

TRUST-WIDE ADULT CLINICAL POLICY DOCUMENT

ASSESSMENT AND MANAGEMENT OF INFECTED WOUNDS

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Recommending Committee:	Skin Care Service
Approving Committee	Executive Committee
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Lead Executive Director:	Executive Director of Nursing and Operations
Lead Author(s):	Skin Care Service

TRUST-WIDE ADULT CLINICAL POLICY DOCUMENT

2019 – Version 2

Striving for perfect care and a just culture

TRUST-WIDE ADULT CLINICAL POLICY DOCUMENT

ASSESSMENT AND MANAGEMENT OF INFECTED WOUNDS

Document name	ASSESSMENT AND MANAGEMENT OF INFECTED WOUNDS
Document summary	Policy to assist clinicians in the decision making process in the assessment and management of infected wounds including escalation process
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To be read in conjunction with	121 - Wound Assessment Policy 2018 122 - Wound Debridement 2018 Wound Care Formulary 2018 SD06 – Consent to Examination and Treatment Policy 2016 IC01 – Infection Prevention and Control 2018 MC01/02/03/04 – Mental Health Capacity 2015 Royal College of Physicians (Dec 2017) - SD51 National Early Warning Score (NEWS) 2 standardising the assessment of acute illness severity in the NHS 2018 Mersey Care (2017) Standard of Frequency for Recording Clinical Observation in Community Guidelines
This document can be made available in a range of alternative formats including various languages, large print and braille etc	
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Version Control:

		Version History:
Version 1	Presented to the clinical policies group	13.02.2018
	Reviewed by Jenny Hurst (Deputy Director of Nursing)	15.03.2019

SUPPORTING STATEMENTS

this document should be read in conjunction with the following statements:

SAFEGUARDING IS EVERYBODY'S BUSINESS

All Mersey Care NHS Foundation Trust employees have a statutory duty to safeguard and promote the welfare of children and adults, including:

- being alert to the possibility of child / adult abuse and neglect through their observation of abuse, or by professional judgement made as a result of information gathered about the child / adult;
- knowing how to deal with a disclosure or allegation of child /adult abuse;
- undertaking training as appropriate for their role and keeping themselves updated;
- being aware of and following the local policies and procedures they need to follow if they have a child / adult concern;
- ensuring appropriate advice and support is accessed either from managers, *Safeguarding Ambassadors* or the trust's safeguarding team;
- participating in multi-agency working to safeguard the child or adult (if appropriate to your role);
- ensuring contemporaneous records are kept at all times and record keeping is in strict adherence to Mersey Care NHS Foundation Trust policy and procedures and professional guidelines. Roles, responsibilities and accountabilities, will differ depending on the post you hold within the organisation;
- ensuring that all staff and their managers discuss and record any safeguarding issues that arise at each supervision session

EQUALITY AND HUMAN RIGHTS

Mersey Care NHS Foundation Trust recognises that some sections of society experience prejudice and discrimination. The Equality Act 2010 specifically recognises the *protected characteristics* of age, disability, gender, race, religion or belief, sexual orientation and transgender. The Equality Act also requires regard to socio-economic factors including pregnancy /maternity and marriage/civil partnership.

The trust is committed to equality of opportunity and anti-discriminatory practice both in the provision of services and in our role as a major employer. The trust believes that all people have the right to be treated with dignity and respect and is committed to the elimination of unfair and unlawful discriminatory practices.

Mersey Care NHS Foundation Trust also is aware of its legal duties under the Human Rights Act 1998. Section 6 of the Human Rights Act requires all public authorities to uphold and promote Human Rights in everything they do. It is unlawful for a public authority to perform any act which contravenes the Human Rights Act.

Mersey Care NHS Foundation Trust is committed to carrying out its functions and service delivery in line the with a Human Rights based approach and the FREDA principles of **F**airness, **R**espect, **E**quality **D**ignity, and **A**utonomy

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1 PURPOSE AND RATIONALE

1.1 “Infection in a wound is a manifestation of a disturbed host bacteria equilibrium in favour of the bacteria, this is not only elicits a systemic response but actually inhibits the process involved in wound healing” (Robson 1998).

The bacterial burden of a wound and its effects on the wound healing process can be adequately assessed by clinical examination of the wound bed, the presentation of the surrounding skin and the patient’s general condition.

