York Teaching Hospital NHS
NHS Foundation Trust

Infection Prevention Policy

Control and Prevention of Extended Spectrum Beta Lactamase (ESBL)

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Approved by:	HIPC
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Target audience:	All Trust staff
Relevant Regulations and Standards	

Executive Summary

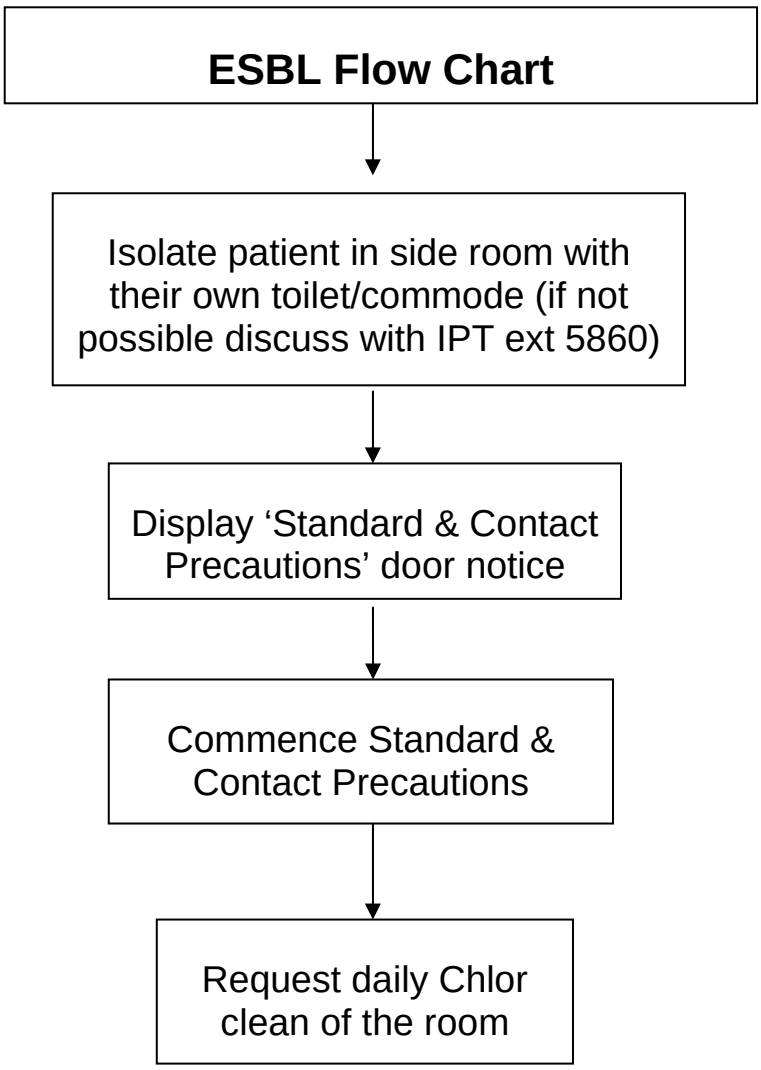
This policy outlines the management of patients with Extended-Spectrum Beta-Lactamase and the infection control measures needed to minimise the spread of these organisms that are in addition to standard precautions.

Version History Log

Version	Date Approved	Version Author	Status & location	Details of significant changes
1	September 11	Jane Balderson (Infection Prevention Nurse)	IPT	First version

Contents

Process flowchart



On discharge to another health care facility the nurse in charge of the patient's care must complete an Inter-Healthcare Transfer Form which will inform the receiving health care provider of the patient's ESBL status.

For further advice contact the Infection Prevention Team on: extension 5860

1 Introduction & Scope

This policy outlines the management of patients with Extended-Spectrum Beta-Lactamase and the infection control measures needed to minimise the spread of these organisms that are in addition to standard precautions.

Extended-Spectrum Beta-Lactamase producing organisms (ESBL) are coliforms that produce an enzyme (Beta-lactamase), which renders the organism resistant to some antibiotics.

2 Definitions

ESBL – Extended-Spectrum Beta-Lactamase

Beta-Lactamase – is an enzyme produced by an organism that breaks down beta-lactams

Colonisation is the presence of micro-organisms without tissue invasion.

