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HESAS EMS Standards Document
Published by HESAS and ReXcels Press
Boston, MA, USA.
Initial draft publication, June 2014.
Final draft publication, December 2020.

#### Message from the chairman

It is vividly evident that the world witnessed the worst public health and economic crisis due to COVID-19 pandemic. This inevitably mobilized the international community to act seriously and swiftly. However, the mortalities and morbidities induced by healthcare-acquired infections (HAI) are equally fatal, but the international community did not act similarly. Consequently, we are continuously and chronically suffering from HAI.

The current intervention for HAI is merely based on passively-set standards and enforcing these standards via regulatory agencies such as the centre for disease control and prevention (CDC), joint commission international (JCI), ministries of health, and other regulatory agencies. To efficiently address HAI, we inevitably need to mobilize the international community because HAI traverses a multitude of epistemological dimensions, requiring multidisciplinary tacit knowledge, and mandates active international collaboration. Besides, we believe that we can efficiently traverse deeply into the root-causes and solution landscapes by automating the entire healthcare environmental services and infection control within healthcare institutions using the latest advancements in computational epistemology, computational infection control models, computational epidemiological models, artificial intelligence, machine learning, distributed ledger technology, collective intelligence, cognitive technologies, internet of things, ubiquitous technologies, intelligent micro-measurement frameworks, artificial life, evidence-based program implementation, patient-centric care, strategy anchored execution, and symbiotic healthcare ecosystem services. Consequently, we developed these open standards that were tailored from diverse international standards to promote the automation of healthcare environmental services and infection control processes and best practices.

The Healthcare Environmental Services Operational Map (HESOM) and other standards were developed to efficiently leverage multidisciplinary experts and practitioners to contribute towards the eradication of HAI-induced mortalities and morbidities. Using ReXcels research and innovation environment, we cultivate collective intelligence by bringing together these multidisciplinary experts to iteratively develop these standards and adaptively support the innovation of computational technology that automates the execution and enforcement of these standards. As such, we cordially invite you to use these documents and participate actively in the further development of these standards to significantly reduce HAI-induced mortalities, morbidities, and their enormous negative economic externalities.

#### **Hamid Adem**

Interim Chairman, and Chief R&D Officer

# **Change Control**



### **Change Control**

Version:	Date:	Changes:



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# ESM Housekeeping Management Process



### **Purpose**





#### 1. PURPOSE

The purpose of this document is to establish a standard Housekeeping process based on best practices and standards for the Organization, such that the Housekeeping process would:

- Ensure that a standard Housekeeping baseline gets established across organization
- Protect patients against standard HAI (hospital Associated Infections)
- Establish clear responsibilities for all those who are involved in the Housekeeping process

This document would establish an efficient Housekeeping process based on international well acclaimed standards like:

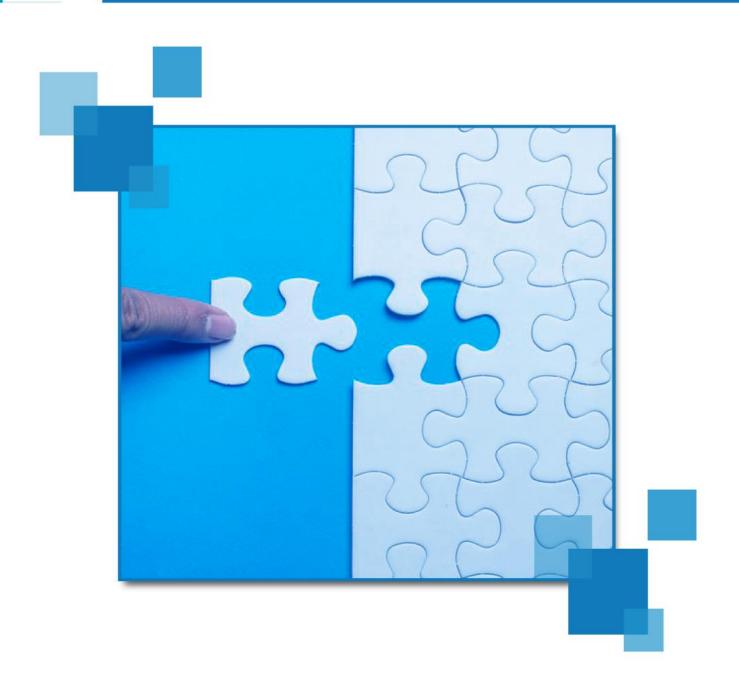
- NHS- National Health Services Standard
- OSHA- Occupational Safety and Health Administration standard
- CDC- Centers for Disease Control and Prevention standard
- Lean six sigma- Quality Standard
- JCI- Journal of Clinical Investigation standard
- JCAHO- Joint Commission on Accreditation of Healthcare Organizations (JCAHO)
- EPA- US Environmental Protection Agency
- HCAHPS Hospital Consumer Assessment of Healthcare Providers and Systems
- HIPA- Health Information Privacy Act standard.

**P.S:** This Housekeeping process is a derivation from ESM (Environmental Service Map), which is a holistic and a comprehensive model for Environmental Services Management.

# ESM Housekeeping Management Process



### **Structure of the Document**



### Structure of the Document



#### 2. STRUCTURE OF THE DOCUMENT

The Housekeeping process management document comprises the following chapters:

**Chapter–3**: <u>Scope</u>: This chapter describes the scope of the document and the Housekeeping process.

**Chapter–4**: <u>General Assumptions</u>: This chapter describes the underlined assumptions made for both the document and Housekeeping process.

**Chapter–5**: <u>Housekeeping Framework</u>: This chapter exhibits the interaction of Housekeeping process with other related processes and also describes the process sequence for Housekeeping process.

**Chapter–6**: <u>Housekeeping Management Process</u>: In this chapter Housekeeping process and sub processes (if any) will be depicted and specified using rigorous BPMN and process specification templates.

**Chapter–7:** <u>References</u>: This chapter serves as a prime reference to Housekeeping process and presents the details supporting it in tabular formats. The chapter describes relevant Business Rules, Risks, Quality Attributes, Data Quality Dimensions, Operation Policies, KPIs, CTQs, Abstract Time-scales and SLAs terms specific to Housekeeping process.

The Housekeeping process is supposed to be a living document and consists of various variable values which would frequently evolve or change as organization's Housekeeping process matures or changes

# ESM Housekeeping Management Process



### Scope





### 3. SCOPE

This process is applicable to Organization's:

- People
  - Housekeeping staff and supervisors
  - Patients
  - suppliers /vendors,
- Premises
  - Normal rooms ( single bed, four beds)
  - Isolation room
  - Reception ward
  - Kitchen, pantry and cooking area
  - Wards (general, bays)
  - Toilets and corridors.

4

# ESM Housekeeping Management Process



### **General Assumptions**



### **General Assumptions**



#### 4. GENERAL ASSUMPTIONS

Following are general assumption made for the Housekeeping process.

- Housekeeping related Planning process, Risk management, Human resource management process and quality management process are automated.
- The Housekeeping shifts have already been established, and that there exists three Housekeeping shifts at organization as mentioned below:
  - 1st 05:00 AM- 01:00 PM
  - 2<sup>nd</sup> 01:00 PM- 09:00 PM
  - 3<sup>rd</sup> 09:00 PM- 05:00 AM
- All the required Housekeeping equipment is readily available.
- Adequate resources are available to this process to ensure Housekeeping process is performed efficiently.
- All the cleaners have been efficiently trained on how to do hygienic Housekeeping.
- Senior Management highly supports the Housekeeping initiative at organization.
- Any activity related assumptions are explicitly identified in related Process Specification table in Chapter 6

# ESM Housekeeping Management Process



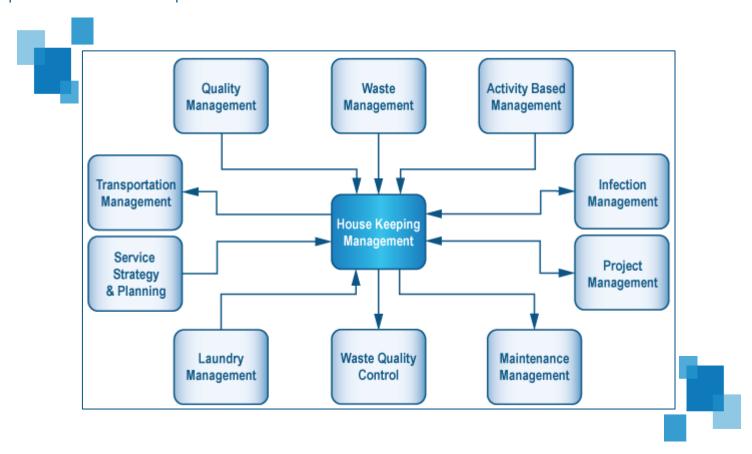
### Housekeeping Management Framework





### **5.1 Housekeeping Process Interactions**

The following depiction shows the points of interaction of Organization (organization) Housekeeping Management process with other related processes.



### **5.2 Housekeeping Process**

The Housekeeping process comprises of following sequence of activities:

- 1. Establish Housekeeping Management Framework
- 2. Establish MSD prevention program
- 3. Identify housekeeping Requirements
- 4. Identify the Housekeeping type



- 5. Identify the Housekeeping equipment availability
- 6. Identify Housekeeping Schedule
- 7. Perform Housekeeping
- 8. Perform Inspection.

**Section 5.2.1 -5.2.8** describes the flow of high level process sequence for organization Housekeeping Management. **Section 6.1** Process Model sheds more light on the entire flow of Housekeeping process.

### 5.2.1 Establish Housekeeping Management Framework

This activity involves setting up proper foundation for organization's housekeeping process. This involves following:

- Establish Management structure. It is vital that there are clear lines of accountability and reporting for the
  housekeeping service at organization, and equally vital that the Housekeeping Management structure is well
  accepted and formalized at organization.
- Preparation of work Schedules. Each housekeeping task to be performed in each area should be identified
  and allocated to a staff group (e.g., organization nurses, cleaners, supervisors) and recorded as a work
  schedule. It is quite important that the work schedules are properly drafted and communicated to the
  cleaners and all other responsible for housekeeping. These work schedules should be properly established
  and reviewed at least annually.

Appendix B shows an example of Work Schedule for a Cleaner.

Establish technical Methods. It is important that organization establishes technical methods to give
guidance to cleaners on how to perform effectively all common housekeeping tasks likely to be required.

Examples of technical methods can be general Housekeeping, floor Housekeeping, and Dust Housekeeping
etc.

Appendix C shows an example of Technical Method.

- Establishing House Keeping Procedures. This activity involves establishing standard organization
   Housekeeping procedures for:
  - Normal Room Housekeeping



- Isolated Room Housekeeping
- Normal Terminal Housekeeping
- Isolated Terminal Housekeeping
- Pantry/ Kitchen Housekeeping
- Corridor Housekeeping
- Toilet Housekeeping
- Reception Housekeeping
- Physiotherapy room Housekeeping

It is quite important that these procedures are properly communicated to the cleaners so that a common standard of Housekeeping would exist at organization.

- Establish Color codes. A color code standard should be used at organization in order to improve the safety
  of housekeeping, and to ensure consistency and clarity for all involved staff. All Housekeeping materials and
  equipment, for example, cloths (re-usable and disposable), mops, buckets, aprons and gloves should be
  color coded.
- Training & Awareness. It is quite vital that organization cleaners are properly trained on all the organization
   Housekeeping methodologies prior to their commencement of official duties.

The depiction on the next page shows organization color code based on NHS (National Health Service) standard.

P.s: ES<sup>3</sup> Housekeeping Planning processes are automated





Bathrooms, washrooms, showers, toilets, basins and bathroom floors

# Green

Catering departments, ward kitchen areas and patient food service at ward level

# Blue

General areas including wards, departments, offices and basins in public areas

# Yellow

Isolation areas



### 5.2.2 Establish MSD prevention program

MSD is a term for injuries and disorders that affect our musculoskeletal system (i.e. muscles, tendons, ligaments, nerves, discs, and blood vessels). Work-related MSDs are caused or aggravated by various hazards present in the workplace. Few examples of MSD are as follows:



- Sprains and strains of muscles, ligaments and tendons (eg shoulder muscle strain leading to rotator cuff tear)
- Back injuries, including damage to the muscles, tendons, ligaments, spinal discs (eg ruptured discs), nerves (eg sciatica), joints and bones
- Joint injuries or degeneration, including injuries to the shoulder, elbow, wrist, hip, knee, ankle, hands and feet
- Bone injuries (eg fractures)
- Nerve injuries (eg carpal tunnel syndrome of the wrist)
- Soft tissue hernias (eg abdominal hernias)
- Muscular and vascular disorders as a result of hand-arm vibration (HAV)

MSD prevention would comprise of following phases:

#### 5.2.2.1 Establishing Strategic foundation

This comprise of following:

- **Set objectives.** This involves establishing broad objectives depending on the needs of organization. Objectives could relate to legislative compliance, reducing the costs, MSD incidents, improving productivity, operational efficiency or a combination of these and other factors.
- **Clear Commitment**: All levels of management need to clearly communicate that they are committed to preventing MSDs in the workplace.
- Resources availability: Supervisors and workers should know that real efforts are being made to reduce
  exposures to MSD hazards and that resources will be allocated to make any necessary changes.

#### ▼ 5.2.2.2 Categorizing hazards

Typically the MSD hazard can be classified as following:

#### Force

When a task requires them to exert a level of force that is too high for any particular muscle, it can damage the muscle or the related tendons, joints and other soft tissue.

This damage can occur from a single movement or action that requires the muscles to generate a very high level of force. However, more commonly, the damage results when muscles generate moderate to high levels of force repeatedly, for a long duration, and/or while the body is in an awkward posture. Some job tasks result in high force loads on different parts of the body. For example, lifting a heavy load that is far



from the body increases the load on the lower back. This can potentially damage both the spinal discs and the vertebrae.

#### Fixed or Awkward Postures

The farther a joint moves towards either end of its range of motion, or the farther away from the neutral posture, the more awkward or poor the posture becomes and the more strain is put on the muscles, tendons and ligaments around the joint. For example, when arms are fully stretched out, the elbow and shoulder joints are at the end of their range of motion. If the worker pulls or lifts repeatedly in this position, there is a higher risk of injury.

#### Repetition

The risk of developing an MSD increases when the same parts of the body are used repeatedly, with few breaks or chances to rest. Highly repetitive tasks can lead to fatigue, tissue damage, and, eventually, pain and discomfort. This can occur even if the level of force is low and the work postures are not very awkward.

#### • Other MSD Hazards and Workplace Factors

Other MSD hazards and workplace factors that should be considered include:

- Contact stress
- local or hand-arm vibration
- Whole-body vibration
- Cold temperatures
- hot work environments
- Repeated impacts
- Work organization, and work methods

#### **▼** 5.2.2.3 Performing Initial MSD assessment

This comprises of following:

- **Checklist.** Checking the current status of MSD prevention awareness and implementation in the housekeeping worker. This comprises of performing assessment via a set of question "initial assessment checklist". This idea behind this step is to see if there are missing basic elements and furthermore, to help identify opportunities to strengthen existing program.
  - Appendix G provides a sample checklist.
- Reviewing records. This comprises of reviewing accident and injury record and performing verbal discussions with housekeeping workers, supervisors and managers. Common sources of such information include:



- Injury records and trends
- Incident and hazard reports
- Issues raised by Check Inspectors, OHS committee members, deputies, employees, permanent and intermittent contractors

#### 5.2.2.4 Conduct detailed MSD assessment

Based on the initial MSD assessment results, MSD detailed assessment might be conducted to identify MSD hazards. This comprises of following utilizing a general MSD hazard identification tool to identify which hazards are present, and take input from the housekeeping workers and staff with regards to the daily hazards that they encounter while performing their routine housekeeping job.

Appendix H provides a tool for General MSD hazard identification.

#### **5.2.2.5** Establishing Priority

The next step is to prioritize their hazard identification findings to help determine the priority level for further action. This step can help workplaces determine which findings are of extremely high priority to address and which may require no further action except to continually monitor for any changes in status.

Appendix I shows a table for prioritizing hazard findings

#### 5.2.2.6 MSD Hazard Root Cause

This involves using a fish bone structure for determining root cause of the hazards. This method can be useful in helping identify where something may be going wrong, or be improved. Such a diagram is typically the outcome of a brainstorming session where problem solvers can offer suggestions. The main goal is represented by the trunk of the diagram, and primary factors are represented as branches. Secondary factors are then added as stems, and so on. Creating the diagram stimulates discussion and often leads to increased understanding of a complex problem.

Causes are usually grouped into major categories to identify the sources of problem. The categories typically include:

- **Human**: Anyone involved with the process.
- Process: How the process is performed and the specific requirements for doing it, such as policies, procedures, rules, regulations and laws.
- **Equipment**: Any equipment, computers, tools etc. required to accomplish the job.
- Materials: Raw materials, parts, pens, paper, etc. used to produce the final product.



• **Environment**: The conditions, such as location, time, temperature, and culture in which the process operates.

Following points can be considered in each of the category:

#### Process

- Length of time allotted to tasks e.g., cleaning clothes.
- Machine paced tasks. E.g. cleaning using floor cleaning machine
- Duration of task e.g. disinfecting a bed.
- Variety of tasks
- Production/quality standards
- Communication between staff within the department

#### Equipment

- Working height e.g., how tall is the fan that needs to be cleaned.
- Location of controls and/or displays
- Operation of the controls e.g how easy is to operate the floor cleaner
- Mobility of trolley
- Location of the stores
- Association with other equipment
- Insufficient adjustability
- Maintenance requirements of the machines

#### Materials

- Packaging
- Weight and dimensions of bucket
- Storage location
- Quality

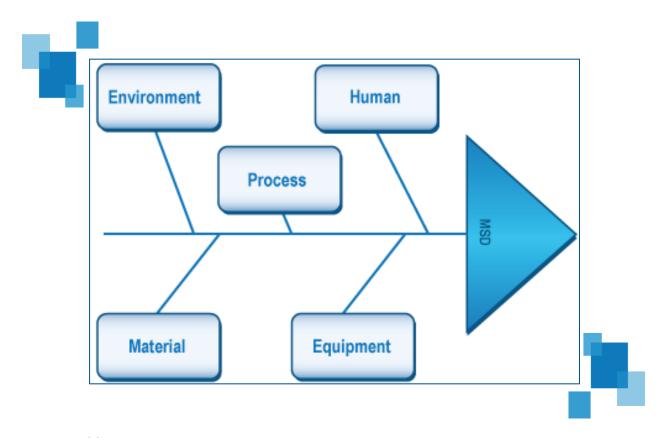
#### Environment

- Working space
- Overcrowding
- Temperature in which the operation is done
- Flooring
- Housekeeping



#### Human

- Insufficient training on techniques/processes
- Insufficient supervision /coaching
- Production pressures and demands
- Inappropriate response to reports of MSD related concerns
- Differences in work methods/techniques
- Inconsistent use of equipment/controls that help reduce MSD risk



#### This comprises of following steps:

- **Step 1:** Write down the specific MSD hazard you are concerned about to help focus the group.
- Step 2: Ask why the MSD hazard exists and identify the category on the worksheet
- **Step 3:** For each answer, ask why again, and continue to do this until the group reaches consensus that the root cause has been identified.



#### **▼** 5.2.2.7 Choose and implement MSD hazard controls

This phase comprises of choosing the hazard controls based on the brainstorming. Following are some solutions which can be undertaken for each category:

- Process: Following solution can be used to address process categories:
  - Job enlargement and/or task rotation between workers
  - Improve communication between workers performing task
  - Self-paced tasks, time allows for micro-breaks in between
  - Improved work/material flow by process redesigning
  - Improve communication between departments
  - Timely response to reported defects, equipment breakdown, product/tool/equipment damage
  - Adequate staffing resources to handle workloads
- Materials: Following solution can be used to address materials categories:
  - Items weight should be taken into consideration for the organization of stock on shelves
  - Reduce use of sub-standard and poor quality materials
  - Lifting weight in manageable weights
  - Purchase materials in bulk containers
  - Redesign packaging to include handles and ease of lifting
  - Store materials in areas that are easy to access
- Equipment: Following solution can be used to address equipment categories:
  - Provide mechanical lifts, hoists, conveyors, motorized carts
  - Improved workstation design to facilitate its operation
  - Chair adjustability (sit/stand, height adjustable)
  - Perform preventative maintenance
  - Perform regular inspections
  - Provide space for workers to move
  - Allow unconstrained postures
  - Provide material handling equipment for moving materials
- Environment: Following solution can be used to address environment categories:
  - Redesign layout to provide space for movement and required job tasks
  - Improve housekeeping



- Comfortable working temperature using coolers, air conditioning and warmers.
- Provide anti-fatigue matting
- Human: Following solution can be used to address Human categories:
  - Training housekeeping staff on :
    - Signs & symptoms of MSD
    - MSD hazard awareness
    - How to report MSDs/MSD hazards
    - Work techniques and processes to avoid MSD
  - Reinforce need for use of equipment/controls that help reduce MSD risk
  - Improved communication from supervisors
  - Support for early reporting of concerns
  - Personal protective equipment (in-soles, knee pads, anti-vibration gloves)
  - Production pressures and demands

Appendix J provides tips that can be considered to remove various categories of MSD.

#### 5.2.2.8 Follow up and evaluate success of MSD prevention program

This comprises of verifying whether the MSD hazards have been reduced or not. This comprises of:

- Walk through surveys. Making surveys and enquiring of the workers as to verify that the control is working (less pain, working as expected, no other hazards introduced)
- **Inspections**. This comprises of performing audits and inspections.
- **Record keeping**. Keep records of hazard identification, risk assessment and control processes to help meet regulatory requirements and ensure that MSD risks in performing manual task issues are being managed

Follow-up again after some time has passed to see if the control is still effective and to consider cost benefit issues.

#### **▼** 5.2.2.9 Communicate results and acknowledge success.

This comprises of conveying the success of the program to all staff, and recognizing individual efforts undertaken to prevent MSD in the workplace

### **5.2.3** Identify Housekeeping Requirements

The objective of this activity is to obtain an understanding of organization's housekeeping requirements. This housekeeping requirement would be based on the following criteria:



- Premises. Premises would take into consideration following:
  - Clinical Classification of premises (isolated, normal, highly isolated)
  - Containment (what is inside the premises, beds, chair, tables etc.)
  - Dimensions ( area, size of room)
- Asynchronous Event: This refers to housekeeping event which are caused due to irregular event for example a person vomits, or there are some airborne microbes in the air conditioning of the hospital.
- Causal Relationship: This refers to the conditions whereby the housekeeping requirement are based on
  the relationship of occurrence of other events for example, in case of a hospital if a patient is discharged the
  room would be cleaned and this would affect the Housekeeping of the room for subsequent patient.

### 5.2.4 Establish Housekeeping Type

The objective of this activity is to identify the type of housekeeping activity that should be performed based on the Requirement identified from the earlier activity. This housekeeping type can be any of the following:

- Regular: This refers to the normal housekeeping supposed to be done to all clinical areas, Isolation rooms, isolation bed areas / bays, Toilets etc. These are planned ahead with proper schedules. Typically regular Housekeeping is heavy.
- **Occasional**: This refers to follow up housekeeping which is done after regular housekeeping at prescribed period of time. Typically the occasional housekeeping are not as intense as the regular housekeeping are.
- **Non regular:** housekeeping done as per specific requirement, such as an instruction form Infection control coordination to clean all the air conditioning vents to kill the airborne viruses or microbes.

### 5.2.5 Identify Housekeeping Resources Availability

This step ensures the availability of various housekeeping resources involved in the process. This comprises of following:

- Staff availability: e.g Cleaners
- Housekeeping Related Equipment
  - Personal Protective Equipment(PPE): Such as face masks, Helmets, Aprons, Disposable Gloves
  - **Environment Security Equipment:** For example, Floor signs.
  - Housekeeping equipment: Chemicals and Housekeeping utensils e.g. mob, towels, buckets, Dust bags, Disinfectants, garbage bags etc.

This activity interacts with Inventory Management process to ensure that all the pre requisites resources for Housekeeping are always available.



P.s: ES<sup>3</sup>Housekeeping Human resource management processes are automated.

### 5.2.6 Identify housekeeping Schedule

Once the availability of the Housekeeping equipment is confirmed the next activity is to identify the timeframe for the housekeeping activity. This comprises of establishing:

- The time duration
- Time of the day
- And frequency of the Housekeeping activity.

P.s: ES<sup>3</sup>Housekeeping Planning processes are automated

### 5.2.7 Perform housekeeping

This activity refers to the actual job of performing the housekeeping activity as per the work instructions and work procedures established by organization.

### **▼**5.2.8 Inspection & Reporting

This activity comprises of following:

- **Inspection**: Occasional inspectional of the quality of the housekeeping job and conformance to the method prescribed for the housekeeping routines.
- **Reporting**: Highlighting any shortcoming as per inspection to the Senior Management of organization.
- **Identification of Corrective and preventive Actions**. List of actions which can be implemented in order to preventive further shortcomings and also to correct the shortcomings.
- **Implement Actions**. This involves implementing the planed actions to improvise organization cleanliness management.

The following table highlights the various constraints and their relationship with regards to the Housekeeping Management process.



Types of Clean	Premises to be cleaned	Containments	Time to clean	Typical Product Used
Regular housekeeping	<ul> <li>All clinical areas Isolation rooms</li> <li>Highly Isolated rooms,</li> <li>Isolation bed areas / bays</li> <li>Toilets</li> </ul>	Floor, ledge, patient's locker, table, chair, bins, bed-frame, mattress and en- suite facilities when present.	Daily Housekeeping (Across every Shift)	<ul><li>Warm water</li><li>Detergent</li><li>Disinfectant</li></ul>
Occasional/ Follow up Clean	<ul> <li>All clinical areas Isolation rooms</li> <li>Highly Isolated rooms,</li> <li>isolation bed areas / bays</li> <li>Toilets</li> </ul>	Floor, ledge, patient's locker, table, chair, bins, bed-frame, mattress and en- suite facilities when present.	At planned intervals after the regular Clean. (Across Every Shifts)	<ul><li>Warm water</li><li>Detergent</li><li>Disinfectant</li></ul>
Non –Regular Enhanced isolation bed areas / bays ,Ward areas		Floor, ledge, patient's locker, table, chair, bins, bed-frame, mattress and premier equipment (en-suite facilities when present). Walls below waist height Curtains and	As and when required e.g, a case of outbreak situation (e.g. airborne microbe identification)	<ul> <li>Warm water</li> <li>Detergent</li> <li>Disinfectant</li> <li>Steam Housekeeping for carpets and soft furnishing</li> </ul>

# ESM Housekeeping Management Process



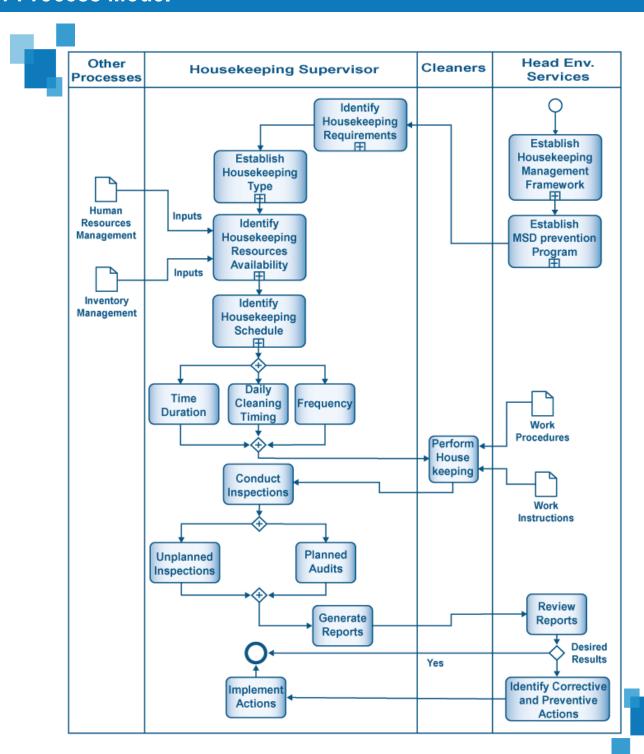
# Housekeeping Management Process



### **Housekeeping Management Process**



### **6.1 Process Model**



6

### **Housekeeping Management Process**



### **6.2 Process Specification**

Specification	Description	
Summary/Purpose	To establish organization's Housekeeping Management process such that organization environment remains free from inflectional and health risks and threats.	
Scope	This is a Level 1 Process Specification.	
Primary Reference	NHS Cleaning Manual	
Related Practices	Transportation Management, Quality Management, Service Strategy & planning, laundry Management, Maintenance Management, Project Management, Infection Management, Activity Based Management, Waste Management	
Related Business Driver	<ul> <li>Cost Effectiveness</li> <li>Better Customer satisfaction</li> <li>Clean and better hospital hygiene</li> </ul>	
Related Operational Policies	OP-001,OP-002,OP-003, OP-004, OP-005, OP-006, OP-007 (Ref. 7.5)	
Assumptions	<ul> <li>There exists an automated capability for Resource Planning and management such as staff, Housekeeping equipment etc,</li> <li>Risk management is automated.</li> <li>Human resource management process is automated.</li> <li>There exists three Housekeeping shifts at organization as mentioned below: <ul> <li>1st 05:00 AM- 01:00 PM</li> <li>2nd 01:00 PM- 09:00 PM</li> <li>3rd 09:00 PM- 05:00 AM</li> </ul> </li> </ul>	
Voice of Customer	Hygiene, High and Consistent Quality of standards, Free of Infections, Timely Services, High Coordinating, Remove Waste, Excellent Ergonomic, Safety, Appearance, Excellent Worker Attitude.	

