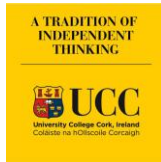




# Infection Prevention and Control A Foundation Course 2014



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## Infection Prevention and Control Multi Drug Resistant Organisms (MDRO's)

Patricia Coughlan,  
Infection Prevention & Control Nurse  
HSE South, Cork & Kerry Disability Services  
September 5<sup>th</sup> 2014

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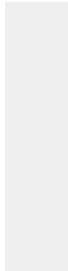
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### Overview



- Guidelines on Multi-drug resistant organisms (MDROs)
- Risk factors for Acquisition of MRDOs
- Infection Prevention and Control Measures when caring for residents carrying Multi Drug Resistant Organisms
- Case Scenarios
  - Management of MRSA
  - Management of VRE



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### Are the same IP&C measures needed in all healthcare settings?



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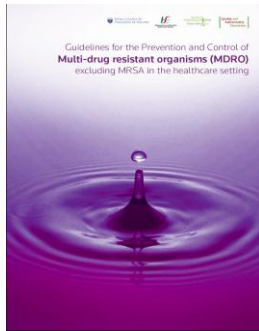
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### National Guidelines

[www.hpsc.ie](http://www.hpsc.ie) under A-Z

Guidelines on the Prevention and Control of Multi-drug resistant organisms (MDRO) in healthcare settings. 2012



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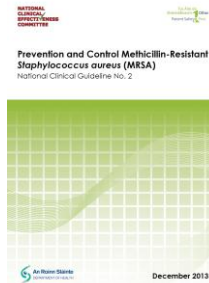
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### National Guidelines

[www.hpsc.ie](http://www.hpsc.ie) under A-Z

Prevention and Control of Methicillin Resistant *Staphylococcus aureus* (MRSA) National Clinical Guideline 2



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### MDRO's – the problem

- Antimicrobials are one of the most significant discovery's of modern medicine
- Antibiotic resistance established and growing worldwide public health problem
- Few therapeutic options available
- Cost- financial and personal




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### MULTIDRUG RESISTANT ORGANISMS

Microorganisms which are resistant to one or more groups of antimicrobials and include but not limited to the following

- Gram positive organisms such as
  - Methicillin Resistant *Staphylococcus aureus* (MRSA)
  - Vancomycin Resistant *Enterococci*(VRE)
- Gram negative organisms such as
  - ESBL(extended -Spectrum Beta-Lactamases) -producing *E.coli* and
  - Carbapenem Resistant *Enterobacteriaceae* (CRE)

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### Risk Groups for Acquisition of MDRO's

- Increasing age & underlying burden of co morbidity
- Increased contact with health services - particularly high dependency areas
- Antibiotic use
- Presence of invasive devices
- High prevalence of colonisation with MDROS has been documented in residents of LTCFs

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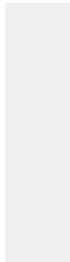
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### Preventing Antimicrobial Resistance in the Healthcare Setting



Use antimicrobials wisely-

- Treat patient/resident not laboratory result
- Treat infection not colonisation
- Treat infection not contamination
- Practice antimicrobial control
- Stop antimicrobial when appropriate
- Seek expert advice




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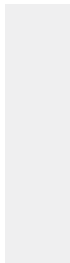
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### Prevention & Control Measures in Residential Care Facilities



- Communication.
- Standard Precautions
  - Hand Hygiene.
  - Environmental Hygiene.
- Healthcare Personnel Education.
- Use of Devices.
- Antimicrobial Stewardship.
- Additional Precautions Transmission Based Precautions.

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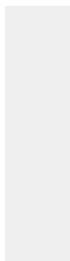
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### Infection Prevention & Control Measures



- Standard Precaution must be used when caring for all resident's/clients regardless of known or unknown status in respect of MRDO's.
- Standard Precautions limit the transmission from potentially colonised individuals.
- Note surveillance cultures may fail to identify colonisation
  - due to lack of sensitivity,
  - laboratory methods or
  - intermittent colonisation due to antimicrobial therapy.

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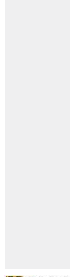
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## MULTIDRUG RESISTANT ORGANISMS



- Antimicrobial resistance is an evolving process and advice should be sought from Infection Prevention and Control Nurse in relation to the infection prevention and control management of any resident colonised or infection with a MDRO.
- Additional precautions such as Contact Precautions maybe advised for the management of some MDRO's further advice should be sought from your Infection Prevention and Control Nurse.