Infection is the presence of micro-organisms causing a host response such as elevated temperature.

ESBL bacteraemia – ESBL in bloodstream

3 Policy Statement

ESBL can cause infection, particularly urinary infections. These can sometimes progress to cause infections such as ESBL bacteraemia, which can be more serious. As ESBL are resistant to many antibiotics the infections caused by them can be more difficult to treat. Specific guidelines for control and prevention of ESBL are therefore justified.

4 Equality Impact Assessment

The Trust' statement on Equality is available in the Policy for Development and Management of Policies at Section 3.3.4.

A copy of the Equality Impact Assessment for this policy is at appendix A

5 Accountability

Corporate accountabilities are detailed in the **Policy for Development and Management of Policies** at section 5.

All healthcare professionals and volunteers are responsible and accountable to the Chief Executive for the correct implementation of this policy.

Professional staff are accountable according to their professional code of conduct. Medical staff are professionally accountable through the General Medical Council, and nurses are professionally accountable to the Nursing and Midwifery Council.

6 Consultation, Assurance and Approval Process

Consultation, assurance and approval process is detailed in section 6 of the **Policy for the Development and Management of Policies.**

The Stakeholder is the Hospital Infection Prevention Committee

7 Review and Revision Arrangements

The date of review is given on the front coversheet.

Persons or group responsible for review is the Hospital Infection Prevention Committee

The Compliance Unit will notify the author of the policy of the need for its review six months before the date of expiry.

On reviewing this policy, all stakeholders identified in section 6 will be consulted as per the Trust's Stakeholder policy. Subsequent changes to this policy will be detailed on the version control sheet at the front of the policy and a new version number will be applied.

Subsequent reviews of this policy will continue to require the approval of the appropriate committee as determined by the **Policy for Development and Management of Policies.**

8 Dissemination and Implementation

8.1 Dissemination

Once approved, this policy will be brought to the attention of relevant staff as per the **Policy for Development and Management of Policies**, section 8 and Appendix C Plan for Dissemination .

This policy is available in alternative formats, such as Braille or large font, on request to the author of the policy.

8.2 Implementation of Policies

The Policy will be disseminated through the Consultants; Clinical Directors; Directorate Manager; Matrons; and Ward Managers via emails and meetings.

9 Document Control including Archiving

The register and archiving arrangements for policies will be managed by the Compliance Unit. To retrieve a former version of this policy the Compliance Unit should be contacted.

10 Monitoring Compliance and Effectiveness

This policy will be monitored for compliance with the minimum requirements outlined below.

10.1 Process for Monitoring Compliance and Effectiveness

Evidence	Monitoring /Who by	Frequency
a. Hand hygiene	Hand hygiene audits completed by ward/ department staff	Monthly
b. Antimicrobial prescribing	Antimicrobial policy audits by Antimicrobial	As required dependant on

	Stewardship Team	issues raised
c. Use of Personal Protective Equipment	Saving Lives High Impact Intervention 8 – cleaning clinical equipment completed by ward/ department staff	Monthly
d. Decontamination equipment	Saving Lives High Impact Intervention 8 – cleaning clinical equipment completed by ward/ department staff Matron Environment Audits completed by matrons	Monthly
e. Decontamination environment	Monit audits completed by domestic teams PEAT inspections completed by PEAT teams	According to risk category for each ward/ department
f. Isolation	IPT documentation records. CPD whiteboard records.	For individual patient cases
g. Data	CPD data, laboratory database surveillance by IPT	Monthly

10.2 Standards/Key Performance Indicators

Saving Lives High Impact Intervention 8 – Cleaning clinical equipment

Hand Hygiene compliance data

IPT performance dashboards

11 Training

See section 11 of the **Policy for Development and Management of Policies** for details of the statutory and mandatory training arrangements.

