Slips, (Trips & Falls)

(An NHS Trusts Approach)

West Midlands Trust

This Trust has:

- Hospital Sites - 3
- Health Centres - 12
- Staff – 7000
- Beds - 900

The Standard

The standard for management of STF's is outlined in the Trust STF's Policy.

Responsibilities on:

- Capital Projects/Estates
- Facilities
- Local Managers
- Health and Safety Department

Policy - Key Messages

- Commitments from CEO/Trust Board
- Use **Risk Assessment** to identify problems
  - Estates\Capital Projects (Corporate)
    - External (Car Parks; Roads; Paths; Roofs)
    - All internal floors (Corridors, Rooms, Wet Rooms)
  - Facilities
    - Cleaning
  - Local Managers
    - Maintaining Safety

Sample Risk Assessment Form

Ref: _____

SLIP, TRIPS & FALLS - RISK ASSESSMENT

DIVISION		**WARD/DEPARTMENT**			
ASSESSOR		**ASSESSMENT DATE**		**REVIEW DATE**	
SCOPE OF ASSESSMENT	*(i.e. work activities, tasks, wards/departments, locations etc. covered by this assessment)*				

ACTION PLAN			
ACTION	**BY WHEN**	**BY WHOM**	**DATE ACHIEVED**

Ref: _____

SLIPS, TRIPS & FALLS RISK ASSESSMENT - FINDINGS

HAZARD	WHO/WHAT COULD BE HARMED/DAMAGED?	EXISTING CONTROLS	CURRENT RISK RATING	ADDITIONAL CONTROLS	RESIDUAL RISK RATING
Spillages (solid/liquid materials) Wet cleaning methods Shoes/clothing Condensation Electric cables Open drawers Poor quality floorcoverings Wind-driven rain/sleet/snow High-level storage *(Specify particular hazards in relation to scope of assessment)*	Staff Patients Visitors	*(specify what the control is – e.g. Ward D98 procedure for xxxx, Safety device located in xxxx)*	*(rate only once, overall)*	Clean and dry incoming footwear, where appropriate(e.g. entrance matting) Procedure for immediate clear-up of spillages Provide adequate electrical/other outlets Locate equipment close to electrical outlets Reorganise storage Prompt reporting and repair of damage/defects Limit the area of contamination (cordon, bund) Restrict access to contaminated areas (e.g. barriers, signage) Keep drawers closed when not in use Provide suitable height access equipment Maintain high standards of housekeeping Staff training Caution signage Health & Safety Inspection procedure Uniform policy (corporate/local)	*(rate only once, overall)*

Slip Potential

Floor Types

(see Appendix 1)

Soft

Hard

Floor Characteristics

- The degree of slip resistance can be expressed as:

  - **Co-efficient of friction**
    A device is used to measure the degree of friction generated when the surface of a material is struck by a "moving" part.
  - **Microroughness**
    A device is used to measure Rz - a measure of total surface roughness, calculated as the mean of several peak-to-valley measurements

Floor Characteristics

The level of slip resistance a floor provides can be expressed in two ways:

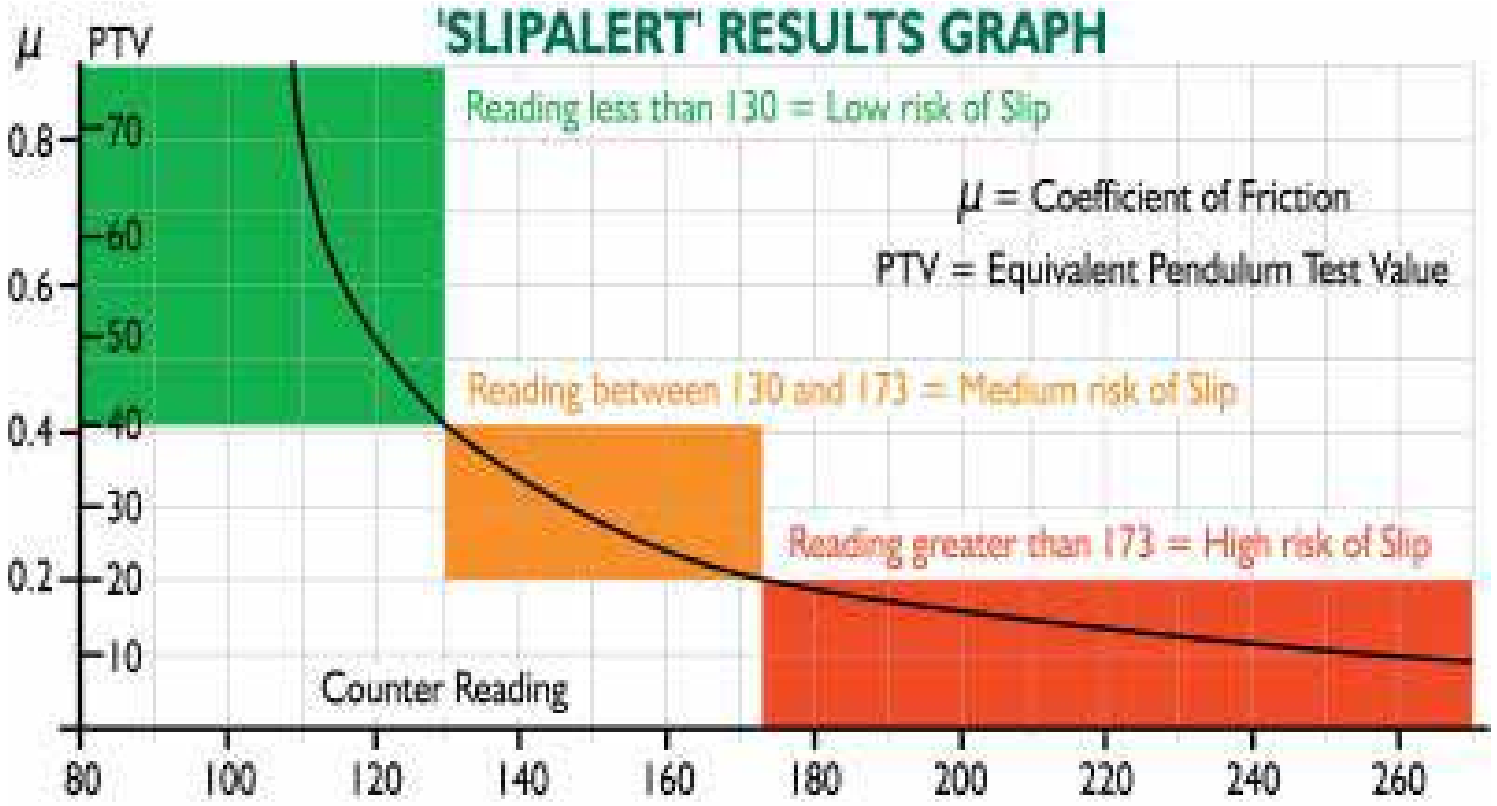
- **Co-efficient of friction**
  A device is used to measure the degree of friction generated when the surface of a material is struck by a “slider” on a moving part.
- **Microroughness**A device measures the roughness of the floor (Rz)

Floor Characteristics Pendulum Data

- Pendulum results are referred to as Pendulum Test Values (PTV) or Slip Resistance Values (SRV).
- This table relates to pedestrians walking in a straight line on a level surface.
- There are two sliders commonly used, one for shod pedestrians (Slider 96 or 4-S rubber), one for barefoot (Slider 55).