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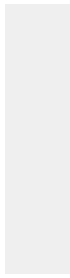
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## Key infection control recommendations for settings outside the hospital applicable to all MDRO



- MDRO colonised patients should not be declined admission to a long-term care facility (LTCF), day care facilities or rehabilitation services or have their admission delayed on the basis of positive MDRO colonisation status.
- Isolation of a resident with MDRO is generally not required in LTCF.
- Standard Precautions are required for the care of all patients, including patients colonised with MDRO in LTCF.
- The need to place a MDRO colonised patient in a single room or to use Contact Precautions should be determined based upon local risk assessment on a case-by-case basis.
- Routine screening for MDRO is not recommended for LTCF.
- *Ref Guidelines on the Prevention and Control of Multi-drug resistant organisms (MDRO) in healthcare settings. HPSC 2012*

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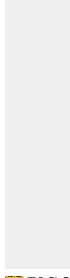
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## Overview



- Infection Prevention and Control Measures for Managing MDROs
- Case Scenarios
- Management of MRSA
- Management of VRE

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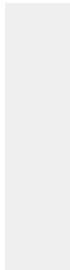
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### Case Scenario 1



- James is a 88 year old gentleman and has been living in residential care facility for the last 3 years, he attends a local day care centre 2 days a week.
- He shares a two bedded room with another gentleman.
- Previous history of MRSA in nasal and wound swabs – 1<sup>st</sup> isolated in 2005 while an in patient in an acute hospital for management of leg ulcers
- Currently James has no wounds, and is well.
- How would you manage James's care?

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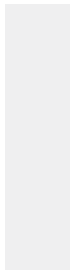
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### What is *Staphylococcus aureus*?



- Staphylococcus aureus* (*S. aureus*).
- gram-positive bacterium
  - common cause of infection – minor skin to life threatening septicaemia
  - numerous sub types of *S. aureus*
  - nasal carriage in 30% of population at any one time, will occur in up to 80% at some
  - Risk of infection increased in vulnerable groups
  - Treatable with antibiotics

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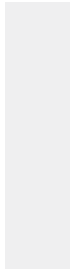
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### What is Methicilin Resistant *Staphylococcus aureus*?



- A strain of *staphylococcus aureus* which is resistant to the majority of antibiotics making it difficult to treat.
    - Seen in both community and hospital settings
- Majority of people are colonised with MRSA
- Colonisation is...
    - the presence and multiplication of micro organisms
    - without signs and symptoms of infection
  - Infection is...
    - the invasion of body tissues by pathogenic and opportunistic organisms
    - with clinical signs of infection present
    - in the right setting MRSA can cause severe infections- bloodstream (BSI), pneumonia, skin & soft tissue (SSTI),

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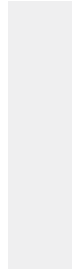
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## Evolution of MRSA

- 1940's, penicillin resistance emerges
- 1950's, 95% penicillin resistance
  - 1959, methicillin introduced in the UK
  - 1961, methicillin resistance first reported
  - 1960's, methicillin used in labs to detect resistance
  - 1970's, MRSA outbreaks in UK & Europe
  - 1979, major outbreak in Melbourne Hospital Australia
  - 1981, first epidemic MRSA strain (EMRSA1)

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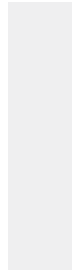
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## Who is at risk of infection ?

- MRSA can cause serious infections e.g. bacteraemia, bone & joint infections, surgical wound infections
- Patients most at risk of developing infection are those
- Seriously ill debilitated ,immunocompromised
  - In Intensive Care Units, Oncology Units, Burns Units,
  - With a variety of invasive devices i.e intra vascular catheters, catheters.
  - Who have had implant surgery - joint replacements

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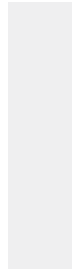
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## Factors Predictive of Colonisation & Infection

- Host Factors predictive of colonisation & infection amongst residents of LTCF include
- Advancing age
  - Antibiotic use (independently associated with MRSA colonisation)
  - Poor functional status
  - Hospitalisation
  - Presence of invasive devices

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## Carriage of MRSA in LTCF

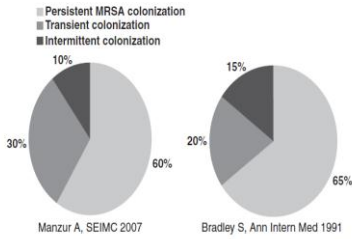


FIG. 1. Methicillin-resistant *Staphylococcus aureus* (MRSA) colonization among residents in long-term-care facilities: relative frequency of persistent vs. transient carriage.