12 Trust Associated Documentation

YHFT [CORP.RL10] Policy for the Development and Management of Policies

YHFT [GL.CLIN.CLIN3] Antimicrobial Formularies

YHFT [CLIN.IC19] Infection Prevention Policy for the Decontamination of Reusable Medical Devices and the Environment

YHFT [CLIN.IC12] Infection Prevention Policy for Effective Hand Hygiene

YHFT [CLIN.IC6] Infection Control Standard Precautions Policy

YHFT [CLIN.IC8] Infection Prevention Isolation Policy

YHFT [CLIN.IC9] Laundry Policy

13 External References –

Health Protection Agency guidelines:
http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/ESBLs/GeneralInformation/#How_can_the_spread_be_controlled?

14 Appendices –

Appendix A	Protocol
Appendix B	Patient management care plan
Appendix C	Door notice
Appendix D	Equality Impact Assessment Tool
Appendix E	Checklist for the Review and Approval
Appendix F	Plan for the Dissemination of the Policy

Appendix A – Protocol

Spread

ESBL are part of the faecal flora therefore spread is likely to occur via the faecal-oral route. Faecally contaminated equipment and poor management of urinary catheters are examples of possible spread.

The main sites of colonisation or infection are urine, faeces, wounds, skin (moist areas) and sputum.

Prevention and control (where the patient is known to have ESBL colonisation or infection)

- Effective hand hygiene before and after each patient contact is of paramount importance in reducing spread. Disinfectant hand gel is very effective against ESBL.

- Antibiotics must be prescribed according to the Trust formulary. A restrictive approach to antibiotic prescribing will reduce the selective pressure for colonisation and infection caused by ESBL.

- Personal protective equipment (aprons, gloves) are required where there is a risk of exposure to blood or body fluids.

- Reusable clinical equipment (eg - medical devices, commodes, beds) must be decontaminated after every use using Clinell wipes or chlor clean correctly diluted to 1000 parts per million (ppm) of available chlorine. ESBL organisms survive best in moist environments therefore equipment must be dried after cleaning.

- Chlor clean correctly diluted to 1000 parts per million (ppm) of available chlorine must be used for environmental cleaning.

- Optimum infection prevention and control requires isolation of the patient. Whenever possible patients should be placed in a single room with their own toilet facilities. A

risk assessment is required before removing a patient from isolation or where single rooms are limited – Infection Prevention Team (IPT) will advise. The risk assessment should include:

- The site where ESBL has been isolated - discharging wounds, expectorating sputum and skin shedding are higher risk sites.
- Where the patient will be managed (ICU and surgical wards are higher risk areas)
- Whether the patient is infected or colonised.

Screening

Routine screening of patients or staff for ESBL is not currently required.

Patients known to have ESBL require negative screens before coming out of isolation where isolation has been considered essential.

Treatment

Colonised patients would not normally require treatment.

Infected patients where treatment is being considered must be discussed with the Medical Microbiologists.

Discharge of patients

- Discharge planning/assessment must not be delayed because of ESBL.
- Inter-hospital transfers for clinical reasons should not be prevented.
- Inform receiving hospitals, General Practitioners and other healthcare agencies of the presence of ESBL:
    - Complete an Electronic Discharge Notification (EDN) /Discharge letter/ inter-healthcare transfer form (IHTF) – place a copy of the IHTF in the patient's notes.

- Ambulance Transportation - Patients may be transported with others in the same ambulance without any special precautions.

- Deceased Patients - Body bags are not required.

Outbreaks

If there is an outbreak of ESBL (two or more acquired cases within a ward with the same sensitivity pattern) the IPT will review and convene an outbreak meeting if required.

Reporting of ESBL incidence

ESBL incidence is reported monthly by ward and Trust on the Q drive.