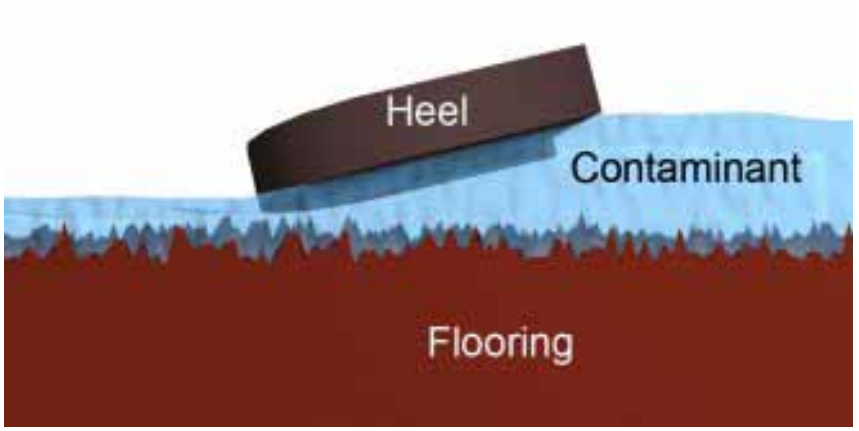
PTV	Slip Potential
0 - 24	High
25 - 35	Moderate
36+	Low

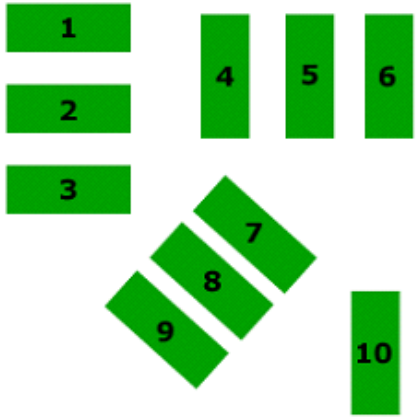
SlipAlert: The distance travelled by SlipAlert can be converted to CoF or Pendulum Test Values (PTV)



Microroughness

- To have a low slip potential a floor needs to have enough microroughness to break through a contaminant and make solid-to-solid contact with the pedestrian's heel.
- An average of ten readings are taken to ensure measurements are more representative of the entire floor.





Slip Assessment Tool

- Taking surface microroughness measurements is quick and easy.
- It can aid incident investigation if used with the SAT (Slip Assessment Tool).
- At our last HSE visit the Inspector included a SAT graph in her report.

Surface Roughness Rz (μm)	Potential for slip
Below 10	High
Between 10 to 20	Moderate
Above 20	Low

Capital Projects

Floor Selection

Criteria

- Where (Ward, Corridor, Wet-room, etc)
- Position (off main external entrance, by hand wash station)
- Foot-fall (High/low pedestrian traffic)
- Likelihood of contamination (Wet area, dusty area,)
- Ease to maintain – keep clean (method)
- (lessons learnt – past experience)

Capital Projects
Where?

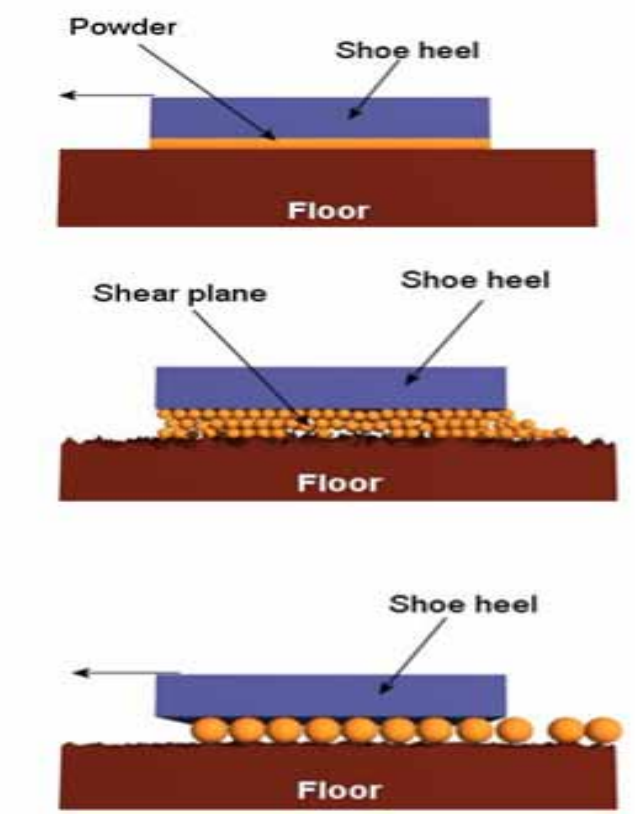
Capital Projects Position

External Entrance to main spine corridor

Contaminants

Reduced friction

- **Fluid**
  - Viscosity of the fluid and the surface finish of the floor.
- **Solids** (size dependant)
  - **Sliding:** Fine powders stick to the shoe and slide with the persons foot.
  - **Shearing:** Slightly larger grained powders such as flour, fall away as the slide progresses.
  - **Rolling:** Sandy, gritty, large grain particles that tend to roll or tumble underfoot.



Capital Projects

Past Experience

Formal justification for change in standard procedure to in Whiterock / Flooring interface