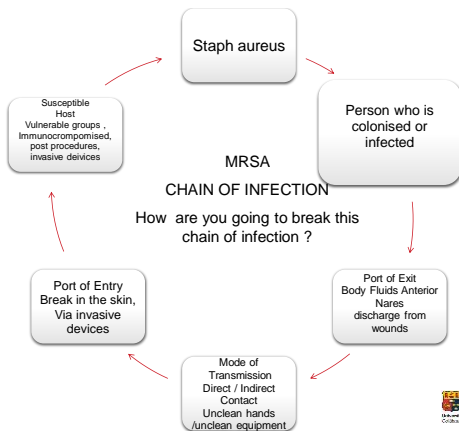
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## MRSA in LTCF

- High prevalence of MRSA carriage amongst residents of LTCFs
- Frequency of infection with MRSA in these settings appears to be low whilst colonised residents remain at the facility.
- Colonisation amongst residents of nursing homes in Belgium was associated with a higher mortality rate, but the excess mortality rate was restricted to residents with impaired cognitive function.
- The findings showed that no excess mortality was found amongst residents with normal or moderately impaired cognitive function.
- A longitudinal prevalence study in the UK found that MRSA was associated with previous and subsequent MRSA infection but was not significantly associated with subsequent hospital admission or mortality.

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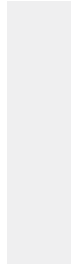




### Key Issue in providing care for James

- Adherence to Standard Precautions by all carers when providing care for James at all times!
- Adherence to Hand Hygiene for all- staff, resident & visitors.
- Individualised care for all residents.
- Managing care equipment and the environment.

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### What if this were in James bathroom?



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### Are there infection risks in James bathroom?



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Would this be safe for James?



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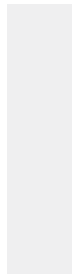
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### Case Scenario 1b

- James requires elective admission to an acute hospital for hip replacement
- On prep op assessment James was screened, a nasal swab was MRSA positive.
- You are the nurse planning James care . What do you do?

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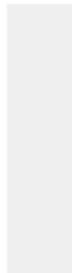
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### Key Issues to consider to promote successful decolonisation

- Communication
  - With pre-op clinic
  - Link with IPCN where available
  - GP
- Is there a care plan?
- Has a decolonisation protocol & pack been provided, if not where will this be sourced?
- When will re screening be carried out?
- What swabs are needed?
- What information should be on the lab form?
- How will results be communicated?
- Who informs James of the results?

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Key Issues to consider to promote success of decolonisation

- Standard Precautions adhered to by all carers at all times!
- Consider single room for duration of decolonisation protocol NOT ISOLATION
- Change linen and clothing each day
- If a 2<sup>nd</sup> protocol is required use a 2<sup>nd</sup> decolonisation pack
- Encourage James with hygiene

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Nursing Care Plan for Client receiving MRSA Decolonisation Treatment  
 Name: \_\_\_\_\_ Location: \_\_\_\_\_ Date Commenced: \_\_\_/\_\_\_/\_\_\_ Date Completed: \_\_\_/\_\_\_/\_\_\_

**M.R.S.A TOPICAL DECOLONISATION PROTOCOL**

© PROTOCOL NUMBER \_\_\_\_\_

Name: \_\_\_\_\_ Ward: \_\_\_\_\_ MRN/DOB: \_\_\_\_\_

| A. Pre-Treatment Screen   |  |                        |       |                        |       |                        |       |       |                        |           |
|---|--|------------------------|-------|------------------------|-------|------------------------|-------|-------|------------------------|-----------|
| B. Treatment Dates  |  |                        |       |                        |       |                        |       |       |                        |           |
| Site  | TREATMENT  | DOSE                   | DAY 1 | DAY 2                  | DAY 3 | DAY 4                  | DAY 5 | DAY 6 | DAY 7                  | Day 8 & 9 |
| *NURSING STAFF TO SIGN INITIAL EACH SECTION AS PROTOCOL IS ADMINISTERED |  |                        |       |                        |       |                        |       |       |                        |           |
| SKIN WASH   | Chlorhexidine Glucosate 4% (Hydrex)                        | DAILY in place of soap |       |                        |       |                        |       |       |                        |           |
| HAIR  | Chlorhexidine Glucosate 4% (Hydrex)                        | Topically to hair      |       | Hairwash NOT DUE today |       | Hairwash NOT DUE today |       |       | Hairwash NOT DUE today |           |
| AXILLAE   | Chlorhexidine acetate/CX Powder                            | 08.00                  |       |                        |       |                        |       |       |                        |           |
| GRONI   | Chlorhexidine acetate (CX Powder) Apply from wrist to knee | 08.00                  |       |                        |       |                        |       |       |                        |           |
| NOSE  | Mupirocin 2% Nasal ointment (Bactroban)                    | 08.00                  |       |                        |       |                        |       |       |                        |           |
|   |  | 14.00                  |       |                        |       |                        |       |       |                        |           |
| POST PROTOCOL SCREENING   |  |                        |       |                        |       |                        |       |       |                        |           |
| 1. _____ 2. _____ 3. _____  |  |                        |       |                        |       |                        |       |       |                        |           |