Appendix B

Date + Time: ……

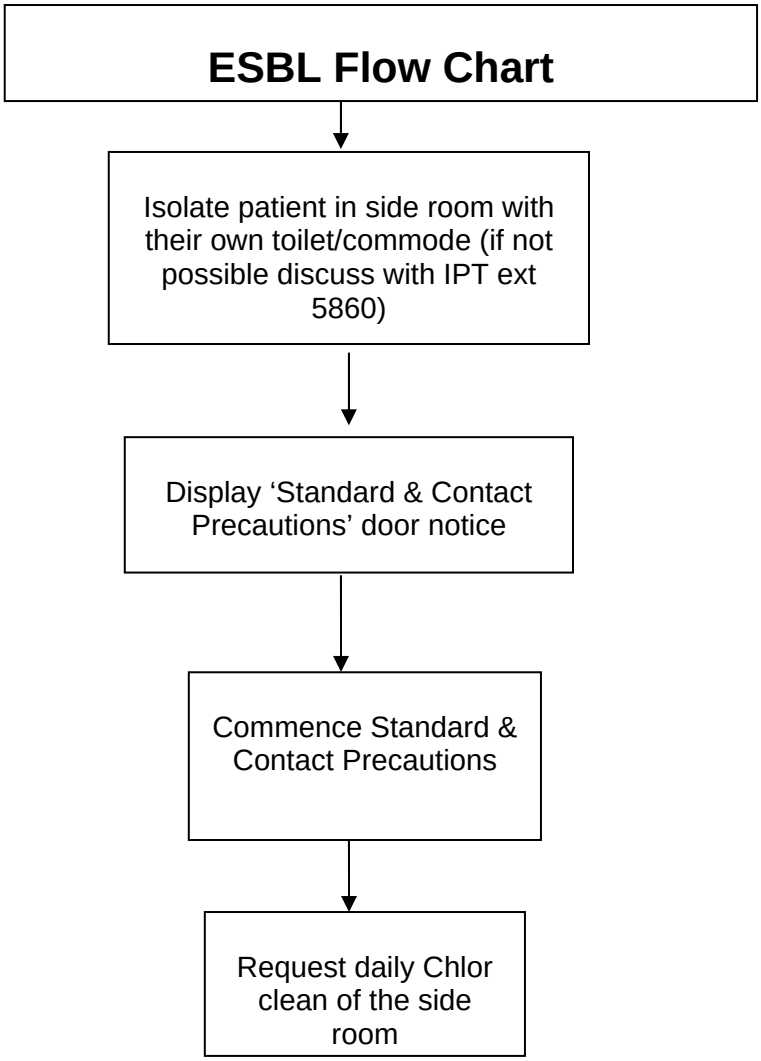
The registered nurse in charge of this patient is responsible for the dissemination of information regarding care and management of the patient with Extended Spectrum Beta Lactamase (ESBL) production:

ESBL can be spread from direct contact (person to person) **or** indirectly via contaminated equipment/environment, therefore it is essential that we;

- ☐ Ensure effective hand hygiene before and after patient contact
- ☐ Isolate the patient in a side room (if not possible, discuss with IPT) with their own toilet/commode
- ☐ Always wear disposable gloves and aprons when manipulating /emptying urinary catheters
- ☐ Arrange daily Chlor clean for the room for the length of the patients' stay
- ☐ Clean all reusable equipment between patients, and between each use

Always display 'Standard & Contact Precautions' door notice

Please refer to door notice for full instructions on Hand Hygiene, Waste/Linen Disposal and Environmental Cleaning