# **Housekeeping Management Process**



Customer Satisfaction Measure	Customer satisfaction index				
COI Correlation	Phase 1, Ph	ase 2, Phase 3, Phase 4, Phase 5, Phase 6 in chain of infection			
Raw Materials	Explained in	Explained in each respective sub processes			
Equipment & Accessories	Explained in	xplained in each respective sub processes			
MSD Management	Lifting/carrying, Disability, Force, Loaded motion, Physical ergonomics, Posture change, Excessive force, Scarceness, Noise, Concentration, Floor hazards, Clothing, Psychosocial factors.				
EBC Procedures	TBD				
Timing Dimensions	Туре	Normal	Follow Up		
	Average	30 min	05 min	_	
	Std	12 min	03 min		
Trigger	Periodic review				
Basic Course of Event	<ol> <li>Housekeeping Management Process</li> <li>Head Environmental Services department establishes Housekeeping Management.</li> <li>Head Environmental service department establishes MSD prevention program.</li> <li>Housekeeping Supervisor identifies Housekeeping requirements</li> <li>Housekeeping Supervisor establishes Housekeeping type</li> <li>Housekeeping Supervisor identifies Housekeeping resources availability</li> <li>Housekeeping Supervisor identifies Housekeeping schedule (time duration, Housekeeping daily timing, frequency of Housekeeping)</li> <li>Cleaners perform Housekeeping based on the work instructions and work procedures</li> </ol>				

# **Housekeeping Management Process**



	<ul> <li>8. Housekeeping Supervisor conducts inspections (unplanned as well as planned audits)</li> <li>9. Housekeeping Supervisor generates reports</li> <li>10. Head Environmental Services department Management reviews Reports</li> <li>11. End</li> </ul>			
Alternative Path	Review results not as expected  1. Head Environmental Services department identifies corrective action and preventive actions  2. Supervisor implements those actions.  3. End			
Exception Path	System Down 1. Keep paper track until system is up and running 2. Update the System and clear all logs. 3. End.			
Extension points	Waste management, Logistics management, Inventory management			
Preconditions	<ul> <li>Human resource management process ensures that the supply of cleaners</li> <li>Inventory management process ensures that there is timely supply of all the required Housekeeping equipments.</li> </ul>			
Post –conditions	Housekeeping process is established at organization.			
Related Business Rules	BR-001, BR-002, BR-004, BR-005 (Ref 7.1)			
Related Risks	RR-001,RR-002, RR-003, RR-004, RR-005, RR-006,RR-007,RR-008, RR-009, RR-010, RR-011, RR-012, RR-013,RR-014,RR-015, RR-016, RR-017, RR-018, RR-019,RR-020, RR-021 (Ref 7.2)			
Related Quality Attributes	Reliability, Service Reliability, Availability, Normal Usability Operations, Confidentiality, Authenticity, Data Integrity, Non-repudiation, Accountability, Performance, Scalability, Extensibility, Adaptability, Testability, Auditability, Operability and Deployability (Ref 7.3)			





Related Data Quality Dimensions	Completeness, Understandability, Accuracy, Free of Error, interpretability, Concise representation, Reputation, Relevance, Timeliness, Appropriate amount (Ref 7.4)			
Related Primary SLA Terms	(Ref 7.9)			
Related KPIs	CC,CCTR, CCR, TCC, TCCTR, TCCR, PCC, PCCTR, PCCR, IRCC, IRCCR, IRCTR, NRCC, NRCCTR, NRCCR, CCC, CCCTR, CCCR, RCC, RCCTR, RCCR, PCC, PCTR,PCCR,RR (Ref 7.6)			
Related CTQs	CCV,CCTRV, CCRV, TCCV, TCCTRV, TCCRV, PCCV, PCCTRV, PCCRV, IRCCV, IRCCRV, IRCTRV, NRCCV, NRCCTRV, NRCCRV, CCCV, CCCTRV, CCCRV, RCCV, RCCTRV, RCCRV, PCCV, PCTRV,PCCRV,RRV MOM, PWOM, CRM, IOM, TOM, PWRM, DDRM, PPOM (Ref 7.7)			
Actors/Agents	Housekeeping Supervisor, Cleaners and Head Environmental Services department.			
Delegation	Delegation Rule -1: Agent Not Available  1. Delegate the task to the agent with same role 2. Update the task 3. Log the delegation  Delegation Rule -2: Agent Overloaded  1. Delegate the task to the agent with same Role 2. Update the task 3. Log the delegation			
Escalation	Rule 1: Performance or operational or legal Issues  1. Escalate to environmental services department head. 2. Log Escalation 3. End			
Process Map	Section 5.1			
Process Model	Section 6.1			

6

#### **Housekeeping Management Process**



Other References APPENDIX A: BUSINESS PROCESS MODELING NOTATION REFERENCE

APPENDIX B: HOUSEKEEPING EQUIPMENT REFERENCE

APPENDIX C: HOUSEKEEPING RAW MATERIALS SPECIFICATION TABLE

APPENDIX D: CHAIN OF INFECTION

APPENDIX E: WORK SCHEDULE SAMPLE APPENDIX F: TECHNICAL METHOD SAMPLE

APPENDIX G: SAMPLE CHECKLIST

APPENDIX H: GENERAL HAZARD IDENTIFICATION TOOL

APPENDIX I: HAZARD PRIORITY TABLE APPENDIX J: TIPS FOR PREVENTING MSD

6

### **Housekeeping Management Process**

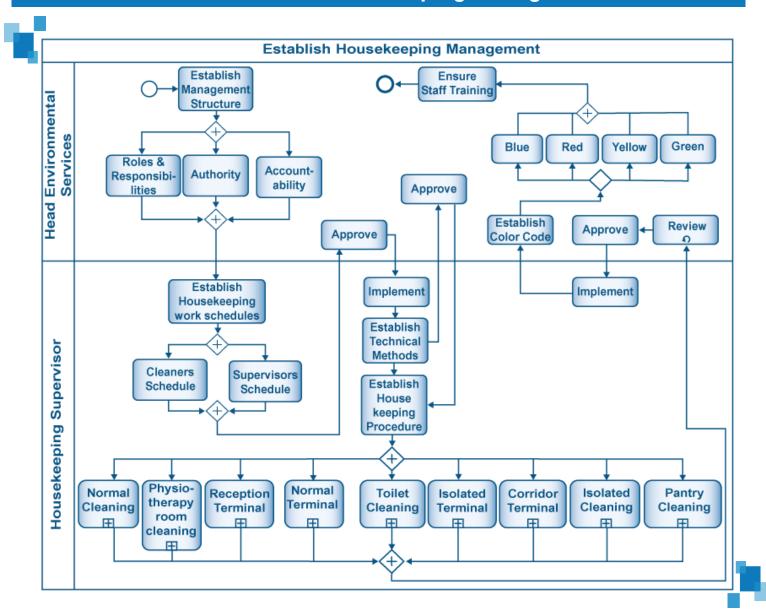


#### 6.3 Roles & Responsibilities

Roles	Responsibilities			
Cleaners	Performs the actual act of Housekeeping and report to the supervisor on the job progress.			
Housekeeping Supervisor s	<ul> <li>Housekeeping Supervisor identifies Housekeeping requirements, establishes Housekeeping type and ensures Housekeeping resources availability</li> <li>Housekeeping Supervisor identifies Housekeeping schedule (time duration, Housekeeping daily timing, frequency of Housekeeping)</li> <li>Housekeeping Supervisor conducts inspections (unplanned as well as planned audits)</li> <li>Housekeeping Supervisor generates reports</li> </ul>			
Head Environmental Services department	<ul> <li>Head Environmental services department establishes Housekeeping Management.</li> <li>Head Environmental service department establishes MSD prevention program</li> <li>Head Environmental services department reviews Reports</li> <li>Head Environmental Services department identifies corrective action and preventive actions (if required)</li> </ul>			
Other Processes	Provide input to this process.			



#### 6.4 Sub-Process – Establish Housekeeping Management Framework





# 6.5 Sub Process - Establish Housekeeping Management Framework Specification

Specification	Description		
Summary/Purpose	To establish organization's Housekeeping Management structure, work schedules and work methods.		
Scope	This is a Level 2 Process Specification.		
Primary Reference	NHS Cleaning Manual		
Related Practices	Transportation Management, Quality Management, Service Strategy & planning, laundry Management, Maintenance Management, Project Management, Infection Management, Activity Based Management, Waste Management		
Related Business Driver	Effective Management of Housekeeping resources		
Related Operational Policies	OP-003 (Ref 7.5)		
Assumptions	<ul> <li>Senior Management provides the need support to this process.</li> <li>All personnel's involved in this process are properly qualified and trained.</li> <li>There exists an automated capability for Resource Planning and management such as staff, Housekeeping equipment etc.,</li> <li>Risk and Quality management is automated.</li> <li>Human resource management process is automated.</li> </ul>		
Voice of Customer	Hygiene, High and Consistent Quality of standards, Free of Infections, Timely Services, High Coordinating, Remove Waste, Excellent Ergonomic, Safety, Appearance, Excellent Worker Attitude.		
Customer Satisfaction Measure	Customer satisfaction index		
COI Correlation	Phase 1, Phase 2, Phase 3, Phase 4, Phase 5, Phase 6 in chain of infection		



Raw Materials	Explained in each respective sub processes			
Equipment & Accessories	Explained in each respective sub processes			
MSD Management	Lifting/carrying, Disability, Force, Loaded motion, Physical ergonomics, Posture change, Excessive force, Scarceness, Noise, Concentration, Floor hazards, Clothing, Psychosocial factors.			
EBC Procedures	TBD			
Timing Dimensions	Туре	Normal	Follow Up	
	Average	30 min	05 min	
	Std	12 min	03 min	
Trigger	None			
Basic Course of Event	1. Head (roles 2. Hous super 3. Head 4. Hous Hous Hous Hous Hous pantr 8. Head 7. Head 7. Hous hous hous hous pantr 8. Head	Establish Housekeeping Management  1. Head Environment Services department establishes Management structure (roles and responsibilities, authority and accountability)  2. Housekeeping Supervisor establishes work schedules (Cleaners and supervisors)  3. Head Environment Services approves the work schedule  4. Housekeeping Supervisor implements the work schedule  5. Housekeeping Supervisor establishes technical methods (for general Housekeeping, floor cleaning and toilet Housekeeping etc.)  6. Head Environment Services approves the technical method  7. Housekeeping Supervisor establishes Housekeeping procedures (Normal Housekeeping, Reception Housekeeping, Normal Terminal, Toilet Housekeeping, Isolated terminal, corridor terminal, isolated Housekeeping, pantry Housekeeping)  8. Head Environment Services review the procedures  9. Head Environment Services approves the procedures		



	<ul> <li>11. Head Environment Services establishes a color code to be followed for all the Housekeeping activities.</li> <li>12. Head Environmental Services assures that the cleaners are properly trained prior to commencement of their job routines.</li> <li>13. End.</li> </ul>		
Alternative Path	None		
Exception Path	System Down 1. Keep paper track until system is up and running 2. Update the System and clear all logs. 3. End.		
Extension points	Establish MSD prevention program		
Preconditions	Ample resources are made available to this process.		
Post –conditions	Housekeeping Management will be well established.		
Related Business Rules	BR-003( Ref 7.1)		
Related Risks	RSK-003, RSK-004, RSK-005, RSK-006, RSK-009, RSK-015, RSK-016, RSK-018 (Ref 7.2)		
Related Quality Attributes	Reliability, Service Reliability, Availability, Usability, Normal Usability Operations, Confidentiality, Authenticity, Accountability, Performance, Scalability, Extensibility, Adaptability, Testability, Auditability, Operability (Ref 7.3)		
Related Data Quality Dimensions	Completeness, Understandability, Accuracy, Free of Error, interpretability, Concise representation, Reputation, Relevance, Timeliness, Appropriate amount (Ref 7.4)		
Related Primary SLA Terms	(Ref 7.9)		
Related KPIs	CPRR, TR (Ref 7.6)		
Related CTQs	CPRRV, TRV, MOM, PWOM, CRM, IOM, TOM, PWRM, DDRM, PPOM (Ref 7.7)		
Actors/Agents	Housekeeping Supervisor, Head Environment Services department		

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Delegation	Delegation Rule -1: Agent Not Available  1. Delegate the task to the agent with same role 2. Update the task 3. Log the delegation  Delegation Rule -2: Agent Overloaded  1. Delegate the task to the agent with same Role 2. Update the task 3. Log the delegation		
Escalation	Rule 1: Performance or operational or legal Issues  1. Escalate to environmental services department head.  2. Log Escalation  3. End		
Process Map	Section 5.1		
Process Model	Section 6.4		
Other References	<ul> <li>Appendix A: Business Process Notation Reference</li> <li>Appendix B: Housekeeping equipment Reference</li> <li>Appendix C: Housekeeping Raw Materials Specification Table</li> <li>Appendix D: Chain of Infection</li> <li>Appendix E: Work Schedule Sample</li> <li>Appendix F: Technical Method Sample</li> </ul>		

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### **Housekeeping Management Process**

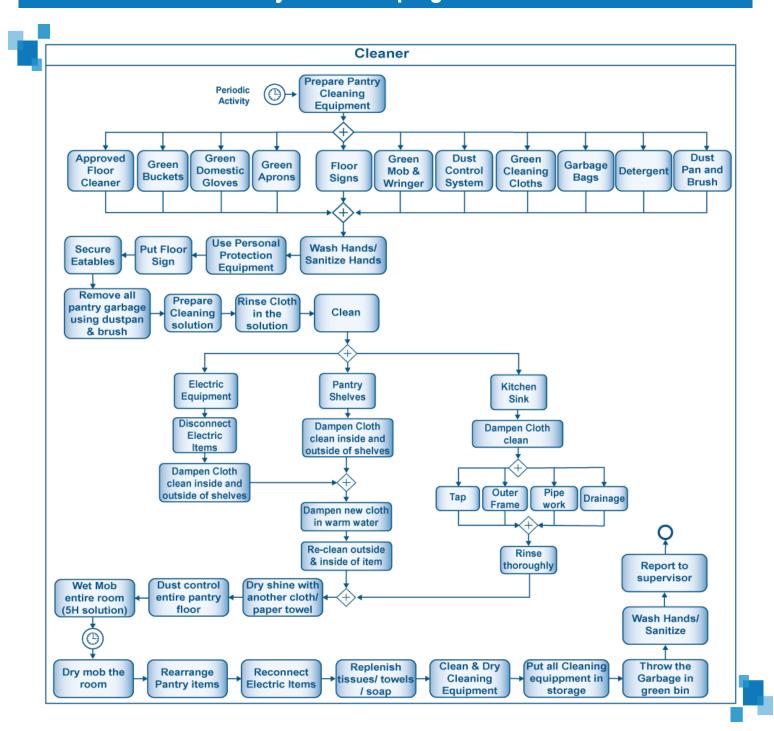


#### 6.6 Roles & Responsibilities

Roles	Responsibilities			
Cleaners	<ul> <li>Housekeeping Supervisor establishes work schedules, reviews the work schedule, approves and implements the work schedule</li> <li>Housekeeping Supervisor establishes technical methods (for general Housekeeping, floor Cleaning etc.), reviews them, approves and implements the technical method</li> <li>Housekeeping Supervisor establishes Housekeeping procedures (Normal Housekeeping, Reception Housekeeping, Normal Terminal, Toilet Housekeeping, Isolated terminal, corridor terminal, isolated Housekeeping, pantry Housekeeping)</li> </ul>			
Head Environment Services department	<ul> <li>Head Environment Services department establishes Management structure (roles and responsibilities, authority and accountability)</li> <li>Head Environment Services approves the work schedule, technical method and Housekeeping procedures</li> <li>Head Environment Services establishes a color code to be followed for all the Housekeeping activities.</li> </ul>			



#### 6.7 Sub Process – Pantry Housekeeping





#### 6.8 Sub Process- Pantry Housekeeping Specification

Specification	Description		
Summary/Purpose	To establish organization's Housekeeping process for Pantry.		
Scope	This is a Level 3 Process Specification.		
Primary Reference	NHS Cleaning Manual		
Related Practices	Transportation Management, Quality Management, Service Strategy & planning, laundry Management, Maintenance Management, Project Management, Infection Management, Activity Based Management, Waste Management		
Related Business Driver	<ul><li>Better hygiene</li><li>Customer satisfaction</li></ul>		
Related Operational Policies	OP-001, OP-002 (Ref 7.5)		
Assumptions	<ul> <li>Housekeeping Resources Management capability is automated.</li> <li>Housekeeping planning, risk and quality management is automated.</li> </ul>		
Voice of Customer	Hygiene, High and Consistent Quality of standards, Free of Infections, Timely Services, High Coordinating, Remove Waste, Excellent Ergonomic, Safety, Appearance, Excellent Worker Attitude.		
Customer Satisfaction Measure	Customer satisfaction index		
COI Correlation	Phase 1, Phase 2, Phase 3, Phase 4, Phase 5, Phase 6 in chain of infection		
Raw Materials	<ul> <li>Approved floor cleaner (h5)</li> <li>General purpose detergent</li> <li>Kitchen soap</li> <li>Sanitizer</li> <li>Kitchen towel</li> </ul>		



	Glass cleaner			
Equipment & Accessories	Green Bucket, Green Domestic Gloves, Green mob, Green Aprons, Floor/ warning Signs, Dust Control System, waste Bag, Green Cleaning Cloth, wringer, dust pan and brush			
MSD Management	Lifting/carrying, Disability, Force, Loaded motion, Physical ergonomics, Posture change, Excessive force, Scarceness, Noise, Concentration, Floor hazards, Clothing, Psychosocial factors.			
EBC Procedures	TBD			
Timing Dimensions	Туре	Normal	Follow Up	
	Average	30 min	05 min	
	Std	12 min	03 min	
Trigger	Periodic Act	ivity, establish	n Housekeeping p	procedures
Basic Course of Event	Pantry Housekeeping  1. Cleaner prepares all pantry Housekeeping equipment (Approved floor cleaner (5H, green buckets, green domestic gloves, green aprons, floor signs, green mob, dust control tool, green Cleaning Cloths, garbage bags, detergent, wringer, dust pan and brush)  2. Cleaner wash hands or sanitizes  3. Cleaner uses personal protection equipment  4. Cleaner puts floor signs  5. Cleaner secures pantry eatables  6. Cleaner removes all pantry garbage using dustpan and brush  7. Cleaner prepares Cleaning solution  8. Cleaners rinse cloth in the solution  9. Cleaner cleans electric equipment, pantry shelves and kitchen sink.  10. Cleaner dry shines with another cloth/ paper towel  11. Cleaner dust controls entire pantry floor  12. Cleaner wet mobs entire room with 5H			



	<ul> <li>13. Cleaner dry mob the room after some time interval</li> <li>14. Cleaner rearranges pantry items</li> <li>15. Cleaner reconnects electric items</li> <li>16. Cleaner replenishes tissues/ towels/ soaps etc.</li> <li>17. Cleaner Cleans and dries the Cleaning equipment</li> <li>18. Cleaner puts all Cleaning equipment in storage</li> <li>19. Cleaner throws the garbage in green bin</li> <li>20. Cleaner washes hands or sanitizes</li> </ul>
	21. Cleaner reports to supervisor 22. End
Alternative Path	Electric Equipment Cleaning  1. Cleaner disconnects electric item  2. Cleaner dampen cloth cleans inside and outside of the item  3. Cleaner dampen new cloth in warm water  4. Cleaner re-cleans outside and inside of the item  5. End  Pantry Shelves Housekeeping  1. Dampen cloth clean inside and outside of shelves  2. Dampen new cloth in warm water  3. Cleaner dampen new cloth in warm water  4. Cleaner re-cleans outside and inside of the item  5. End  Pantry Kitchen Sink  1. Cleaner dampens cloth clean tap, outer frame, pipe work and drainage.  2. Cleaner rinse the sink thoroughly  3. End
Exception Path	<ol> <li>System Down</li> <li>Keep paper track until system is up and running.</li> <li>Update the System and clear all logs.</li> <li>End.</li> </ol>
Extension points	Review Housekeeping procedures





Preconditions	All Cleaner are properly trained and qualified.			
Post –conditions	Pantry gets cleaned.			
Related Business Rules	BR-003( Ref 7.1)			
Related Risks	RSK-001, RSK-002, RSK-007, RSK-008, RSK-011, RSK-012, RSK-017(Ref 7.2)			
Related Quality Attributes	Reliability, Service Reliability, Availability, Usability, Normal Usability Operations, Confidentiality, Authenticity, Availability, Data Integrity, Accountability, Performance, Scalability, Extensibility, Adaptability, Testability, Auditability, Operability, Deployability (Ref 7.3)			
Related Data Quality Dimensions	Accuracy, Objectivity, Free-of-Error, Relevance, Completeness, Timeliness, Appropriate Amount, Understandability, Interpretability, Concise Representation (Ref 7.4)			
Related Primary SLA Terms	(Ref 7.9)			
Related KPIs	PCC, PCCTR, PCCR (Ref 7.6)			
Related CTQs	PCCV, PCCTRV, PCCRV (Ref 7.7)			
Actors/Agents	Cleaner			
Delegation	Delegation Rule -1: Agent Not Available  1. Delegate the task to the agent with same role 2. Update the task 3. Log the delegation  Delegation Rule -2: Agent Overloaded  1. Delegate the task to the agent with same Role 2. Update the task 3. Log the delegation			
Escalation	Rule 1: Performance or operational or legal Issues  1. Escalate to environmental services department head.  2. Log Escalation			



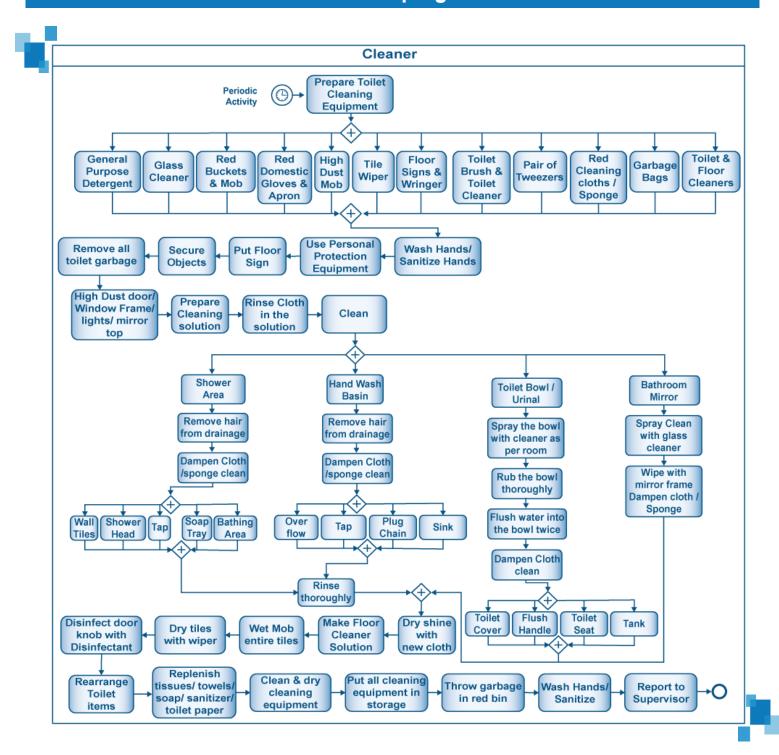
	3. End
Process Map	Section 5.1
Process Model	Section 6.7
Other References	<ul> <li>Appendix A: Business Process Notation Reference</li> <li>Appendix B: Housekeeping equipment Reference</li> <li>Appendix C: Housekeeping Raw Materials Specification Table</li> <li>Appendix D: Chain of Infection</li> <li>Appendix E: Work Schedule Sample</li> <li>Appendix F: Technical Method Sample</li> </ul>

#### 6.9 Roles and Responsibilities - Pantry Housekeeping

Roles	Responsibilities
Cleaners	<ul> <li>Cleaner prepares all pantry Housekeeping equipment (Approved floor cleaner (5H, green buckets, green domestic gloves, green aprons, floor signs, green mob, dust control tool, green Cleaning Cloths, garbage bags, detergent, wringer, dust pan and brush)</li> <li>Cleaner ensure that entire pantry is thoroughly cleaned as per this process.</li> <li>Cleaner reports to supervisor</li> </ul>



#### 6.10 Sub Process - Toilet Housekeeping





#### **6.11 Sub Process- Toilet Housekeeping Specifications**

Specification	Description		
Summary/Purpose	To establish organization's toilet Housekeeping Process.		
Scope	This is a Level 3 Process Specification.		
Primary Reference	NHS Cleaning Manual		
Related Practices	Transportation Management, Quality Management, Service Strategy & planning, laundry Management, Maintenance Management, Project Management, Infection Management, Activity Based Management, Waste Management		
Related Business Driver	<ul><li>Better hygiene</li><li>Customer satisfaction</li></ul>		
Related Operational Policies	OP-001, OP-002 (Ref 7.5)		
Assumptions	<ul> <li>Housekeeping Resources Management capability is automated.</li> <li>Housekeeping planning, risk and quality management is automated.</li> <li>Clorox is used to clean toilet floor for Normal rooms only.</li> <li>For normal room Clorox and cleaner with bleach is used to clean toilet bowl.</li> <li>For isolated rooms 5H is used to clean the toilet floor</li> <li>For isolated rooms 52 L and cleanser plus bleach is used to clean toilet bowl.</li> </ul>		
Voice of Customer	Hygiene, High and Consistent Quality of standards, Free of Infections, Timely Services, High Coordinating, Remove Waste, Excellent Ergonomic, Safety, Appearance, Excellent Worker Attitude.		
Customer Satisfaction Measure	Customer satisfaction index		
COI Correlation	Phase 1, Phase 2, Phase 3, Phase 4, Phase 5, Phase 6 in chain of infection		
Raw Materials	General purpose detergent		



	<ul><li>Clord</li><li>Toile</li><li>Soap</li><li>Clord</li><li>Clea</li><li>Disin</li><li>Appr</li></ul>	t paper o/ sanitizer ox nser with blead	ptica Comblispr aner (5H)	ray)
Equipment & Accessories	Red bucket and mob, red domestic gloves, red aprons, floor/ warning signs, toilet brush and toilet cleaner, pair of tweezers, garbage bag, tile wiper, spray bottle, high dust mob, sponge, wringer, Sponge			
MSD Management	Lifting/carrying, Disability, Force, Loaded motion, Physical ergonomics, Posture change, Excessive force, Scarceness, Noise, Concentration, Floor hazards, Clothing, Psychosocial factors. 5400, 7200			
EBC Procedures	TBD	TBD		
Timing Dimensions	Туре	Type Normal Follow Up		
	Average	30 min	05 min	
	Std 12 min 03 min			
Trigger	Periodic activity, establish Housekeeping procedures			
Basic Course of Event	<ol> <li>Toilet Housekeeping</li> <li>Cleaner prepares all Toilet Housekeeping equipment (General purpose detergent, glass cleaner, red bucket and mob, red domestic gloves, red aprons, floor signs, toilet brush and toilet bowl cleaner, pair of tweezers, red Cleaning Cloths, garbage bags, Toilet &amp; floor cleaners, tile wiper, high dust mob, wringer, sponge)</li> <li>Cleaner wash hands or sanitizes</li> </ol>			