Wound infection can be highly distressing for patients, causing pain, loss of function, and remains a major cause of morbidity and mortality. It prolongs the length of inpatient episodes and significantly increases healthcare costs (Kingsley 2001). The care of patients with a wound infection is generally inconsistent (Collier 2004) which can be attributed to poor understanding of the biological microenvironment of chronic wounds and inaccurate assessment of the wound situation (Falanga 2002).

“Early recognition along with prompt, appropriate and effective intervention is more important than ever in reducing its economic and health consequences” (WUWHS 2008).

2 OUTCOME FOCUSED AIMS AND OBJECTIVES

2.1 This policy has been developed and peer reviewed by members of the Skin Care Service to provide evidence-based guidance on assessment and the management of infected wounds and wounds that are at ‘risk’ of infection. It aims to improve clinical practice and reduce variations in standards of care; and to disseminate best practice across Mersey Care NHS Foundation Trust (MCFT).

2.2 Provide resources to support staff and training

3 SCOPE

3.1 This policy applies to all employees employed by Mersey Care Foundation Trust (MCFT), who are involved in the assessment and management of patients with infected wounds or and wounds that are at risk’ of infection.

4 DEFINITIONS

4.1 (Taken from The Pocket Dictionary for Nurses, Oxford Medical Publications, 1988 unless otherwise indicated).

Argyria	This very rare condition produces blue-grey discolouration of the skin and is associated with long-term systemic exposure to silver salts. Argyria differs from the reversible local discolouration that may be associated with silver dressings; argyria is irreversible and can
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	affect the skin of the entire body and the internal organs
Bactericidal	Capable of killing bacteria
Bacteriostatic	Capable of inhibiting or retarding the growth and multiplication of bacteria.
Bioburden:	The microbial loading of the skin and/or wounds with normal commensals and potential pathogens.
Biofilms	After attachment to a surface, e.g. in a wound, bacteria may encase themselves in a gelatinous matrix – a biofilm. Biofilms may contain multiple species of bacteria, which are shielded against the immune system and antimicrobial agents. There appears to be a correlation between biofilms and non-healing in chronic wounds.
Colonisation	Presence of microbial organisms within the wound that is restricted without producing a host reaction. Microbial growth occurs at a non-critical level and wound healing is not delayed or impeded.
Contamination	Presence of bacteria within the wound without multiplication or host reaction; wound healing is not delayed.
Critical colonisation	The situation in which the host defences cannot maintain the balance of organisms in a wound.
Commensals:	An organism that lives in close association with another of a different species without either harming or benefiting it.
Crepitus	A crackling feeling or sound detected on palpation of tissues that is due to gas within the tissues.
Fibroblasts	Widely distributed cell in connective tissue that is responsible for the production of both the ground substance and precursors of collagen, elastic fibres and reticular fibres.
Induration	Hardening of the skin and subcutaneous tissues around a wound due to inflammation, secondary to infection.
Inoculum:	Any material that is used for inoculation
Keratinocytes	A type of skin cell that produces keratin; a fibrous scleroprotein that occurs in the outer layer of the skin and horny tissues such as hair and nails.
Local Infection	Occurs when bacteria or other microbes move deeper into the wound tissue and

	increase at a rate that invokes a response in the host.
Lymphangitis	Inflammation of lymph vessels, seen as red skin streaks running proximally from a site of infection.
Pathogen	Micro-organism, such as a bacterium that parasitizes an animal or man and produces disease.
Pathogenic	Capable of causing disease. The term is applied to a parasitic micro-organism in relation to its host.
Spreading infection	The invasion of the surrounding tissue by infective organisms that have spread from a wound. Microorganisms increase and spread, that signs and symptoms extend beyond the wound border. This may involve deep tissue, muscle, fascia, organs or body cavities.
Systemic Infection	Systemic infection from a wound affects the whole body. Microorganisms spread throughout the whole body via vascular and lymphatic systems.
Synergy	The interaction or cooperation of two or more bacterial species (for the purpose of this guidance), to produce a new or enhanced effect compared to their separate affects.
Virulence	The disease-producing (pathogenic) ability of a micro-organism

5 DUTIES

5.1 The Executive Nurse Director is responsible for ensuring the implementation of this policy. This has been delegated to the Skin Care Service.

5.2 The Executive Nurse Director is responsible for ensuring that this document is reviewed and if required revised in the light of legislative guidance or organisational change. This process has been delegated to the Skin Care Service.

