts interviewed provided footwear for cleaners, however they did specify that footwear should be flat heeled with a closed toe. There were no requirements for specific safety features of shoes, such as having slip resistant soles. One interviewee suggested that advising staff to wear slip resistant shoes might adversely increase slip related accidents by encouraging staff to walk on wet floors. None of the Trusts intended to introduce slip resistant footwear for cleaning staff, and they generally reported they did not consider it necessary.

The main concern raised by some interviewees in relation to footwear was that some members of the public visit the hospital wearing inappropriate shoes (e.g. high heels), which they felt are more likely to lead to an individual slipping or tripping.

3.8.3 Building design

One interviewee identified that they had recently had the opportunity to advise on the floor surfaces adopted in a new building on the hospital site. This individual noted the importance of this input to ensure that floors that are selected with some consideration to cleaning and safety hazards (i.e. so that appropriate flooring can be selected). They were pleased that they had been able to influence the selection of flooring and had recommended cleaning regimes for the new flooring too. Another interviewee from a different hospital Trust emphasised that it is extremely important for health and safety teams within the hospital Trusts to be consulted when

new wards or buildings are being designed. The interviewee added that health and safety staff learn many lessons that could lead to improvements in design, but such input often does not occur in practice, leading to old problems continuing to be designed into new buildings.

Some current problems include the fact that older hospitals often have long corridors, leading to trailing cables being a major trip hazard. Newer hospitals, however, tend to have too many beds and pieces of equipment in each ward, leading to less space for staff (including cleaning staff) to move around, and also an increase in density of potential slip and trip hazards (e.g. trailing cables from electric beds, walking aids for patients etc). Storage was also suggested to be an important issue. It was suggested that storage is often limited, leading to items such as equipment being stored in corridor areas or wards, again increasing the amount of trip hazards.

One intervention that was suggested that could reduce trip hazards was the application of high level power points, which do not then run along the floors. Similarly another interviewee recommended that more power sockets should be installed to limit the distance that power cables need to cover.

Two documents have recently been published which give guidance on the design of new buildings with reference to floor surface and slipperiness. CIRIA's "Safer surfaces to walk on – reducing the risk of slipping" gives advice on the selection of floors, cleaning of floors and human behaviours that affect slips and trips. The Department of Health's Health Technical Memorandum 61 gives advice on flooring with advice on flooring in different areas (e.g. operating theatre; kitchens). It refers the reader to HSE advice on the cleaning of floors e.g. HSE's information sheet Slips and Trips 02 "Slips and trips: the importance of floor cleaning".

3.8.4 Litigation culture

One interviewee noted that due to the litigious culture that now exists in the United Kingdom, individuals who have an accident look for a reason in order to make a claim. This interviewee believed that some individuals who had reported a slip or trip accident may have actually slipped or tripped due to their own carelessness. In order to make a claim for compensation, however, some individuals may have unfairly blamed the hospital for this.

3.8.5 Language barriers

One hospital Trust identified that language barriers had caused some difficulty in communicating with staff. The use of illustrations in training materials was suggested to assist understanding, however, it was felt that staff need to have at least a basic grasp of English, not only in order to understand training materials but also to understand what supervisors request of them.

3.9 REDUCING SLIP AND TRIP ACCIDENTS IN HOSPITALS: INTERVENTIONS AND INITIATIVES RAISED BY INTERVIEWEES THAT COULD HELP REDUCE THE NUMBER OF SLIP AND TRIP ACCIDENTS IN HOSPITALS

3.9.1 Behaviour and attitudes

Training

Training was emphasised by the majority of interviewees as important in order to ensure that staff are competent in their work and is therefore a key intervention in reducing slips and trips associated with cleaning operations. There did not, however, appear to be a consistent approach outlining the level to which slips and trips should be covered in training, nor to how regularly such training should be repeated. One hospital Trust has recently introduced specific days aimed at raising awareness of cleaning to staff, patients and visitors to the hospital site. These days are held at regular intervals throughout the year. Cleaners have found them useful in highlighting that other staff have to co-operate for them to be able to do a good job. They remind all staff, patients and visitors that everyone has responsibility for the cleanliness of the premises, to a greater or lesser extent. Several hospital Trusts highlighted the importance of improving the professional status of cleaning staff and ensuring that staff form coherent, motivated teams. This may be achievable with appropriate training.

Effective guidance and supervision

Supervising staff were noted as key in providing guidance to operational cleaners and ensuring that procedures were followed. This includes highlighting procedures or behaviours of operational staff that could have a negative impact on slip and trip accidents. Again there was no consistent approach adopted by Trusts involved in this project as to how this was achieved.

Raising awareness and responsibility of staff, patients and public

One of the most important issues raised by interviewees in order to reduce the number of slips and trips in hospitals was increasing awareness and responsibility of staff, patients and the public. Interviewees suggested that individuals need to respect and take heed of information such as warning signs. In addition to this, it was suggested that staff, patients and the public all need to take responsibility and report hazards such as spillages if they are identified. Interviewees were unsure as to how awareness could be raised, but added that it was a very important factor.