<ol><li>Cleaner uses personal protection equipm</li></ol>	nent
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- 4. Cleaner puts floor signs
- 5. Cleaner secures toilet objects
- 6. Cleaner removes all toilet garbage
- 7. Cleaner high dust cleans door, window frames, lights, mirror top
- 8. Cleaner prepares Cleaning solution
- 9. Cleaners rinse cloth /sponge in the solution
- 10. Cleaner cleans shower area, hand wash basin, toilet bowl/ urinal and Bathroom mirror.
- 11. Cleaner dry shines with new cloth
- 12. Cleaner makes Clorox solution
- 13. Cleaner wet mob entire tiles
- 14. Cleaner dry tiles with wiper
- 15. Cleaner disinfects door with Disinfectant.
- 16. Cleaner rearranges toilet items
- 17. Cleaner replenishes tissues/ towels/ soaps etc.
- 18. Cleaner Cleans and dries the Cleaning equipment
- 19. Cleaner puts all Cleaning equipment in storage
- 20. Cleaner throws the garbage in red bin
- 21. Cleaner washes hands or sanitizes
- 22. Cleaner reports to supervisor
- 23. End

#### **Alternative Path**

#### **Shower Area Cleaning**

- 1. Cleaner removes hair from drainage
- 2. Cleaner dampen cloth cleans wall tiles, shower head, tap, soap tray, bathing area
- 3. Cleaner rinse thoroughly
- 4. End

#### **Wash Basin Cleaning**

- 1. Cleaner removes hair from drainage
- 2. Cleaner dampen cloth cleans overflow, plug chain, tap, sink
- 3. Cleaner rinse thoroughly



	4. End  Toilet Bowl/ Urinal Cleaning  1. Cleaner sprays the bowl with Clorox/ toilet bowl cleaner  2. Cleaner rubs the bowl thoroughly.  3. Cleaner flushes water into the bowl twice  4. Cleaner dampen clothes clean toilet cover, flush handle, toilet seat and tank.  5. End  Bathroom Mirror Cleaning  1. Cleaner sprays clean with glass cleaner.  2. Cleaner wipes the mirror frame with dampen cloth  3. End		
Exception Path	System Down 1. Keep paper track until system is up and running 2. Update the System and clear all logs. 3. End.		
Extension points	Review Housekeeping procedure		
Preconditions	All Cleaner are properly trained qualified.		
Post –conditions	Toilet gets cleaned.		
Related Business Rules	BR-003( Ref 7.1)		
Related Risks	RSK-001, RSK-002, RSK-007, RSK-008, RSK-011, RSK-012, RSK-014,RSK-017 (Ref 7.2)		
Related Quality Attributes	Reliability, Service Reliability, Availability, Usability, Normal Usability Operations, Confidentiality, Authenticity, Availability, Data Integrity, Accountability, Performance, Scalability, Extensibility, Adaptability, Testability, Auditability, Operability, Deployability (Ref 7.3)		
Related Data Quality Dimensions	Accuracy, Objectivity, Free-of-Error, Relevance, Completeness, Timeliness, Appropriate Amount, Understandability, Interpretability, Concise Representation (Ref 7.4)		





Related Primary SLA Terms	(Ref 7.9)		
Related KPIs	TCC, TCCTR, TCCR (Ref 7.6)		
Related CTQs	TCCV, TCCTRV, TCCRV (Ref 7.7)		
Actors/Agents	Cleaner		
Delegation	Delegation Rule -1: Agent Not Available  1. Delegate the task to the agent with same role 2. Update the task 3. Log the delegation  Delegation Rule -2: Agent Overloaded  1. Delegate the task to the agent with same Role 2. Update the task 3. Log the delegation		
Escalation	Rule 1: Performance or operational or legal Issues  1. Escalate to environmental services department head. 2. Log Escalation 3. End		
Process Map	Section 5.1		
Process Model	Section 6.10		
Other References	<ul> <li>Appendix A: Business Process Notation Reference</li> <li>Appendix B: Housekeeping equipment Reference</li> <li>Appendix C: Housekeeping Raw Materials Specification Table</li> <li>Appendix D: Chain of Infection</li> <li>Appendix E: Work Schedule Sample</li> <li>Appendix F: Technical Method Sample</li> </ul>		

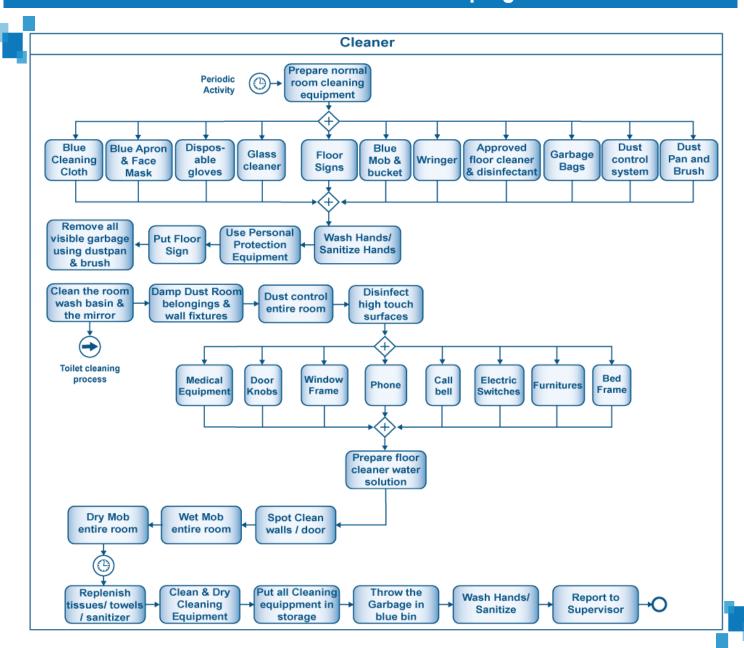


#### 6.12 Roles and Responsibilities - Toilet Housekeeping

Roles	Responsibilities
Cleaners	<ul> <li>Cleaner prepares all Toilet Housekeeping equipment (General purpose detergent, glass cleaner, red bucket and mob, red domestic gloves, red aprons, floor signs, toilet brush and toilet bowl cleaner, pair of tweezers, red Cleaning Cloths, garbage bags, Clorox, tile wiper, wringer, Sponge)</li> <li>Cleaner ensure that entire toilet is thoroughly cleaned as per this process.</li> <li>Cleaner reports to supervisor</li> </ul>



#### 6.13 Sub Process - Normal Room Housekeeping





#### **6.14 Sub Process – Normal Room Housekeeping Specification**

Specification	Description		
Summary/Purpose	To establish organization's normal room Housekeeping Process.		
Scope	This is a Level 3 Process Specification.		
Primary Reference	NHS Cleaning Manual		
Related Practices	Transportation Management, Quality Management, Service Strategy & planning, laundry Management, Maintenance Management, Project Management, Infection Management, Activity Based Management, Waste Management		
Related Business Driver	<ul><li>Better hygiene</li><li>Customer satisfaction</li></ul>		
Related Operational Policies	OP-001, OP-002, OP-004 (Ref. 7.5)		
Assumptions	<ul> <li>Housekeeping Resources Management capability is automated.</li> <li>Housekeeping planning, risk and quality management is automated.</li> </ul>		
Voice of Customer	Hygiene, High and Consistent Quality of standards, Free of Infections, Timely Services, High Coordinating, Remove Waste, Excellent Ergonomic, Safety, Appearance, Excellent Worker Attitude.		
Customer Satisfaction Measure	Customer satisfaction index		
COI correlation	Phase 1, Phase 2, Phase 3, Phase 4, Phase 5, Phase 6 in chain of infection		
Raw Materials	<ul> <li>Glass cleaner</li> <li>Floor Cleaner (5H)</li> <li>Tissues</li> <li>Sanitizer</li> </ul>		



	Disinfectant (Antiseptica Combispray)			
Equipment & Accessories		Blue cleaning cloth, Blue Apron, Disposable Gloves, Floor/ warning signs, Blue mob and bucket, face mask, garbage bags, Dust control system, wringer, dustpan and brush		
MSD Management	change, Exc	Lifting/carrying, Disability, Force, Loaded motion, Physical ergonomics, Posture change, Excessive force, Scarceness, Noise, Concentration, Floor hazards, Clothing, Psychosocial factors.		
EBC Procedures	TBD	TBD		
Timing Dimensions	Туре	Normal	Follow Up	
	Average	30 min	05 min	_
	Std	12 min	03 min	
Trigger	Periodic acti	vity, Establish	Housekeeping p	procedures
Basic Course of Event	1. Clea Blue facer contr 2. Clea 3. Clea 4. Clea 5. Clea 6. Clea proce 7. Clea 8. Clea 9. Clea	Apron, disposemask, Approviously system, writer wash hand ner uses personer puts floor ner removes an er cleans the ess) ner damp dus ner dust contriner disinfects	all normal House sable gloves, glared Floor Cleaner inger, dustpan ands or sanitizes onal protection essigns all visible garbage room wash based to sentire floor.	



	<ul> <li>10. Cleaner prepares Cleaning solution</li> <li>11. Cleaners spot cleans walls and door</li> <li>12. Cleaner wet mobs entire room</li> <li>13. Cleaner dry mobs entire room after some time interval</li> <li>14. Cleaner replenishes tissues/ towels/ soaps etc.</li> <li>15. Cleaner Cleans and dries the Cleaning equipment</li> <li>16. Cleaner puts all Cleaning equipment in storage</li> <li>17. Cleaner throws the garbage in blue bin</li> <li>18. Cleaner washes hands or sanitizes</li> <li>19. Cleaner reports to supervisor</li> <li>20. End</li> </ul>
Alternative Path	None
Exception Path	System Down 1. Keep paper track until system is up and running 2. Update the System and clear all logs. 3. End.
Extension points	Review Housekeeping procedures
Preconditions	All Cleaner are properly trained qualified.
Post –conditions	Normal Room gets cleaned.
Related Business Rules	BR-003( Ref 7.1)
Related Risks	RSK-001, RSK-002, RSK-007, RSK-008, RSK-011, RSK-012, RSK-017, RSK-019 (Ref 7.2)
Related Quality Attributes	Reliability, Service Reliability, Availability, Usability, Normal Usability Operations, Confidentiality, Authenticity, Availability, Data Integrity, Accountability, Performance, Scalability, Extensibility, Adaptability, Testability, Auditability, Operability, Deployability (Ref 7.3)
Related Data Quality Dimensions	Accuracy, Objectivity, Free-of-Error, Relevance, Completeness, Timeliness, Appropriate Amount, Understandability, Interpretability, Concise Representation (Ref 7.4)





Related Primary SLA Terms	(Ref 7.9)		
Related KPIs	CC, CCTR, CCR (Ref 7.6)		
Related CTQs	CCV, CCTRV, CCRV (Ref 7.7)		
Actors/Agents	Cleaner		
Delegation	Delegation Rule -1: Agent Not Available  1. Delegate the task to the agent with same role 2. Update the task 3. Log the delegation  Delegation Rule -2: Agent Overloaded  1. Delegate the task to the agent with same Role 2. Update the task 3. Log the delegation		
Escalation	Rule 1: Performance or operational or legal Issues  1. Escalate to environmental services department head. 2. Log Escalation 3. End		
Process Map	Section 5.1		
Process Model	Section 6.13		
Other References	<ul> <li>Appendix A: Business Process Notation Reference</li> <li>Appendix B: Housekeeping equipment Reference</li> <li>Appendix C: Housekeeping Raw Materials Specification Table</li> <li>Appendix D: Chain of Infection</li> <li>Appendix E: Work Schedule Sample</li> <li>Appendix F: Technical Method Sample</li> </ul>		

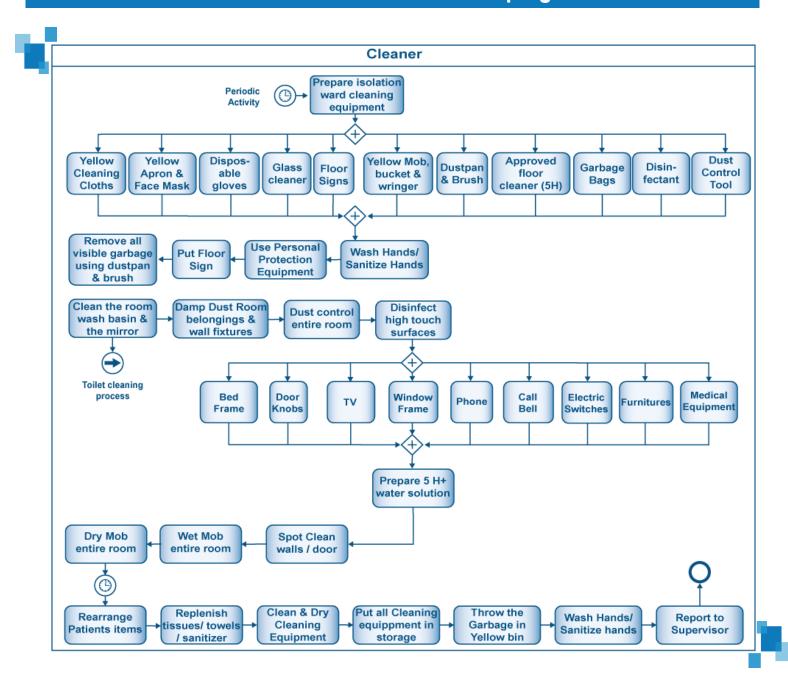


#### 6.15 Roles and Responsibilities- Normal Room Housekeeping

Roles	Responsibilities
Cleaners	<ul> <li>Cleaner prepares all normal Housekeeping equipment (Blue Cleaning Cloths, Blue Apron, disposable gloves, glass cleaner, floor signs, blue mob &amp; bucket, facemask, Approved Floor Cleaner (5H), garbage bags, disinfectant, dust control tool)</li> <li>Cleaner ensure that entire room is thoroughly cleaned as per this process</li> <li>Cleaner reports to supervisor</li> </ul>



#### 6.16 Sub Process - Isolation Room Housekeeping





#### **6.17 Sub Process – Isolated Room Housekeeping Specifications**

Specification	Description	
Summary/Purpose	To establish organization's isolated room Housekeeping Process.	
Scope	This is a Level 3 Process Specification.	
Primary Reference	NHS Cleaning Manual	
Related Practices	Transportation Management, Quality Management, Service Strategy & planning, laundry Management, Maintenance Management, Project Management, Infection Management, Activity Based Management, Waste Management	
Related Business Driver	<ul><li>Better hygiene</li><li>Customer satisfaction</li></ul>	
Related Operational Policies	OP-001, OP-002, OP-004 (Ref. 7.5)	
Assumptions	<ul> <li>Housekeeping Resources Management capability is automated.</li> <li>Housekeeping planning, risk and quality management is automated.</li> </ul>	
Voice of Customer	Hygiene, High and Consistent Quality of standards, Free of Infections, Timely Services, High Coordinating, Remove Waste, Excellent Ergonomic, Safety, Appearance, Excellent Worker Attitude.	
Customer Satisfaction Measure	Customer satisfaction index	
COI correlation	Phase 1, Phase 2, Phase 3, Phase 4, Phase 5, Phase 6 in chain of infection	
Raw Materials	<ul> <li>Glass cleaner</li> <li>Floor Cleaner (5H)</li> <li>Tissues</li> <li>Sanitizer</li> <li>Disinfectant (5H)</li> </ul>	



Equipment & Accessories	Yellow cleaning cloth, Yellow Apron, Disposable Gloves, Floor/ warning signs, Yellow mob and bucket, face mask, garbage bags, Dust control system, wringer.			
MSD Management	Lifting/carrying, Disability, Force, Loaded motion, Physical ergonomics, Posture change, Excessive force, Scarceness, Noise, Concentration, Floor hazards, Clothing, Psychosocial factors.			
EBC Procedures	TBD			
Timing Dimensions	Туре	Normal	Follow Up	
	Average	30 min	05 min	
	Std	12 min	03 min	
Trigger	Periodic activity, Establish Housekeeping procedures			
Basic Course of Event	Isolation Room Housekeeping  1. Cleaner prepares all isolated Housekeeping equipment (Yellow Cleaning Cloths, yellow Apron, disposable gloves, glass cleaner, floor signs, yellow mob & bucket, facemask, Approved Floor Cleaner (5H), garbage bags, disinfectant, dust control tool, wringer, dustpan and brush)  2. Cleaner wash hands or sanitizes  3. Cleaner uses personal protection equipment  4. Cleaner puts floor signs  5. Cleaner removes all visible garbage using dust pan and brush  6. Cleaner cleans the room wash basin and mirror ( as per toilet Housekeeping process)  7. Cleaner damp dusts room belongings and wall fixtures.  8. Cleaner dust controls entire floor.  9. Cleaner disinfects high touch surfaces (medical equipment, door knobs, window frame, phone, call bell, electric switches, furniture, bed frame)  10. Cleaners spot cleans walls and door  11. Cleaners wet mobs entire room			



	<ul> <li>13. Cleaner dry mobs entire room after some time interval</li> <li>14. Cleaner replenishes tissues/ towels/ soaps etc.</li> <li>15. Cleaner Cleans and dries the Cleaning equipment</li> <li>16. Cleaner puts all Cleaning equipment in storage</li> <li>17. Cleaner throws the garbage in yellow bin</li> </ul>	
	18. Cleaner washes hands or sanitizes 19. Cleaner reports to supervisor 20. End	
Alternative Path	None	
Exception Path	System Down 1. Keep paper track until system is up and running 2. Update the System and clear all logs. 3. End.	
Extension points	Review Housekeeping procedures	
Preconditions	All Cleaner are properly trained qualified.	
Post –conditions	Isolated Room gets cleaned.	
Related Business Rules	BR-003( Ref 7.1)	
Related Risks	RSK-001, RSK-002, RSK-007, RSK-008, RSK-010, RSK-011, RSK-012, RSK-017, RSK-019 (Ref 7.2)	
Related Quality Attributes	Reliability, Service Reliability, Availability, Usability, Normal Usability Operations, Confidentiality, Authenticity, Availability, Data Integrity, Accountability, Performance, Scalability, Extensibility, Adaptability, Testability, Auditability, Operability, Deployability (Ref 7.3).	
Related Data Quality Dimensions	Accuracy, Objectivity, Free-of-Error, Relevance, Completeness, Timeliness, Appropriate Amount, Understandability, Interpretability, Concise Representation (Ref 7.4)	
Related Primary SLA Terms	(Ref 7.9)	

6



Related KPIs	IRCC, IRCCTR, IRCCR (Ref 7.6)		
Related CTQs	IRCCV, IRCCTRV, IRCCRV (Ref 7.7)		
Actors/Agents	Cleaner		
Delegation	Delegation Rule -1: Agent Not Available  1. Delegate the task to the agent with same role 2. Update the task 3. Log the delegation  Delegation Rule -2: Agent Overloaded 1. Delegate the task to the agent with same Role 2. Update the task 3. Log the delegation		
Escalation	Rule 1: Performance or operational or legal Issues  1. Escalate to environmental services department head.  2. Log Escalation  3. End		
Process Map	Section 5.1		
Process Model	Section 6.16		
Other References	<ul> <li>Appendix A: Business Process Notation Reference</li> <li>Appendix B: Housekeeping equipment Reference</li> <li>Appendix C: Housekeeping Raw Materials Specification Table</li> <li>Appendix D: Chain of Infection</li> <li>Appendix E: Work Schedule Sample</li> <li>Appendix F: Technical Method Sample</li> </ul>		

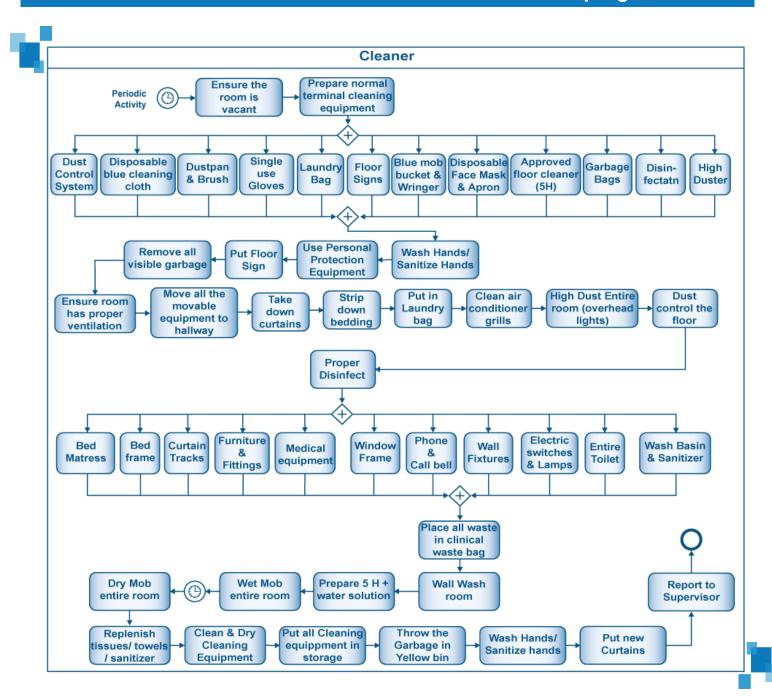


#### 6.18 Roles and Responsibilities – Isolated Room Housekeeping

Roles	Responsibilities
Cleaners	<ul> <li>Cleaner prepares all isolated Housekeeping equipment (Yellow Cleaning Cloths, Cleaner with bleach, disposable gloves, glass cleaner, floor signs, blue mob &amp; bucket, facemask &amp; apron, Approved Floor Cleaner (5H), garbage bags, disinfectant, dust control tool)</li> <li>Cleaner ensure that isolated room is thoroughly cleaned as per this process</li> <li>Cleaner reports to supervisor</li> </ul>



#### 6.19 Sub Process - Normal Room Terminal Housekeeping





# **6.20 Sub Process – Normal Room Terminal Housekeeping Specification**

Specification	Description	
Summary/Purpose	To establish organization's normal room terminal Housekeeping Process.	
Scope	This is a Level 3 Process Specification.	
Primary Reference	NHS Cleaning Manual	
Related Practices	Transportation Management, Quality Management, Service Strategy & planning, laundry Management, Maintenance Management, Project Management, Infection Management, Activity Based Management, Waste Management	
Related Business Driver	<ul><li>Better hygiene</li><li>Customer satisfaction</li></ul>	
Related Operational Policies	OP-001, OP-002, OP-004 (Ref. 7.5)	
Assumptions	<ul> <li>Housekeeping Resources Management capability is automated.</li> <li>Housekeeping planning, risk and quality management is automated.</li> </ul>	
Voice of Customer	Hygiene, High and Consistent Quality of standards, Free of Infections, Timely Services, High Coordinating, Remove Waste, Excellent Ergonomic, Safety, Appearance, Excellent Worker Attitude.	
Customer Satisfaction Measure	Customer satisfaction index	
COI Correlation	Phase 1, Phase 2, Phase 3, Phase 4, Phase 5, Phase 6 in chain of infection	
Raw Materials	<ul><li>Disinfectant (Antiseptica Comblispray)</li><li>Sanitizer</li><li>Soap</li></ul>	



		el & tissues oved floor clea	iner (5H)	
Equipment & Accessories	Dust control system, Disposable Blue cleaning cloth, single use gloves, laundry bag, floor signs, blue mob and bucket, disposable facemask and apron, garbage bags, high duster, wringer, dustpan and brush			
MSD Management	Lifting/carrying, Disability, Force, Loaded motion, Physical ergonomics, Posture change, Excessive force, Scarceness, Noise, Concentration, Floor hazards, Clothing, Psychosocial factors.			
EBC Procedures	TBD			
Timing Dimensions	Туре	Normal	Follow Up	
	Average	30 min	05 min	
	Std	12 min	03 min	
Trigger	Periodic acti	vity, Establish	Housekeeping p	procedures
Basic Course of Event	1. Clea 2. Clea dispo blue clear brus 3. Clea 4. Clea 5. Clea 6. Clea 7. Clea 8. Clea	ner prepares psable blue Cl mob and bu ner(5H), Garba n) ner wash hand ner uses perso ner puts floor s ner removes a ner ensures ro	room is vacant all isolated Ho eaning Cloth, sucket, disposable age bags, disinfuls or sanitizes anal protection esigns Il visible garbage om has proper vehe movable equals	е



Alternative Path	13. Cleaner high dust entire room (overhead lights)  14. Cleaner dust control the floor  15. Cleaner properly disinfects bed mattress, bad frame, curtain tracks, furniture & fittings, Medical equipment, window frame, phone & call bell, wall fixtures, electric switches and lamps, entire toilet, wash basin and sanitizer  16. Cleaner places all wastes in clinical waste bag  17. Cleaner washing all walls of the room  18. Cleaner prepares solution  19. Cleaner wet mob entire room  20. Cleaner dry mobs entire room after some time interval  21. Cleaner replenishes tissues/ towels/ soaps / sanitizer etc.  22. Cleaner Cleans and dries the Cleaning equipment  23. Cleaner puts all Cleaning equipment in storage  24. Cleaner throws the garbage in yellow bin  25. Cleaner washes hands or sanitizes  26. Cleaner reports to supervisor  27. End
Exception Path	System Down 1. Keep paper track until system is up and running 2. Update the System and clear all logs. 3. End.
Extension points	Review Housekeeping procedures
Preconditions	All Cleaner are properly trained qualified.
Post –conditions	Normal Room gets terminal cleaned.
Related Business Rules	BR-003( Ref 7.1)



Related Risks	RSK-001, RSK-002, RSK-007, RSK-008, RSK-011, RSK-012, RSK-017, RSK-019 (Ref 7.2)
Related Quality Attributes	Reliability, Service Reliability, Availability, Usability, Normal Usability Operations, Confidentiality, Authenticity, Availability, Data Integrity, Accountability, Performance, Scalability, Extensibility, Adaptability, Testability, Auditability, Operability, Deployability (Ref 7.3)
Related Data Quality Dimensions	Accuracy, Objectivity, Free-of-Error, Relevance, Completeness, Timeliness, Appropriate Amount, Understandability, Interpretability, Concise Representation (Ref 7.4)
Related Primary SLA Terms	(Ref 7.9)
Related KPIs	NRCC, NRCCTR, NRCCR (Ref 7.6)
Related CTQs	NRCCV, NRCCTRV, NRCCRV (Ref 7.7)
Actors/Agents	Cleaner
Delegation	Delegation Rule -1: Agent Not Available  1. Delegate the task to the agent with same role 2. Update the task 3. Log the delegation  Delegation Rule -2: Agent Overloaded 1. Delegate the task to the agent with same Role 2. Update the task 3. Log the delegation
Escalation	Rule 1: Performance or operational or legal Issues  1. Escalate to environmental services department head.  2. Log Escalation  3. End
Process Map	Section 5.1
Process Model	Section 6.19