5.3 Service Care Leads, Team Leaders and Ward Managers to support Skin Care Service with the implementation of the Policy in a timely manner to ensure there is no delay in service delivery. Also, are responsible for ensuring that high standards are maintained within their areas of responsibility and the standards set out this policy are adhered to. It is the responsibility of each line manager to ensure staff all relevant training.

5.4 This policy will be reviewed in 2 years unless practice alters / or new guidance the interim.

6 PROCESS

6.1 Principles of Best Practice

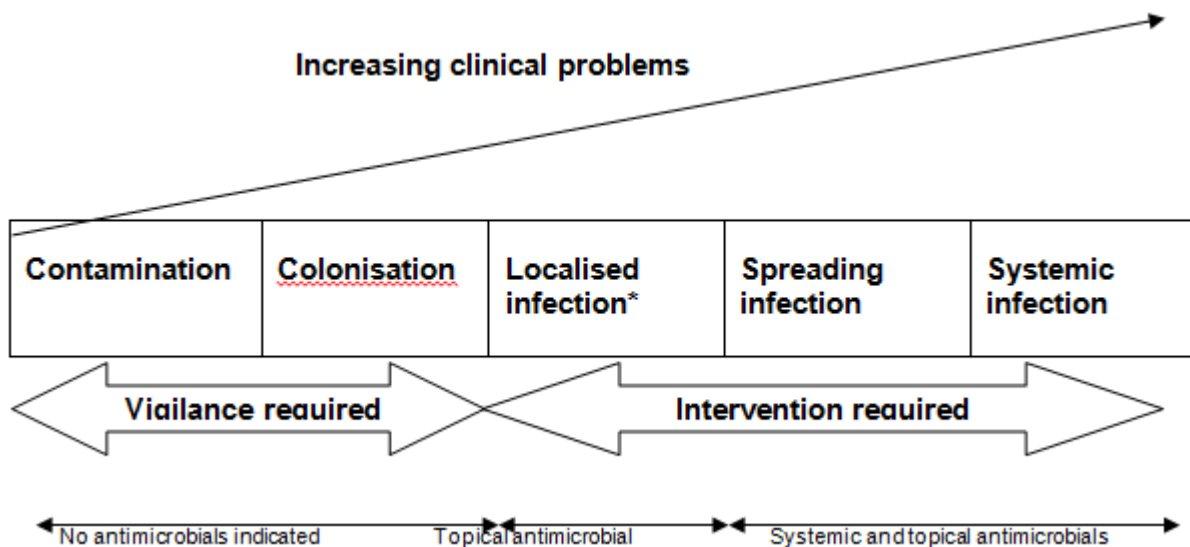
A holistic approach to individuals with, or at risk of, active wound infection remains essential to best practice in prevention, identification and management of wound infection.

The wound infection continuum provides a framework through which the impact microbes have on a wound (IWII 2016) it also provides classification; assessment and management of the wound and its bio burden (see Table 1).

(see page 5 – 6 for definitions):

- Contamination
- Colonisation
- Local infection
- Spreading infection
- Systemic infection

6.2 Table 1 – The wound Infection Continuum



*Localised infection may or may not be accompanied by the classic signs of infection and symptoms of inflammation. When it is not, various terms have been used i.e. critical colonisation (see definitions) (see appendix 1), * adapted from (WUHS 2008, IWII 2016)*

Effective intervention from all healthcare practitioners in order to treat established infection appropriately and to minimise the number of patients with wounds that move from the state of critical colonisation to clinical infection.

6.3 Diagnosis of wound infection

The diagnosis of wound infection is made mainly on clinical grounds. Assessment should include evaluation of the patient, the tissues around the wound and the wound itself (WUWHS, 2008) for the signs and symptoms of wound infection, as well as for factors likely to increase the risk and severity of infection. Incorporation of assessment for wound infection into routine wound practice will aid early detection and subsequent treatment.

