


Infection Prevention and Control A Foundation Course

2014

A TRADITION OF INDEPENDENT THINKING

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University College Cork, Ireland
Coláiste na hOllscoile Corcaigh




Cleaning, Equipment, the Environment, and Waste.

Audit in Primary Care

M. Smiddy, UCC

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Cleaning and Decontamination

Decontamination is the combination of processes (including cleaning, disinfection and sterilisation) used to render Reusable Invasive Medical Devices (RIMDs) safe for handling by staff and for use on patients.

Cleaning is the process that physically removes soiling, including large numbers of microorganisms and the organic material on which they grow. This is usually carried out using neutral detergent and warm water. Detergent wipes may be used provided they have not dried out.

Disinfection describes a process that eliminates many or all-pathogenic microorganisms from inanimate objects, with the exception of bacterial spores, e.g. disinfection of environmental surface with a sodium hypochlorite solution. **The use of disinfectant wipes is not advised.**

Sterilisation refers to a physical or chemical process that completely kills or destroys **all** forms of viable microorganisms from an object, including spores. This is usually carried out in an autoclave.

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Environmental Cleaning

Environmental hygiene is essential to preventing healthcare-associated infection. Pathogenic organisms can survive for long periods in the environment.

The survival of MRSA in the environment h has been demonstrated by Wagenvoort (2000) to exceed one year.

Without adequate cleaning all healthcare environments provide an ideal reservoir for pathogens.


Staphylococcus aureus

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Environment

- Cleaning Schedule: who, what, how and when. Keep records of daily and weekly cleaning schedules.
- Colour Coding

Area	Colour Disposable Cloth
General areas including GP rooms, reception area/offices & public areas.Important to use new disposable cloth for wash hand basins (cave gram negative bacilli e.g pseudomonas) : Blue	
Sanitary (toilets) & washroom floors,sluices : Red	

- Be practical, remove clutter, safe storage of supplies, chemicals and equipment, washable surfaces (no fabric coverings, carpets).
- Be aware of "touch" areas.
- No need for disinfectant other than for blood / body fluid spillage or infectious patients.

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Environment

- ✓ Designated person for cleaning environment
- ✓ Cleaning schedule
- ✓ Fixtures and fittings
- ✓ Toys

What is wrong here?

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Chapter 9 2014 Guidelines page 34 - 38

Area	Recommended Method
Bins	Wash with detergent and warm water. Where disinfection required use a chlorine-releasing agent /sodium hypochlorite1000 ppm concentration. Rinse and dry previously mentioned rinse and dry should be included for all cites referring to sodium hypochlorite as these agents can be corrosive. Always follow manufacturer's instructions re dilution and health and safety.
Brushes (toilet)	Regularly wash with detergent and warm water and suspend on holder to dry. If grossly contaminated risk assess and dispose of accordingly.
Buckets	Clean with warm water and detergent after use. Dry and store inverted. Equipment in contact with infective material should be cleaned and then disinfected with sodium hypochlorite solution.
Carpets	Not recommended in the clinical area. Carpets act as a reservoir for dust and microorganisms. They should be removed to maintain a safe environment
Ceilings	When visibly soiled, wash with detergent and water
Curtains	Should be laundered at least 6 monthly and when visibly soiled
Floors	*Dry Cleaning* – Use a vacuum cleaner or dust-attracting mop. Sweeping brushes must not be used in clinical areas.

Management of Blood and Body Fluid Spillages

✓ Blood and body fluid spillages should be dealt with immediately to reduce the risk of exposure.

✓All practices must have a written policy regarding the management of such spillages.

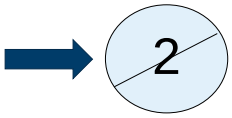
✓An appropriate spill kit must be available and stored in a designated accessible area.