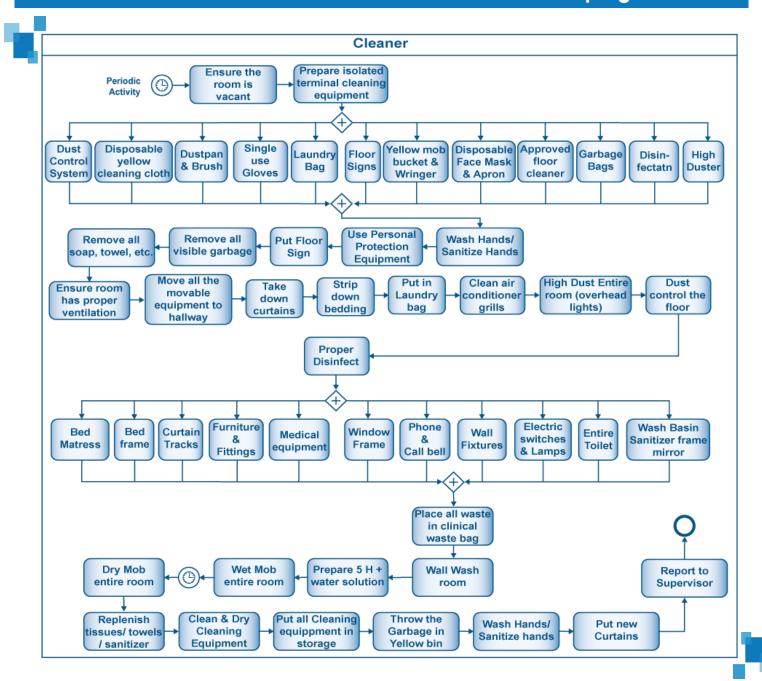
Other References	Appendix A: Business Process Notation Reference
	Appendix B: Housekeeping equipment Reference
	Appendix C: Housekeeping Raw Materials Specification Table
	Appendix D: Chain of Infection
	Appendix E: Work Schedule Sample
	Appendix F: Technical Method Sample

# **6.21 Roles and Responsibilities - Normal Room Terminal Housekeeping**

Roles	Responsibilities
Cleaners	<ul> <li>Cleaner ensure the room is vacant</li> <li>Cleaner prepares all isolated Housekeeping equipment (Dust control system disposable blue Cleaning Cloth, cleanser with bleach, single use gloves, laundry bag, floor signs, blue mob and bucket, disposable face mask &amp; apron, Approved floor cleaner(5H), Garbage bags, disinfectant, high duster, wringer, dustpan and brush)</li> <li>Cleaner ensure that entire room is terminally cleaned as per this process</li> <li>Cleaner reports to supervisor</li> </ul>



#### 6.22 Sub Process – Isolated Room Terminal Housekeeping





# **6.23 Sub Process - Isolated Room Terminal Housekeeping Specification**

Specification	Description
Summary/Purpose	To establish organization's normal isolated terminal Housekeeping Process.
Scope	This is a Level 3 Process Specification.
Primary Reference	NHS Cleaning Manual
Related Practices	Transportation Management, Quality Management, Service Strategy & planning, laundry Management, Maintenance Management, Project Management, Infection Management, Activity Based Management, Waste Management
Related Business Driver	<ul><li>Better hygiene</li><li>Customer satisfaction</li></ul>
Related Operational Policies	OP-001, OP-002, OP-004 (Ref. 7.5)
Assumptions	<ul> <li>Housekeeping Resources Management capability is automated.</li> <li>Housekeeping planning, risk and quality management is automated.</li> </ul>
Voice of Customer	Hygiene, High and Consistent Quality of standards, Free of Infections, Timely Services, High Coordinating, Remove Waste, Excellent Ergonomic, Safety, Appearance, Excellent Worker Attitude.
Customer Satisfaction Measure	Customer satisfaction index
COI correlation	Phase 1, Phase 2, Phase 3, Phase 4, Phase 5, Phase 6 in chain of infection
Raw Materials	<ul><li>Disinfectant (Antiseptica Comblispray)</li><li>Sanitizer</li><li>Soap</li></ul>



		el & tissues oved floor clea	aner (5H)	
Equipment & Accessories	Dust control system, Disposable Blue cleaning cloth, single use gloves, laundry bag, floor signs, blue mob and bucket, disposable facemask and apron, garbage bags, high duster, wringer, dustpan and brush			
MSD Management	Lifting/carrying, Disability, Force, Loaded motion, Physical ergonomics, Posture change, Excessive force, Scarceness, Noise, Concentration, Floor hazards, Clothing, Psychosocial factors.			
EBC Procedures	TBD			
Timing Dimensions	Туре	Normal	Follow Up	
	Average	30 min	05 min	
	Std	12 min	03 min	
Trigger	Periodic acti	vity, Establish	Housekeeping p	procedures
Basic Course of Event	1. Clea 2. Clea disport launce Appr dust 3. Clea 4. Clea 5. Clea 6. Clea 7. Clea 8. Clea	ner ensure the ner prepares a pasable yellow dry bag, floor second floor clean and brush ner wash hand ner uses personer puts floor second removes a ner ensures removes a ner e	Cleaning Cloth, signs, yellow mobaner(5H), Garba ) ds or sanitizes onal protection esigns all visible garbage oom has proper vithe movable equations	e







Related Risks	RSK-001, RSK-002, RSK-007, RSK-008, RSK-010, RSK-011, RSK-012, RSK-017, RSK-019 (Ref 7.2)
Related Quality Attributes	Reliability, Service Reliability, Availability, Usability, Normal Usability Operations, Confidentiality, Authenticity, Availability, Data Integrity, Accountability, Performance, Scalability, Extensibility, Adaptability, Testability, Auditability, Operability, Deployability (Ref 7.3)
Related Data Quality Dimensions	Accuracy, Objectivity, Free-of-Error, Relevance, Completeness, Timeliness, Appropriate Amount, Understandability, Interpretability, Concise Representation (Ref 7.4)
Related Primary SLA Terms	(Ref 7.9)
Related KPIs	IRCC, IRCCTR, IRCCR (Ref 7.6)
Related CTQs	IRCCV, IRCCTRV, IRCCRV (Ref 7.7)
Actors/Agents	Cleaner
Delegation	Delegation Rule -1: Agent Not Available  1. Delegate the task to the agent with same role 2. Update the task 3. Log the delegation  Delegation Rule -2: Agent Overloaded  1. Delegate the task to the agent with same Role 2. Update the task 3. Log the delegation
Escalation	Rule 1: Performance or operational or legal Issues  1. Escalate to environmental services department head. 2. Log Escalation 3. End
Process Map	Section 5.1
Process Model	Section 6.22



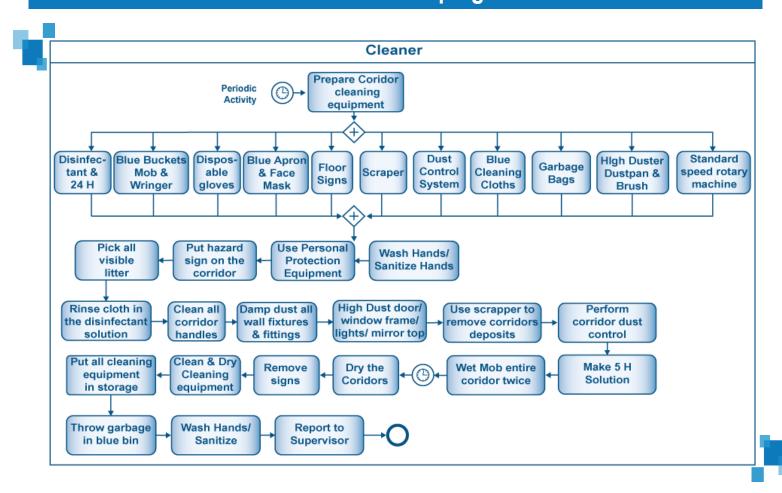
Other References	Appendix A: Business Process Notation Reference
	Appendix B: Housekeeping equipment Reference
	Appendix C: Housekeeping Raw Materials Specification Table
	Appendix D: Chain of Infection
	Appendix E: Work Schedule Sample
	Appendix F: Technical Method Sample

# 6.24 Roles and Responsibilities - Isolated Room Terminal Housekeeping

Roles	Responsibilities
Cleaners	<ul> <li>Cleaner ensure the room is vacant</li> <li>Cleaner prepares all isolated Housekeeping equipment (Dust control tool disposable yellow Cleaning Cloth, cleanser with bleach, single use gloves, laundry bag, floor signs, yellow mob and bucket, disposable face mask &amp; apron, Approved floor cleaner(5H), Garbage bags, disinfectant, high duster)</li> <li>Cleaner ensure that entire isolated room is thoroughly cleaned as per this process</li> <li>Cleaner reports to supervisor</li> </ul>



#### 6.25 Sub Process - Corridor Housekeeping





#### **6.26 Sub Process – Corridor Housekeeping Specifications**

Specification	Description	
Summary/Purpose	To establish organization's corridor Housekeeping Process.	
Scope	This is a Level 3 Process Specification.	
Primary Reference	NHS Cleaning Manual	
Related Practices	Transportation Management, Quality Management, Service Strategy & planning, laundry Management, Maintenance Management, Project Management, Infection Management, Activity Based Management, Waste Management	
Related Business Driver	<ul><li>Better hygiene</li><li>Customer satisfaction</li></ul>	
Related Operational Policies	OP-001, OP-002, OP-004 (Ref. 7.5)	
Assumptions	<ul> <li>Housekeeping Resources Management capability is automated.</li> <li>Housekeeping planning, risk and quality management is automated.</li> </ul>	
Voice of Customer	Hygiene, High and Consistent Quality of standards, Free of Infections, Timely Services, High Coordinating, Remove Waste, Excellent Ergonomic, Safety, Appearance, Excellent Worker Attitude.	
Customer Satisfaction Measure	Customer satisfaction index	
COI correlation	Phase 1, Phase 2, Phase 3, Phase 4, Phase 5, Phase 6 in chain of infection	
Raw Materials	<ul> <li>Disinfectant (antiseptica comblispray)</li> <li>Sanitizer</li> <li>Gum remover (if needed)</li> <li>Approved floor cleaner (24 h)</li> </ul>	



Equipment & Accessories	Blue bucket, mob, wringer, disposable gloves, blue Arpon, face mask, floor signs, scraper, Dust control System, Blue Cleaning cloths, garbage bags, high duster, dustpan & brush, standard speed rotary machine		
MSD Management	Lifting/carrying, Disability, Force, Loaded motion, Physical ergonomics, Posture change, Excessive force, Scarceness, Noise, Concentration, Floor hazards, Clothing, Psychosocial factors.		
EBC Procedures	TBD		
Timing Dimensions	Type Normal Follow Up  Average 30 min 05 min  Std 12 min 03 min		
Trigger	Periodic activity, Establish Housekeeping procedures		
Basic Course of Event	<ol> <li>Corridor Housekeeping</li> <li>Cleaner prepares corridor Housekeeping equipment (Disinfectant, Blue Bucket &amp; mob, Disposable Gloves, Blue Aprons and face mask, Floor signs, Scraper, Dust control tool, Blue Cleaning Cloths, garbage bags, high duster, Approved Floor Cleaner (5H), dustpan &amp; brush, wringer)</li> <li>Cleaner wash hands or sanitizes</li> <li>Cleaner uses personal protection equipment</li> <li>Cleaner puts floor signs</li> <li>Cleaner removes all visible garbage</li> <li>Cleaner rinses the cloth in the disinfectant solution</li> <li>Cleaner cleans all corridor handles</li> <li>Cleaner damp dusts all wall fixtures and fittings</li> <li>Cleaner high dust door, window frame and light and mirror top</li> <li>Cleaner uses scraper to remove corridors deposits</li> <li>Cleaner performs corridor dust control</li> <li>Cleaner makes 5H Solution</li> <li>Cleaner wet mobs entire corridor twice</li> </ol>		



	14. Cleaner dries the corridor after some time interval 15. Cleaner removes the signs 16. Cleaner Cleans and dries the Cleaning equipment 17. Cleaner puts all Cleaning equipment in storage 18. Cleaner throws the garbage in blue bin 19. Cleaner washes hands or sanitizes 20. Cleaner reports to supervisor 21. End			
Alternative Path	None			
Exception Path	System Down 1. Keep paper track until system is up and running 2. Update the System and clear all logs. 3. End.			
Extension points	Review Housekeeping procedures			
Preconditions	All Cleaner are properly trained qualified.			
Post –conditions	Corridor gets cleaned			
Related Business Rules	BR-003( Ref 7.1)			
Related Risks	RSK-001, RSK-002, RSK-007, RSK-008, RSK-011, RSK-012, RSK-013, RSK-017, RSK-019 (Ref 7.2)			
Related Quality Attributes	Reliability, Service Reliability, Availability, Usability, Normal Usability Operations, Confidentiality, Authenticity, Availability, Data Integrity, Accountability, Performance, Scalability, Extensibility, Adaptability, Testability, Auditability, Operability, Deployability (Ref 7.3)			
Related Data Quality Dimensions	Accuracy, Objectivity, Free-of-Error, Relevance, Completeness, Timeliness, Appropriate Amount, Understandability, Interpretability, Concise Representation (Ref 7.4)			
Related Primary SLA Terms	(Ref 7.9)			

6



Related KPIs	CCC, CCCTR, CCCR (Ref 7.6)		
Related CTQs	CCC, CCCTR, CCCR (Ref 7.7)		
Actors/Agents	Cleaner		
Delegation	Delegation Rule -1: Agent Not Available  1. Delegate the task to the agent with same role 2. Update the task 3. Log the delegation  Delegation Rule -2: Agent Overloaded 1. Delegate the task to the agent with same Role 2. Update the task 3. Log the delegation		
Escalation	Rule 1: Performance or operational or legal Issues  1. Escalate to environmental services department head.  2. Log Escalation  3. End		
Process Map	Section 5.1		
Process Model	Section 6.26		
Other References	<ul> <li>Appendix A: Business Process Notation Reference</li> <li>Appendix B: Cleaning equipment Reference</li> <li>Appendix C: Housekeeping Raw Materials Specification Table</li> <li>Appendix D: Chain of Infection</li> <li>Appendix E: Work Schedule Sample</li> <li>Appendix F: Technical Method Sample</li> </ul>		

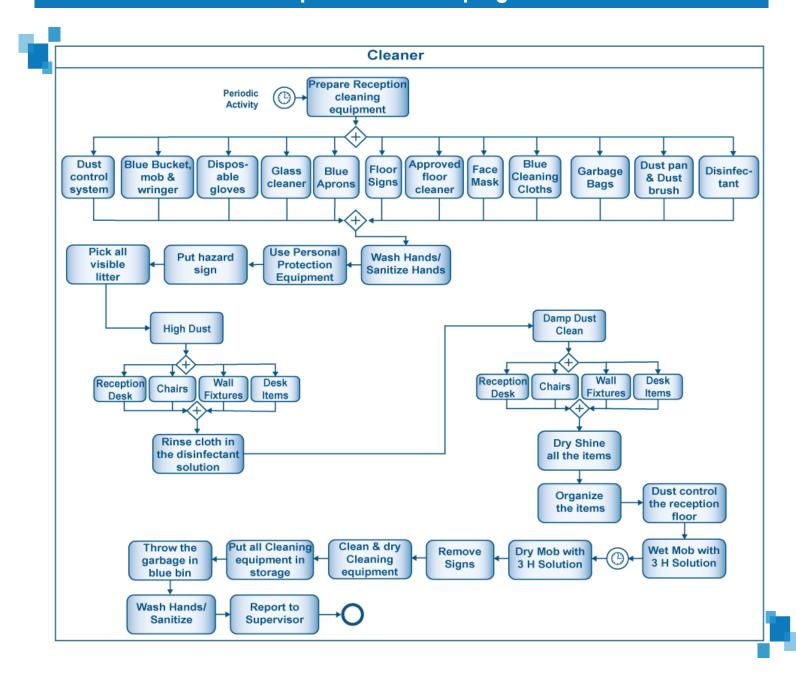


#### 6.27 Roles and Responsibilities - Corridor Housekeeping

Roles	Responsibilities
Cleaners	<ul> <li>Cleaner prepares corridor Housekeeping equipment (Disinfectant, Blue Bucket &amp; mob, Disposable Gloves, Blue Aprons and face mask, Floor signs, Scraper, Dust control tool, Blue Cleaning Cloths, garbage bags, high duster, Approved Floor Cleaner (5H), dustpan &amp; brush, wringer)</li> <li>Cleaner ensure that entire corridor is thoroughly cleaned as per this process</li> <li>Cleaner reports to supervisor</li> </ul>



#### 6.28 Sub Process - Reception Housekeeping





#### **6.29 Sub Process – Reception Housekeeping Specifications**

Specification	Description		
Summary/Purpose	To establish organization's reception Housekeeping Process.		
Scope	This is a Level 3 Process Specification.		
Primary Reference	NHS Cleaning Manual		
Related Practices	Transportation Management, Quality Management, Service Strategy & planning, laundry Management, Maintenance Management, Project Management, Infection Management, Activity Based Management, Waste Management		
Related Business Driver	<ul><li>Better hygiene</li><li>Customer satisfaction</li></ul>		
Related Operational Policies	OP-001, OP-002, OP-004 (Ref. 7.5)		
Assumptions	<ul> <li>Housekeeping Resources Management capability is automated.</li> <li>Housekeeping planning, risk and quality management is automated.</li> </ul>		
Voice of Customer	Hygiene, High and Consistent Quality of standards, Free of Infections, Timely Services, High Coordinating, Remove Waste, Excellent Ergonomic, Safety, Appearance, Excellent Worker Attitude.		
Customer Satisfaction Measure	Customer satisfaction index		
COI correlation	Phase 1, Phase 2, Phase 3, Phase 4, Phase 5, Phase 6 in chain of infection		
Raw Materials	<ul> <li>Disinfectant (Antiseptica Comblispray)</li> <li>Sanitizer</li> <li>Approved floor cleaner (3 H)</li> </ul>		
Equipment & Accessories	Dust control system, Blue bucket, Blue Mob, Blue wringer, disposable gloves, Blue Aprons, floor signs, Face Mask, Blue Cleaning cloths, Garbage bags, dust pan & brush,		



MSD Management	Lifting/carrying, Disability, Force, Loaded motion, Physical ergonomics, Posture change, Excessive force, Scarceness, Noise, Concentration, Floor hazards, Clothing, Psychosocial factors.			
EBC Procedures	TBD	TBD		
Timing Dimensions	Туре	Normal	Follow Up	
	Average	30 min	05 min	
	Std	12 min	03 min	
Trigger	Periodic activ	vity, Establish I	Housekeeping p	procedures
Basic Course of Event	1. Clear Buck (3H), Disin 2. Clear 3. Clear 4. Clear 5. Clear 6. Clear 7. Clear 9. Clear 10. Clear 11. Clear 12. Clear 13. Clear 14. Clear 14. Clear	Periodic activity, Establish Housekeeping procedures  Reception Housekeeping  1. Cleaner prepares reception Housekeeping equipment (Dust Control tool, Blue Bucket, Disposable Gloves, Blue Aprons, Floor signs, Approved floor cleaner (3H), face mask Blue Cleaning Cloths, garbage bags, Dust pan and dust brush, Disinfectant, wringer)  2. Cleaner wash hands or sanitizes  3. Cleaner uses personal protection equipment  4. Cleaner puts floor signs  5. Cleaner removes all visible garbage  6. Cleaner High Dusts reception desk, chairs, wall fixtures and desk items  7. Clean rinse cloth in disinfectant solution		



	17. Cleaner throws the garbage in blue bin 18. Cleaner washes hands or sanitizes 19. Cleaner reports to supervisor 20. End		
Alternative Path	None		
Exception Path	System Down 1. Keep paper track until system is up and running 2. Update the System and clear all logs. 3. End.		
Extension points	Review Housekeeping procedures		
Preconditions	All Cleaner are properly trained qualified.		
Post –conditions	Reception area gets cleaned.		
Related Business Rules	BR-003( Ref 7.1)		
Related Risks	RSK-001, RSK-002, RSK-007, RSK-008, RSK-011, RSK-012, RSK-013, RSK-017, RSK-019 (Ref 7.2)		
Related Quality Attributes	Reliability, Service Reliability, Availability, Usability, Normal Usability Operations, Confidentiality, Authenticity, Availability, Data Integrity, Accountability, Performance, Scalability, Extensibility, Adaptability, Testability, Auditability, Operability, Deployability (Ref 7.3)		
Related Data Quality Dimensions	Accuracy, Objectivity, Free-of-Error, Relevance, Completeness, Timeliness, Appropriate Amount, Understandability, Interpretability, Concise Representation (Ref 7.4)		
Related Primary SLA Terms	(Ref 7.9)		
Related KPIs	RCC, RCCTR, RCCR (Ref 7.6)		
Related CTQs	RCCV, RCCTRV, RCCRV (Ref 7.7)		

6



Actors/Agents	Cleaner		
Delegation	Delegation Rule -1: Agent Not Available  1. Delegate the task to the agent with same role 2. Update the task 3. Log the delegation  Delegation Rule -2: Agent Overloaded  1. Delegate the task to the agent with same Role 2. Update the task 3. Log the delegation		
Escalation	Rule 1: Performance or operational or legal Issues  1. Escalate to environmental services department head. 2. Log Escalation 3. End		
Process Map	Section 5.1		
Process Model	Section 6.28		
Other References	<ul> <li>Appendix A: Business Process Notation Reference</li> <li>Appendix B: Housekeeping equipment Reference</li> <li>Appendix C: Housekeeping Raw Materials Specification Table</li> <li>Appendix D: Chain of Infection</li> <li>Appendix E: Work Schedule Sample</li> <li>Appendix F: Technical Method Sample</li> </ul>		

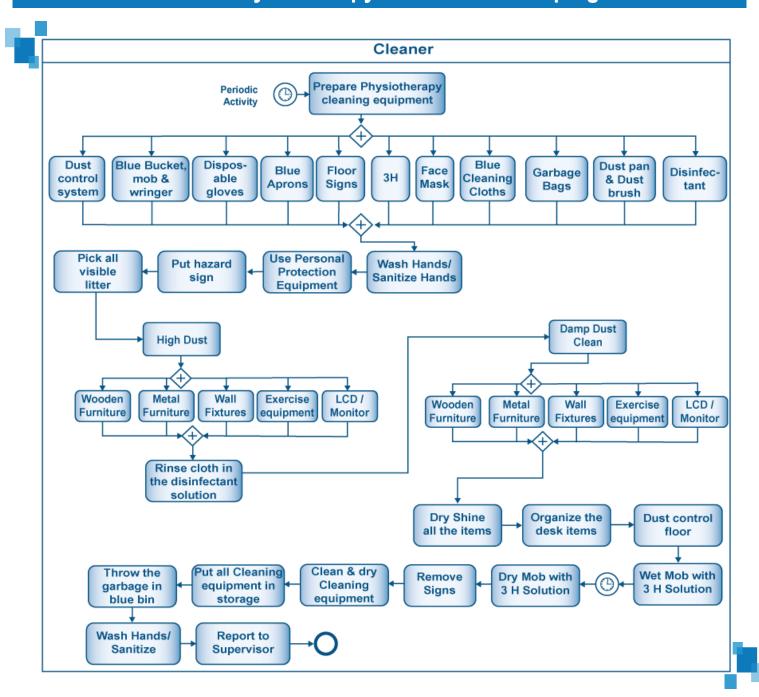


#### 6.30 Roles and Responsibilities - Reception Housekeeping

Roles	Responsibilities
Cleaners	<ul> <li>Cleaner prepares reception Housekeeping equipment (Dust Control tool, Blue Bucket, Disposable Gloves, Blue Aprons, Floor signs, Approved floor cleaner (3H), face mask Blue Cleaning Cloths, garbage bags, Dust pan and dust brush, Disinfectant, wringer)</li> <li>Cleaner ensure that entire reception is thoroughly cleaned as per this process</li> <li>Cleaner reports to supervisor</li> </ul>



#### 6.31 Sub Process - Physiotherapy Room Housekeeping





#### 6.32 Sub Process - Physiotherapy Room Housekeeping Specifications

Specification	Description			
Summary/Purpose	To establish organization's physiotherapy room Housekeeping Process.			
Scope	This is a Level 3 Process Specification.			
Primary Reference	NHS Cleaning Manual			
Related Practices	Transportation Management, Quality Management, Service Strategy & planning, laundry Management, Maintenance Management, Project Management, Infection Management, Activity Based Management, Waste Management			
Related Business Driver	<ul><li>Better hygiene</li><li>Customer satisfaction</li></ul>			
Related Operational Policies	OP-001, OP-002, OP-004 (Ref. 7.5)			
Assumptions	<ul> <li>Housekeeping Resources Management capability is automated.</li> <li>Housekeeping planning, risk and quality management is automated.</li> </ul>			
Voice of Customer	Hygiene, High and Consistent Quality of standards, Free of Infections, Timely Services, High Coordinating, Remove Waste, Excellent Ergonomic, Safety, Appearance, Excellent Worker Attitude.			
Customer Satisfaction Measure	Customer satisfaction index			
COI Correlation	Phase 1, Phase 2, Phase 3, Phase 4, Phase 5, Phase 6 in chain of infection			
Raw Materials	<ul> <li>Disinfectant (Antiseptica Comblispray)</li> <li>Sanitizer</li> <li>Approved floor cleaner (3 H)</li> </ul>			



Equipment & Accessories	Dust control system, Blue bucket, Blue Mob, Blue wringer, disposable gloves, Blue Aprons, floor signs, Face Mask, Blue Cleaning cloths, Garbage bags, dust pan & brush			
MSD Management	Lifting/carrying, Disability, Force, Loaded motion, Physical ergonomics, Posture change, Excessive force, Scarceness, Noise, Concentration, Floor hazards, Clothing, Psychosocial factors.			
EBC Procedures	TBD			
Timing Dimensions	Туре	Normal	Follow Up	
	Average	30 min	05 min	
	Std	12 min	03 min	
Trigger	Periodic activ	vity, Establish	Housekeeping p	procedures
Basic Course of Event	Physiotherapy Room Housekeeping  1. Cleaner prepares physiotherapy Housekeeping equipment (dust control, blue bucket, disposable gloves, blue aprons, floor signs, Approved floor Cleaner (3H), face mask, Blue Cleaning Clothes, garbage bags, dust plan & brush, disinfectant)  2. Cleaner wash hands or sanitizes  3. Cleaner uses personal protection equipment  4. Cleaner puts floor signs  5. Cleaner removes all visible garbage  6. Cleaner High Dusts wooden furniture, metal furniture, wall fixtures, exercise equipment, LCD/ monitor  7. Clean rinse cloth in disinfectant solution  8. Clean Damp Dust clean furniture, metal furniture, wall fixtures, exercise equipment, LCD/ monitor  9. Cleaner dry shines all the items			



	<ul> <li>11. Cleaner dust control the reception floor</li> <li>12. Cleaner wet mobs with 3H solution</li> <li>13. Cleaner dries the corridor after some time interval</li> <li>14. Cleaner removes the signs</li> <li>15. Cleaner Cleans and dries the Cleaning equipment</li> <li>16. Cleaner puts all Cleaning equipment in storage</li> <li>17. Cleaner throws the garbage in blue bin</li> <li>18. Cleaner washes hands or sanitizes</li> <li>19. Cleaner reports to supervisor</li> <li>20. End</li> </ul>		
Alternative Path	None		
Exception Path	System Down 1. Keep paper track until system is up and running 2. Update the System and clear all logs. 3. End.		
Extension points	Review Housekeeping procedures		
Preconditions	All Cleaner are properly trained qualified		
Post –conditions	Physiotherapy Room gets terminal cleaned.		
Related Business Rules	BR-003( Ref 7.1)		
Related Risks	RSK-001, RSK-002, RSK-007, RSK-008, RSK-011, RSK-012, RSK-017, RSK-019 (Ref 7.2)		
Related Quality Attributes	Reliability, Service Reliability, Availability, Usability, Normal Usability Operations, Confidentiality, Authenticity, Availability, Data Integrity, Accountability, Performance, Scalability, Extensibility, Adaptability, Testability, Auditability, Operability, Deployability (Ref 7.3)		