6.4 Risk Factors / Contributing factors to the development of Wound Infection

The Department of Health (2011) document "Saving Lives" High Impact Intervention Chronic Wound Bundle identifies the risk of infection in chronic wounds are increased by:

- Reduced perfusion of blood to the tissues
- Raised blood glucose
- The severity of the lesion
- Patients with a compromised immune response will therefore be more at risk of developing infection than patients who are not immuno-compromised; stress, alcohol, smoking, drug abuse, lack of sleep
- A patient's age; the very young and older people are at particular risk
- Medication; immunosuppressive agents; steroids and non-steroid anti-inflammatory agents
- Contamination either at the point of injury (e.g. by soil, gravel) or at a later stage (e.g. by faeces)
- Poor wound management (e.g. inadequate wound debridement)
- Failure to exclude osteomyelitis
- Psychosocial factors – hospitalisation/institutionalisation, poor personal hygiene, unhealthy lifestyle choices (WUWHS, 2008)
- Certain wound characteristics (see content) or poor standards of wound care related hygiene.

The risk of infection in patients with diabetic foot ulcers is further increased by:

- Presence of diabetic neuropathy and structural deformity such as Charcot joints
- Failure to off load pressure

A wound swab should only be taken if there are signs of clinical infection present (see below and appendix 1 - 2) and if the wound is deteriorating, increasing in size or failing to heal (Ikram 2013) that warrant treatment. The process of wound swabbing and data analysis incurs a cost and therefore should not be used inappropriately (Kingsley 2001).

Identifying wound infection should be viewed as a clinical skill which can be supported by laboratory findings when necessary, but it should not rely on pure laboratory science i.e. Swab results (see Appendix 6 for appropriate wound swab referral process). Diagnosis of wound infection is a clinical judgement (Cooper and Vowden 2006) and the most important means to identifying wound infection is accurate assessment of clinical signs and symptoms displayed by the patient (Miller 1998, Cooper 2002, White 2003, Kingsley 2001, 2002).

6.5 Clinical Signs and Symptoms of Wound Infection

The recognised, validated and well-documented signs of wound infection are:

6.6 Classic Criteria

- Localised erythema
- Localised pain
- Localised heat
- Cellulitis
- Oedema
- Abscess formation
- Viscous, purulent and discoloured discharge

6.7 Additional Criteria

- Unexpected delayed wound healing
- Discolouration of the tissues both within and at the wound margins
- Friable, bleeding granulation tissue
- Unexpected pain/discomfort reported by the patient even when the wound dressing is in place
- Malodour
- Wound breakdown associated with wound pocketing/bridging at the base of the wound

(Cutting and White 2004)
Level of Evidence: C

Although most infected wounds demonstrate these common classic criteria, it is important to note that there are subtle differences between specific wound types (Cutting et al 2005) (see Appendix 2 for subtle signs and symptoms). Signs of infection are often masked or absent in patients with diabetes and compromised peripheral arterial circulation due to a reduction in the inflammatory response to pathogenic invasion. Infection of the diabetic foot often involves superficial and deep tissues and extends to bone.

A multidisciplinary approach to assessment and treatment is required for these complex wound types and continued observation for early clinical signs of infection is pivotal in initiating appropriate antibiotic therapy and preventing rapid tissue destruction (Cutting et al 2005).

Strategies that aim to reduce risk should be an integral part of the patient's management plan.

Level of evidence: C

In wounding, the protective mechanism of the skin as a barrier is breached, allowing micro-organisms to access moist, warm, vulnerable tissues. Chronic wounds (see below for Specific Wound Types) become contaminated or colonised with bacteria reflecting local conditions, yet for the most part these potential pathogens live harmoniously with natural skin commensals without compromising the wound healing process. Once the host defences are unable to fight off the growth of these pathogens, localised infection is reached and the wound healing process then affected.

6.8 Biofilms

Biofilms are complex microbial communities, containing bacteria and sometimes also fungi, which are embedded in a protective polysaccharide matrix. The matrix attaches the biofilm to a surface, such as a wound bed, and protects the microorganisms from the host's immune system and from antimicrobial agents such as antiseptics and antibiotics. Biofilms are commonly present in chronic wounds, and are thought to contribute to, and perpetuate, a chronic inflammatory state that prevents healing.

The management of biofilms includes:

- Reduction of biofilm burden through debridement and/or vigorous cleansing to remove the biofilm and the dormant (persister) bacteria
- Prevention of biofilm reformation through the use of topical antimicrobials to kill planktonic (free-floating) bacteria

6.9 Specific Wound Types

6.9.1 Surgical Site Infection (SSI's)

Surgical site infection is a type of healthcare-associated infection in which the surgical incision site becomes contaminated and this subsequently leads to infection. NICE (2008, updated 2017) report surgical site infections have been shown to compose up to 20% of all of healthcare-associated infections. At least 5% of patients undergoing a surgical procedure develop a surgical site infection. A national prevalence study of infections in hospitals in 2006 showed that SSI made up 14.5% of the total number of infections (Smyth 2006) but they are considered to be largely preventable. The most significant risk factor for SSIs is the level of bacterial burden. Modern surgical techniques and the use of prophylactic antibiotics have reduced this risk.