Capital Projects

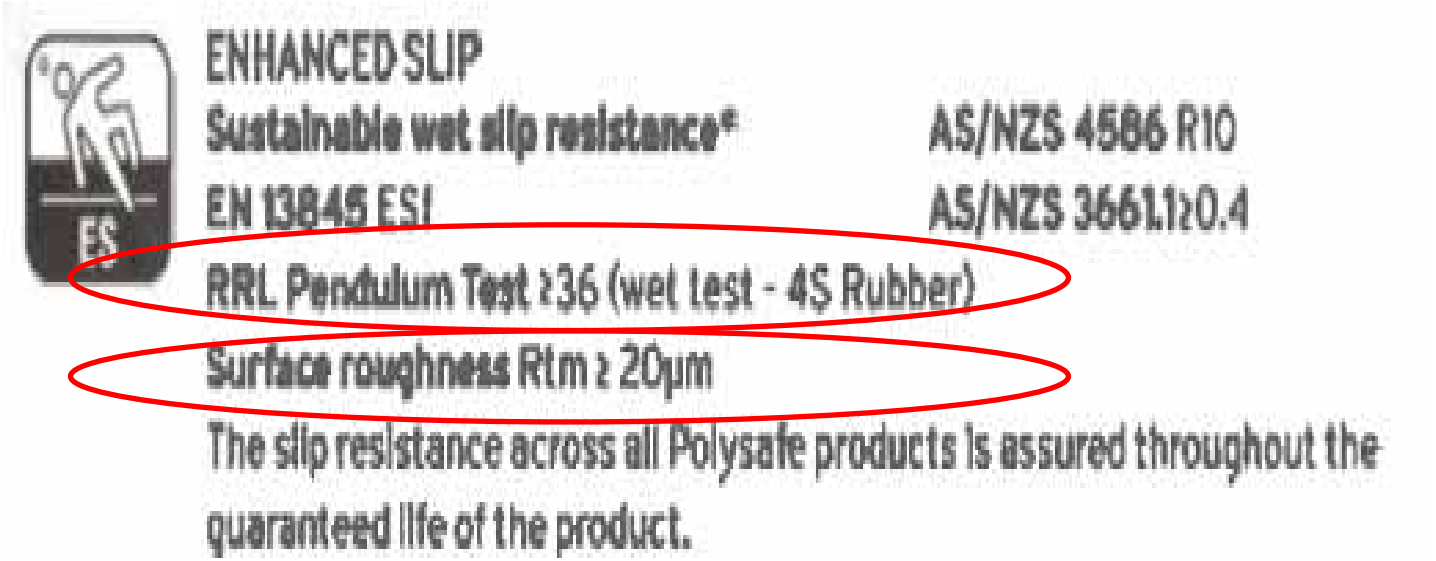
Floor Properties

(Slip, Durability, Hygiene)

Capital Projects

Slip Resistant Information

- Vinyl Flooring (Data Sheet Sent On To Facilities)



Facilities

Cleaning

- The Trust Employs 500 Cleaners
- All cleaners have a specific 5 day training programme, followed by a period of “buddy working”
- All cleaning teams report to a Supervisor
- Supervisors:
  - Monitor cleaning quality
  - Monitor cleaning methods

In-house Training Slide

Facilities
Cleaning

Why Do We Clean?

There are three main reasons:

1. To ensure the floor maintains its safety standard (Slip/Trips)
2. A clean environment provides the right setting for good patient care, Infection control and it is important for efficient and effective healthcare. Poor standards are linked with outbreaks of infection
3. To ensure that the Trust meets the National Standards of Cleanliness Guidelines

In-house Training Slide

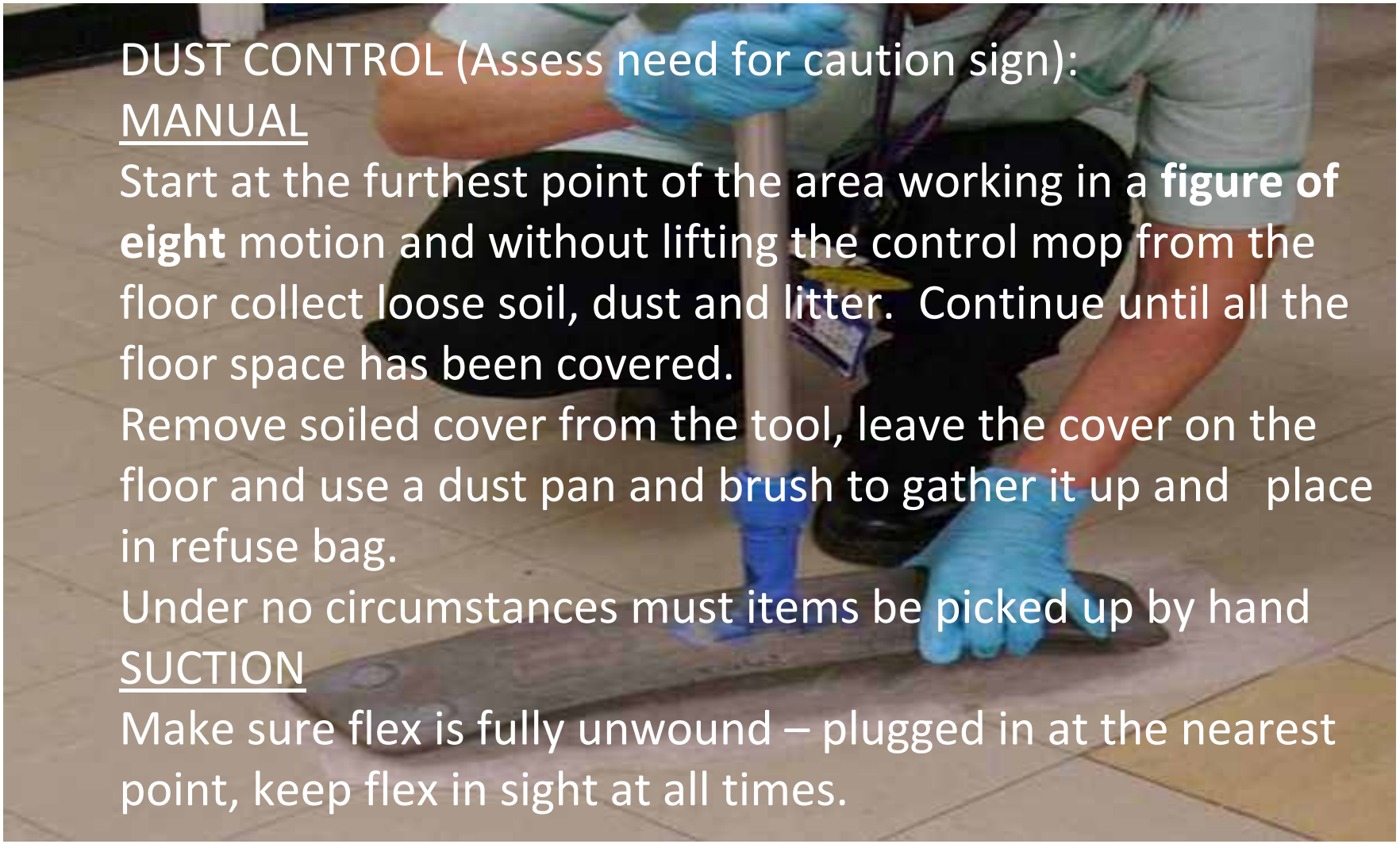
Facilities
Cleaning

- All staff must:
  - adhere to the uniform policy
  - ensure their personal cleanliness is of the highest standards.
- Footwear must be:
  - a full closed in shoe.
  - flat/low heels.
  - black in colour.

In-house Training Slide

Facilities Cleaning

(Appendix 2a & b)



DUST CONTROL (Assess need for caution sign):

MANUAL

Start at the furthest point of the area working in a **figure of eight** motion and without lifting the control mop from the floor collect loose soil, dust and litter. Continue until all the floor space has been covered.