TOPICAL TREATMENT COMPLETE SEE DATES BELOW FOR SCREENING

ISE – South (Clark & Ervey) Disability Services; 2007; Revised 09/2010; MRSA Care Facilities 2014 (Adapted from CLIF Care Plan)

Nursing Care Plan for Client receiving MRSA Decolonisation Treatment  
 Name: \_\_\_\_\_ Location: \_\_\_\_\_ Date Commenced: \_\_\_/\_\_\_/\_\_\_ Date Completed: \_\_\_/\_\_\_/\_\_\_

**Topical Treatment of MRSA**  
 Body washing with antiseptic solutions plus topical anti-staphylococcal agents will be used in an attempt to eliminate MRSA. An individual care plan should be devised.

- The patient will have topical decolonisation protocol for seven days
- After this time the protocol is then stopped for re-screening
- The screen sites and dates will be identified on the protocol administration sheet.
- 3 negative screens, first taken 48-72 hours, second and third 4 days apart, are required in order to deem the patient MRSA negative
- Clearly label lab request forms "as requested by Infection Control".

Use topical preparations as follows:

1. Wash hair with Chlorhexidine Glucosate 4% (Hydrex) as per protocol sheet
2. Wash body all over daily with Hydrex using a disposable cloth. Do not use soap during the procedure
3. When the skin is dry, dust CX Powder under the arms and from groin to the knees.
4. Apply Bactroban Ointment to the nose three times a day:
  - a) Once a time to clear the alaric present
  - b) Uncover the cap and squeeze a small amount of ointment, about the size of a pea on a cotton bud
  - c) Apply ointment to the inside of the nostril
  - d) Repeat for the other nostril
  - e) Close the nostril by pressing the sides of the nose together for a moment. This will spread the ointment inside each nostril.
5. Dispose of Hydrex, CX powder and Bactroban ointment once treatment protocol complete.

Screening sites include:

- Nasal (1 swab used on both nostrils)
- Axilla (1 swab used on both axillae) may not be required in some hospitals

Other sites may include:

- Wounds
- Ulcers
- PEG feeding tube site
- Specimen
- Catheter specimen of urine

ISE – South (Clark & Ervey) Disability Services; 2007; Revised 09/2010 (Adapted from CLIF Care Plan)



## Prevention and Control of Methicillin Resistant *Staphylococcus aureus* (MRSA) (2013) National Clinical Guideline 2

Recommendations relevant to Non-acute healthcare given on which are detailed in the next 15 slides

1. Communication
2. Screening
3. Infection Prevention & Control Programme
4. Infection Prevention and Control Measures
5. Facilities
6. MRSA in the Home
7. Eradication of MRSA ( Decolonisation )
8. Antimicrobial Stewardship

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## Communication

- Good communication between healthcare facilities is essential to prevent and control MRSA.
- Healthcare facilities should be informed on admission and discharge of recent MRSA screening results, decolonisation treatments received and any requirement for post decolonisation screening. This should be included in the transfer documentation. **Grade D**

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## Screening

- Expert advice should be sought before embarking on screening for MRSA.
- Routine screening for MRSA in non-acute healthcare settings is not recommended.
- Carriage of MRSA is not a contraindication to the transfer of a patient to a non-acute healthcare setting.
- Routine screening before discharge to a non-acute healthcare facility or home is not required.

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## Screening contd

- Screening before admission to an acute hospital setting may be required, especially, pre operatively for an elective procedure.
- The need for screening prior to admission should be determined by the patients' consultant in conjunction with the hospital infection doctor, prevention and control team.
- Screening after decolonisation treatment will not normally be required after discharge. However, screening after decolonisation treatment may be requested in certain cases for example;
  1. pre-operatively on the advice of the hospital admitting physician/surgeon
  2. where a patient is to be readmitted to hospital for further treatment

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## Infection Prevention & Control Programme

- Non-acute healthcare facilities should have an infection prevention and control program which incorporates
1. Monitoring for problems, including outbreaks of infection.
  2. Routinely assessing all residents for their risk of acquisition or transmission of infection
  3. Education of employees in infection prevention and control precautions.
  4. Policy and procedure development and review.
  5. Monitoring of care practices.
  6. Occupational health.
  7. Antibiotic stewardship.

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## Infection Prevention & Control Measures

- Standard Precautions are advised for the care of all residents regardless of MRSA status
- All residents should be encouraged to practice good hygiene and be assisted with this if required.
- Isolation of a resident colonised with MRSA is not generally required as this may adversely affect rehabilitation of the resident.
- The potential for transmission of infection should be considered in resident placement decisions.
- Local risk assessment of the individual and the environment will be required prior to placement, i.e. in the presence of an exuding wound which can not be covered single room placement may be appropriate.
- Contact Precautions may be required where a resident has an infection caused by MRSA or to control outbreaks of MRSA infection.