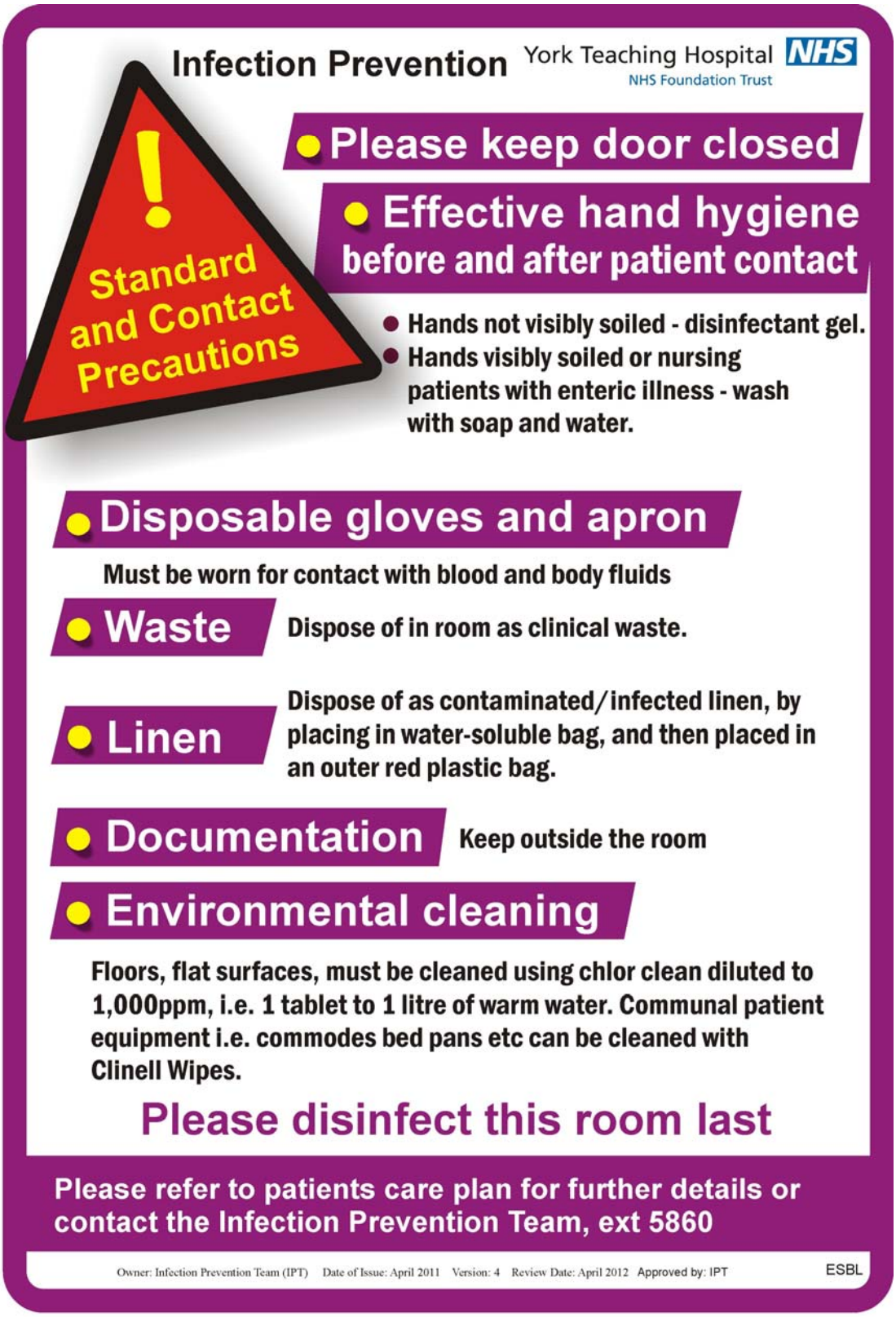


On discharge to another health care facility the nurse in charge of the patient's care must complete an Inter-Healthcare Transfer Form which will inform the receiving health care provider of the patient's ESBL status.

For further advice contact the Infection Prevention Team on: extension 5860 or bleep 809

Signature of nurse receiving information, initiating care and disseminating information ……

Appendix C – Door notice



Appendix D Equality Impact Assessment Tool

To be completed when submitted to the appropriate committee for consideration and approval.

Name of Policy:	Extended Spectrum Beta Lactamase

1.	**What are the intended outcomes of this work?** *Inform clinical staff of best practice clinical care for patients with Extended Spectrum Beta Lactamase isolated in microbiological specimens*	
2	**Who will be affected?** *Patients, staff*	
3	**What evidence have you considered?** *Health Protection Agency guidelines* *http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/ESBLs/GeneralInformation/#How_can_the_spread_be_controlled?*	
a	**Disability**	
b	**Sex**	
c	**Race**	
d	**Age** .	
e	**Gender Reassignment**	
f	**Sexual Orientation**	
g	**Religion or Belief**	
h	**Pregnancy and Maternity**.	
i	**Carers**	
j	**Other Identified Groups**	
4.	**Engagement and Involvement**	

a.	Was this work subject to consultation?	Yes
b.	How have you engaged stakeholders in constructing the policy	No
c.	If so, how have you engaged stakeholders in constructing the policy	
d.	For each engagement activity, please state who was involved, how they were engaged and key outputs	
5.	**Consultation Outcome** Approved by Hospital Infection Prevention Committee *Now consider and detail below how the proposals impact on elimination of discrimination, harassment and victimisation, advance the equality of opportunity and promote good relations between groups*	
a	Eliminate discrimination, harassment and victimisation	
b	Advance Equality of Opportunity	
c	Promote Good Relations Between Groups	
d	What is the overall impact?	
	Name of the Person who carried out this assessment:	
	Date Assessment Completed	
	Name of responsible Director	