- **Use a hazard / spillage sign to ensure safety of patients, visitors and staff.**
- **Don personal protective equipment: gloves and an apron and required equipment.**

Blood Spillage	Body Fluid Spillage
Cover spillage with disinfectant solution / granules e.g. Hypochlorite 10,000 ppm. Leave for the recommended contact time according to manufacturers' instructions	Do not use chlorine based disinfectants directly on acidic solutions e.g. urine and vomitus
Remove spillages using paper towels and place into a healthcare risk	Using paper towels remove the spillage and place towels into healthcare risk waste bag.
Wipe area with disinfectant solution ensuring all traces of blood are removed.	Once the fluid has been removed wipe the area with the disinfectant solution ensuring all traces are removed
After all Spillages	
Place all waste into healthcare risk waste bag.	
Remove gloves and apron.	
Perform hand hygiene as per the 5 moments for hand hygiene (WHO 2009)	
Ensure the area is washed with detergent and water to remove all traces of the disinfectant.	

Equipment - Single Use Only

Many items of equipment are "designated as single use only". This means the item can be used once only on a single patient and is then discarded. "Single Use Only" is denoted by the following symbol:



'A device designated for "single-use" must not be reused. It should only be used on an individual patient during a single procedure and then discarded' (MHRA, 2011)

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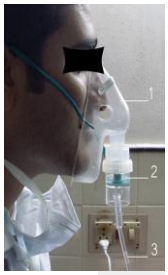
Equipment - Single Patient Use

A medical device that is intended for single use means that the device may be used for more than one episode of use on one patient only.

The device can be reprocessed between each use as per manufacturer's instructions e.g. nebuliser tubing. Single patient should be used for one patient and not reused on a different individual under any circumstances.



Equipment: What are Reusable Invasive Medical Devices?

"Reusable invasive medical devices (RIMD) include items such as scalpels and scissors are fundamental to all surgical procedures and many medical procedures.

Patients undergoing treatment have a right to expect that the RIMD used will be clean, free from infectious agents and in good working order" (Code of Practice for Decontamination of Reusable Invasive Medical Devices, 2007).

RIMDs are used in many healthcare activities including in general practice and dentistry.

Equipment: RIMD Management

Multidisciplinary management of RMID's is essential to safety. This involves;

- production and revision of policies, procedures and guidelines with education and training regarding same;
- provision of a suitable environment for decontamination and storage;
- investigation of incidents and validation of the processes involved.

The management of RIMDs includes selection, specification and purchasing of the instruments, transport and storage, validation, maintenance and disposal. Involvement of maintenance, testing and validation of the decontamination systems involved is also essential.

Can this be achieved in Primary Care?

Decontamination: How do I risk assess?

Item, patient, risk of infection?

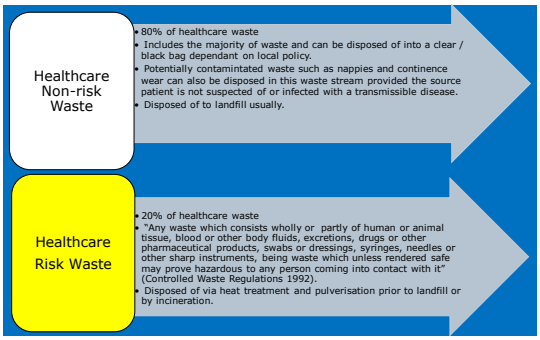
Risk	Application	Recommendations	Examples of Medical dDevices
Critical	Items in close contact with a break in the skin or mucous membrane or introduced Into a sterile body area	Requires sterilisation	Surgical instruments, needles for injection, stitch cutter, speculum used to insert an IUD
Semi critical	Items in close contact with non intact skin or mucous membranes [72] or body fluids, particularly After use on infected patients or prior to use on immunocompromised patients	Requires high level disinfection (Sterilization preferred where practicable)	Speculum used for cervical smear, pessary and diaphragm fitting ring, nasal speculum, ear speculum and ear syringe nozzle, endoscopes and thermometers (in contact with mucous membrane)
Non-critical	Items in contact with healthy skin but not mucous membranes [72].	Can be processed by cleaning (and low level disinfection where necessary)	Stethoscope, blood pressure cuffs, 24 hour BP monitor, examining table, baby scales, Doppler