Remove soiled cover from the tool, leave the cover on the floor and use a dust pan and brush to gather it up and place in refuse bag.

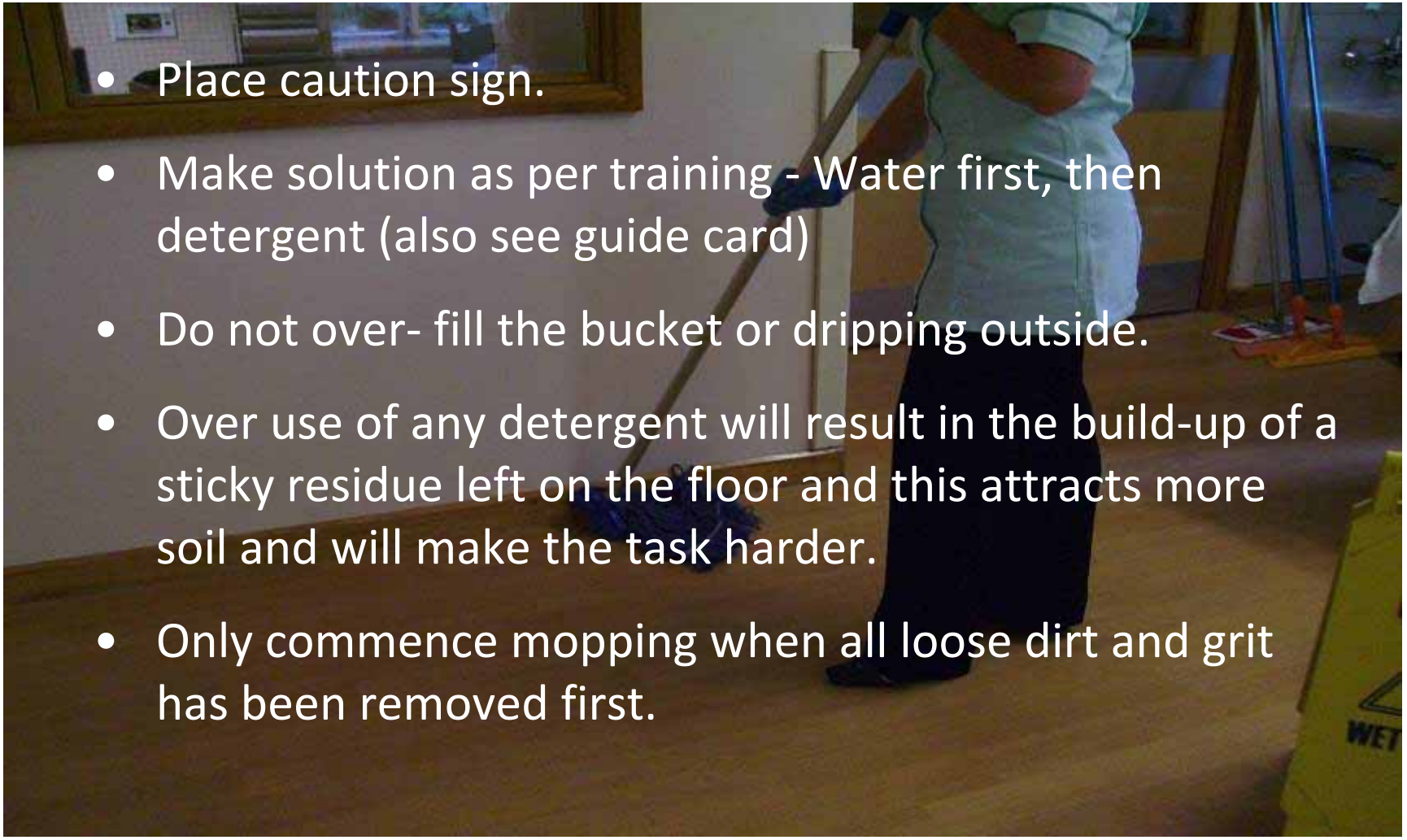
Under no circumstances must items be picked up by hand

SUCTION

Make sure flex is fully unwound – plugged in at the nearest point, keep flex in sight at all times.

In-house Training Slide

Facilities
Cleaning



- Place caution sign.
- Make solution as per training - Water first, then detergent (also see guide card)
- Do not over- fill the bucket or dripping outside.
- Over use of any detergent will result in the build-up of a sticky residue left on the floor and this attracts more soil and will make the task harder.
- Only commence mopping when all loose dirt and grit has been removed first.

In-house Training Slide

Facilities
Cleaning

DAMP MOPPING

- When working on stairs, in corridors and other public areas clean half the floor at one time so that dry access is available and access is not hampered. THIS IS VITAL AND MUST BE ADHERED TO
- High Traffic points are cleaned out-of-hours AM/PM always follow these instructions, people may enter the area without your knowledge.
- Return the caution sign to the store when all floors have dried.

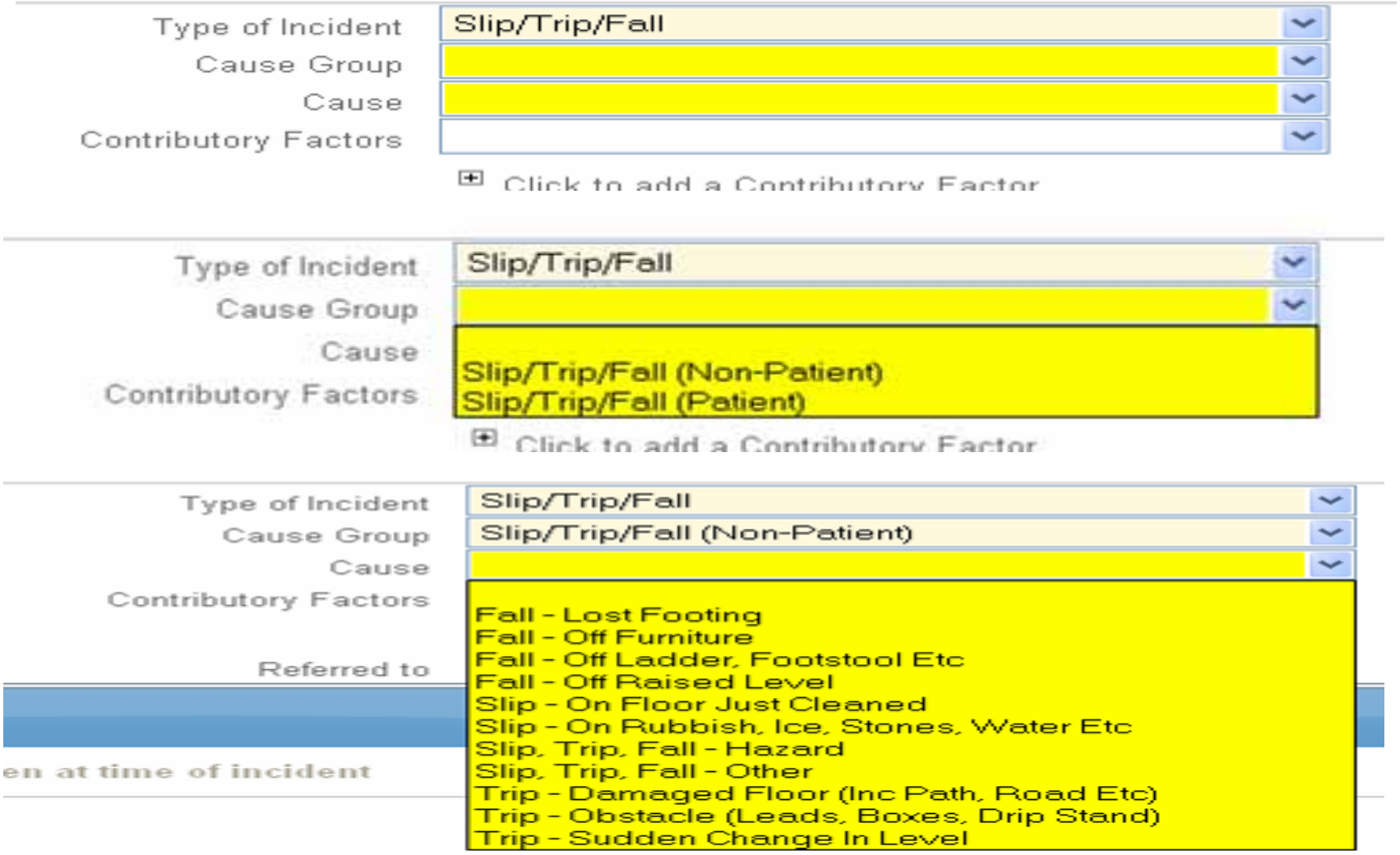
- *(New segregation option being looked at)*