If you have identified a potential discriminatory impact of this procedural document, please refer it to the Equality and Diversity Committee, together with any suggestions as to the action required to avoid/reduce this impact.

Appendix E Checklist for the Review and Approval

To be completed and attached to any document which guides practice when submitted to the appropriate committee for consideration and approval.

	Title of document being reviewed:	Yes/No/ Unsure	Comments
1	**Development and Management of Policies**		
	Is the title clear and unambiguous?		
	Is it clear whether the document is a guideline, policy, protocol or procedures?		
2	**Rationale**		
	Are reasons for development of the document stated?		
3	**Development Process**		
	Is the method described in brief?		
	Are individuals involved in the development identified?		
	Do you feel a reasonable attempt has been made to ensure relevant expertise has been used?		
	Is there evidence of consultation with stakeholders and users?		
	Has an operational, manpower and financial resource assessment been undertaken?		
4	**Content**		
	Is the document linked to a strategy?		
	Is the objective of the document clear?		
	Is the target population clear and		

	Title of document being reviewed:	Yes/No/ Unsure	Comments
	unambiguous?		
	Are the intended outcomes described?		
	Are the statements clear and unambiguous?		
5	**Evidence Base**		
	Is the type of evidence to support the document identified explicitly?		
	Are key references cited?		
	Are the references cited in full?		
	Are local/organisational supporting documents referenced?		
5a	**Quality Assurance**		
	Has the standard the policy been written to address the issues identified?		
	Has QA been completed and approved?		
6	**Approval**		
	Does the document identify which committee/group will approve it?		
	If appropriate, have the staff side committee (or equivalent) approved the document?		
7	**Dissemination and Implementation**		
	Is there an outline/plan to identify how this will be done?		
	Does the plan include the necessary training/support to ensure compliance?		
8	**Document Control**		
	Does the document identify where it will		

	Title of document being reviewed:	Yes/No/ Unsure	Comments
	be held?		
	Have archiving arrangements for superseded documents been addressed?		
9	**Process for Monitoring Compliance**		
	Are there measurable standards or KPIs to support monitoring compliance of the document?		
	Is there a plan to review or audit compliance with the document?		
10	**Review Date**		
	Is the review date identified?		
	Is the frequency of review identified? If so, is it acceptable?		
11	**Overall Responsibility for the Document**		
	Is it clear who will be responsible for coordinating the dissemination, implementation and review of the documentation?		

Individual Approval			
If you are happy to approve this document, please sign and date it and forward to the chair of the committee/group where it will receive final approval.			
Name		Date	
Signature			
Committee Approval			
If the committee is happy to approve this document, please sign and date it and forward copies to the person with responsibility for disseminating and implementing the document and the person who is responsible for			

maintaining the organisation’s database of approved documents.			
Name		Date	
Signature			

Appendix F Plan for dissemination of policy

To be completed and attached to any document which guides practice when submitted to the appropriate committee for consideration and approval.

Title of document:	
Date finalised:	
Previous document in use?	
Dissemination lead	
Which Strategy does it relate to?	
If yes, in what format and where?	
Proposed action to retrieve out of date copies of the document:	**Compliance Unit will hold archive**

Dissemination Grid

To be disseminated to:	**1)**	**2)**
Method of dissemination		
who will do it?		
and when?		
Format (i.e. paper or electronic)	**Electronic**	

Dissemination Record

Date put on register / library	
Review date	
Disseminated to	
Format (i.e. paper or electronic)	
Date Disseminated	
No. of Copies Sent	
Contact Details / Comments	