Related Data Quality Dimensions	Accuracy, Objectivity, Free-of-Error, Relevance, Completeness, Timeliness, Appropriate Amount, Understandability, Interpretability, Concise Representation (Ref 7.4)
Related Primary SLA Terms	(Ref 7.9)
Related KPIs	PCC, PCCTR, PCCR (Ref 7.6)
Related CTQs	PCCV, PCCTRV, PCCRV (Ref 7.7)
Actors/Agents	Cleaner
Delegation	Delegation Rule -1: Agent Not Available  1. Delegate the task to the agent with same role 2. Update the task 3. Log the delegation  Delegation Rule -2: Agent Overloaded  1. Delegate the task to the agent with same Role 2. Update the task 3. Log the delegation
Escalation	Rule 1: Performance or operational or legal Issues  1. Escalate to environmental services department head. 2. Log Escalation 3. End
Process Map	Section 5.1
Process Model	Section 6.31
Other References	<ul> <li>Appendix A: Business Process Notation Reference</li> <li>Appendix B: Cleaning equipment Reference</li> <li>Appendix C: Housekeeping Raw Materials Specification Table</li> <li>Appendix D: Chain of Infection</li> <li>Appendix E: Work Schedule Sample</li> <li>Appendix F: Technical Method Sample</li> </ul>

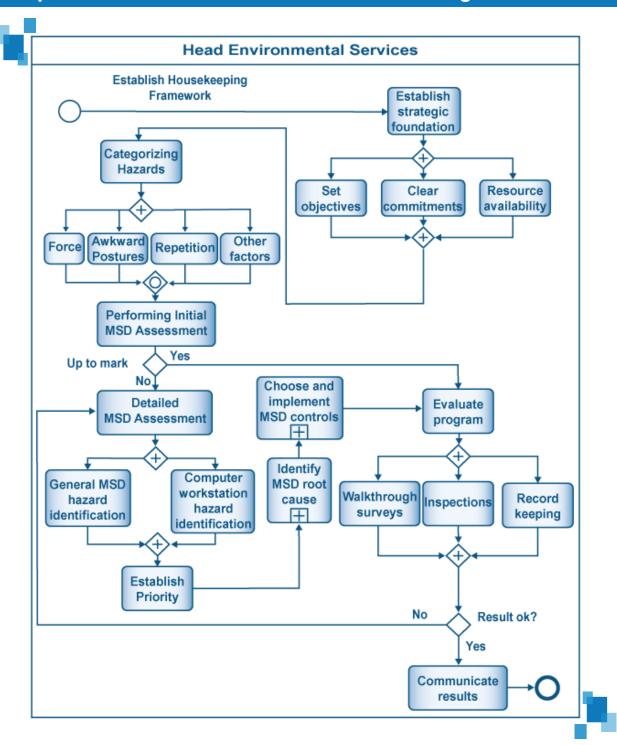


#### 6.33 Roles and Responsibilities - Physiotherapy Room Housekeeping

Roles	Responsibilities
Cleaners	<ul> <li>Cleaner prepares physiotherapy Housekeeping equipment (dust control, blue bucket, disposable gloves, blue aprons, floor signs, Approved floor Cleaner (3H), face mask, Blue Cleaning Clothes, garbage bags, dust plan &amp; brush, disinfectant)</li> <li>Cleaner ensure that entire Physiotherapy room is thoroughly cleaned as per this process</li> <li>Cleaner reports to supervisor</li> </ul>



#### 6.34 Sub process - Establish MSD Prevention Program





#### 6.35 Sub Process - Establish MSD Prevention Program Specification

Specification	Description
Summary/Purpose	The purpose of this process is to establish standard process for establishing MSD prevention program.
Scope	This is a level 1 Process Specification.
Primary Reference	• OSHA
Related ESM Practices	Transportation Management, Quality Management, Service Strategy & planning, laundry Management, Maintenance Management, Project Management, Infection Management, Activity Based Management, Waste Management
Related Business Driver	Ensure better safety of employees
Related Operational Policies	OP-007, OP-008,(Ref 7.5)
Assumptions	Senior Management Support exists.
Voice of Customer	Hygiene, High and Consistent Quality of standards, Free of Infections, Timely Services, High Coordinating, Remove Waste, Excellent Ergonomic, Safety, Appearance, Excellent Worker Attitude. (Ref 7.10)
Customer Satisfaction Measure	Customer satisfaction index
COI Correlation	None
Raw Materials	None
Equipment & Accessories	Automated System for laundry Management



MSD Management	Lifting/carrying, Disability, Force, Loaded motion, Physical ergonomics, Posture change, Excessive force, Scarceness, Noise, Concentration, Floor hazards, Clothing, Psychosocial factors. (Ref 7.12)
EBC Procedures	None
Timing Dimension	Type Normal
	Average 30 min  Std 12 min
Trigger	Establish Housekeeping framework
Basic Course of Event	<ol> <li>Establish MSD Program</li> <li>Senior Management establishes strategic foundation which comprises of setting objectives, clear commitments and resource availabilities.</li> <li>Senior Management categorizes MSD hazards into categories (force, awkward postures, repetition, and other factors)</li> <li>Senior Management performs initial MSD assessment which comprises of checklist and records reviews.</li> <li>Senior Management evaluates program which comprises of walkthrough surveys, inspections, record keeping.</li> <li>Senior Management communicates results to the staff and management.</li> <li>End</li> </ol>
Alternative Path	<ol> <li>Establish MSD Program (detailed MSD assessment)</li> <li>Senior Management establishes strategic foundation which comprises of setting objectives, clear commitments and resource availabilities.</li> <li>Senior Management categorizes MSD hazards into categories (force, awkward postures, repetition, and other factors)</li> <li>Senior Management performs initial MSD assessment which comprises of checklist and records reviews.</li> <li>Senior Management performs detailed MSD assessments</li> <li>Senior Management establishes priority</li> </ol>



Exception Path	<ol> <li>Senior Management identifies MSD root cause</li> <li>Senior Management choose and implement MSD controls</li> <li>Senior Management evaluates program which comprises of walkthrough surveys, inspections, record keeping.</li> <li>Senior Management communicates results to the staff and management.</li> <li>End</li> <li>Establish MSD Program (result not okay)</li> <li>Senior Management performs detailed MSD assessments.</li> <li>Senior Management establishes priority</li> <li>Senior Management identifies MSD root cause</li> <li>Senior Management choose and implement MSD controls</li> <li>Senior Management evaluates program which comprises of walkthrough surveys, inspections, record keeping.</li> <li>Senior Management communicates results to the staff and management.</li> <li>End</li> </ol> System Down
	<ol> <li>Keep paper track until system is up and running</li> <li>Update the System and clear all logs.</li> <li>End.</li> </ol>
Extension points	Identify MSD root cause, Choose and implement MSD controls, Identify housekeeping requirements
Preconditions	There exists a capability at environmental Services department to monitor the performance of housekeeping process
Post -conditions	MSD hazards get reduced.
Related Business Rules	BR-004, BR-005 (Ref 7.1)
Related Risks	RR-0020 ,RR-0021(Ref. 7.2)



Related Quality Attributes	Reliability, Usability, Data Integrity, Non-repudiation, Accountability, Performance, Auditability, Service reliability, confidentiality, authenticity, availability, non-repudiation, testability (Ref 7.3)
Related Data Quality Dimensions	Accuracy, Objectivity, Relevance, Completeness, timeliness, Understandability, interpretability, Reputation, Objectivity, Free-0f Error, Relevance, Completeness, Timeliness, Concise Representation (Ref 7.4)
Related Primary SLA Terms	TBD (Ref 7.9)
Related KPIs	MHR, RCIR, MHPR (Ref 7.6)
Related CTQs	MHRV, RCIRV, MHPRV (Ref 7.7)
Actors/Agents	Senior Management
Delegation	Delegation Rule -1: Agent Not Available  1. Delegate the Issue to additional Agent with same Role 2. Update the Issue 3. Log the Delegation  Delegation Rule -2: Agent Overloaded  1. Delegate the Issue to additional Agent with same Role 2. Update the Issue 3. Log the Delegation
Escalation	Rule 1: Performance or operational or legal Issues  1. Escalate to environmental services department head. 2. Log Escalation
Process Map	Section 5.1

6

## **Housekeeping Management Process**

Appendix J: Tips For Preventing Msd



Other References	Appendix A: Business Process Modeling Notation Reference
	Appendix B: Housekeeping Equipment Reference
	Appendix C: Housekeeping Raw Materials Specification Table
	Appendix D: Chain Of Infection
	Appendix E: Work Schedule Sample
	Appendix F: Technical Method Sample
	Appendix G: Sample Checklist
	Appendix H: General Hazard Identification Tool
	Appendix I: Hazard Priority Table

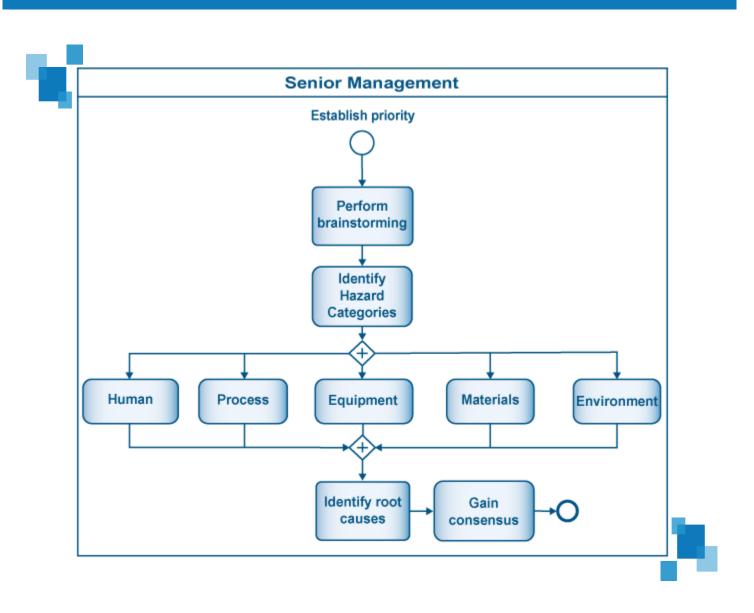


# 6.36 Sub Process – Establish MSD Prevention Program Roles and responsibilities

Roles	Responsibilities
Senior Management	<ul> <li>Senior Management establishes strategic foundation which comprises of setting objectives, clear commitments and resource availabilities.</li> <li>Senior Management categorizes MSD hazards into categories (force, awkward postures, repetition, and other factors)</li> <li>Senior Management performs initial MSD assessment which comprises of checklist and records reviews.</li> <li>Senior Management performs detailed MSD assessments which comprises of general MSD hazard identification and computer workstation hazard identification.</li> <li>Senior Management establishes priority</li> <li>Senior Management identifies MSD root cause</li> <li>Senior Management evaluates program which comprises of walkthrough surveys, inspections, record keeping.</li> <li>Senior Management communicates results to the staff and management</li> </ul>



#### 6.37 Sub process – Identity MSD root cause





#### 6.38 Sub Process – Identify MSD root cause Specification

Specification	Description
Summary/Purpose	The purpose of this process is identifying MSD root causes.
Scope	This is a level 2 Process Specification.
Primary Reference	<ul><li>Lean waste minimization</li><li>Six sigma quality model</li><li>OSHA</li></ul>
Related ESM Practices	Transportation Management, Quality Management, Service Strategy & planning, laundry Management, Maintenance Management, Project Management, Infection Management, Activity Based Management, Waste Management
Related Business Driver	Service quality improvisation
Related Operational Policies	OP-007 (Ref 7.5)
Assumptions	Senior Management Support exists.
Voice of Customer	Hygiene, High and Consistent Quality of standards, Free of Infections, Timely Services, High Coordinating, Remove Waste, Excellent Ergonomic, Safety, Appearance, Excellent Worker Attitude. (Ref 7.10)
Customer Satisfaction Measure	Customer satisfaction index
COI Correlation	None
Raw Materials	None
Equipment & Accessories	Automated System for laundry management

# 6



MSD Management	Lifting/carrying, Disability, Force, Loaded motion, Physical ergonomics, Posture change, Excessive force, Scarceness, Noise, Concentration, Floor hazards, Clothing, Psychosocial factors. (Ref 7.12)
EBC Procedures	None
Timing Dimension	Type Normal  Average 30 min  Std 12 min
Trigger	Establish priority
Basic Course of Event	Identify MSD root cause  1. Senior Management performs brainstorming sessions 2. Senior Management identifies the hazard for categories (human, process, equipment, materials, environment) 3. Senior Management identifies the root cause for the hazards 4. Senior Management gains consensus. 5. End
Alternative Path	None
Exception Path	System Down 1. Keep paper track until system is up and running 2. Update the System and clear all logs. 3. End.
Extension points	Choose and implement MSD control
Preconditions	There exists a capability at environmental Services department to monitor the performance of this process.
Post -conditions	Root cause of hazard is identified.
Related Business Rules	BR-004 (Ref 7.1)



Related Risks	RR-020 (Ref. 7.2)
Related Quality Attributes	Reliability, Usability, Data Integrity, Non-repudiation, Accountability, Performance, Auditability, Service reliability, confidentiality, authenticity, availability, non repudiation, testability (Ref 7.3)
Related Data Quality Dimensions	Accuracy, Objectivity, Relevance, Completeness, timeliness, Understandability, interpretability, Reputation, Objectivity, Free-0f Error, Relevance, Completeness, Timeliness, Concise Representation (Ref 7.4)
Related Primary SLA Terms	TBD (Ref 7.9)
Related KPIs	RCIR (Ref 7.6)
Related CTQs	RCIRV (Ref 7.7)
Actors/Agents	Senior Management
Delegation	Delegation Rule -1: Agent Not Available  1. Delegate the Issue to additional Agent with same Role 2. Update the Issue 3. Log the Delegation  Delegation Rule -2: Agent Overloaded  1. Delegate the Issue to additional Agent with same Role 2. Update the Issue 3. Log the Delegation
Escalation	Rule 1: Performance or operational or legal Issues
	Escalate to environmental services department head.     Log Escalation
Process Map	Section 5.1



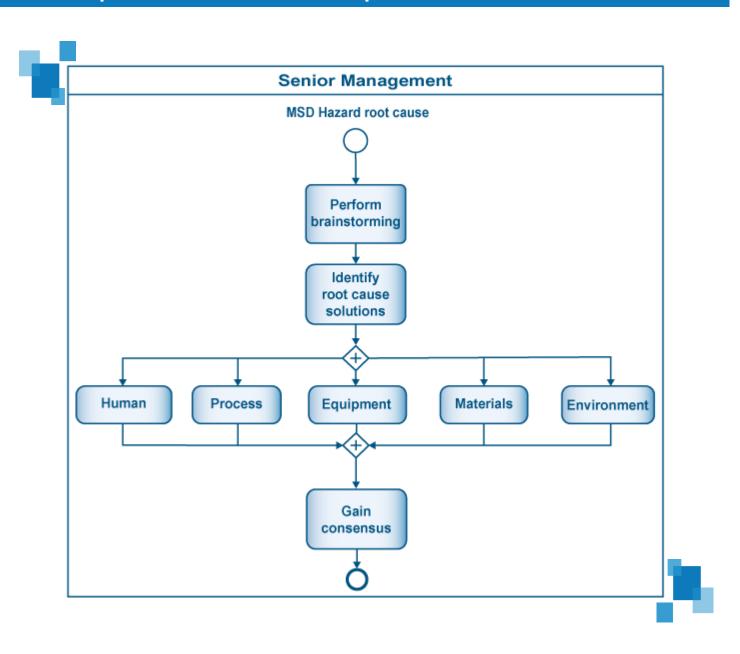
Process Model	Section 6.37
Other References	Appendix A: Business Process Modeling Notation Reference Appendix B: Chain of Infection

#### 6.39 Sub Process – Identify MSD root cause Roles and responsibilities

Roles	Responsibilities
Senior Management	<ul> <li>Senior Management performs brainstorming sessions</li> <li>Senior Management identifies the hazard for categories (human, process, equipment, materials, environment)</li> <li>Senior Management identifies the root cause for the hazards</li> <li>Senior Management gains consensus.</li> </ul>



#### 6.40 Sub process – Choose and implement MSD controls





# **6.41 Sub Process – Choose and Implement MSD controls Specification**

Specification	Description
Summary/Purpose	The purpose of this process is choose and implement MSD controls
Scope	This is a level 2 Process Specification.
Primary Reference	<ul> <li>Lean waste minimization</li> <li>Six sigma quality model</li> <li>OSHA</li> </ul>
Related ESM Practices	Transportation Management, Quality Management, Service Strategy & planning, laundry Management, Maintenance Management, Project Management, Infection Management, Activity Based Management, Waste Management
Related Business Driver	Service quality improvisation and reduction of MSD hazards
Related Operational Policies	OP-008 (Ref 7.5)
Assumptions	Senior Management Support exists.
Voice of Customer	Hygiene, High and Consistent Quality of standards, Free of Infections, Timely Services, High Coordinating, Remove Waste, Excellent Ergonomic, Safety, Appearance, Excellent Worker Attitude. (Ref 7.10)
Customer Satisfaction Measure	Customer satisfaction index
COI Correlation	None
Raw Materials	None



Equipment & Accessories	Automated System for Laundry B management
MSD Management	Lifting/carrying, Disability, Force, Loaded motion, Physical ergonomics, Posture change, Excessive force, Scarceness, Noise, Concentration, Floor hazards, Clothing, Psychosocial factors. (Ref 7.12)
EBC Procedures	None
Timing Dimension	Type Normal  Average 30 min  Std 12 min
Trigger	Identify MSD hazard root cause
Basic Course of Event	<ol> <li>Choose and Implement MSD controls</li> <li>Senior Management performs brainstorming sessions</li> <li>Senior Management identifies root cause solutions for the hazard categories (human, process, equipment, materials, environment)</li> <li>Senior Management gains consensus.</li> <li>End</li> </ol>
Alternative Path	None
Exception Path	System Down 1. Keep paper track until system is up and running 2. Update the System and clear all logs. 3. End.
Extension points	Evaluate program
Preconditions	There exists a capability at environmental Services department to monitor the performance of this process.
Post -conditions	Root cause of hazard is implemented.



Related Business Rules	BR-005(Ref 7.1)
Related Risks	RR-0021 (Ref. 7.2)
Related Quality Attributes	Reliability, Usability, Data Integrity, Non-repudiation, Accountability, Performance, Auditability, Service reliability, confidentiality, authenticity, availability, non repudiation, testability (Ref 7.3)
Related Data Quality Dimensions	Accuracy, Objectivity, Relevance, Completeness, timeliness, Understandability, interpretability, Reputation, Objectivity, Free-0f Error, Relevance, Completeness, Timeliness, Concise Representation (Ref 7.4)
Related Primary SLA Terms	TBD (Ref 7.9)
Related KPIs	MHPR (Ref 7.6)
Related CTQs	MHPRV (Ref 7.7)
Actors/Agents	Senior Management
Delegation	Delegation Rule -1: Agent Not Available  1. Delegate the Issue to additional Agent with same Role 2. Update the Issue 3. Log the Delegation  Delegation Rule -2: Agent Overloaded  1. Delegate the Issue to additional Agent with same Role 2. Update the Issue 3. Log the Delegation
Escalation	Rule 1: Performance or operational or legal Issues  1. Escalate to environmental services department head. 2. Log Escalation



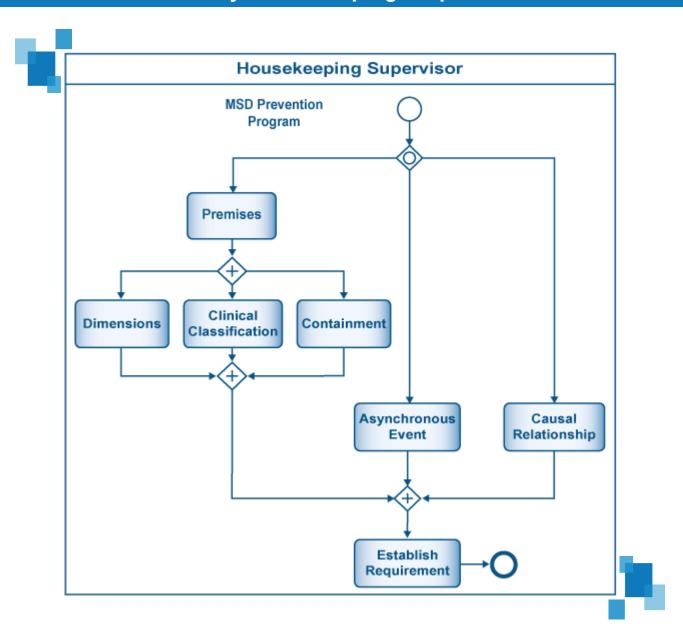
Process Map	Section 5.1
Process Model	Section 6.41
Other References	Appendix A: Business Process Modeling Notation Reference Appendix B: Chain of Infection

#### 6.42 Sub Process – Identify MSD root cause Roles and responsibilities

Roles	Responsibilities
Senior Management	<ul> <li>Senior Management performs brainstorming sessions</li> <li>Senior Management identifies root cause solutions for the hazard categories (human, process, equipment, materials, environment)</li> <li>Senior Management gains consensus.</li> </ul>



#### 6.43 Sub Process Identify Housekeeping Requirements





# **6.44 Sub Process – Identify Housekeeping Requirements Specification**

Specification	Description
Summary/Purpose	To establish a process for identifying organization Housekeeping requirements.
Scope	This is a Level 2 Process Specification.
Primary Reference	NHS Cleaning Manual
Related Practices	Transportation Management, Quality Management, Service Strategy & planning, laundry Management, Maintenance Management, Project Management, Infection Management, Activity Based Management, Waste Management
Related Business Driver	Safe and hygienic environment at organization
Related Operational Policies	OP-005 (ref 7.5)
Assumptions	Senior Management support is available
Voice of Customer	Ref 7.10
Customer Satisfaction Measure	TBD
COI Correlation	Phase 1, Phase 2, Phase 3, Phase 4, Phase 5, Phase 6 in chain of infection
Raw Materials	None
Equipment & Accessories	None
MSD Management	TBD
EBC Procedures	TBD
Timing Dimensions	TBD



Trigger	Established MSD prevention program.
Basic Course of Event	Establish Housekeeping Requirement  1. Housekeeping Supervisor evaluates the premises (dimensions, clinical classification and containment) and/ or asynchronous event and/ or casual relationship  2. Housekeeping Supervisor establishes the requirement.  3. End
Alternative Path	None
Exception Path	System Down  1. Keep paper track until system is up and running  2. Update the System and clear all logs.  3. End.
Extension points	Establish Housekeeping Types
Preconditions	Housekeeping Management should be well established.
Post –conditions	Housekeeping requirements gets established
Related Business Rules	BR-001 (Ref 7.1)
Related Risks	RSK-008 (Ref 7.2)
Related Quality Attributes	Service Reliability, Availability, Normal Usability Operations, Performance, Scalability, Extensibility, Adaptability, Testability, Auditability, Operability and Deployability (Ref 7.3)
Related Data Quality Dimensions	Accuracy, Objectivity, Free-of-Error, Relevance, Completeness, Timeliness, Understandability, Interpretability, Concise Representation (Ref 7.4)
Related Primary SLA Terms	(Ref 7.9)
Related KPIs	None



Related CTQs	DDRM, PWRM (Ref 7.7)				
Actors/Agents	Housekeeping Supervisor				
Delegation	Delegation Rule -1: Agent Not Available  1. Delegate the task to the agent with same role 2. Update the task 3. Log the delegation  Delegation Rule -2: Agent Overloaded  1. Delegate the task to the agent with same Role 2. Update the task 3. Log the delegation				
Escalation	Rule 1: Performance or operational or legal Issues  1. Escalate to environmental services department head.  2. Log Escalation  3. End				
Process Map	Section 5.1				
Process Model	Section 6.43				
Other References	<ul> <li>Appendix A: Business Process Notation Reference</li> <li>Appendix B: Housekeeping equipment Reference</li> <li>Appendix C: Housekeeping Raw Materials Specification Table</li> <li>Appendix D: Chain of Infection</li> <li>Appendix E: Work Schedule Sample</li> <li>Appendix F: Technical Method Sample</li> </ul>				

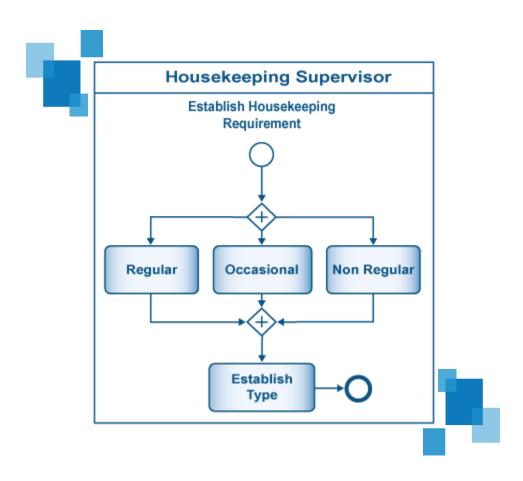


#### 6.45 Roles & Responsibilities – Identify Housekeeping Requirements

Roles	Responsibilities					
Housekeeping Supervisor	<ul> <li>Housekeeping Supervisor evaluates the premises (dimensions, clinical classification and containment) and/ or asynchronous event and/ or casual relationship</li> <li>Housekeeping Supervisor establishes the requirement.</li> </ul>					



#### 6.46 Sub-Process – Establish Housekeeping Types





#### 6.47 Sub Process – Establish Housekeeping Types Specification

Specification	Description				
Summary/Purpose	To establish process for identifying Housekeeping types.				
Scope	This is a Level 2 Process Specification.				
Primary Reference	NHS Cleaning Manual				
Related Practices	Transportation Management, Quality Management, Service Strategy & planning, laundry Management, Maintenance Management, Project Management, Infection Management, Activity Based Management, Waste Management				
Related Business Driver	Ensure healthy and hygienic environment at organization.				
Related Operational Policies	None				
Assumptions	Senior management support is available				
Voice of Customer	(Ref 7.10)				
Customer Satisfaction Measure	TBD				
COI correlation	Phase 1, Phase 2, Phase 3, Phase 4, Phase 5, Phase 6 in chain of infection				
Raw Materials	None				
Equipment & Accessories	None				
MSD Management	TBD				
EBC Procedures	TBD				
Timing Dimensions	TBD				
Trigger	Established Housekeeping requirement.				



Basic Course of Event	Establish Housekeeping Management  1. Housekeeping Supervisor identifies the type of Housekeeping (regular, or occasional or non-regular) based on the Housekeeping requirements.  2. Housekeeping Supervisor establishes the type.  3. End			
Alternative Path	None			
Exception Path	System Down  1. Keep paper track until system is up and running  2. Update the System and clear all logs.  3. End.			
Extension points	Establish Resources Availability			
Preconditions	Housekeeping requirement should be well established.			
Post –conditions	Housekeeping type gets selected.			
Related Business Rules	None			
Related Risks	None			
Related Quality Attributes	Service Reliability, Availability, Performance(Ref 7.3)			
Related Data Quality Dimensions	Accuracy, Objectivity, Free-of-Error, Relevance, Completeness Understandability, Interpretability, Concise Representation (Ref 7.4)			
Related Primary SLA Terms	(Ref 7.9)			
Related KPIs	None			
Related CTQs	None			
Actors/Agents	Housekeeping Supervisor			
Delegation	Delegation Rule -1: Agent Not Available  1. Delegate the task to the agent with same role  2. Update the task			



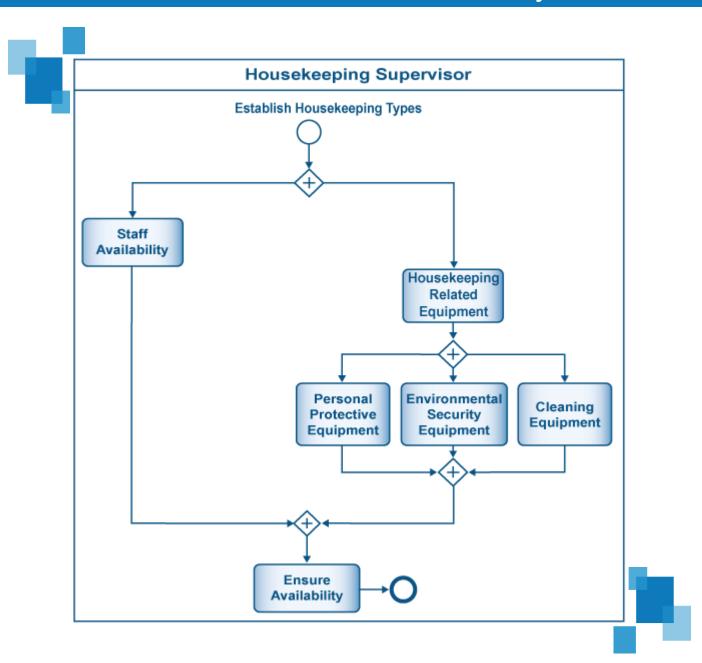
	<ul> <li>3. Log the delegation</li> <li>Delegation Rule -2: Agent Overloaded</li> <li>1. Delegate the task to the agent with same Role</li> <li>2. Update the task</li> <li>3. Log the delegation</li> </ul>					
Escalation	Rule 1: Performance or operational or legal Issues  1. Escalate to environmental services department head.  2. Log Escalation  3. End					
Process Map	Section 5.1					
Process Model	Section 6.46					
Other References	<ul> <li>Appendix A: Business Process Notation Reference</li> <li>Appendix B: Housekeeping equipment Reference</li> <li>Appendix C: Housekeeping Raw Materials Specification Table</li> <li>Appendix D: Chain of Infection</li> <li>Appendix E: Work Schedule Sample</li> <li>Appendix F: Technical Method Sample</li> </ul>					

#### 6.48 Roles & Responsibilities – Establish Housekeeping Types

Roles	Responsibilities				
Housekeeping Supervisor	Housekeeping Supervisor identifies the type of Housekeeping.				