Cleaning Tools

Incident

- The Trust uses an Electronic Incident Reporting System
- All Staff can report an incident
- Incidents system automatically notifies manager of the area, and other pre-defined personnel
- All incidents are classified
- All Incidents are graded (see Appendix 3)

Incidents


Type of Incident
Slip/Trip/Fall
Cause Group
Cause
Contributory Factors
Click to add a Contributory Factor
Type of Incident
Slip/Trip/Fall
Cause Group
Cause
Contributory Factors
Slip/Trip/Fall (Non-Patient)
Slip/Trip/Fall (Patient)
Click to add a Contributory Factor
Type of Incident
Slip/Trip/Fall
Cause Group
Slip/Trip/Fall (Non-Patient)
Cause
Contributory Factors
Referred to
Fall - Lost Footing
Fall - Off Furniture
Fall - Off Ladder, Footstool Etc
Fall - Off Raised Level
Slip - On Floor Just Cleaned
Slip - On Rubbish, Ice, Stones, Water Etc
Slip, Trip, Fall - Hazard
Slip, Trip, Fall - Other
Trip - Damaged Floor (Inc Path, Road Etc)
Trip - Obstacle (Leads, Boxes, Drip Stand)
Trip - Sudden Change In Level
en at time of incident

RISK ASSESSMENT MATRIX

Q1. **PROBABILITY** - What is the likelihood of the risk occurring? Use the table below to assign this incident a category code.

MEASURES OF PROBABILITY	
DESCRIPTOR	DESCRIPTION
1. Rare	The event may only occur in exceptional circumstances
2. Unlikely	The event is not expected to happen but may occur in some circumstances
3. Possible	The event may occur occasionally
4. Likely	The event is likely to occur, but is not a persistent issue
5. Almost Certain	The event will probably occur on many occasions and is a persistent issue

Q2. **SEVERITY** - Identify the highest consequence of this risk? (Use this table as a general guide; you may need to apply similar methodology for consequences not considered here ie information governance breaches)

Descriptor	Actual or Potential Impact on Individual(s)	Actual or Potential Impact on Organisation	COST Cost of control / litigation	The Potential for complaint/ Litigation
Insignificant 1	NO INJURY OR ADVERSE OUTCOME	No risk at all to organisation	£0 - £50K	Unlikely to cause complaint \ litigation
Minor 2	SHORT TERM INJURY /DAMAGE e.g. Injury that is likely to be resolved within one month	Minimal risk to organisation	£50K - £500K	Complaint possible Litigation unlikely
Moderate 3	SEMI-PERMANENT INJURY/DAMAGE e.g. Injury that may take up to 1 year to resolve.	Some disruption in service with unacceptable impact on patient Short term sickness	£500K - £2M	High potential for complaint Litigation possible but not certain.
Major 4	PERMANENT INJURY Loss of body part(s) Loss of sight Admission to specialist Intensive care unit	Long term sickness Service closure Service/department external accreditation at risk	£2M - £4M	Litigation expected/certain Multiple justified complaints
Catastrophic 5	DEATH and/or MULTIPLE INJURED PEOPLE	National adverse publicity External enforcement body investigation Trust external accreditation at risk	£4M & Above	Multiple claims or a single major claim

Q3 **Risk Score - Use the matrix below to grade the risk.**
i.e. 2 x 4 = 8 = Yellow or 5 x 5 = 25 = Red

	SEVERITY				
PROBABILITY	Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
1 Rare	1	2	3	4	5
2 Unlikely	2	4	6	8	10
3 Possible	3	6	9	12	15
4 Likely	4	8	12	16	20
5 Almost Certain	5	10	15	20	25

Incidents

- All incidents are investigated according to grade:
  - Green/Yellow – local
  - Amber – Divisional
  - Red – Corporate – non-clinical by H&S Department
- All RIDDOR's by H&S Department.

Incidents

Red incidents

Corporately managed incident investigation

- Table Top Review – All Trust stakeholders
- Action Plan Drafted (see Appendix 2)
- Action Plan Approved by Adverse Event Cttee
- AEC meet by monthly review actions and sign off Action Plan.

TIMETABLE OF EVENTS
INCIDENT:

Date/Time	Event	Significance
Elements of Good Practice 1. 2.		