Equipment - Examples

Item	Risk	Method
Ear Piece for ear syringe	Non-critical	Single use disposable or as per manufacturer's instructions
Examination Couch	Non-critical	Cover with clean disposable towel and change after each patient. Clean with a neutral detergent or detergent wipe at regular intervals and after ↑ risk procedures
Examination Couch after patient with known MRSA carriage and suspected norovirus	Non-critical	Clean and then disinfect with the appropriate dilution of a hypochlorite solution
Dressing scissors	Critical	Ideally disposable. Clean with detergent and water and sterilise in accordance with manufacturers instructions
Glucometer	Non-critical	As per manufacturers instructions

For more specific information access the 2014 guidelines for Primary Care Chapter 8 pages 28 – 33.

Clinical Waste



General Waste Storage and Management Guidelines

- Waste containers and bags must be UN approved to ensure a sufficient standard of quality.
- Do not overfill bags or containers.
- All waste bags and containers must be stored out of public access in a locked area.
- All containers should be labelled with area specific details to ensure they are fully traceable to the area of origin.
- All bags must be sealed securely prior to disposal

Responsibilities

All Personnel

- Ensure the safe disposal of waste they have generated according to "Segregation and Packaging of Healthcare Risk and Non-Risk Waste"
- Undertake training which should be provided for all those who generate, segregate, packaging, collect, transport and store waste.
- Ensure that waste is correctly and safely segregated and prepared for collection.

General Practice Manager/GP

- Structures are in place so that waste is generated into the appropriate containers at the point of generation.
- Adequate supplies of approved bags/containers and individual tag ties are available.
- Training is available for staff and staff are facilitated to attend.
- Measures are taken to correct hazards identified or breech of guidelines.
- Any incidents that occur in relation to waste are reviewed and appropriate action taken to prevent a recurrence in the future.

Confidential Material:
This is not Healthcare-risk waste but must be shredded prior to disposal in non-risk waste

What is Audit?

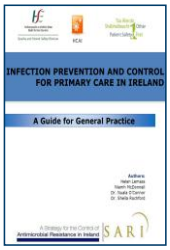
- An audit is a systematic method of examining current or past practices against agreed standards with the aim of improving practice through feedback of meaningful results to stakeholders.
- An audit is "a quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria and the implementation of change" (2002, NICE/CHI).

Stage 1: Preparation

- What are you going to audit?
- Why?
- Where and when is the audit being done?
- How will you do the audit?

Stage 2: Criteria Selection

- How are you going to do the audit?
  - What tool are you going to use?
    - The tool MUST be based on Best Practice recommendations / guidelines / legislation for Ireland e.g. Primary Care Infection Prevention and Control Guidelines



http://www.hpsc.ie/A-Z/MicrobiologyAntimicrobialResistance/InfectionControlandHAI/Guidelines/File,14612,en.pdf

Stage 3: Measure Level of Performance

- How are you going to do the audit?
  - Audit of paperwork / documents?
  - Interview?
  - Environment?
  - Objects?
  - Knowledge?
  - People? Observational audit requires specific training to ensure quality and consistency of reported results.

Stage 4: Making Improvements..... .....Feedback

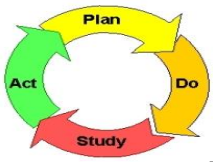
Consider how are you going to provide feedback?

Who will you provide feedback to?

Suggestions?

Stage Five: Sustaining Improvements

- Vital part of the audit cycle.
- Unless you have conducted the audit as part of your clinical work this will more than likely not be possible.
- Feedback of the results with consequent re-auditing is the first step in this process



Deming 1990

Activity

View the following images and assess compliance with Best Practice. The audit is structured under the following headings;

1. Hand Hygiene
2. Waste Management

Complete the audit tool provided.