#### 6.49 Sub – Process – Establish Resources Availability





#### 6.50 Sub Process – Establish Resource Availability Specification

Specification	Description				
Summary/Purpose	To ensure resource availability for the Housekeeping process.				
Scope	This is a Level 2 Process Specification.				
Primary Reference	NHS Cleaning Manual				
Related Practices	Transportation Management, Quality Management, Service Strategy & planning, laundry Management, Maintenance Management, Project Management, Infection Management, Activity Based Management, Waste Management				
Related Business Driver	Better resource management				
Related Operational Policies	OP-006 (Ref 7.5)				
Assumptions	<ul> <li>Senior Management support is available to this process.</li> <li>The resource management and planning is done automatically.</li> </ul>				
Voice of Customer	Ref 7.10				
Customer Satisfaction Measure	TBD				
COI correlation	None				
Raw Materials	None				
Equipment & Accessories	None				
MSD Management	TBD				
EBC Procedures	TBD				
Timing Dimensions	TBD				



Trigger	Establish Housekeeping types					
Basic Course of Event	<ol> <li>Establish Resource Availability</li> <li>Housekeeping Supervisor ensures staff availability and Housekeeping related equipment (PPE, environmental security equipment, Housekeeping equipment)</li> <li>Housekeeping Supervisor ensures availability.</li> <li>End</li> </ol>					
Alternative Path	None					
Exception Path	System Down 1. Keep paper track until system is up and running 2. Update the System and clear all logs. 3. End.					
Extension points	Identify Housekeeping schedule.					
Preconditions	Housekeeping types have been established.					
Post –conditions	Housekeeping resources get ensured.					
Related Business Rules	BR-001 (Ref 7.1)					
Related Risks	RSK-002, RSK-006, RSK-009(Ref 7.2)					
Related Quality Attributes	Reliability, Availability, Performance, Scalability, Extensibility, Adaptability, Testability, Operability (Ref 7.3)					
Related Data Quality Dimensions	Accuracy, Objectivity, Free-of-Error, Relevance, Completeness, Timeliness, Understandability, Interpretability(Ref 7.4)					
Related Primary SLA Terms	(Ref 7.9)					
Related KPIs	RR, CC (Ref 7.6)					
Related CTQs	RRV, CCV, MOM, IOM, TOM, PPOM (Ref 7.7)					
Actors/Agents	Housekeeping Supervisor					



Delegation Rule -1: Agent Not Available  1. Delegate the task to the agent with same role 2. Update the task 3. Log the delegation Delegation Rule -2: Agent Overloaded 1. Delegate the task to the agent with same Role 2. Update the task 3. Log the delegation					
Escalation	Rule 1: Performance or operational or legal Issues  1. Escalate to environmental services department head.  2. Log Escalation  3. End				
Process Map	Section 5.1				
Process Model	Section 6.49				
<ul> <li>Appendix A: Business Process Notation Reference</li> <li>Appendix B: Housekeeping equipment Reference</li> <li>Appendix C: Housekeeping Raw Materials Specification Table</li> <li>Appendix D: Chain of Infection</li> <li>Appendix E: Work Schedule Sample</li> <li>Appendix F: Technical Method Sample</li> </ul>					



#### 6.51 Roles & Responsibilities – Establish Resource Availability

Roles	Responsibilities					
Housekeeping Supervisor	Housekeeping Supervisor ensures staff and Housekeeping related equipment availability,					







This chapter serves as a prime reference to Chapter 6 and presents the details supporting Chapter 6 in tabular formats. This chapter consists of various variable values which would frequently evolve or change as organization's Housekeeping process matures or changes.

At minimal this document should be updated biannually. However, if need arises this document may be updated earlier than its prescribed revision period

#### 7.1 Business Rules

BR ID	Description	Context	Rule	Source
BR-001	Housekeeping requirements (supplies and Staff) would be planned and estimated 6 months in anticipation of need.	TBD	TBD	TBD
BR-002	Quality Audits would be done planned (periodically) as well as unplanned (depending on situations).	TBD	TBD	TBD
BR-003	All premises should be kept free from infections	TBD	TBD	TBD
BR-004	All MSD hazard should be identified and prioritized	Business	TBD	TBD
BR-005	-005 All the root causes of MSD should be identified		TBD	TBD



## 7.2 Risk

Risk ID	Description	Source	Severity Level	Status	Resolution
RR-001	Cleaners/ supervisors' absence from job	NA	High	NA	Management should keep track of all cleaners effectively. Uninformed absenteeism should be deal sternly.
RR-002	Shortage of cleaners	NA	High	NA	Senior management should plan the human resources well ahead so that there is never a shortage of cleaners
RR-003	Poor monitoring of activities	NA	High	NA	Senior Management should monitor the efficiency of supervisor / cleaners on weekly/ monthly basis.
RR-004	Lack of infection control awareness within the cleaners	NA	High	NA	Management should conduct awareness session for the Housekeeping team so that they are well aware about methods and techniques of infection control
RR-005	Different cleaners clean differently	NA	Medium	NA	Management should train the Housekeeping team about the standard



					Housekeeping mechanism of the hospital.
RR- 006	Many responsibility for each supervisor leads to errors	NA	Medium	NA	Management should re plan supervisor responsibilities and remove unnecessary job responsibilities
RR-007	Time Wastage in arrangement and distribution of Housekeeping the equipment	NA	low	NA	Proper time management techniques should be enforce to control the delays
RR-008	Dissatisfaction amongst the patient with regards to Housekeeping	NA	High	NA	Management should implement quality programs to increase customer satisfaction.
RR-009	Lack and delay in availability of Housekeeping supplies.	NA	High	NA	Management should ensure that they have a proper inventory management practice so that shortage of supplies doesn't occur.
RR-010	No Restricted access to the cleaners for infection prone room	NA	medium	NA	Organization should establish means and methods whereby cleaners' access to such rooms is limited as per need basis.



RR-011	Huge time difference to perform same Housekeeping activities	NA	medium	NA	The management should standardize the procedure of Housekeeping across entire department, such that each cleaner would follow similar steps for similar Housekeeping jobs.
RR-012	Starting of work not monitored e.g, delay in start of Housekeeping work	NA	High	NA	Various time keeping methods, e.g, punch card, work registry signing, access cards can be used to track and keep time of commencement of work.
RR-013	Inappropriate use of disinfectant quality at public areas can be hazardous to people	NA	Medium	NA	All cleaner should be properly trained on the quality of disinfectant to be used at various places.
RR-014	Dressing attire not properly crafted for each cleaner, e.g., Cleaner Trousers are too long for some cleaners and get easily soaked into toilet.	NA	Low	NA	It should be made clear to cleaners that such attires should properly folded so at to ensure that they don't get soaked. And supervisor should monitor that cleaners are following this strictly.
RR-015	Negligence of usage of Personal protection equipment, e.g Cleaner did not wear the Household gloves while Housekeeping the toilets	NA	High	NA	Management should train the Housekeeping team on the standard use of PPE and hazards of not following them.



RR-016	Current Housekeeping methods are noisy.	NA	Low	NA	Management should train the Housekeeping team about desired means and methods of Housekeeping such that the hospital premise is free from noise pollution.
RR-017	Housekeeping trolley not pre-arranged before commencement of Housekeeping. e.g, some equipment. (Masks, gloves, warning signs) were missing.	NA	Low	NA	At the end of shift, the cleaners should put all the required items back into the trolley to facilitate the subsequent shift.
RR-018	Lack of operational rules for special cases. E.g., male cleaner's inability to clean female patient room.	NA	High	NA	The operational policy should be established for special cases, and all the cleaners should be made aware of them.
RR-019	Tendency to miss the routine Housekeeping if the room is vacant	NA	High	NA	Management should strictly monitor and verify all the rooms are being cleaned as planned. Management should perform surprise checks to verify the all the rooms are being cleaned as planned.
RR-020	The MSD assessment results are not accurate	NA	High	TBD	Detailed assessment techniques should be undertaken. If needed MSD professional bodies



					should be contacted to perform assessment/
RR-021	Root cause for some MSD is not identified	NA	High	TBD	For those MSD for which root cause can't be identified there should be a work around solution identified until the cause is identified.

## 7.3 Quality Attribute

QA ID	Description	Threshold
QA- 001	Interoperability	TBD
QA-002	Reliability	TBD
QA-003	Service Reliability	TBD
QA-004	Availability	TBD
QA-005	Usability	TBD
QA-006	Normal Usability Operations	TBD
QA-007	Confidentiality	TBD
QA-008	Authenticity	TBD
QA-009	Data Integrity	TBD
QA-010	Availability	TBD



QA-011	Non-repudiation	TBD
QA-012	Accountability	TBD
QA-013	Security Integration	TBD
QA-014	Performance	TBD
QA-015	Scalability	TBD
QA-016	Extensibility	TBD
QA-017	Adaptability	TBD
QA-018	Testability	TBD
QA-019	Auditability	TBD
QA-020	Operability and Deployability	TBD

## 7.4 Data Quality Dimension

DQ ID	Description	Threshold
DQ - 001	Accuracy	TBD
DQ-002	Believability	TBD
DQ-003	Reputation	TBD
DQ-004	Objectivity	TBD
DQ-005	Free-of-Error	TBD



DQ-006	Value Added	TBD
DQ-007	Relevance	TBD
DQ-008	Completeness	TBD
DQ-009	Timeliness	TBD
DQ-010	Appropriate Amount	TBD
DQ-011	Understandability	TBD
DQ-012	Interpretability	TBD
DQ-013	Concise Representation	TBD

# 7.5 Operation Policy

Policy ID	Description	Context	Importance (1-5)
OP-001	Follow up Housekeeping would be done hourly.	TBD	TBD
OP-002	Each shifts change would be properly endorsed.	TBD	TBD
OP-003	Housekeeping procedures would be reviewed at least annually	TBD	TBD
OP-004	All patient occupied rooms have to cleaned atleast daily.  P.s this operational policy doesn't refer in any way that unoccupied room are not to be cleaned)	TBD	TBD
OP-005	For any changes in the infrastructure the Housekeeping requirement should be reviewed	TBD	TBD



OP-006	All cleaners would be trained periodically.	TBD	TBD
OP-007	Advanced MSD assessment should be undertaken if the results from initial MSD assessment are not accurate	TBD	TBD
OP-008	Root cause identification and implementation would be done only when a consensus is reached by the brain storming team.	TBD	TBD

## 7.6 KPI

Name	Acronym	Description	Context	Importance	Soft Threshold	Hard Threshold
Housekeeping cost	СС	Housekeeping cost per month	NA	TBD	TBD	TBD
Housekeeping complaint rate	CCTR	Number of Housekeeping complains per month	NA	TBD	TBD	TBD
Housekeeping Compliance rate	CCR	Number of Housekeeping targets achieved per month.	NA	TBD	TBD	TBD
Toilet Housekeeping cost	TCC	Toilet Housekeeping cost per month	NA	TBD	TBD	TBD



Toilet Housekeeping complaint rate	TCCTR	Number of Toilet Housekeeping complains per month	NA	TBD	TBD	TBD
Toilet Housekeeping Compliance rate	TCCR	Number of Toilet Housekeeping targets achieved per month.	NA	TBD	TBD	TBD
Pantry Housekeeping cost	PCC	Pantry Housekeeping cost per month	NA	TBD	TBD	TBD
Pantry Housekeeping complaint rate	PCCTR	Number of Pantry Housekeeping complains per month	NA	TBD	TBD	TBD
Pantry Housekeeping Compliance rate	PCCR	Number of Pantry Housekeeping targets achieved per month.	NA	TBD	TBD	TBD
Isolated Room Housekeeping cost	IRCC	Isolated Room Housekeeping cost per month	NA	TBD	TBD	TBD
Isolated Room Housekeeping Compliance rate	IRCCR	Number of Isolated room Housekeeping targets achieved per month.	NA	TBD	TBD	TBD



Isolated Room Housekeeping complaint rate	IRCTR	Isolated Room Number of Housekeeping complains per month	NA	TBD	TBD	TBD
Normal Room Housekeeping cost	NRCC	Normal Room Housekeeping cost per month	NA	TBD	TBD	TBD
Normal Room Housekeeping complaint rate	NRCCTR	Number of normal room Housekeeping complains per month	NA	TBD	TBD	TBD
Normal Room Housekeeping Compliance rate	NRCCR	Number of Normal Room Housekeeping targets achieved per month.	NA	TBD	TBD	TBD
Corridor Housekeeping cost	CCC	Corridor Housekeeping cost per month	NA	TBD	TBD	TBD
Corridor Housekeeping complaint rate	CCCTR	Number of Corridor Housekeeping complains per month	NA	TBD	TBD	TBD
Corridor Housekeeping Compliance rate	CCCR	Number of Corridor Housekeeping	NA	TBD	TBD	TBD



		targets achieved per month.				
Reception Housekeeping cost	RCC	Reception Housekeeping cost per month	NA	TBD	TBD	TBD
Reception Housekeeping complaint rate	RCCTR	Number of Reception Housekeeping complains per month	NA	TBD	TBD	TBD
Reception Housekeeping Compliance rate	RCCR	Number of Reception Housekeeping targets achieved per month.	NA	TBD	TBD	TBD
Physiotherapy Housekeeping cost	PCC	Physiotherapy Housekeeping cost per month	NA	TBD	TBD	TBD
Physiotherapy Housekeeping complaint rate	PCTR	Number of Physiotherapy Housekeeping complains per month	NA	TBD	TBD	TBD
Physiotherapy Housekeeping Compliance rate	PCCR	Number of Physiotherapy Housekeeping targets achieved per month.	NA	TBD	TBD	TBD



Retention Rate	RR	Number of staff retained quarterly	NA	TBD	TBD	TBD
MSD hazards rate	MHR	Number of MSD hazard in the organization identified quarterly	NA	TBD	TBD	TBD
Root cause identification rate	RCIR	Number of hazards with root cause identified	NA	TBD	TBD	TBD
MSD hazard prevention rate	MHPR	Number of MSD hazard in the organization prevented quarterly	NA	TBD	TBD	TBD

#### 7.7 CTQ

Name	Acronym	Description	Context	Importance	Soft Threshold	Hard Threshold
Motion Optimization Measure	МОМ	Management of motion optimization measure	NA	TBD	TBD	TBD
Paper work Optimization Measure	PWOM	Management of Paper work Optimization Measure	NA	TBD	TBD	TBD
Correction reduction measure	CRM	Management of Correction	NA	TBD	TBD	TBD



		reduction measure				
Inventory Optimization Measure	IOM	Management of Inventory Optimization Measure	NA	TBD	TBD	TBD
Transportation Optimization Measure	ТОМ	Management of Transportation Optimization Measure	NA	TBD	TBD	TBD
Patient Waiting reduction Measure	PWRM	Management of Patient Waiting reduction Measure	NA	TBD	TBD	TBD
Diagnosis delays reduction measure	DDRM	Management of Diagnosis delays reduction measure	NA	TBD	TBD	TBD
Patient Processing optimization measure	PPOM	Management of Diagnosis delays reduction measure	NA	TBD	TBD	TBD
Housekeeping cost variation	CCV	Standard Deviation of CC	NA	TBD	TBD	TBD
Housekeeping complaint rate variation	CCTRV	Standard Deviation of CCTR	NA	TBD	TBD	TBD

#### Reference



Housekeeping Compliance rate variation	CCRV	Standard Deviation of CCR	NA	TBD	TBD	TBD
Toilet Housekeeping cost variation	TCCV	Standard Deviation of TCC	NA	TBD	TBD	TBD
Toilet Housekeeping complaint rate variation	TCCTRV	Standard Deviation of TCCTR	NA	TBD	TBD	TBD
Toilet Housekeeping Compliance rate variation	TCCRV	Standard Deviation of TCCR	NA	TBD	TBD	TBD
Pantry Housekeeping cost variation	PCCV	Standard Deviation of PCC	NA	TBD	TBD	TBD
Pantry Housekeeping complaint rate variation	PCCTRV	Standard Deviation of PCCTR	NA	TBD	TBD	TBD
Pantry Housekeeping Compliance rate variation	PCCR	Standard Deviation of PCCR	NA	TBD	TBD	TBD
Isolated Room Housekeeping cost variation	IRCCV	Standard Deviation of IRCC	NA	TBD	TBD	TBD



Isolated Room Housekeeping Compliance rate variation	IRCCRV	Standard Deviation of IRCCR	NA	TBD	TBD	TBD
Isolated Room Housekeeping complaint rate variation	IRCTRV	Standard Deviation of IRCTR	NA	TBD	TBD	TBD
Normal Room Housekeeping cost variation	NRCCV	Standard Deviation of NRCC	NA	TBD	TBD	TBD
Normal Room Housekeeping complaint rate variation	NRCCTR V	Standard Deviation of NRCCTR	NA	TBD	TBD	TBD
Normal Room Housekeeping Compliance rate variation	NRCCR	Standard Deviation of NRCCR	NA	TBD	TBD	TBD
Corridor Housekeeping cost variation	CCCV	Standard Deviation of CCC	NA	TBD	TBD	TBD
Corridor Housekeeping complaint rate variation	CCCTRV	Standard Deviation of CCCTR	NA	TBD	TBD	TBD
Corridor Housekeeping	CCCRV	Standard Deviation of CCCR	NA	TBD	TBD	TBD

#### Reference



Compliance rate variation						
Reception Housekeeping cost variation	RCCV	Standard Deviation of RCC	NA	TBD	TBD	TBD
Reception Housekeeping complaint rate variation	RCCTRV	Standard Deviation of RCCTR	NA	TBD	TBD	TBD
Reception Housekeeping Compliance rate variation	RCCRV	Standard Deviation of RCCR	NA	TBD	TBD	TBD
Physiotherapy Housekeeping cost variation	PCCV	Standard Deviation of PCC	NA	TBD	TBD	TBD
Physiotherapy Housekeeping complaint rate variation	PCTRV	Standard Deviation of PCTR	NA	TBD	TBD	TBD
Physiotherapy Housekeeping Compliance rate variation	PCCRV	Standard Deviation of PCCR	NA	TBD	TBD	TBD
Retention Rate variation	RRV	Standard Deviation of RR	NA	TBD	TBD	TBD



#### 7.8 Abstract Time-Scale

Name	Acronym	Description	Quantification
ATS-001	SFT	8 hours Housekeeping shifts	TBD

#### 7.9 SLA Terms

SLA ID	Description	Context	KPI	СТQ
TBD	TBD	TBD	TBD	TBD

#### 7.10 Voice of Customer

VOC	Customer	Description	Perceived Value
Hygiene	Doctors, Patients, Nurses, Housekeeping Supervisors, Housekeepers, Clerks, Visitors, Environmental Services Management, Laundry worker, Transportation worker, Maintenance worker, Waste management worker.	The environment should be attributing with great hygiene level.	<ul> <li>High quality healthcare services</li> <li>Safe environment</li> <li>Low infection rate</li> <li>Low risk</li> </ul>
High and Consistent Quality of standards	Doctors, Patients, Nurses, Housekeeping Supervisors, Clerks, Environmental Services Management,	High and Consistent Quality of standards.	<ul><li>Reputation of organization or hospital</li><li>Professionalism</li><li>Trust</li></ul>

#### Reference



	Laundry worker, Transportation worker, Maintenance worker, Waste management worker, Housekeepers		Positive psychological bias
Free of Infections	Doctors, Patients, Nurses, Housekeeping Supervisors, Clerks, Visitors, Environmental Services Management, Laundry worker, Transportation worker, Maintenance worker, Waste management worker, Housekeepers	Infections free and healthy environment.	<ul> <li>Safe environment</li> <li>Reputation of hospital or organization</li> <li>Trust</li> <li>Quick healing</li> <li>Positive psychological bias</li> <li>Low risk</li> </ul>
Timely Services	Doctors, Patients, Nurses, Housekeeping Supervisors, Visitors, Environmental Services Management, Laundry worker, Transportation worker, Maintenance worker, Waste management worker, Housekeepers	The response time for any request should be very short.	<ul> <li>Professionalism</li> <li>Trust</li> <li>Positive psychological bias</li> <li>Reputation of hospital or organization</li> <li>Safe environment</li> </ul>
High Coordinating	Doctors, Patients, Nurses, Housekeeping Supervisors, Clerks, Environmental Services Management, Laundry worker, Transportation worker, Maintenance worker, Waste	There should be high level of coordination between hospital employees and departments.	<ul> <li>Professionalism</li> <li>Trust</li> <li>Low risk</li> <li>Excellent Ergonomic</li> </ul>

#### Reference



	management worker, Housekeepers		
Remove Waste	Patients, Nurses, Housekeeping Supervisors, Clerks, Visitors, Environmental Services Management, Laundry worker, Transportation worker, Maintenance worker, Waste management worker, Housekeepers	Wastes should be either removed or minimized.	<ul> <li>Safe environment</li> <li>Low infection rate</li> <li>Low risk</li> <li>Reputation of hospital or organization</li> <li>Low cost</li> <li>Timely response</li> <li>High quality</li> </ul>
Excellent Ergonomic	Doctors, Patients, Nurses, Housekeeping Supervisors, Clerks, Visitors, Environmental Services Management, Laundry worker, Transportation worker, Maintenance worker, Waste management worker, Housekeepers	The hospital environment and policy should comply with physical, organization and cognitive ergonomics.	<ul> <li>Professionalism</li> <li>Trust</li> <li>Job accuracy</li> <li>Excellent communication</li> <li>Low risk</li> <li>Reputation of hospital or organization</li> </ul>
Safety	Doctors, Patients, Nurses, Housekeeping Supervisors, Clerks, Visitors, Environmental Services Management, Laundry worker, Transportation worker, Maintenance worker, Waste management worker, Housekeepers	Hospital environment should comply with occupational health and safety procedures.	<ul><li>Safe environment</li><li>Professionalism</li><li>Low risk</li></ul>
Appearance	Housekeeping Supervisors, Environmental Services	The appearance of the workers,	Professionalism



	Management, Laundry worker, Transportation worker, Maintenance worker, Waste management worker, Housekeepers	supervisors and manager should induce positive biases.	<ul> <li>Reputation of hospital or organization</li> <li>Trust</li> <li>Positive psychological bias</li> </ul>
Excellent Worker Attitude	Housekeeping Supervisors, Environmental Services Management, Laundry worker, Transportation worker, Maintenance worker, Waste management worker, Housekeepers	The environment service employee should be free from negative attitudes.	<ul> <li>Professionalism</li> <li>Reputation of hospital or organization</li> <li>Trust</li> <li>Positive psychological bias</li> <li>Minimum disputes</li> <li>Less employee turn over</li> </ul>

#### **7.11 Customer Context Matrix**

Name of Customer	Acronym	Context of Customer	Coordination Process Area
Doctors	DOC	Direct	HIS Coordination
Patients	PAT	Direct	HIS Coordination
Nurses	NUR	Direct	HIS Coordination, Nurse Coordination
Housekeeping Supervisors	HKS	Direct	Quality Coordination, Nurse Coordination, infection control coordination
Clerks	CLR	Direct	HIS Coordination
Visitors	VIS	Indirect	HIS Coordination



Environmental Services Management	ESM	Direct	Nurse Coordination, infection control coordination
Other hospital workers	OHW	Indirect	Security coordination
Laundry worker	LDW	Direct	Nurse Coordination, HIS Coordination
Transportation worker	TRW	Direct	Quality Coordination, HIS Coordination
Maintenance worker	MAW	Direct	Quality Coordination, HIS Coordination
Waste management worker	WMW	Direct	Quality Coordination, HIS Coordination
Infection control professional	ICP	Indirect	Infection control coordination
Housekeepers	HK	Direct	HIS Coordination, Nurse Coordination



#### 7.12 MSD Attributes

MSD Attribute	Description
Lifting/carrying	Large vertical movements, long carry distances.
Disability	Pose a risk to those with a health problem or a physical or learning disability.
Force	High initial forces to get the load moving.
Loaded motion	High forces to keep the load in motion.
Physical ergonomics	Constraints on body posture/positioning, confined spaces/narrow doorways.
Posture change	Strong force and awkward movement/posture. E.g. bent wrists.
Excessive force	Excessive force to grip raw materials, product or tools
Scarceness	Inadequate tools for repetitive use screwdrivers, pliers, hammers.
Noise	Noise which cause stress and muscle tension.
Concentration	Tasks require high levels of attention/concentration especially where the worker has little control over allocation of effect to the task.
Floor hazards	Remove slip and trip hazards through provision of appropriate floor surfaces and good keeping.
Clothing	Clothing/PPE may prevent sufficient movement for the task or reduce capability.  E.g. to grip consider handling needs when selecting work wear/gloves.