Notes – enter all root causes from timeline/TTR – each root cause must have a corresponding action. The action must be entered on the recommendations action plan

Name (Patient or Person Involved)			
Incident Reference Number		Incident Date	
Brief Summary of Incident (Fact not opinion)			
1. Organisational/Management	**Action**		
2. Work Environment	**Action**		
3. Team	**Action**		
4. Task/Procedure	**Action**		
5. Individual	**Action**		
6. Patient	**Action**		
Name:	**Job Title:**		
Contact Number:	**Date:**		

RED INCIDENT
RISK TREATMENT PLAN
CONFIDENTIAL

Incident No:

Summary:			
Date of Incident		**Time of Incident**	
Date of Tabletop		**Work days since incident**	
Division/Directorate		**Department/Ward**	
Divisional Director		**Divisional Gen. Manager**	
Corporate Risk Lead			
Divisional Investigation Lead			
TTR Chair			

ACTION PLAN					
No	Action	By Whom	By When	Evidence/ Cost	Date Achieved
1					

Incident

RIDDOR's

Slip Trip & Fall incidents (non-patient)

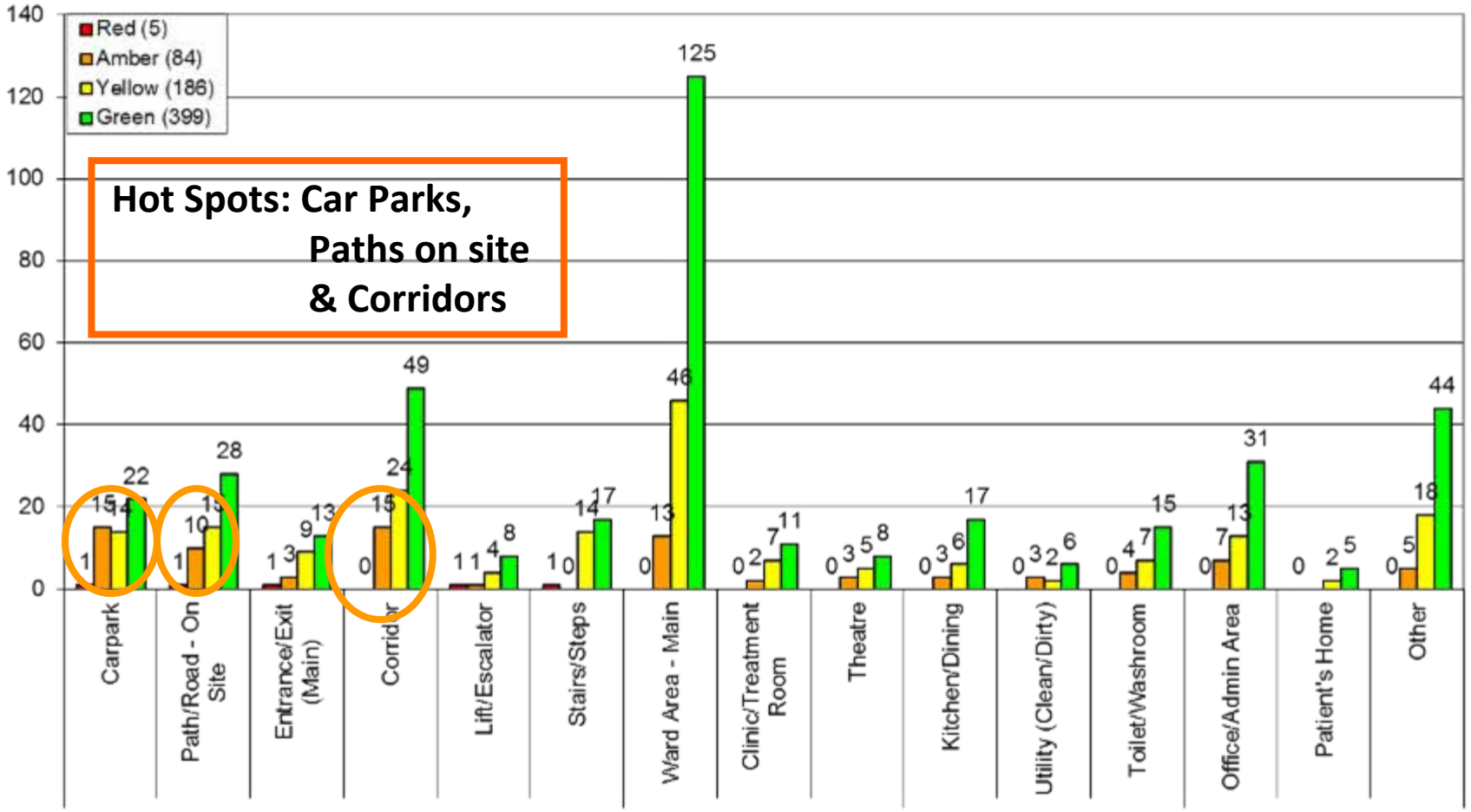
- Statements\Questioning IP:
  - Footwear
  - Visibility
  - Carrying anything
  - Contamination
  - Rushing
- Photographs\CCTV
- <u>If as a result of a slip</u>
  - Floor **Microroughness** Rz
  - Data entered into Slip Assessment Tool

Information Management

- Local/Divisional investigations reported back at team meetings
- Corporate investigations – all stakeholders invited to Table Top Review – Action Plan managed by Division/Corporate team
- Report generated quarterly for all incidents
  - Health and Safety Committee
  - Risk Management Group
  - Governance Board
  - Published on Health and Safety Home Page