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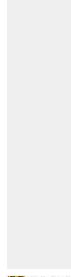
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## Facilities

- Routine facilities in all non-acute healthcare facilities should include adequate sinks for staff hand washing, liquid soap and paper towels in wall mounted dispensers, alcohol hand rub and hand cream.
- In non-acute healthcare facilities, single rooms with hand hygiene facilities should be available which can be used for infection prevention and control purposes.
- Newly built non-acute hospital inpatient accommodation should comprise a minimum of 50% single-patient rooms.

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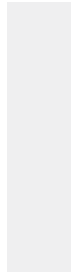
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## Education

- Education on standard precautions and relevant national infection prevention and control on national policies should be provided for all staff in non acute healthcare settings.
- Education on the use of invasive devices such as urinary catheters, enteral feeding tubes and tracheostomies should be provided to healthcare staff in non-acute healthcare facilities.

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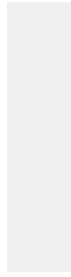
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## Decolonisation of MRSA

- MRSA decolonisation is not sufficiently effective to warrant routine use in all colonised patients.
- Excessive use of mupirocin, should be avoided as this will select for resistance.
- Decolonisation may be considered in certain cases but the likely success or impact of such therapy should be risk assessed to evaluate the aim, the required agents and whether it is likely to be successful.

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### Eradication of MRSA- when should decolonisation be attempted?

Attempt at decolonisation may be considered in the following groups

1. Patients colonised with MRSA who are due to undergo an elective operative procedure especially high risk surgery e.g. cardiothoracic surgery, orthopaedic implant.
2. Patients in a clinical area where there is a high risk of colonisation leading to invasive infection, e.g. the ICU/NUU.
3. If the risk of infection is high and the consequences severe e.g. immunosuppressed patients.
4. As part of a strategy to address uncontrolled transmission despite the use of other measures.

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### Eradication of MRSA- when should decolonisation be attempted?

- In patients with colonisation at non-nasal sites there is a high possibility that decolonisation therapy will fail. Therefore use, in such populations, should be carefully considered and the aim and likely outcome taken into account before such therapy is initiated.
- Attempts at decolonisation are unlikely to be successful in patients with chronic skin conditions, ulcers, indwelling urinary catheters and therefore use in such populations should be carefully considered and the aim and likely outcome taken into account before such therapy is initiated.

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### Antimicrobial use in long term care facilities – Practical Guidance

- Antibiotic stewardship programmes should be implemented for long term care facilities.
- When antibiotics are prescribed to treat MRSA, local advice should be sought from the consultant microbiologist or infectious diseases physician.
- The use of antibiotics associated with MRSA selection or resistance should be avoided or minimised as much as possible. These include cephalosporins, macrolides and fluoroquinolones.
- Topical therapy for superficial MRSA skin infections should not be used without advice from a consultant microbiologist or an infectious diseases physician.

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**Appendix VIII**  
Infection prevention and control measures advised when caring for residents colonised or infected with MRSA in residential care facilities.



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**Placement in Residential Care Facilities**

- Placement
  - Consider the potential for transmission in all resident placement decisions
  - Single room placement with Contact Precautions for residents with MRSA is not generally recommended
- Exceptions might be
  - a resident with wounds heavily colonised with MRSA, (where the wound can not be covered)
  - or a resident with a tracheostomy who is unable to control their secretions

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**Placement in Residential Care Facilities**

- Residents known to be colonised with MRSA
  - Can participate in group activities provided wounds are covered and good hand hygiene is adhered to.
  - Can share a room with resident at low risk of acquiring MRSA
  - Where facilities are available should not share with residents at increase risk of acquiring MRSA
  - Residents colonised should receive care in rooms
  - Single room placement for residents with wound which can not be covered

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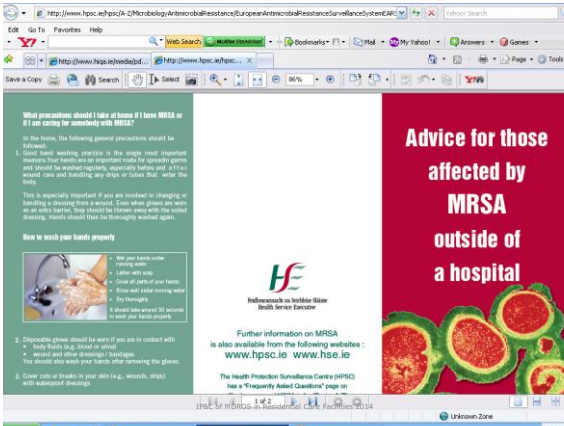
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## Overview