NICE (2008, updated 2017) indicate that surgical site infections can have a significant impact on quality of life for the patient, being linked with considerable morbidity and extended length of hospital stay. Surgical site infections impose a considerable financial impact on healthcare providers. In addition, increased numbers of infections are now being seen in primary care because patients are allowed home earlier following day case and fast-track surgery.

6.9.2 Chronic Wounds

All chronic wounds will be colonised with micro-organisms but this does not generally delay healing. However, if the quantity of these organisms overwhelms the local defences, healing will be halted and the wound can be termed infected. Therefore correct identification of the signs of infection is of key importance in wound management. The management of chronic wounds in both primary and secondary care settings, especially those identified as being infected presents an ever-increasing challenge and potential financial burden to the NHS. In 2009, analysis of a twelve month period of methicillin resistant *Staphylococcus aureus* (MRSA) bacteraemia cases was completed. Where the source of the bacteraemia was identified, over 18% were due to skin and soft tissue infections. Of these 28% had diabetes identified as a risk factor. Chronic wounds have been identified as the sources of infection in as many as 40% of MRSA bacteraemia cases within the West Midlands and are likely to be implicated in many other causes of blood stream infection resulting in potentially avoidable harm to patients (DOH West Midlands RCA data; 2009). Wound infection can contribute to septicaemia as bacteria migrate from the wound into the circulatory system.

6.10 Prevention

The Department of Health “Saving Lives” High Impact Actions Chronic Wound Bundle (2011) provides instructions on how to reduce the risk and incidence of chronic wound infections and chronic wound-related blood stream infections. The risk of infection reduces when all the key elements of care within the clinical process are performed every time and for every patient. Nursing staff must be provided with training and competent to carry out these tasks.

- Hand Hygiene
- Personal Protective Equipment
- Principles of Asepsis
- Wound Assessment
- Wound Swabs
- Wound Cleansing
- Dressing
- Antibiotics
- Documentation
- Sensitive’s / Allergies
- Prophylaxis
- Patient education
- Glucose control
- Referral to other health care specialists
- Nutritional assessment
- Communication

6.11 Documenting signs and symptoms of wound infection

Signs and symptoms of a wound infection should be documented on the Mersey Care Wound Evaluation Chart and this along with holistic assessment of the patient will assist in clinical decision making around how the patient should be managed. It would be advisable to record baseline observations (i.e. temperature / blood pressure / pulse / respiratory rate / BM / oxygen saturations) of the patient to check for systemic symptoms so that appropriate action can be taken (refer to Appendix 3). Any concerns regarding the correct diagnosis/treatment of wound infection should be escalated to senior nurse or GP depending on role/service area (refer to Appendix 10).

6.12 Management of Infection

6.12.1 The Use of Antimicrobials in the Treatment of localised infection / Infected

There are a large number of antimicrobial wound care products available, but we need to be better prepared for selecting the right product for the right patient, for the right wound, at the right time, weighing up the advantages / disadvantages (Wounds UK 2013).

For current product recommendations refer to Mersey Care Wound Care Formulary Available at: http://opera.liverpoolch.nhs.uk/SIRS/Skin_Service/Forms/AllItems.aspx

The term **antimicrobial** describes substances used to treat infections and is a general umbrella term for antibiotics, disinfectants and antiseptics.

Antimicrobial dressings are indicated for the treatment of infected wounds, or in specific cases for the prevention of infection. They should not be used routinely on wounds that are healing normally (Wound UK 2013). Antimicrobial dressings aim to reduce the number of micro-organisms at the wound bed to allow normal healing to resume. Effectiveness is dependent on their remaining active throughout their life. As, with all wounds it is important to frequently reassess the wound bed and surrounding tissues, monitoring for signs of spreading or systemic infection.

6.13 Antimicrobial 'TWO WEEK Review'

It is recommended that antimicrobial dressings should be only be used for two weeks initially and then the wound, the patient and the management approach should be re-evaluated (Wounds UK 2013).