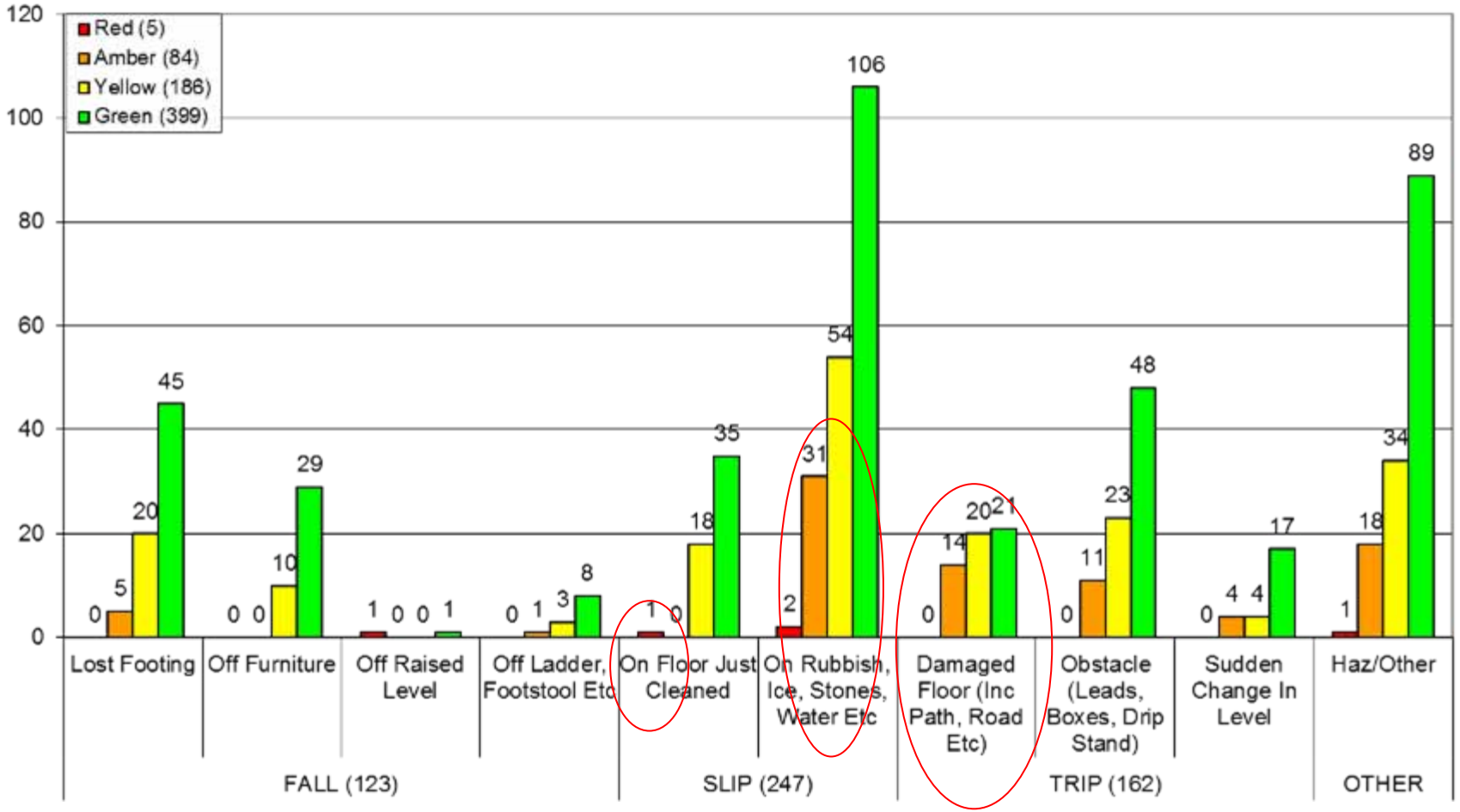
Non-Patient STF's Grade by Location

(5 years data Ave 135)

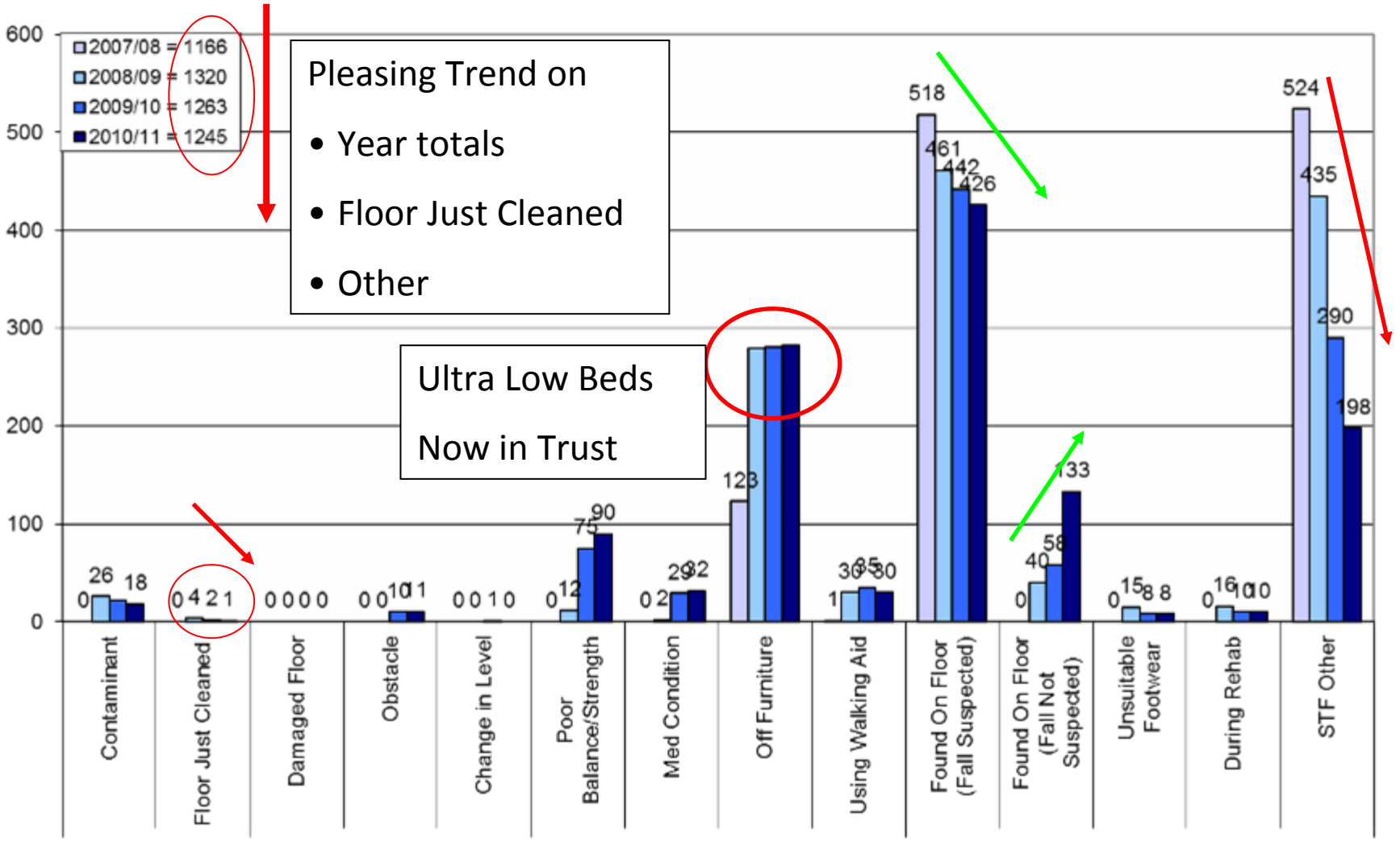


Non-Patient STF's Grade by Stated Cause

(5 years data)



Patient Falls (2007 – 2011)



Questions

Other Issues

Footwear, floor treatment, work process, housekeeping, human behaviour

Rubber

A natural product, durable, lightweight and easy to clean, but often has a smooth finish which is likely to be slippery when contaminated. Can also be textured or profiled.

Vinyl

A range of different finishes, from smooth and textured surfaces, to safety vinyl floors. A safety vinyl is often seen as hard to keep clean, generally because the wrong cleaning method is being used.

Linoleum

Is durable, lightweight and easy to clean, but usually has a smooth finish, which means it is likely to be slippery when contaminated.

Ceramic

Is durable, hardwearing and aesthetically appealing. Tiles come in a range of finishes: glazed, vitrified, matt, polished and profiled etc. Safety tiles are available, eg carborundum quarry tile. Generally, the rougher the surface finish, the better the slip resistance with viscous contamination. These tiles may need a different cleaning regime to keep the surface clean and maintain slip resistance.

Stone

Both natural stone and man-made stone such as terrazzo. Hard-wearing and different finishes eg polished, flamed etc. May have variation in surface characteristics. As a result slip resistance may alter across the tile. The slip resistance of these floors will be dependent on surface finish. They are often sealed or polished which can result in a surface with low microroughness, which means they may be slippery when wet or contaminated.