SARI Infection Prevention and Control Audit tool

Date: _____ **Practice:** _____

Practice Manager: _____ **Audit Undertaken By:** _____

Answer Yes, No or Not applicable – please tick a box for **all** questions

Section 2: Hand Hygiene

Standard: Systems are in place in order to facilitate performance of Hand Hygiene.

	Y	N	NA	Comments
1. There is a designated clinical hand hygiene sink in each clinical room (i.e. dedicated only for hand hygiene)				
2. Hand hygiene sink is clean and intact (check sealant, taps, splash back)				
3. Hand hygiene sink meets the standard HTM 64 Sanitary assemblies (2006) i.e. no plugs, no overflows, water from taps not directly situated above plug hole)				
4. Elbow operated or sensor taps are fitted to the clinical hand wash basin				
5. Liquid soap(and not bar soap) is available at **all** sinks in the clinical rooms				
6. Soap dispensers are in good working order				
7. Soap dispenser nozzles are clean				
8. Adequate amount of liquid handwash soap is available				
9. Alcohol hand rub is available in clinical room				
10. Only disposable paper towel is available (not reusable towels)				
11. Towel dispenser is in good working order and adequate amount of disposable paper towels is available				
12. A foot operated lidded waste bin for paper towels is available and is in good working order				
13. Hand hygiene poster is displayed at each sink				
14. Access to hand wash sink is not obstructed				

Q 1.

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Q 2,3,4.

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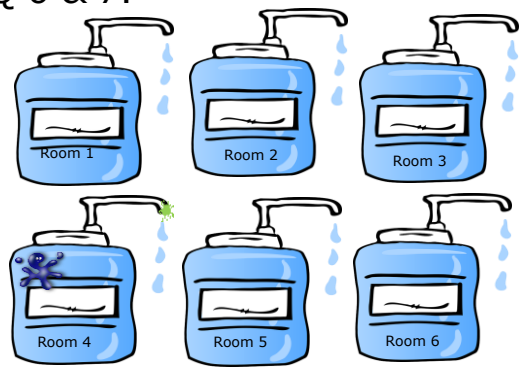
Q 5.


Room 1


Room 2

Q 6 & 7.


Room 1
Room 2
Room 3
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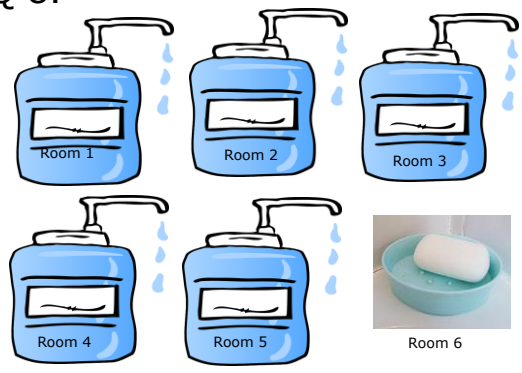
Room 6

Q 8.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Q 9.

Q 10 & 11.

Q 12.

Q 13.

Q 14.

SARI Infection Prevention and Control Audit tool

Date: _____ **Practice:** _____

Practice Manager: _____ **Audit Undertaken By:** _____

Answer Yes, No or Not applicable – please tick a box for **all** questions

Section 5: Waste

Standard: ***That waste segregation and management is complies with The Segregation, Packaging and Storage guidelines for Healthcare risk waste (DOHC, 2010)***