- Infection Prevention and Control Measures for Managing MDROs Case Scenarios
- Management of MRSA
- Management of VRE

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## VRE – Vancomycin Resistant Enterococci

- Enterococci – normal bacteria flora of the human and animal bowel – over 17 different species.
- Enterococci have intrinsic resistance to many antimicrobials
- Enterococci are relatively poor pathogens usually causing colonisation rather than infection

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## VRE – Vancomycin Resistant Enterococci

### Risk Groups

- oncology & transplant patients,
- residents with indwelling devices,
- haemodialysis patients,
- recent hospitalisation in high dependency,
- recent antibiotics vancomycin, third generation cephalosporins

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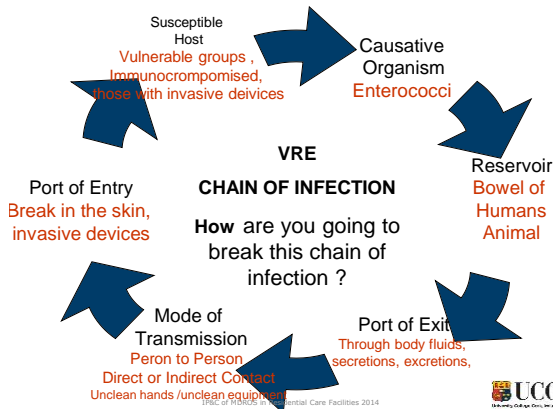
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## Case Scenario 2

- Mary is 84 year old resident in a residential care facility. Recently treated in hospital for pneumonia requiring care in a high dependency unit. During her admission Mary was found to be carrying VRE (Vancomycin Resistant Enterococci).
- Mary has recovered and is returning to her residential care facility
- What IP&C precautions will be required when caring for Mary on her return?
- Standard or Contact ??

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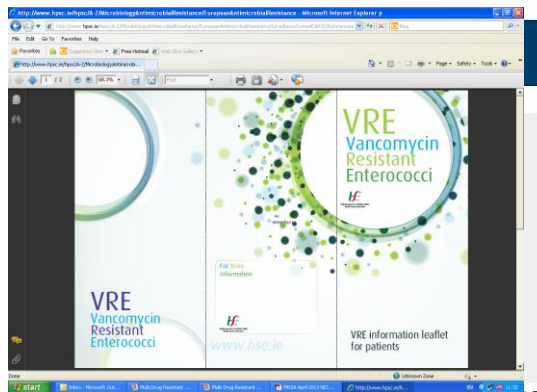
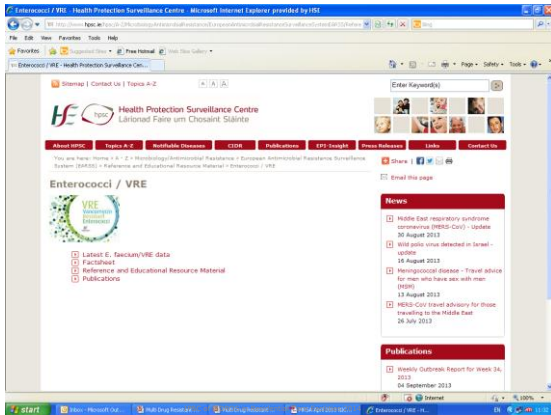
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## VRE – Vancomycin Resistant Enterococci Infection Prevention and Control Precautions

- Standard Precautions are advised for all residents including those colonised with VRE
- Placement – assess the risk of dispersal of the microorganism into the environment
- Screening – not indicated in RCF
- Decolonisation – not applicable to VRE
- Communication-
  - resident should be aware of diagnosis,
  - on discharge the receiving health care facility/RCF should be informed of status of the resident/patient.
- VRE is not a contraindication to admission to a RCF, access to day services or rehabilitation.
- People with VRE should be advised on and assisted to adhere to good hygiene practices i.e. hand hygiene after using the Bathroom or touching any wounds or devices as a matter of routine.

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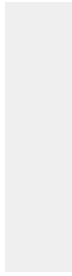
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## Case Scenario 2b

- Two weeks after discharge Mary develops diarrhoea.
- What actions do you take to prevent and control infection?



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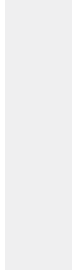
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## Consider causes of Diarrhoea?

- Infectious causes of diarrhoea include *C.Difficile*, Norovirus, salmonella and other bacteria & viral infection.
- In a resident known to be colonised with VRE diarrhoea will increase the risk of dispersal of the microorganism into the environment
- In a RCF all residents with diarrhoea which is suspected to be infectious should be placed in a single room on Contact Precautions
- What is diarrhea?