6.13.1 If after two weeks:

- there is improvement in the wound, but continuing signs of infection – it may be clinically justifiable to continue the with an antimicrobial dressing with further regular reviews
- the wound has improved and the signs and symptoms of wound infection are no longer present – the antimicrobial dressing should be discontinued
- there is no improvement – the antimicrobial dressing should be discontinued and consideration given to changing the dressing to one that contains a different antimicrobial agent and if the patient is unwell using a systemic antibiotic and re-evaluating possibly untreated comorbidities.

Once the bioburden is under control and the wound is improving, a non-antimicrobial dressing should be considered.

6.14 Prophylactic 'use'

Antimicrobial dressings may be used as a barrier to microorganisms in wounds at high risk of infection or re-infection e.g. wounds with exposed bone, or wounds in patients who are immunocompromised, have poor circulation, unstable diabetes or neoplastic disease (Vowden, 2011).

An **antiseptic** describes a range of chemical cleansing solutions that limit infection in living tissues; some need to be used in high concentrations and need to be in contact with the wound for extended periods of time in order to destroy pathogens

There currently appears to be a general change in thought regarding the use of topical antiseptic preparations in response to the clinical need to provide effective mechanisms of reducing wound colonisation and preventing infection (White 2003, Cutting 2004, Cooper 2004). The clinical significance of the research results for human wounds is questionable and the benefits of topical antiseptics in returning wounds to a state of bacterial balance have recently been reconsidered (Robson 1999). The clinical use of antiseptics must be based on a risk/benefit analysis taking into account the potential detrimental effects of the pathogenic bacteria present in the wound, the antibacterial action of the antiseptic and its' potential toxicity to viable tissue (Kaye 2000).

Topical antiseptics should **only** be used where clinically indicated and for short periods of time. The practitioner should ensure the wound is reviewed and treatment evaluated regularly and that a clear, evidence-based rationale is documented to support the clinical decision (Scanlon 2005).

6.15 Topical Antiseptics

The ideal antiseptic should have the following attributes:

- Broad spectrum of activity
- Low potential for resistance
- Non-toxic to white blood cells in the early inflammatory stage and later to fibroblasts and keratinocytes
- Rapid acting
- Neither an irritant or a sensitizer
- Effective even in the presence of slough, exudate and pus etc (White 2003)

6.16 Systemic Antibiotics

An antibiotic describes substances that are derived from micro-organisms or are synthetically manufactured to selectively target bacteria; they destroy or inhibit the growth of other micro-organisms.

If the patient is displaying symptoms of a clinical wound infection and a low grade temperature an assessment (including base line investigations i.e. Temperature / Blood pressure / Pulse / Respiratory rate / BM / Oxygen saturations) must be completed by an appropriate health professional and if appropriate, antibiotics prescribed closely monitoring the patient response, whilst awaiting swab results (reference should be made to the Antimicrobial guidelines). NB Broad Spectrum Antibiotics should always be prescribed with caution (see appendix 3) (The Pan Mersey Antimicrobial Guidelines 2015/16).

If however, the patient is displaying symptoms of an acute systemic illness, urgent medical opinion MUST be sought.

There is great debate over the use of antimicrobials in wound management. The widespread inappropriate use of systemic and topical antibiotics has led to the emergence of resistant strains of bacteria such as methicillin-resistant *Staphylococcus aureus* (MRSA) (White et al 2001, White 2003).

As with use of topical antimicrobials, when a patient is prescribed systemic antibiotic therapy for a wound infection, the following should be recorded within the patient's nursing records: - Name of Antibiotic, Dose, Frequency and Length of course.

6.17 Further considerations if a wound infection does not resolve

Consider taking a further wound swab if signs of infection are not reduced 48-72hours after initiation of antibiotic therapy (Ikram, 2013). For wounds that display evidence of infection and do not respond to treatment or are recurrently infected, consider referral to the Skin Care Service for advice and support (see appendix 3 and 6).

(NB Reference should be made to Pan Mersey Care Antimicrobial Guidelines)
Level of evidence: C

7 CONSULTATION

This policy was developed and peer reviewed by members of the Skin Care Service and ratified by Mersey Care trust wide Clinical Polices group.