Epoxy

This is a type of polymer resin, usually painted or rollered onto a floor, that dries to form a waterproof layer. A range of different finishes from very smooth to aggressive slip resistant surfaces. Aggregate is used in the slip resistant floors. Slip resistant floors may need different cleaning regimes to keep the surface clean and maintain the level of slip resistance.

Wood

The slip resistance of natural wood floors may vary. Natural wood floors are often sealed or polished; this will alter the surface roughness and slip resistance of the floor, generally making them more slippery when wet or contaminated.

Metal

Hard-wearing they range from designer stainless steel tiles to industrial profiled surfaces and grids. Metal floors often have a very smooth surface finish which results in a high slip potential when contaminated. The addition of a raised profile pattern does not necessarily improve slip resistance,

Cementitious

Concrete based, hard-wearing and often used in industrial environments. Several surface finishes are available, from very rough to very smooth. Cementitious surfaces often release large amounts of dust which can make floors slippery.

Facilities

Overview for Floor Types/ Maintenance /Products and Frequencies and Methods Applied

Floor Type	Where Used (Examples)	Dry Methods	Shift	Frequency	Chemical Products	Frequencies	Wet Methods	Frequencies	Shift
Standard Vinyl	• Wards • Corridors • Offices	• Suction Clean • Dust Control	AM/PM	Daily	• Chlor-Clean • Alkaline Cleaner • Polish	• Daily • 1/7 for 2 weeks • 1/7 for 4 weeks	• Mopped • Mopped/Agitated with machine • Spot mopped	Daily Daily Daily	AM/PM
Polyflor/ low maintenance	• Receptions • Corridors	• Suction Clean • Dust Control	Nights AM/PM	Daily	• Neutral-Detergent • Alkaline Cleaner	• Daily • 1day in 6 week program	• Scrubber Dryer • Spot mopped	Daily Daily	Nights AM/PM
Anti-Static	• Theatres	• Suction Clean	PM/AM	Daily	• Neutral-Detergent • Chlor-Clean	• Daily • following blood spill or as directed by infection control	• Scrubber Dryer • wet pick up	Daily Daily	PM/AM
Safety Flooring/ (Altro–Polyflor)	• Wards (WC) • Bathrooms • Utilities • Public Toilets • Kitchens	• Suction Clean • Dust Control	AM/PM	Daily	• Chlor-clean • Alkaline Cleaner	• Daily • 2 x Daily • Weekly	• Mopped • Agitated with machine • wet pick up	Daily 2xDaily Weekly	AM/PM
Terrazzo	• Receptions • Theatres • Recovery	• Suction Clean	AM/PM	Daily	• Neutral-Detergent • Alkaline Cleaner	• Daily	• Scrubber Dryer • wet pick up	Daily	AM/PM
Concrete	• Trade Entrances • Loading Bays	• Dust Control • Suction Clean • Flipper	AM/PM	• Monthly • weekly check • spot clean spillages	• Neutral-Detergent	• Monthly	• Scrubber Dyer • wet pick up • Spot mop	Monthly Weekly As required	AM/PM

Inclement weather: Frequencies on Main Entrances will increase to maintain aesthetic appearance.
Maintenance/Audit: Floor maintenance programs signed daily by operatives and checked by Supervision during Audits.
Floor Cleaning Procedures: Identified in Facilities, Hotel Services Cleaning Procedure Handbook.

Appendix 2b

Sample Rota

Ward Service Officer 1	
7.00am	Clean sanitary areas/sluice/store area.
8.15am	Commence damp dusting of ward including clean itilities using one cloth per item method.
9.30am	BREAK
10.00am	Vacuum main ward/side rooms.
	Vacuum Isolation Wards.
11.00am	Clean patient equipment as per list provided on ward area.
11.50am	Clean equipment return to store.
12.00pm	Assist with food service.
1.30pm	Commence periodic duties as per schedules.
2.40pm	Food service duties.
2.50pm	Clean equipment and return to store.
3.00pm	FINISH

Ward Service Officer 2	
7.00am	Food Services Duties.
9.30am	BREAK
10.00am	Damp mop & clean main ward/side rooms, wards, day rooms & Nurses Station.
11.50am	Clean equipment return to store.
12.00pm	Food service duties (including cleaning kitchen).
1.30pm	Commence periodic duties as per schedules.
2.30pm	Clean equipment and return to store.
2.40pm	Collect Supper items.
3.00pm	FINISH

Ward Service Officer 3	
4.00pm	Cleaning duties - dust control and spot mop ward.
4.40pm	Collect jugs and glasses, wash and refill and re-distribute.
5.00pm	Commence food service duties.
6.30pm	Clean sanitary areas/sluice/store area.
7.20pm	Empty bins in all areas and re-dust control.
7.50pm	Clean equipment and return to store.
8.00pm	FINISH

KEY:	
	Sanitary Room Cleaning
	Bed/General Area Cleaning
	Food Service/Kitchen Cleaning
	Isolation Area Cleaning

NHS

Appendix 3

RISK ASSESSMENT MATRIX

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Q3 **Risk Score - Use the matrix below to grade the risk.**
i.e. 2 x 4 = 8 = Yellow or 5 x 5 = 25 = Red

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TIMETABLE OF EVENTS

INCIDENT:

Date/Time	Event	Significance
Elements of Good Practice 1. 2.		

Notes – enter all root causes from timeline/TTR – each root cause must have a corresponding action. The action must be entered on the recommendations action plan

Name (Patient or Person Involved)			
Incident Reference Number		**Incident Date**	
Brief Summary of Incident (Fact not opinion)			
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2. Work Environment	**Action**		
3. Team	**Action**		
4. Task/Procedure	**Action**		
5. Individual	**Action**		
6. Patient	**Action**		
Name:	**Job Title:**		
Contact Number:	**Date:**		

RED INCIDENT

RISK TREATMENT PLAN

CONFIDENTIAL

Incident No:

Summary:			
Date of Incident		**Time of Incident**	
Date of Tabletop		**Work days since incident**	
Division/Directorate		**Department/Ward**	
Divisional Director		**Divisional Gen. Manager**	
Corporate Risk Lead			
Divisional Investigation Lead			
TTR Chair			

ACTION PLAN					
No	Action	By Whom	By When	Evidence/ Cost	Date Achieved
1					

- Dr Steve Thorpe - Buxton Health and Safety Laboratory
- Surtronic Duo
- RRL - Road Research Laboratory (British Pendulum Test) The Portable Skid Resistance Tester, also known as the British Pendulum Tester, was originally designed in the 1940's by Percy Sigler to measure the slip resistance of floors in government buildings. During the late 1950's the instrument was adopted and redesigned by the then Road Research Laboratory (RRL, now known as the Transport Research Laboratory, TRL).
- STEP – Slips Trips eLearning Package
- SAT – Slip Assessment Tool