3.9.2 Environmental

Building design

Interviewees identified that consideration of building design has the potential to have a positive impact on reducing the number of slip and trip accidents. By involving members of the cleaning team in building design, steps can be taken to ensure that flooring is appropriate, there is an adequate amount of space, and that there are enough electrical power sockets. Other important issues would also emerge if such consultation took place.

Pop up warning signs

One hospital was trialling the use of 'pop up' warning signs. These signs are stored in corridors or rooms in hospitals and can be deployed by members of staff, patients, or the public if a spillage or other form of slip or trip hazard is identified. For this intervention to be effective however, it will require knowledge of its existence by individuals, and also the desire and inclination to apply them when a hazard is spotted. An evaluation of such an intervention would therefore be needed to determine its effectiveness.

3.9.3 Resource

Staff

The hospital Trusts involved with this research all identified that there were a number of vacancies for operational cleaning staff. It was added that this might lead to corners being cut in relation to safety in order to ensure that cleaning is completed to the required frequencies. Interviewees also added that it was difficult to fill vacancies and a realistic intervention could not be identified.

Materials and equipment

Use of modern materials and equipment were suggested as likely to help reduce slip and trip accidents by reducing or removing wet cleaning processes (e.g. with microfibre materials and flat mops), or removing potential trip hazards (e.g. with battery powered equipment). Whilst many of the Trusts involved with this research were using or would like to use these products, the associated increase in expense over traditional equipment meant that the budget was not always available to purchase them.

3.9.4 Interviewee wish list

Interviewees were asked what things they would have/do in an ideal world in order to help reduce the number of slip and trip accidents. The main issues related to the following:

- Input from cleaning team on building design (e.g. more power sockets);
- Employment of modern materials such as micro fibres and flat mops;
- Employment of modern equipment such as battery powered scrubber dryer machines.

3.9.5 Summary

- It was anecdotally reported that awareness of the impact of cleaning on the number of slip and trip accidents is generally high by all staff, from management through to operational cleaning staff. There was no formal evaluation of this awareness.
- Interviewees did not have objective figures to identify how many accidents were directly attributable to cleaning operations, but it was a general perception that cleaning operations do impact on the number of slip and trip accidents.
- It was a general perception that the two main causes of slip and trip accidents attributable to the work of cleaning staff were wet floors and trailing cables.

- The selection and specification of cleaning procedures, techniques and materials generally differed slightly for each hospital, based on equipment and staff resources. Procedures and techniques were generally based on good practice such as that specified by the British Institute for Cleaning Science (BICS).

- Interventions that could help reduce slip and trip accident rates include training of staff, raising of awareness of the importance of slip and trip hazards to all hospital staff, patients and visitors and investment in dry cleaning equipment.

3.9.6 Recommendations

Based on the issues raised in the discussion, the following recommendations are proposed:

Recommendations for further research:

- **Validation of the findings at a behavioural level and on a wider scale**

The application of a behavioural questionnaire would be beneficial to more accurately measure cleaner awareness of their impact on slip and trip accidents. This could be achieved with a large scale national survey and could also further investigate interventions more at the 'shop floor' level. Accident data collected by Trusts, and under the RIDDOR regulations could be analysed to identify the underlying causes of slip and trip accidents in healthcare services settings.

- **Guidance on good practice**

Guidance on good practice could be generated and then shared with all NHS Trusts. This could cover all aspects of cleaning operations and give guidance on a number of topics, for example, specification of cleaning regimes, management and retention of cleaning staff, supervision and competence assurance. An example raised in this project is competence assurance. Whilst hospital Trusts generally had systems in place to ensure that competence was maintained by cleaning staff, this was not consistent across all of the Trusts. Guidance or good practice on training in slip and trip management should be provided, how often training should be provided and the issues which supervisors need to supervise may help to ensure that Trusts adopt a consistent approach to the competence assurance.

Methods for improving standards of slip and trip risk management

- **Raise awareness and responsibility of staff, public and patients on slip and trip issues**

Further research would be beneficial to identify how staff, public and patient awareness and responsibility could be improved. Such research should identify:

  - why signs are ignored and what needs to be done for them to be taken more seriously by staff, public and patients;

  - what can be done to increase staff, public and patient responsibility (e.g. with reporting hazards such as spillages);

  - how individuals, especially elderly and infirm patients can be encouraged to ask for assistance if they wish to move from one location to another.

- **Encourage hospital Trusts to receive input from their cleaning teams with regard to building design and layout.**

Cleaning teams are arguably most aware of the factors that have the potential to lead to slip and trip accidents. Poor building design has been suggested to contribute to slip and trip accidents, therefore, input from cleaning teams on better design may help reduce accidents that are caused by poor design. There is also recent guidance about floor type choice.

- **Encourage reporting near misses – for proactive monitoring**

Reporting of near misses in addition to actual accidents was highlighted by one of the interviewees as beneficial for proactive monitoring. By encouraging the reporting of near misses, hospitals may be able to identify and resolve potential hazards before they have the opportunity to cause harm.