Psychosocial factors	Adverse psychosocial factors can increase the potential for manual handling injuries. A workers psychosocial response to work and the workplace conditions
	can affect their health in general and MSDs in particular. The factors include the content, design, organization and management of the work

## ESM Housekeeping Management Process







Terminology	Description	
Abstract Time Scale	Time Scale that will be quantified both during operations and continuous process improvement. These time identifiers are correlated with the soft thresholds that are dynamically specified during life span of the process.	
Availability	The property of being accessible and usable upon demand by an authorized entity.	
BPMN	Business Process Modelling Notation Business Process Modelling Notation is the practice of documenting an organisation's key business processes in a graphical format.	
Business Rules	Business Rules are intended to assert business structure or to control or influence the behaviour of the Business. Business rules describe the operations, definitions and constraints that apply to an organization	
Housekeeping	A process that is intended to physically remove microorganisms (and the organic material on which they thrive) and other contaminants from objects	
COI	Chain of Infection	
СТQ	Critical to Quality Critical To Quality (CTQ) is continuous measuring and monitoring tool agreed between the internal processes to achieve greater customer satisfaction.	
Data Quality Dimensions	The totality of features and characteristics of data that bears on their ability to satisfy a given purpose	
Disinfection	A process that is intended to kill or remove pathogenic microorganisms but which cannot usually kill bacterial spores	
EBC	Evidence Based Housekeeping	
ES <sup>3</sup>	Environmental support service system.	
ESM	Environmental Service Map	
EPA	Environmental Protection Agency Standard	



HAI	Hospital Associated Infection	
HCAHPS	Hospital Consumer Assessment of Healthcare Providers and Systems)	
HIPA	Health Information Privacy Act standard	
JCI	Journal of Clinical Investigation standard	
JCAHO	Joint Commission on Accreditation of Healthcare Organizations standard	
Organization	Organization	
KPI	Key Performance Indicator  A metric that is used to help manage a process, IT service or activity. Many metrics may be measured, but only the most important of these are defined as KPIs and used to actively manage and report on the process, IT service or activity. KPIs should be selected to ensure that efficiency, effectiveness, and cost effectiveness are all managed.	
MSD	Macro Skeleton Disorder	
NHS	National health Service.	
I		
Operational Policy	Rules defined to operate the process.	
Operational Policy PPE	Rules defined to operate the process.  Personal Protective Equipment.	
PPE	Personal Protective Equipment.  Quality attributes are non-functional requirements used to evaluate the performance of a	
PPE Quality Attributes	Personal Protective Equipment.  Quality attributes are non-functional requirements used to evaluate the performance of a process.  A possible event that could cause harm or loss, or affect the ability to achieve Objectives. A risk is measured by the probability of a threat, the vulnerability of the asset to that threat,	

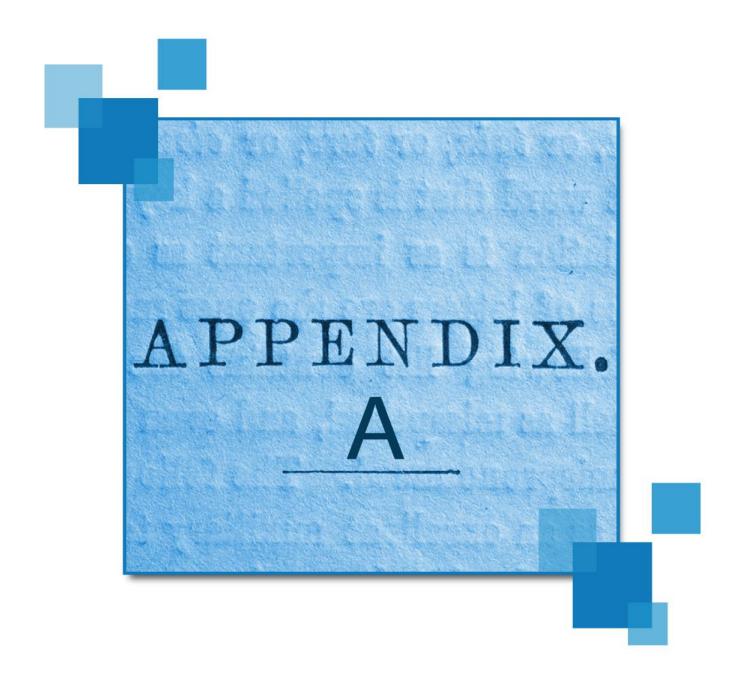


	An Agreement between an IT Service Provider and a Customer. The SLA describes the IT Service, documents Service Level Targets, and specifies the responsibilities of the IT Service Provider and the Customer.
Terminal Housekeeping	A thorough Housekeeping method used in healthcare environments to control the spread of infections.

## ESM Housekeeping Management Process



# Appendix A: Business Process Modeling Notation Reference





#### **INTRODUCTION**

Business Process Modelling ("BPM") is the practice of documenting an organization's key business processes in a manner which:

- Is highly graphical
- Focuses on business terminology rather than technical
- Allows all business steps/tasks to be included, not just those which involve a computer system.

Below is a mention of various concepts of BPMN with the relevant definition and graphic notation.

PROCESS START	
All processes have to start somehow, general notation for a process models commence with the START event, is a circle.	
One can use simply the <i>basic unmarked</i> start event as above, or one of the different type more detail as described below.	s of start event, to provide
If a process starts when some sort of message arrives, mail, email, text. Following notation can be used	Message start
If a process starts by virtue of the passage of time – e.g. 1st Jan review or 4 days after the purchase order is sent, following notation can be used	TIMER Start
If the process starts when a rule/condition is met – e.g. when Incident Impact is more than 100,000.	RULE Start
If a process starts when another process finishes. Following notation can be used	LINK Start
If there is more than one 'trigger' for a process to start. Following notation can be used	MULTIPLE Start



#### **TASK AND SUB PROCESS**

Task	Task is a lowest level activity in a process map. A task is used when the work is not broken down to a finer level of detail	My Task
Sub Process	A Sub-process is a compound activity which can be broken down into finer details.	My Task
Loops	Loops task or sub process continues to iterate until the loop condition is true.	Review

#### **INTERMEDIATE EVENTS**

Following notation can be used to display the intermediate event,						
	BASIC	MESSAGE	TIMER	RULE	LINK	MULTIPLE
similar to start and end events.	0				lacktriangle	

#### **PROCESS END**

All processes have to end somehow, general notation for a process models end will be a circle with a solid line.



One can use simply use the *basic* end event as above, or you can use one of the different types of end event, to provide more detail, as described below:

If a process ends by something being sent via a message of some sort e.g., mail, email, document, following notation can be used.

MESSAGE End



If the end of this process causes the start of another, following notation can be used.	LINK End
If more than one consequence of the process ending, following notation can be used.	MULTIPLE End

SWIMLANES				
Pool	A <i>Pool</i> represents a participant in a Process. It is also acts as a "swimlane" and a graphical container for partitioning a set of activities from other Pools		Name	
Lane	A Lane is a sub-partition within a Pool and will extend the entire length of the Pool, either vertically or horizontally. Lanes are used to organize and categorize activities.		Name	

# Sequence Flow A Sequence Flow is represented by a solid line with a solid arrowhead (see the figure to the right) and is used to show the order (the sequence) that activities will be performed in a Process. A Message Flow is represented by a dashed line with an open arrowhead (see the figure to the right) and is used to show the flow of messages between two separate Process Participants. In BPMN, two separate Pools in the Diagram will represent the two Participants.



#### **ARTIFACTS**

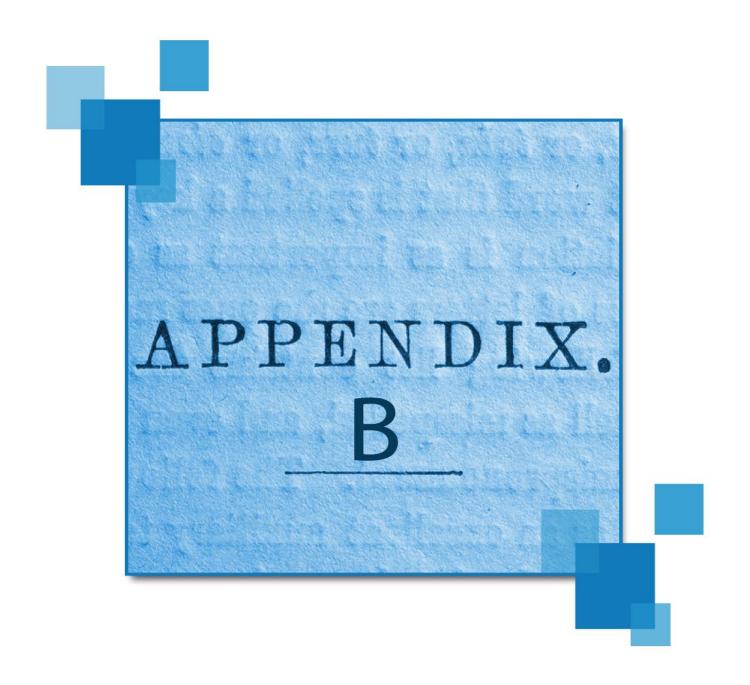
Annotation	The ANNOTATION shape is used to add comments to a process model. It consists of text in a square left bracket	This is some text which helps explain something about the model
Data Object	A data object represents a piece of data which is required or produced by the process eg. Customer details, output.	Application Form
Group	A grouping is purely for documentation or explanatory purposes. It has no impact on the model. It consists of a rectangle with dashed lines and rounded corners, usually enclosing other objects.	

#### **GATEWAYS**

Exclusive	The values of the process are examined to determine which path to take	Do Something  Or  Do Something  Else
Inclusive	Each branch will be evaluated and will not stop when one branch condition becomes true.	Prove Academic Prerequisites  Prove Residency Rights  Show Fees Paid
Parallel	Provides a mechanism to synchronise parallel flow and to create parallel flow.	Do Something  And Also Do This

## ESM Housekeeping Management Process

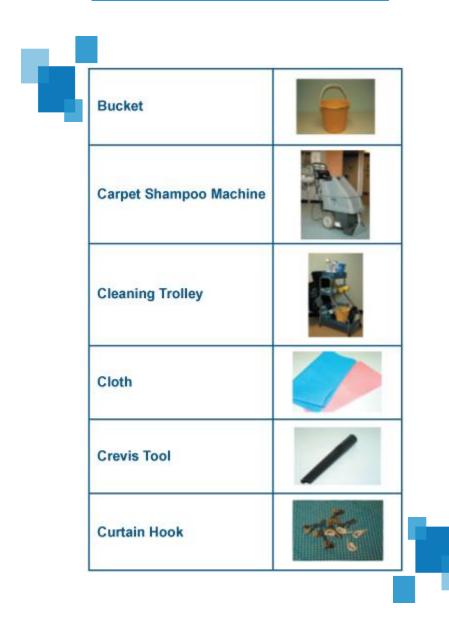






Abrasive Pad/Scouring Pad	
Apron	
Automatic Scrubber Dryer	
Bowl	9
Bottle Brush Local protocol should be followed for cleaning/ replacement	1







Dust Control System (Applicator Tool and Disposable Static Cloth)	1
Dust covers	The same of the sa
Dustpan and Brush Edge Cleaning Tool	
Fan Local protocol should be followed for cleaning and maintenace	6
Floor Maintenance Machine	
Floor Pad for Floor Cleaning Machine	$\odot$
Gauntlet Gloves/Safety Gloves	90



Domestic Gloves	
High Dusting Mop	
Knee Pad	
Ladder	
Laundry Bag	
Mask Mask must have a fluid repellent layer for staff protection	



Masking Tape	
Mop Handle	
Mop Head	
Paper Towel	Reprise to
Platform Steps	
Safety Glasses	



Safety Goggles	Ca,
Scraper	4
Spray Bottle	2
Squeegee Blade	1
Standard Speed Rotary Machine	130
Steam Cleaner	O
Suction Vacuum Cleaner	=

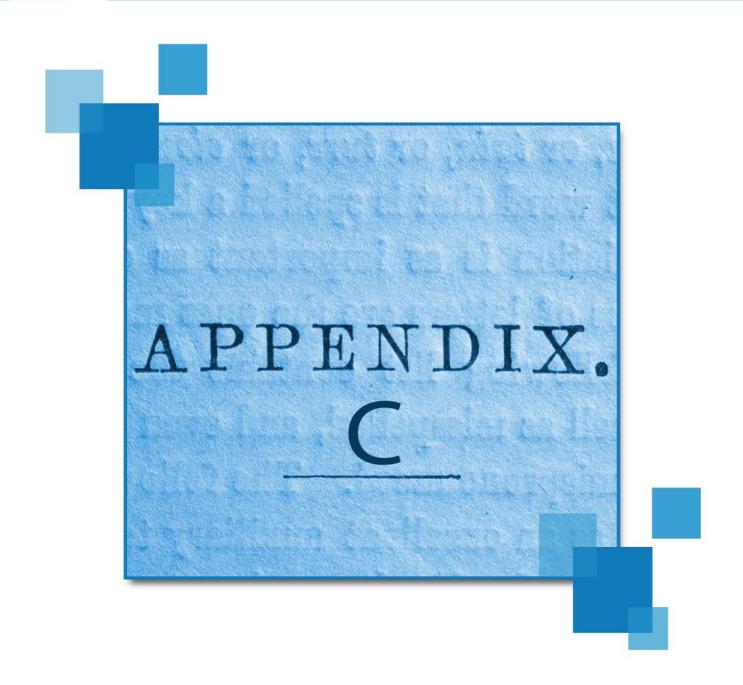


Vacuum Cleaner (Upright)	
Toilet Paper	
Toilet Brush	
Floor Sign	11
Garbage Bag	
Wringer	

## **ESM Housekeeping Management Process**



#### **Appendix C: Housekeeping Raw Materials Specification Table**



# **Appendix C: Housekeeping Raw Materials Specification Table**



Raw Material	Description	Effect	Concentration
5H	3M™ Quat Disinfectant Cleaner Concentrate is a concentrated product to be diluted and dispensed using the 3M™ Twist 'n Fill™ Housekeeping Chemical Management System. 3M™ Quat Disinfectant Cleaner Concentrate is a concentrated, one-step, hospital use disinfectant cleaner that is effective against a broad spectrum of bacteria is virucidal including Hepatitis B, Hepatitis C, and HIV-1, the AIDS virus), fungicidal and inhibits the growth of mold and mildew and their odors when used as directed. This product meets AOAC efficacy standards for hospital disinfectants and is a proven "one-step" disinfectant - cleaner - fungicide, mildewstat - virucide* which is effective in water up to 400 ppm hardness in the presence of 5% serum contamination. This product is a heavy duty disinfectant cleaner that cleans,	<ul> <li>Kill Bacteria</li> <li>Acinetobacter baumannii</li> <li>Brevibacterium amoniagenes</li> <li>Campylobacter jejuni</li> <li>Enterobacter aerogenes</li> <li>Enterococcus faecalis</li> <li>(Enterococcus)</li> <li>Enterococcus faecalis – VRE</li> <li>(Vancomycin-Resistant)</li> <li>ESBL Escherichia coli –</li> <li>(Extended spectrum betalactamase producing E.coli)</li> <li>Escherichia coli (E. Coli)</li> <li>Klebsiella pneumoniae</li> <li>Legionella pneumophilia</li> <li>Pseudomonas aeruginosa</li> <li>Pseudomonas cepacia</li> <li>Salmonella enterica (Salmonella)</li> <li>Salmonella schottmuelleri</li> <li>Salmonella typhi</li> <li>Serratia marcescens</li> <li>Shigella dysenteriae</li> <li>Staphylococcus aureus – MRSA (Methicillin Resistant)</li> </ul>	2 Liter /127 Gallon

# Appendix C: Housekeeping Raw Materials Specification Table



disinfects and deodorizes in one
labor saving step

- Staphylococcus aureus Multi-
- Drug Resistant
- Staphylococcus aureus VISA
- (Vancomycin Intermediate
- Resistant)
- Streptococcus pyogenes (Strep) Vibrio cholera

#### **Kill Viruses**

- Herpatis B Virus (HBV)
- Hepatitis C Virus (HCV)
- Herpes Simplex Virus Type 1
- Herpex Simplex Virus Type 2
- HIV-1 (AIDS virus)
- Human Coronavirus
- Influenza Type A/Brazil
- Norwalk virus (Feline Calicivirus)(Norovirus)
- Respiratory Syncytial Virus (RSV)
- SARS Associated Coronavirus [cause of Severe Acute Respiratory Syndrome]
- Vaccinia (Pox Virus)

#### **Kill Animal Viruses**

- Avian Influenza (H3N2)
- Avian Infectious Bronchitis
   Virus
- Canine Distemper Virus
- Feline Calicivirus

# **Appendix C: Housekeeping Raw Materials Specification Table**



		<ul> <li>Newcastle's Disease Virus</li> <li>Pseudorabies Virus</li> <li>Kill Fungi</li> <li>Aspergillus niger</li> <li>Trichophyton mentagrophytes</li> <li>(the Athlete's Foot Fungus)</li> <li>Trichophydon mentagrophytes</li> </ul>	
3H	Specific Use: No-rinse, low-foaming formula won't harm washable hard floors or leave soapy residue that can dull or soften floor finish. Use with mop or automatic scrubber. Fresh scent. Intended Use: Hard Surface Cleaner	<ol> <li>Mineral.         <ul> <li>A solid homogeneous crystalline chemical element or compound, having a specific chemical composition, that results from the inorganic processes of nature.</li> </ul> </li> <li>Organic.         <ul> <li>A substance consisting only of matter or products of plant or animal origin. Chemically, such substances are compounds containing strings of carbon molecules attached to one or more hydrogen molecules.</li> </ul> </li> <li>Osmological.         <ul> <li>Relating to soils of organic or inorganic matter that emit an (unpleasant) odor.</li> </ul> </li> <li>Bacterial.         <ul> <li>Soils or compounds containing active (live) bacteria.</li> </ul> </li> <li>Entomological.</li> </ol>	

# **Appendix C: Housekeeping Raw Materials Specification Table**



		Soils involving insects, especially those that can cause or carry diseases.	
24H	Versatile, low-foaming cleaner can be used in automatic scrubbers or in mop-on applications.  This product meets the Green Seal™ standard for industrial and institutional cleaners based on its reduced human and environmental toxicity and reduced volatile organic compound content, with skin and eye irritation and acute toxicity met at the as-used dilution.		2 liter/ 137 gallons.
52L	Concentrated product to be diluted and dispensed using the 3M Twist 'n Fill™ Housekeeping Chemical Management System. Tile, Grout & Bowl Cleaner is designed to remove hard water scale, mineral deposits, soap scum and soil buildup from typical bathroom and shower surfaces such as ceramic tile walls and floors.		2-liter/ 2.6 gallons
1L	Non-streaking cleaner for windows, glass and mirrors. Low flow for use in filling bottles		2 liter/ 30 gallons

# Appendix C: Housekeeping Raw Materials Specification Table

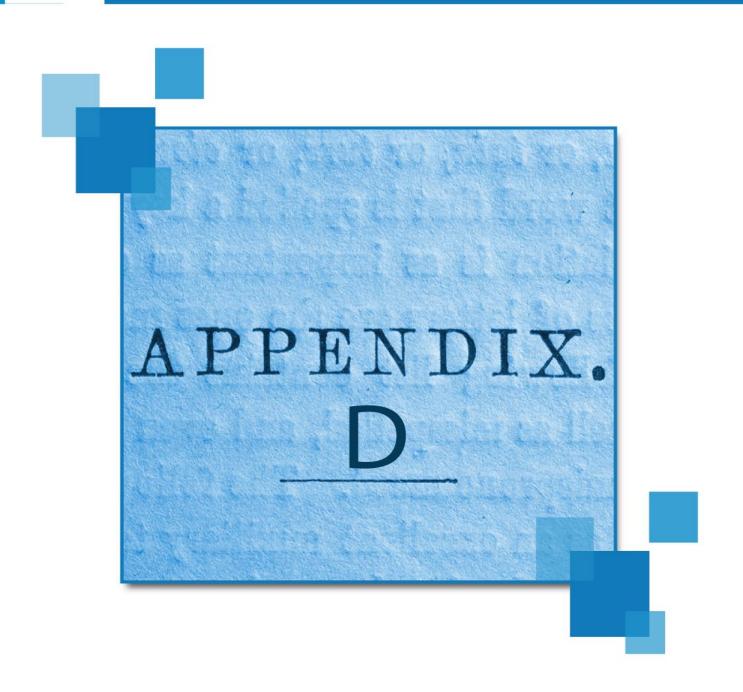


Gum Remover	The 3M <sup>™</sup> Gum Remover is a ready-to-use clear liquid formulated to help remove gum from carpeting easily and completely with no sticky residue.	wet a cloth with a small amount of gum remover and blot the dirt from the gum before applying the liquid
Antiseptic a Combi Spray	Is a ready for use alcoholic solution for the rapid disinfection of surfaces, medical devices and medical inventory in all important medical functional areas, such as OR, IC, ambulances, for disinfection of OR-shoes, OR-clothing, mattresses, pillows, blankets, mobile inventory, etc.	1 Liter wet a cloth with a small amount of Antiseptica Combi Spray and blot the dirt web the doors and tables.
Cleanser	Formulated to quickly remove mineral and lime deposits, scale, rust and soap scum from toilet bowls and urinals.	
EPA Clorox		

## ESM Housekeeping Management Process



#### **Appendix D: Chain of Infection**



## Appendix D: Chain of Infection



In order to control or prevent infection it is essential to understand that transmission stages of a pathogen resulting in infection requires the six vital links (Refer to the table below).

Each link mentioned below must be present for infection or colonization to proceed, and breaking any of the links can prevent the infection.

Stage	Link	Description
1	Infectious Agent	Any disease-causing microorganism (pathogen)
2	The Reservoir Host	The organism in which the infectious microbes reside
3	The Portal of Exit	Route of escape of the pathogen from the reservoir.
4	The Route of Transmission	Method by which the pathogen gets from the reservoir to the new host
5	The Portal of Entry	Route through which the pathogen enters its new host
6	The Susceptible Host	The organism that accepts the pathogen

The section below details out the six stages:

### **Link 1: Infectious Agent**

The causative agent for infection is any microorganism capable of producing disease. Microorganisms responsible for infectious diseases include bacteria, viruses, rickettsiae, fungi, and protozoa. Sometimes, microorganisms are part of patient's own body flora and can cause infection in the immunocompromised host. These infections are called endogenous infections. Infections which are acquired from external sources are called exogenous infections.

### Link 2: Reservoir Host

The second link in the chain of infection is the reservoir, i.e. the environment or object in or on which a microorganism can survive and, in some cases, multiply. Inanimate objects, human beings, and animals can all serve as reservoirs, providing the essential requirements for a microorganism to survive at specific stages in its life cycle. Infectious reservoirs abound in health care settings, and may include everything from patients, visitors, and staff members to furniture, medical equipment, medications, food, water, and blood.

## Appendix D: Chain of Infection



### Link 3: Portal of Exit

The portal of exit is the path by which an infectious agent leaves its reservoir. Usually, this portal is the site where the microorganism grows. Common portals of exit associated with human reservoirs include the respiratory, genitourinary, and gastrointestinal tracts, the skin and mucous membranes and the placenta (transmission from mother to fetus)

### **Link 4: Route of Transmission**

The microorganism can be acquired by inhalation (through respiratory tract), ingestion (through gastrointestinal tract), inoculation (through accidental sharp injury or bites), contact (during sexual intercourse) and transplacental transmission (microbes may cross placenta from the mother to fetus). It is important to remember that some microorganisms use more than one transmission route to get from the reservoir to a new host.

Of the six links in the chain of infection, the mode of transmission is the easiest link to break and is key to control of cross-infection in hospitals.

### **Link 5: The Portal of Entry**

The portal of entry is the path by which an infectious agent invades a susceptible host. Usually, this path is the same as the portal of exit. For example, the portal of entry for tuberculosis and diphtheria is through the respiratory tract, hepatitis B and Human Immunodeficiency Virus enter through the bloodstream or body fluids and Salmonella enters through the gastrointestinal tract. In addition, each invasive device, e.g. intravenous line, creates an additional portal of entry into a patient's body thus increasing the chance of developing an infection.

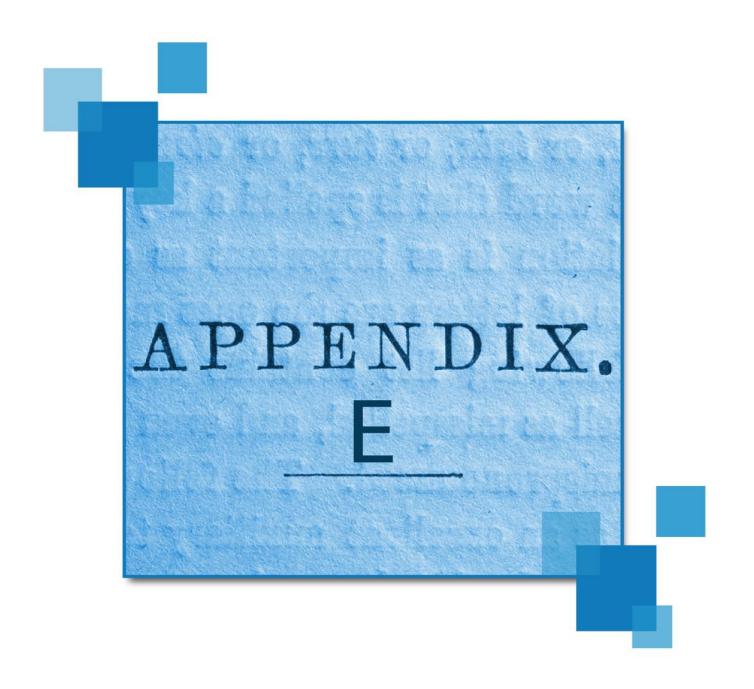
### **Link 6: The Susceptible host**

The final link in the chain of infection is the susceptible host. The human body has many defense mechanisms for resisting the entry and multiplication of pathogens. When these mechanisms function normally, infection does not occur. However, in immunocompromised patients, where the body defenses are weakened, infectious agents are more likely to invade the body and cause an infectious disease. In addition, the very young and the very old are at higher risk for infection because in the very young the immune system does not fully develop until about age 6 months, while old age is associated with declining immune system function as well as with chronic diseases that weaken host defenses.

# ESM Housekeeping Management Process



## **Appendix E: Work Schedule Sample**



## **Appendix E: Work Schedule Sample**



### **Work Instructions: Cleaner**

Monday-Friday (07.30 – 15.30)

Issued: 09 July 2011 Issue status: Revision 2 Approved by: (signature) Housekeeping Supervisor

### **Daily duties**

#### 7.30 - 08.00

- Report to nurse in charge on arrival
- Wash and dry crockery, cutlery and feeding aid, and stack ready for housekeeper
- Clean ward pantry work surfaces, microwave and sink. Spot-mop floor

#### 8.00 - 08-40

- Replenish hand soaps, paper towels, toilet rolls and sanitizer gel dispensers
- Check and clean bath, shower and sluice: damp-dust horizontal and vertical surfaces, clean internal glass and mirrors, spot-mop floors as necessary
- Clean all toilets: clean bidet, toilet and urinal; damp-dust horizontal and vertical surfaces; clean internal glass and mirrors; damp-mop floors

#### 08.40 - 10.00

- Wash and dry crockery for mid-morning drink and stack ready for housekeeper
- Begin Housekeeping bed bays, nurses' station and corridors: collect and dispose of refuse, clean bins and
  refit bags; damp-dust horizontal and vertical surfaces, bedside lamps, chairs and beds; clean internal glass
  and mirrors; spot-clean walls; clean hand wash basins; replenish hand soaps, paper towels, toilet rolls and
  sanitizer gel dispensers; damp-mop floors, planning your route and pulling out furniture as necessary

#### 10.00 - 10.15

Break

### 10.15 - 12.00

- Wash and dry crockery for lunch and stack ready for housekeeper
- Continue Housekeeping bed bays, nurses station and corridors as above

## 13

### **Appendix E: Work Schedule Sample**



#### 12.00 - 12.30

Lunch

#### 2.30 - 13.30

- Collect and dispose of refuse, clean bins and refit bags as required in all areas
- Clean shower rooms, bathroom and sluice: damp-dust horizontal and vertical surfaces; clean shower cubicles, wash hand basins and baths; replenish hand soaps, paper towels, toilet rolls and Sanitizer gel dispensers; damp-mop floors
- Check clean toilets

#### 13.30 - 14.30

- Report to the nurse in charge to receive any new instructions on Housekeeping barrier-nursed single rooms
- Clean the three single rooms: collect and dispose of refuse, clean bins and refit bags; damp-dust horizontal
  and vertical surfaces, bedside lamps, chairs and beds; clean internal glass and mirrors; spot-clean walls;
  clean hand wash basins; replenish hand soaps, paper towels, toilet rolls and sanitizer gel dispensers; dampmop floors, planning your route and pulling out furniture as necessary

#### 14.30 - 15.15

Carry out weekly Housekeeping duties

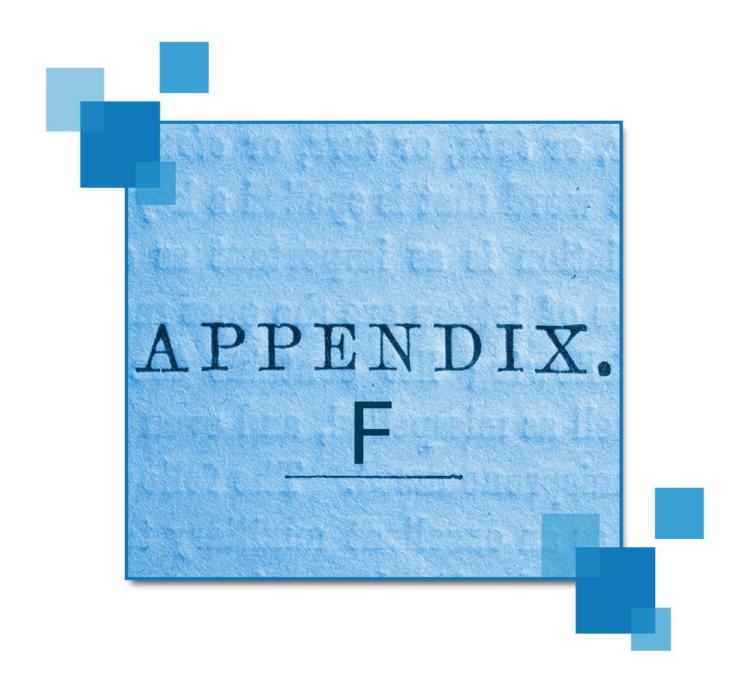
#### 15.15 - 15.30

- Tidy and clean Housekeeping cupboard; complete Housekeeping cupboard checklist
- Inform nurse in charge and leave ward at 15.30

## ESM Housekeeping Management Process



## **Appendix F: Technical Method Sample**





### **DUST-CONTROLLING**

### **Equipment and materials required:**

- Color-coded dustpan and brush;
- Color-coded long handled dust-control system tool;
- Color-coded dust-control system mop head or static cloth;
- Color-coded domestic gloves;
- Color-coded hand held scraper;
- Housekeeping trolley;
- Laundry bag;
- Warning signs.