	Y	N	NA	Comments
1. There is evidence that the practice waste policy is available and staff are aware of its contents				
2. All clinical areas have foot operated bins				
3. Foot operated bins are in working order				
4. Clinical and household waste is correctly segregated				
5. Yellow bags are used for disposal of clinical waste				
6. There is evidence that risk waste bags are less than ¾ full when closed				
7. There is evidence that risk waste bags are closed using a "swan neck " method				
8. There is evidence that risk waste bags are tagged for traceability				
9. There is a dedicated area for the safe storage of clinical waste (inaccessible to the public)				
10. The storage area is clean and there is evidence of a cleaning schedule				
11. The storage area is cleaned immediately following a spill.				
12. Appropriate protective clothing is available for staff handling clinical waste bags.				
13. There is evidence that the waste contractor is registered with a valid licence				

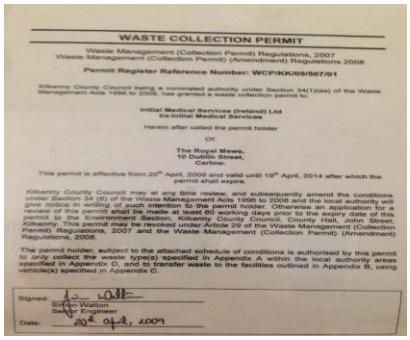
Q 2.

Q 4.

Q 8.

Q 9.

Q 10.



WASTE COLLECTION PERMIT

Waste Management (Collection Permit) Regulations, 2007
Waste Management (Collection Permit) (Amendment) Regulations 2008

Permit Register Reference Number: WCP/KK/09/807/01

Kilkenny County Council being a nominated authority under Section 34(12)(a) of the Waste Management Acts 1996 to 2008, has granted a waste collection permit to:

Initial Medical Services (Ireland) Ltd
t/a Initial Medical Services

Herein after called the permit holder

Of:

The Royal Mews,
10 Dublin Street,
Carlow.

This permit is effective from 20th April, 2009 and valid until 19th April, 2014 after which the permit shall expire.

Kilkenny County Council may at any time review, and subsequently amend the conditions under Section 34 (6) of the Waste Management Acts 1996 to 2008 and the local authority will give notice in writing of such intention to the permit holder. Otherwise an application for a review of this permit shall be made at least 60 working days prior to the expiry date of this permit to the Environment Section, Kilkenny County Council, County Hall, John Street, Kilkenny. This permit may be revoked under Article 29 of the Waste Management (Collection Permit) Regulations, 2007 and the Waste Management (Collection Permit) (Amendment) Regulations, 2008.

The permit holder, subject to the attached schedule of conditions is authorised by this permit to only collect the waste type(s) specified in Appendix A within the local authority areas specified in Appendix D, and to transfer waste to the facilities outlined in Appendix B, using vehicle(s) specified in Appendix C.

Signed: _____
Stephen Walton
Senior Engineer

Date: 20th April, 2009

Calculate % Compliance

- Use a calculator.
- Divide the total number of correct or compliant answers and divide by the total number of questions asked.

  Example
  - There were 7 compliant or correct answers out of 10.
  - Divide 7 by 10 and x 100 = 70% compliance.
  - Record and feedback the result. Indicate where there were problems e.g. sinks cluttered, difficult to access
  - When you repeat the audit next time using the same audit tool, compare the results.
  - Are they improved or poorer?
  - Why?
  - What action should be taken?
  - Use Audit Outcome Tool

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SARI IPC Audit Outcome

Standard 1: **Clinical Practice**

Standard: ***Practices will reflect infection prevention and control guidelines and reduce the risk of cross infection to patients, while providing appropriate protection to staff.***

Date: _____ **Auditor:** _____

1. Summary of strengths evident from the Audit

2. Improvements required evident from the audit

Improvements required	Actions necessary for improvement
1.	
2.	
3.	
4.	

Signature of auditor: _____ Date: _____

Signature of practice manager: _____ Date: _____

Key Messages

- Ensure you have policies to cover Decontamination, Waste and Audit. Use the new Guidelines to support this.
- Record everything you do, including keeping cleaning records, this is essential for quality inspections.
- When you audit ensure you record it, feedback the results, make changes and re-audit. Keep all results and prove continuous quality improvement in your practice.

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