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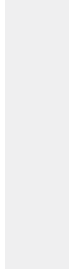
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## Contact Precautions



Refer to

- Guidelines on Infection Prevention and Control for Community & Disability Services Section 6 HSE South 2012
- Management of MDROS Appendix 5 – Summary of Contact Precautions [www.hpsc.ie](http://www.hpsc.ie)



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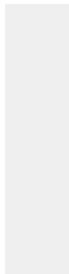
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## Contact Precautions



- Placement - *single room with en suite facilities or designate toilet or commode*
- Hand Hygiene – *AHR (if hands visibly clean) or antimicrobial soap-*
  - **Soap & Water if in contact with diarrhoea**
- PPE – *gloves when in direct contact with the resident or their immediate environment, apron or gown depending on level of contact*
- Care Equipment – *dedicated or cleaned & disinfected between each person, minimise the amount of disposable supplies brought into a room*
- Environmental Cleaning – *increase cleaning and introduce environmental disinfection –*
  - *With what ??*



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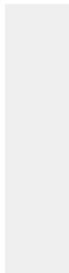
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## Contact Precautions



- Laundry – *treat all as potential contaminated – alginate bag*
- Waste – *as per HCRW policy – items soiled with body fluids assessed as infectious should be disposed of as HCRW*
- Duration of Precautions – *until symptom free for two day and return of normal bowel pattern*
- Terminal Cleaning – *carried out on resolution of symptoms*



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Placed on the outside door  
Contact Precautions on the  
reverse of the advice for  
visitors to preserve privacy



Cork & Kerry Infection Prevention & Control Community and Disability Services 2012

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Contact Precautions on the  
reverse of the advice for  
visitors to preserve privacy



Cork & Kerry Infection Prevention & Control Community and Disability Services 2012




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Placed on the inside of the  
room door for staff &  
visitors leaving the room



Cork & Kerry Infection Prevention & Control Community and Disability Services 2012




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### INFECTION PREVENTION AND CONTROL STOOL CHART

NAME: \_\_\_\_\_  
DOB: \_\_\_\_\_ MRN: \_\_\_\_\_  
UNIT: WARD: \_\_\_\_\_

#### STOOL SPECIMEN COLLECTION RECORD

Note: Diarrhoeal specimens are defined as those that fall up the stage of three categories (HPSC, 2010), according to whether COLLECTED & TESTed or REGISTERED:

| DATE | C&S | C. DIFFICILE | Specimen | Result |
|------|-----|--------------|----------|--------|
|      |     |              |          |        |
|      |     |              |          |        |
|      |     |              |          |        |

#### STOOL RECORD

Note: Diarrhoea is defined as those or more loose/watery bowel movements which are normal in colour for the patient or 10 times or more in an other recognized category for the diarrhea (e.g. faeces) test (HPSC, 2010).

Bristol stool chart to be used when recording type of stool (see attached).

| DATE | TIME | Type of stool (see Bristol chart) | Description (e.g. colour, consistency, mucus, odour, volume, blood) |
|------|------|-----------------------------------|---|
|      |      |                                   |   |
|      |      |                                   |   |
|      |      |                                   |   |
|      |      |                                   |   |
|      |      |                                   |   |

IPCT, Practice and Control  
Clinical Practice and Quality Group

### INFECTION PREVENTION AND CONTROL STOOL CHART

| DATE | TIME | Type of stool (see Bristol chart) | Description (e.g. colour, consistency, mucus, odour, volume, blood) |
|------|------|-----------------------------------|---|
|      |      |                                   |   |
|      |      |                                   |   |
|      |      |                                   |   |
|      |      |                                   |   |
|      |      |                                   |   |
|      |      |                                   |   |

#### Bristol Stool Chart

Types 1 - 3 are normal stool types for adults

- Type 1: Hard, lumpy or clumpy stools (less than one daily)
- Type 2: Hard, lumpy or clumpy stools (one daily)
- Type 3: Soft, lumpy or clumpy stools (one or more daily)
- Type 4: Soft, smooth, sausage-shaped or ridged (one or more daily)
- Type 5: Soft, smooth, mushy or watery (one or more daily)
- Type 6: Watery, thin stools (one or more daily)
- Type 7: Watery, thin stools (one or more daily)

Types 6 - 7 leading towards diarrhoea or urgency?