- 1. Wash hands and put on gloves.
- 2. Display the warning signs.
- 3. Attach the static cloth or the mop head to the dust-control system tool.
- 4. Pick up all large items of litter, for example tissues and sweet wrappers.
- 5. Use the scraper to remove any chewing gum or other large deposits attached to the floor. Very gently run the scraper blade along the surface towards the deposit and then work it gently in a semi-circular motion until the deposit is removed. Take care not to damage the surface.
- 6. When dust-controlling in a room, aim to finish by the door and start at the furthest point away from it. When dust-controlling a long corridor, aim to perform the task in small sections of between ten and fifteen paces.
- 7. Clean the edges of the floor first, with the leading edge of the dust-control tool, then work backwards, dusting the area using an overlapping figure-of-eight pattern. The dust-control tool should remain in contact with the floor at all times.
- 8. When the cloth or mop head has become full of dust, remove it, dispose of it and replace it with a new one. Disposable cloths should be placed in a domestic waste bag and cleanable heads into a laundry bag.
- 9. Use the dustpan and brush to collect remaining particles.
- 10. On completion of the task, clean and dry all equipment and store safely and tidily in a secure storage area, segregated according to color-coding where appropriate.
- 11. Remove gloves and wash hands



### **DAMP-DUSTING – HORIZONTAL AND VERTICAL SURFACES**

### **Equipment and materials required:**

- Color-coded bucket:
- Color-coded cloth;
- Color-coded domestic gloves;
- Housekeeping trolley;
- · General purpose detergent or general surface cleaner;
- Warning signs.

- 1. Wash hands and put on gloves.
- 2. Display warning signs.
- 3. Prepare the Cleaning solution in the bucket, in strict accordance with the manufacturer's instructions and with your training. Do not mix chemicals, and only use a Housekeeping product provided by your employer.
- 4. Place the bucket on a Housekeeping trolley.
- 5. Dampen or rinse a cloth in the Cleaning solution.
- 6. Remove items from the surface to be cleaned.
- 7. Begin damp-dusting. For small flat surfaces, wipe in straight lines beginning with the edges. For larger surfaces, begin with the edges and damp-dust using an overlapping figure-of-eight pattern. Turn the cloth on each second pass, and rinse regularly in the solution.
- 8. Take care to damp-dust the edges and undersides of surfaces after the tops. Where extendable items, such as bedside tables are to be damp-dusted, extend them before beginning to work.
- 9. Change the Cleaning solution when it becomes soiled.
- 10. Greasy or stubborn deposits may require repeated passes.
- 11. Replace any items moved on to the clean surface when it is dry.
- 12. On completion, dispose of the cloth, clean and dry all equipment and store safely and tidily in a secure storage area, segregated according to color-coding where appropriate.
- 13. Remove gloves and wash hands.



### **DUSTING – HIGH-DUSTING**

### **Equipment and materials required:**

- Color-coded high-dusting tool;
- Telescopic handle attachment (if required);
- Dusting tool duster head or dusting cloth;
- Color-coded domestic gloves;
- Housekeeping trolley;
- Laundry bag;
- Warning signs.

- 1. Wash hands and put on gloves.
- 2. Display warning signs.
- 3. Check that pictures, clocks and other hangings are secure before dusting.
- 4. Place the duster head or duster cloth onto the high-dusting tool. If dusting a high ceilinged room, it may be necessary to use the telescopic attachment.
- 5. Firmly holding the handle of the tool or telescopic attachment, begin to high-dust. Work systematically around the room you are dusting, covering a 1-2 meter section at a time. Begin at the highest point and work methodically to the lowest point.
- 6. Start by dusting the join of the ceiling with the wall.
- 7. Pass the dusting tool head along the tops of all high surfaces, such as picture frames, bed rails, pipes, high dado rails, clocks, cupboard tops, and high ledges.
- 8. Pass the flat surface of the tool head over the wall surface, starting at the top and working systematically downwards in overlapping side to side passes.
- 9. Repeat the process for the next 1-2 meter section.
- 10. Replace duster heads or duster cloths when they become soiled. Place reusable heads in the laundry bag.
- 11. Change the Cleaning solution when it becomes soiled.
- 12. On completion, dispose of the final cloth, clean and dry all equipment and store safely and tidily in a secure storage area, segregated according to color-coding where appropriate.
- 13. Remove gloves and wash hands.



### WALLS - SPOT-HOUSEKEEPING

### **Equipment and materials required:**

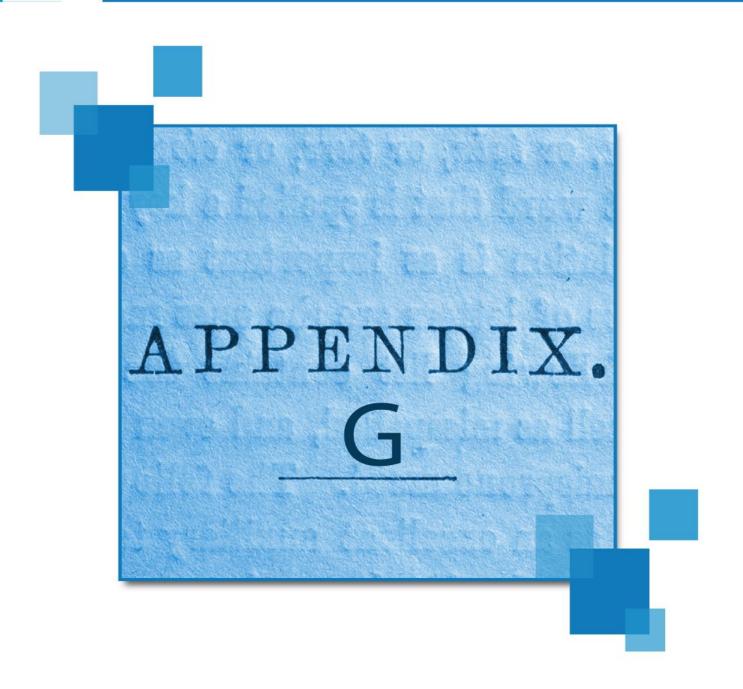
- Color-coded bucket;
- Color-coded cloth x 2:
- Color-coded domestic gloves;
- Non-abrasive pad;
- Housekeeping trolley;
- General purpose detergent or general surface cleaner;
- Warning signs;

- 1. Wash hands and put on gloves.
- 2. Display warning signs.
- 3. Prepare the Cleaning solution in the bucket, in strict accordance with the manufacturer's instructions and with your training. Do not mix chemicals and only use a Housekeeping product provided by your employer.
- 4. Place the bucket on a Housekeeping trolley.
- 5. Dampen or rinse a cloth in the Cleaning solution so that it is fairly dry.
- 6. Gently wipe the mark, scuff or soiling from the wall using a gentle circular motion, starting at the outside the soiling and moving towards the centre.
- 7. Dry the area and remove any drips and runs using the second, dry, cloth.
- 8. For greasy or stubborn deposits, repeat the process using the non-abrasive pad in place of the first cloth. Stop immediately if any damage to the painted surface begins to occur and inform your supervisor.
- 9. On completion, dispose of the final cloths, clean and dry all equipment and store safely and tidily in a secure storage area, segregated according to color-coding where appropriate.
- 10. Remove gloves and wash hands.

## **ESM Housekeeping Management Process**



## **Appendix G: Sample Checklist**



## 15 Appendix G: Sample Checklist



Establish a foundation for success	YES	NO
Managers, supervisors, and workers all know the workplace is serious about preventing MSDs		
The workplace is ready to make changes to reduce the risk of MSDs		
Resources are available to make any necessary changes		
Understand MSDs and MSD hazards	YES	NO
Managers, supervisors, and workers know what MSDs are and what hazards can cause them		
Recognize MSD hazards and related concerns	YES	NO
Incident/injury records are reviewed to find jobs/tasks where MSDs have been reported		
Workers, supervisors and managers are asked about job/tasks that they believe contribute to any pain or discomfort		
Problem jobs/tasks are observed and an MSD hazard identification tool is used, with full input and participation of workers who do the jobs/tasks		
Conduct an MSD risk assessment	YES	NO
Problem jobs/tasks are prioritized for a simple risk assessment		
Workers are asked to identify key concerns/activities/ task demands that are contributing to MSDs, pain or discomfort		
Observations & MSD hazard identification tool results are compared to worker comments/concerns		
Effort is made to agree on what issues/hazards should be addressed to help reduce the risk of MSDs (agreement between observations, hazard identification tool(s), and worker comments)		

## 15 Appendix G: Sample Checklist

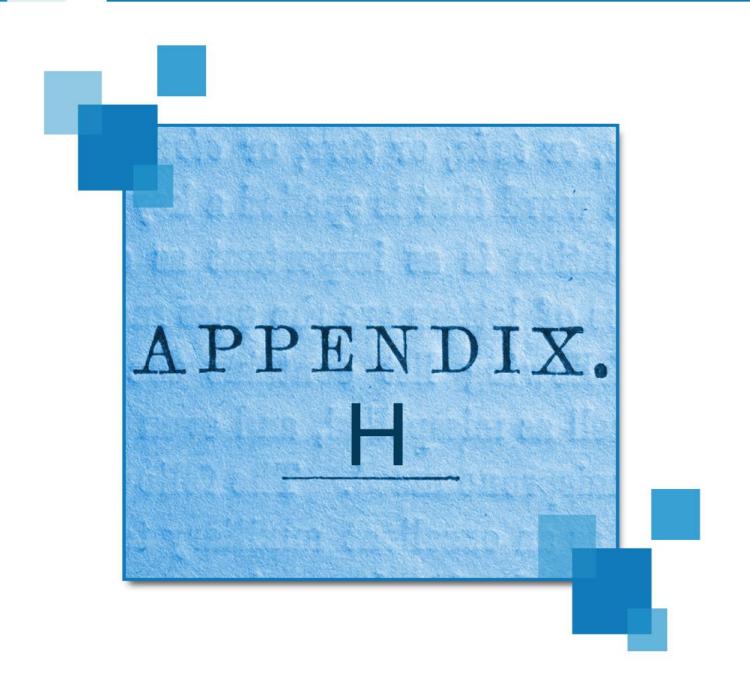


Effort is made to agree on why these hazards exist for this job/task		
Choose and implement MSD hazard controls	YES	NO
When MSD hazard controls are needed, workers, supervisors, maintenance, and safety personnel discuss/brainstorm ideas and options to control identified MSD hazard(s)		
Possible controls for MSD hazards are selected and reviewed		
Preferred control ideas are identified and action plans are developed for implementation		
Follow up on and evaluate success of MSD hazard controls	YES	NO
Workers are asked for their feedback on/opinions about MSD hazard controls		
Workers receive training on how to use MSD controls and are using them		
Observations and the MSD hazard identification tool results are used to help confirm that the exposure to the MSD hazard has been reduced		
Reviews are done to ensure that no new hazards/concerns result from the MSD hazard control(s)		
Communicate results and acknowledge success		
Those involved in the process are acknowledged and the workplace is told about new MSD hazard control(s)		

## **ESM Housekeeping Management Process**



## Appendix H: General Hazard **Identification Tool**



## 16 Appendix H: General Hazard **Identification Tool**



Job Title or Task:	Date:
Completed By:	

### **General Observations/Notes:**

	MSD HAZARDS GRIPPING	Tick if present			
Pinching	Unsupported heavy object(s)				
Gripping	Difficult/tiring holding or manipulating				
	Difficult/tiring squeezing to open/close				
Power	Unsupported heavy object(s)				
Gripping	Difficult/tiring holding or manipulating				
	Difficult/tiring squeezing to open/close				
	MSD HAZARDS FORCE	Tick if present			
Lifting and	Object is heavy/difficult to lift/lower				
Lowering	Object is lifted/lowered repeatedly				
	Hands are above the shoulders when lifting/lowering object				
	Hands are below the knees when lifting/lowering object				
	Object is far away from the belly button				
	Loads are unstable, unbalanced, uncooperative, or unpredictable				
	Awkward lifting/lowering postures (bend, twist, kneel, reach, sit)				
Pushing	Object is hard/difficult to push/pull				
Pulling	Object is pushed/pulled repeatedly				
	Object is pushed with hands above the shoulders				
	Object is pushed with hands below the waist				
	Awkward pushing/pulling postures (bend, twist, kneel, reach, sit)				
	MSD HAZARDS AWKWARD POSTURE	Tick if present			
	Neck visibly bent forward (chin close to chest)				

## 16 Appendix H: General Hazard **Identification Tool**



Aukword	Neek visibly bent to one side (car close to shoulder)			
Awkward Position	Neck visibly bent to one side (ear close to shoulder)			
	Neck twisted to either side/chin close to the shoulder			
	Neck noticeably bent back			
	Neck bent forward and chin out (head forward)			
	Hand(s) at or above the head			
	Elbow(s) at/or above the shoulder			
	Elbows/hands behind the body			
	Sitting or standing with the back noticeably bent forward,			
	Sideways, or twisted			
	Back noticeably bent backward with no support for the back			
	Squatting/kneeling while working			
	Wrist noticeably bent down or up			
	Wrist noticeably bent to the side (toward thumb/little finger)			
	Hand turned so palm faces fully up or down			
Fixed	Sitting for long periods without standing (office work, driving)			
Position	Standing still on a hard surface for a long period of time			
	MSD HAZARD - REPITITION	Tick if present		
Repetition	Performing the same neck motions repeatedly			
	Performing the same shoulder motions repeatedly			
	Performing the same elbow motions repeatedly			
	Performing the same wrist motions repeatedly			
	Performing the same hand/finger motions repeatedly			
	Performing intensive keyboarding			
	Performing intensive mousing			
	MSD HAZARDS - OTHERS	Tick if prese		

## 16 Appendix H: General Hazard **Identification Tool**

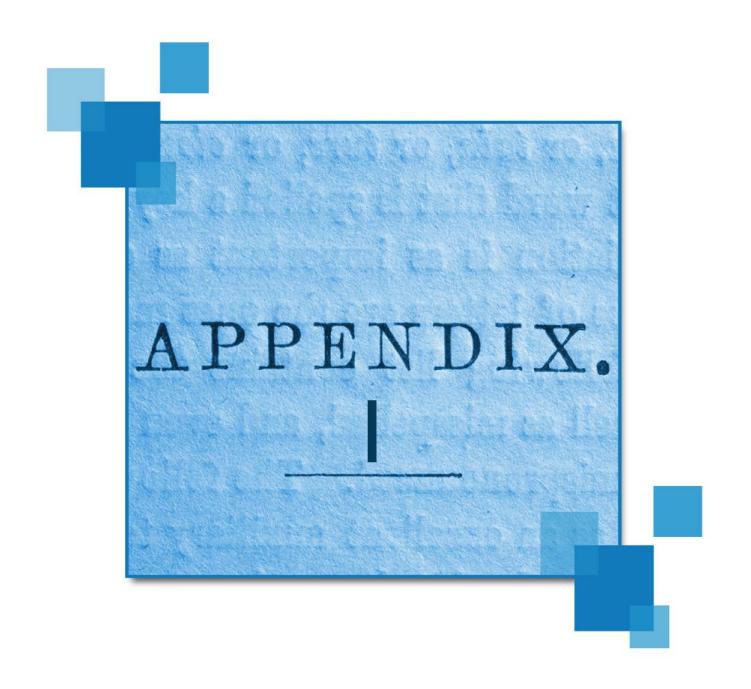


Repeated impacts	Using the hand or knee as a hammer	
Contact	Tool handles dig into hand/palm	
Stress	Workstation/equipment edges/products dig into body (hands,	
Hand arm	Forearms, trunk, thighs)	
vibration	Using vibrating tools (impact wrenches, carpet strippers, chain saws, jackhammers, scalers, riveting hammers, grinders, sanders, jig saws, jack-leg drills)	
Whole body vibration	Operating mobile equipment/vehicles on rough, uneven surfaces	
Cold hot	Work environment is cold, hand/arms are exposed to cold air	
temperature	Work environment is hot/humid	

## **ESM Housekeeping Management Process**



## **Appendix I: Hazard Priority Table**



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## **Appendix I: Hazard Priority Table**

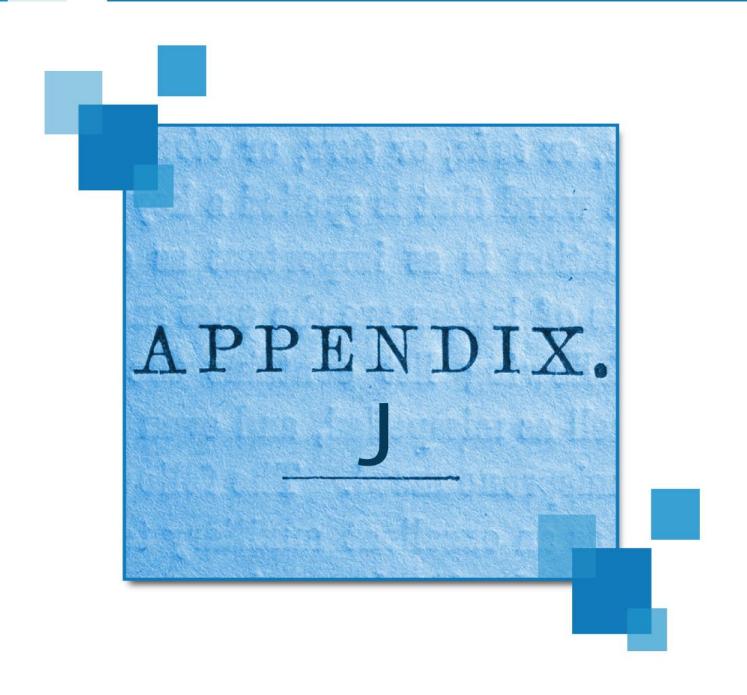


PRIORITY	MSD REPORTED		WORKER DISCOMFORT		MSD HAZARD IDENTIFIED	
LEVEL	YES	NO	YES	NO	YES	NO
VERY HIGH						
						<b>√</b>
HIGH	$\sqrt{}$			<b>√</b>		√
		<b>√</b>	√		√	
MEDIUM		<b>√</b>	√			√
LOW		<b>√</b>		<b>√</b>	$\checkmark$	
No Risk assessment needed		V		V		√

## **ESM Housekeeping Management Process**



### **Appendix J: Tips for Preventing MSD**





### **Force**

### **Gripping tools/equipment**

- Provide tools that allow workers to grip the tool using a power grip.
- Eliminate the use of pinch or key grips as much as possible.
- Choose tools that have triggers that allow for the use of multiple fingers rather than one Finger or a thumb.
- Choose tools that can be used with the wrist straight.
- Choose tools with vibration reducing features.
- Choose tools that are lighter and designed to reduce hand torque and kickback.
- Ensure the tool is balanced and does not require extra muscular effort to hold it in position.
- Ensure the handle of a tool does not create pressure points in the palm of the hand.
- Use tools with handles that fit the hand, for example use a smooth, cushioned hand grip rather than one with hard ridges that space the fingers.
- Provide rubber or sponge-type grips on tool handles.
- Provide tools than be safely used by either left handed or right handed workers
- Maintain tools regularly.
- Inspect tools regularly. Ensure worn or damaged tools are fixed or replaced.

### **Pushing and pulling**

- Provide carts that have vertical or height adjustable handles to enable different-sized workers to
  position their hands between waist and shoulder height.
- Use larger wheels on carts and bins as this reduces push and pull forces and they are easier to roll
  over cracks or holes.
- Ensure that wheels/casters that are suitable for the load being transported and are compatible with the type of flooring.
- Determine the most suitable swivel arrangement of casters two or four, front or back.
- Ensure there is enough space so the worker does not have to use awkward postures to move the cart.
- Design/change the layout of the work area to eliminate the need to push wheeled objects upslopes
  or over uneven surfaces.
- Ensure the flooring is level, smooth and in good condition.



- Ensure workers can see over the top of the cart.
- Push rather than pull carts.
- Maintain carts, especially wheels and wheel bearings.
- Provide brakes on carts where practical.

### Heavy, frequent or awkward lifting

- Use mechanical assists to lift/lower loads such as hoists, pallet trucks, pump trucks ladder hoists, gin poles, daisy chains, cranes, or chain falls.
- Use lifting devices designed for specific tasks, e.g. lifting / moving people, lifting / moving animals
- Move objects as close to the body as possible before lifting them use turntables to bring loads close.
- Ensure there are no obstacles between the worker and the load being lifted.
- Provide height adjustable pallet trucks/scissor lifts to keep loads off the floor and so that loads can be handled with the hands above knee height.
- Organize the starting and ending location of the lifts to limit the overall vertical travel distance a load has to be lifted.
- Avoid lifts below knuckle level and above shoulder level limit use of high and low shelves.
- Avoid lifting loads that are heavier than four kg when seated stand and use larger, stronger muscles.
- Improve grips/handles on objects being lifted.
- Split the overall weight of a load into smaller loads.
- Avoid uneven, unbalanced loads.
- Use gravity as an assist whenever possible (lower rather than lift).
- Use carts, motorized buggies, conveyors, gravity feed rollers to transport loads rather than carrying them.
- Provide tools/devices to help with carrying tasks carrying handles, extension handles.
- Train workers to assess all material handling tasks and to ensure that the path is clear of obstructions/trip hazards when carrying items.
- Do not carry objects up and down stairs if two hands are needed to hold objects. Keep one hand free
  to hold hand rail.
- Improve housekeeping to prevent slips, trips and falls.
- Require suppliers to include the weight on all objects/packages that are manually handled
- Use shoulder pads when carrying loads on shoulders.



### Fixed or awkward postures

- Provide height adjustability in a standing workstation.
- Establish a suitable working height depending on the type of work being done (i.e. precision, light or heavy work).
- Provide sit/stand stools at standing workstations and for tasks with prolonged standing.
- Provide height adjustable chairs.
- Utilize lift tables to keep the position the objects close to the worker.
- Utilize tilt tables to angle objects close to workers.
- Utilize rotating platforms to minimize reaching for objects.
- Provide self-elevating platforms in deep bins to keep items easily accessible and near the top of the bin.
- Provide false bottoms in deep sinks or containers.
- Limit shelf heights to between knee and shoulder height.
- Provide foot rests at standing workstations.
- Ensure the type of flooring will minimize shock absorption to the worker's body.
- Provide anti-fatigue matting for standing work areas with hard floor surfaces.
- Use devices such as lifts, duct jacks, scissor lifts, and extension poles or stands for operating tools overhead.
- Use adjustable scaffolds, aerial and other work platforms to raise the whole body closer to work.
- Place materials used often at appropriate height and less frequently used materials in less desirable locations.
- Use tables, benches, or stands to bring work to waist height

### Repetition

- Implement well-designed job rotation.
- Add different tasks to the job to increase the variety of activities.
- Include flexibility in the job so the worker can control pace of work.
- Use a work/rest schedule that allows for frequent changes of activity.
- Encourage employees to take micro-breaks.
- Mechanize the task where necessary.



### Repeated impacts

- Look for tools/equipment that will eliminate the need for repeated impacts:
  - Use rubber mallets/other tools instead of the hand, and
  - Use power stretchers for carpet installations.
- Provide workers with well-designed padded gloves/knee pads.
- Change fittings/parts/equipment to minimize the forces used with repeated impacts.
- Limit the time duration required for repeated impacts.

### **Contact stress**

- Change or modify equipment (e.g. use a long-handled screwdriver to prevent the butt from digging into the palm).
- Change or modify work area to prevent sharp edges from digging into skin (e.g. cover sharp or metal edges with padding).
- Use personal protective equipment (e.g. use knee pads while kneeling; use padded gloves when lifting heavy objects by narrow plastic strapping).
- Improve or change work practice to reduce resting or leaning against sharp edges.

### **Local or hand-arm Vibration**

- Use vibration-absorbing padding on grips or handles.
- Provide employees with anti-vibration gloves.
- Keep tools well maintained/sharp to reduce vibration.
- Source various suppliers who can supply tools with lower levels of vibration.
- Reduce total exposure to vibration by alternating between tasks that use vibrating tools and tasks with non-powered tools or by incorporating job rotation between tasks.
- Use cutting or powerhead vibration dampening devices.
- Use equipment that includes vibration-dampening rubber grommets on controls and control box.

### Whole-body vibration

 Avoid sitting or standing for prolonged periods on vibrating surface if practicable (e.g. avoid working on catwalks attached to vibrating machinery).



- Isolate the source of vibration from the rest of the work space to prevent transmission of vibration to the sitting or standing area (e.g. isolation of truck cabs from diesel engine vibration).
- Train and instruct operators and drivers to:
  - Adjust the driver weight setting on suspension seats,
  - Adjust the seat position and controls correctly to provide good lines of sight and
  - Support,
  - Adjust the vehicle speed to suit the ground conditions to avoid excessive bumping and jolting,
  - Steer, brake, accelerate, shift gears and operate attached equipment smoothly, and
  - Follow worksite routes to avoid traveling over rough, uneven or poor surfaces.
- Choose machinery suitable for the job:
  - Select vehicles and machines with the appropriate size, power and capacity for the work and the ground conditions.
- Maintain machinery and roadways:
  - Make sure that paved surfaces or site roadways are well maintained (e.g. Potholes filled in, ridges leveled, rubble removed),
  - Maintain vehicle suspension systems correctly (e.g. Cab, tire pressures, seat
  - Suspension),
  - Replace solid tires on machines such as fork-lift trucks, sweepers and floor scrubbers before they
    reach their wear limits, and
  - Obtain appropriate advice (from seat manufacturers, machine manufacturers and/or vibration specialists) when replacing a vehicle seat. Seats need to be carefully matched to the vehicle to avoid making vibration exposure worse.
- Other measures
  - Introduce work schedules to avoid long periods of exposure in a single day and allow for breaks where possible.
  - Avoid high levels of vibration and/or prolonged exposure for older employees, people with back problems, young people and pregnant women.

### **Cold temperatures**

- Ensure workers wear high-friction, well-fitting gloves.
- Ensure that workers wear clothing that keeps them warm without adding a lot of bulk
- Ensure hand tools are stored in a warm place prior to use.



- Provide alternating periods of cold and warm work (worker rotation) and allow workers to take rest breaks in warm areas.
- Avoid having workers use tools that discharge cold gases over the hand.
- Provide local source heating (portable heaters) for workers.
- Educate workers about the adverse effects of cold and its influence on MSDs.
- Encourage workers to stay well hydrated

### Hot work environments

- Provide alternating periods of cool/shaded and warm work (worker rotation) and allow workers to take rest breaks in cool areas.
- Provide local source cooling (portable spot chillers) for workers.
- Educate workers about the adverse effects of heat and its influence on MSDs.
- Encourage workers to stay well hydrated.

### Work organization

- Ensure that repetitive or demanding tasks incorporate opportunities for rest or recovery (e.g. allow brief pauses to relax muscles; change work tasks; change postures or techniques).
- Incorporate task variability so that the worker does not have to perform similar repetitious tasks throughout
  the full shift. Provide the worker with the opportunity to vary work tasks by rotating jobs or increasing the
  scope of the job.
- Ensure that work demands and work pace are appropriate.

### **Work methods**

- Evaluate jobs to determine whether work methods are compatible with worker capabilities.
- Analyze the differences in work methods between individuals to find the best work methods.
- Ensure that the official work method is the best work method and corresponds with what workers are actually doing.