- **Raise the profile of slip and trip accidents in the healthcare sector**

Consider how best to raise the profile of slips and trips in the healthcare sector in general. Ideas include working with bodies such as the Department of Health, NHS Estates, the NPSA and BICs to ensure that the reduction of slip and trip accidents is considered when specifying cleaning regimes and procedures.

Long term problems to be considered:

Some other issues were raised for which easy solutions cannot be found, but which are still worth considering because of the impact they could have.

- **Reducing staff shortage/turnover**

The problem of recruitment cannot easily be addressed, however, some Trusts did report that they were now having more applicants for jobs than they did a couple of years ago. They attributed this change to a couple of reasons – since the "Agenda for Change" changes to NHS staff contracts, staff now have better pay and working conditions, making the job more attractive. Also, because there has recently been increased media pressure in the area of hospital cleaning the reputation of cleaning is beginning to change, with the public changing in their attitude to valuing the role of cleaners more and recognising it as an essential part of running a safe hospital.

- **Affordability of damp/dry cleaning materials**

Many of the Trusts interviewed were aware of new technology in the field of cleaning, such as microfibre cleaning which is a totally dry method of cleaning floors. However, at the moment, this system is prohibitively expensive, and Trusts cannot afford to invest in the equipment. However, if it becomes more popular in the future the price may come down accordingly, and Trusts may be able to consider buying the equipment in a few years time.

4 APPENDICES

Appendix 1- Interview schedule

Introduce team, HSL and the project

<u>Awareness of wider impact of cleaning on slips and trips</u>
What impact do you think cleaners have on slips and trips occurring?
Does management identify that cleaning procedures can impact on the occurrence of slips and trips? Do you believe that this message gets across/is understood by the cleaning team?

How many accidents do you know might be attributable to the work conducted by cleaners? *e.g. if floors are left wet*
Are there records for recording slip and trip accidents? Who keeps these records? Are there records for patients and visitors (litigation)? Are these reviewed as part of a risk assessment?

Do you think that cleaners are aware that their work impacts on the number of slip and trip accidents? *e,g, that leaving floors wet especially at busy times of the day can lead to accidents?*

<u>Impact of cleaning practices on slips and trips</u>
Are cleaning practices considered in relation to Health and Safety risks (e.g. Slips and trips)?
Are factors such as throughput/footfall considered? Is the frequency of cleaning considered? And if so, how do cleaning practices take these factors into account? Are there different practices for different parts of the hospital (i.e. for wards, waiting rooms, staff areas etc.)?

Are the cleaning methods/techniques considered in relation to slip and trip risks, and if so, how are these decided/selected?
What factors are considered – e.g. footfall, time of day, staffing levels, staff rotas, signage of alternative routes

Are the materials/products used by cleaners considered to have an impact on slip and trip accidents?
If so, what impact can mopping, wiping, wetting and drying etc have? How long are floors and surfaces usually left wet/damp for? At what times of day?

Are cleaning practices regularly reviewed e.g. in light of slip and trip accidents?
Frequency?

<u>Impact of management and supervision on slips and trips</u>
How is the quality of work completed by the cleaning team judged?
Cleanliness (physical objective measure)? Appearance? Potential for an accident (e.g. a slip) to occur?

What factors are considered with staff supervision?
Is it completion of work to time or a specific outcome? Is there a monitoring schedule? Is the potential for slip and trip accidents considered as an outcome?

Is a risk assessment conducted?
Is this acted upon/monitored in relation to slip and trip accidents, and if so, how? Reactive changes vs active monitoring?

Training and maintenance of standards
Do cleaners receive any training?
If yes – is this formal/structured or informal? What is the training on? Are accidents/slips and trips covered? Are the courses accredited/non-accredited e.g. BICs accredited?

Do cleaners receive any good practice guidelines or equivalent?
Are these seen by the cleaning team or held by management/supervisors? Are there any sanctions if these are not followed?

Staffing levels
How many vacancies at present?
How many staff work overtime? How much overtime do they work? Do staff work shifts or at night (i.e. quiet times of the day)?

Equipment & Environment
Are floors highly polished (And therefore more slippery when wet)?
Is slip resistant flooring present in the hospital? e.g. Safety vinyl
Are machines such as scrubber/drier machines employed to reduce the time that floors remain wet/damp?
Do cleaners wear slip resistant shoes?
Are the entrance mats cleaned?

Questions for cleaning contractors
If there are cleaning contractors, how are they selected and are slip and trip accidents considered?
What are the main issues? (e.g. cost, reputation, have always used the same)
Who decides which contractor to use?
Is there a structured procedure to follow?

Are contracts regularly reviewed? If so, are slip and trip accidents considered in the review?
How regularly? When? Why?

Have you ever cancelled/reviewed a contract/regime due to:
- *Unsatisfactory standards of work?*
- *Poor adherence to H&S?*
- *Level of accidents/S&Ts?*

Other factors?

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