8 TRAINING AND SUPPORT

8.1 Mersey Care employees will be expected to act at all times in such a manner as to safeguard and promote the interests of patients and clients. All registered health professionals must have knowledge and skills and effective practice; recognise and work within the limits of personal competence (Nursing and Midwifery Council (NMC), 2015)

All employees must be made aware of the organisations guidelines before commencement in post, as part of their local induction process.

Elements of this guideline have been incorporated in the development of the wound assessment competency programme. This is available to all clinical staff involved in the management of patients with wounds (E-learning Package) and can be accessed through the Learning and Development Bureau – LDB@merseycare.nhs.uk. Here, outline any training requirements necessary for staff in adhering to the policy document. You should consider whether such training needs are, or should be, included in existing statutory / mandatory training and if not, how this will be funded

9 MONITORING

9.1 The Executive Director of Nursing and Operations is responsible for ensuring the implementation of this policy. This has been delegated to the Skin Care Service.

9.2 The Executive Director of Nursing and Operations is responsible for ensuring that this document is reviewed and if required revised in the light of legislative guidance or organisational change. This process has been delegated to the Skin Care Service.

9.3 **Service Care Leads, Team Leaders and Ward Managers** to support Skin Care Service with the implementation of the Policy in a timely manner to ensure there is no delay in service delivery. Also, are responsible for ensuring that high standards are maintained within their areas of responsibility and the standards set out this policy are adhered to. It is the responsibility of each line manager to ensure staff all relevant training.

9.4 This policy will be reviewed in 2 years unless practice alters / or new guidance the interim.

10 IMPACT ASSESSMENT

10.1 This policy is believed to have no differential impact for any groups or groups. An impact assessment is not required.

Title: Assessment and Management of Infected Wounds
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Area covered: Trust – Wide across Mersey Care NHS Foundation Trust

What are the intended outcomes of this work? Assist clinicians in the decisions making process in the assessment and management of infected wounds including escalation process

Who will be affected? Staff, patients and all service users

Evidence

What evidence have you considered? In Consideration of the categories below, implementation of this policy would not discriminate against any identified demographic.

Disability (including learning disability)

Sex

Race Consider and detail (including the source of any evidence) on difference ethnic groups, nationalities, Roma gypsies, Irish travellers, language barriers.

Age Consider and detail (including the source of any evidence) across age ranges on old and younger people. This can include safeguarding, consent and child welfare.

Gender reassignment (including transgender) Consider and detail (including the source of any evidence) on transgender and transsexual people. This can include issues such as privacy of data and harassment.

Sexual orientation Consider and detail (including the source of any evidence) on heterosexual people as well as lesbian, gay and bi-sexual people.

Religion or belief Consider and detail (including the source of any evidence) on people with different religions, beliefs or no belief.

Pregnancy and maternity Consider and detail (including the source of any evidence) on working arrangements, part-time working, infant caring responsibilities.

Carers Consider and detail (including the source of any evidence) on part-time working, shift-patterns, general caring responsibilities.

Other identified groups Consider and detail and include the source of any evidence on different socio-economic groups, area inequality, income, resident status (migrants) and other groups experiencing disadvantage and barriers to access.

Cross Cutting implications to more than 1 protected characteristic
What was the evidence used putting this policy together – national guidelines etc. / patient experience / data

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Human Rights	Is there an impact? How this right could be protected?
Right to life (Article 2)	<i>Use not engaged if Not applicable</i>
Right of freedom from inhuman and degrading treatment (Article 3)	<i>Use supportive of a HRBA if applicable</i>
Right to liberty (Article 5)	
Right to a fair trial (Article 6)	
Right to private and family life (Article 8)	
Right of freedom of religion or belief (Article 9)	
Right to freedom of expression Note: this does not include insulting language such as racism (Article 10)	
Right freedom from discrimination (Article 14)	

This policy has been circulated for peer review amongst colleagues within the Skin Care Service.

Summary of Analysis <i>This highlights specific areas which indicate whether the whole of the document supports the trust to meet general duties of the Equality Act 2010</i>
Eliminate discrimination, harassment and victimisation
Advance equality of opportunity

Promote good relations between groups

What is the overall impact?

Implementation of this policy will provide a positive impact on patient care and will not have an adverse effect on patients and service users that share protected characteristics.