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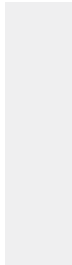
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**When a resident has diarrhoea- SIGHT**

- S** Suspect that a case may be infective where there is no clear alternative cause for diarrhoea
- I** Isolate. Consult with the infection prevention and control team (IPCT) where available while determining the cause of the diarrhoea
- G** Gloves and aprons must be used for all contacts with the patient and their environment
- H** Hand washing with soap and water should be carried out after each contact with the patient and the patient's environment
- T** Test the stool for C&S, *C. difficile* toxin, by sending a specimen immediately




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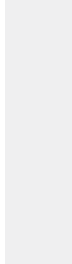
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**Key Messages for when Managing MDROs outside of the Hospital**

- MDRO colonised patients should not be declined admission to a long-term care facility (LTCF), day care facilities or rehabilitation services or have their admission delayed on the basis of positive MDRO colonisation status.
- Isolation of a resident with MDRO is generally not required in LTCF. Standard Precautions are required for the care of all patients, including patients colonised with MDRO in LTCF.
- The need to place a MDRO colonised patient in a single room or to use Contact Precautions should be determined based upon local risk assessment on a case-by-case basis.
- Routine screening for MDRO is not recommended for LTCF.
- *Ref Guidelines on the Prevention and Control of Multi-drug resistant organisms (MDRO) in healthcare settings. HPSC 2012*




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### Standard or Contact Precautions for MRDOs ?

- The decision to isolate a resident must be considered carefully and should take into account
  - the infection
  - the risks to other residents,
  - the presence of risk factors that increase the likelihood of transmission, and
  - the psychological effects of isolation on the colonised or infected resident.
- Before isolating a resident, a plan to review the need for ongoing Contact Precautions must be in place.

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### Standard or Contact Precautions for MDROS ?

- Standard Precautions advised for relatively healthy independent residents colonised with an MDRO
- Contact Precautions are recommended in certain situations including .
  - Ill dependent residents OR
  - Residents with uncontrolled secretions/excretions OR
  - Residents suffering from an infection caused by an MDRO:
- Single room accommodation is preferable, if available.

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### Standard or Contact Precautions for MDROS

- Cohorting of patients known to be colonised or infected with the same MDRO is acceptable.
- If cohorting is not possible, then those residents colonised/infected with an MDRO should be placed in a room
  - with a resident considered to be at low risk for acquisition of an MDRO (i.e. not immunocompromised, not on antimicrobials, without open wounds, drains or urinary catheters) or
  - those who have an anticipated short duration of stay.

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### Other aspects of control of MDRO in LTCFs include:

- Maintaining a list of residents infected/colonised with an MDRO
- Monitoring microbiology culture results of specimens sent to the local microbiology laboratory
- Communication of information relating to the status of an MDRO colonised resident to other receiving or transmitting facilities where indicated, such as upon referral to hospital or other healthcare facilities
- Ensuring adequate environmental cleaning

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### Wise Words



*"Penicillin should only be used if there is a properly diagnosed reason and, if it needs to be used, use the highest possible dose for the shortest time necessary. Otherwise antibiotic resistance will develop"*  
 Alexander Fleming, 1945

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### 3 Key Messages for Control of MRDOs in Residential Care

1. Standard Precautions for ALL- the major focus for health care workers is the reduction of contamination on hands and any equipment taken from one client to another
2. Careful use of a precious resource - Antimicrobials
3. Reduce risk of infection- vaccinate, care of devices, monitor and treat infection appropriately.  
*The need for additional infection control precautions in a residential setting must be balanced with the need for a healthy lifestyle.*




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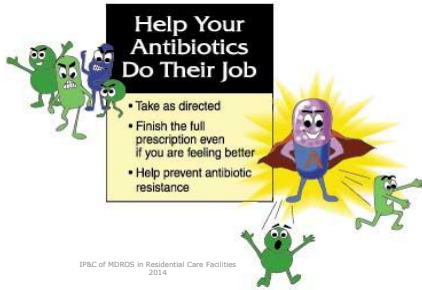
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What you can do as an individual !



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## References

- Guidelines on the Prevention and Control of Multi-drug resistant organisms (MDRO) in healthcare settings. 2012
- [http://www.hpsc.ie/A-Z/MicrobiologyAntimicrobialResistance/InfectionControlandHAI/Guidelines/File\\_12922\\_en.pdf](http://www.hpsc.ie/A-Z/MicrobiologyAntimicrobialResistance/InfectionControlandHAI/Guidelines/File_12922_en.pdf)
- Prevention and Control of Methicillin Resistant *Staphylococcus aureus* (MRSA) National Clinical Guideline 2
- [http://www.hpsc.ie/A-Z/MicrobiologyAntimicrobialResistance/InfectionControlandHAI/Guidelines/File\\_13950\\_en.pdf](http://www.hpsc.ie/A-Z/MicrobiologyAntimicrobialResistance/InfectionControlandHAI/Guidelines/File_13950_en.pdf)

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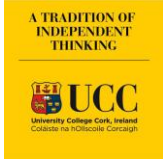
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Thank You !



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