Addressing the impact on equalities

There needs to be greater consideration re health inequalities and the impact of each individual development /change in relation to the protected characteristics and vulnerable groups

Action planning for improvement

Detail in the action plan below the challenges and opportunities you have identified. *Include here any or all of the following, based on your assessment*

- *Plans already under way or in development to address the **challenges** and **priorities** identified.*
- *Arrangements for continued engagement of stakeholders.*
- *Arrangements for continued monitoring and evaluating the policy for its impact on different groups as the policy is implemented (or pilot activity progresses)*
- *Arrangements for embedding findings of the assessment within the wider system, OGDs, other agencies, local service providers and regulatory bodies*
- *Arrangements for publishing the assessment and ensuring relevant colleagues are informed of the results*
- *Arrangements for making information accessible to staff, patients, service users and the public*
- *Arrangements to make sure the assessment contributes to reviews of DH strategic equality objectives.*

For the record

Name of persons who carried out this assessment: Michelle Gallagher

Date assessment completed: 04.02.2019

Name of responsible Director: Director of Nursing

Date assessment was signed:

11 DOCUMENTATION AND RECORD KEEPING

11.1 Effective documentation is of paramount importance for the following reasons:

- To comply with NMC guidance on record keeping
- Contemporaneous written records provide the evidence and rationale on which care delivery is based and are legal requirement. They could be scrutinised at any time in a court of law and must therefore accurately reflect and justify the actions and decisions made by health care professionals
- Accurate records improve communication between health care professionals regarding individual patient care
- Accurate, comprehensive records enhance continuity of care.

12 DISTRIBUTION LIST / DISSEMINATION METHOD

12.1 Once approved, by the Trust Wide Policies Group, this policy will be added to the Clinical Policies intranet site and communicated via the weekly Communication Bulletin. Knowledge of the guideline will also be communicated to staff via the Learning and Development Bureau: LDB@merseycare.nhs.uk and also by the Skin Care Service who support community nurses in the management of patient with infected wounds.

References

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Linked Areas/Information

This guideline should be used in conjunction with:

Other Skin Care Service Guidelines
<http://nww.liverpoolch.nhs.uk/policies-and-procedures/clinical-policies.htm>

Practical Guide to the Management and Treatment of Wounds in Primary Care
<http://opera.liverpoolch.nhs.uk/SIRS/Policies-and-Procedures/Clinical%20Policies/Forms/Search.aspx>

Infection Prevention Control Manual
<http://opera.liverpoolch.nhs.uk/SIRS/Policies-and-Procedures/Clinical%20Policies/Infection%20Prevention%20Control%20Manual.pdf>

Antimicrobial Guidelines and Management of Common Infections In Primary Care (2015)
<http://opera.liverpoolch.nhs.uk/SIRS/Useful%20Documents/Pan%20Mersey%20Antimicrobial%20Guidelines%202015%20.pdf>

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Pan Mersey Area Prescribing Committee, Antimicrobial Guide and Management of Common Infections in Primary Care 2015/16. Strategies to Optimise Prescribing of Antimicrobials in Primary Care
www.panmerseyapc.nhs.uk/formulary/documents/05-00-00_infections.pdf

Appendix 1 – Signs and Symptoms associated with stages of the Wound Infection Continuum - Adapted from IWII (2016), WUWHS (2008)

Contamination	Colonisation	Local infection	Spreading infection	Systemic infection
<p>Presence of bacteria within the wound without multiplication or host reaction; wound healing is not delayed.</p>	<p>Microbial organisms within the wound that is restricted without producing a host reaction. Microbial growth occurs at a non-critical level and wound healing is not delayed or impeded.</p>	<p>Covert (subtle) signs of infection</p> <ul style="list-style-type: none"> • Delayed wound healing • Epithelial bridging and pocketing in granulation tissue • Increasing malodour • Hypergranulation (excessive vascular tissue) • Bleeding, friable granulation • Wound breakdown and enlargement • New or increasing pain <p>Overt (classic) signs of infection</p> <ul style="list-style-type: none"> • New or increasing pain • Delayed wound healing • Erythema • Local warmth • Swelling • Purulent discharge • Increasing malodour 	<ul style="list-style-type: none"> • Malaise/lethargy or non-specific general deterioration • Loss of appetite • Extending in duration + / - erythema • Lymphangitis • Crepitus • Wound breakdown / dehiscence with or without satellite lesions • Inflammation, swelling or lymph glands 	<ul style="list-style-type: none"> • Severe sepsis • Septic shock • Organ failure • Death

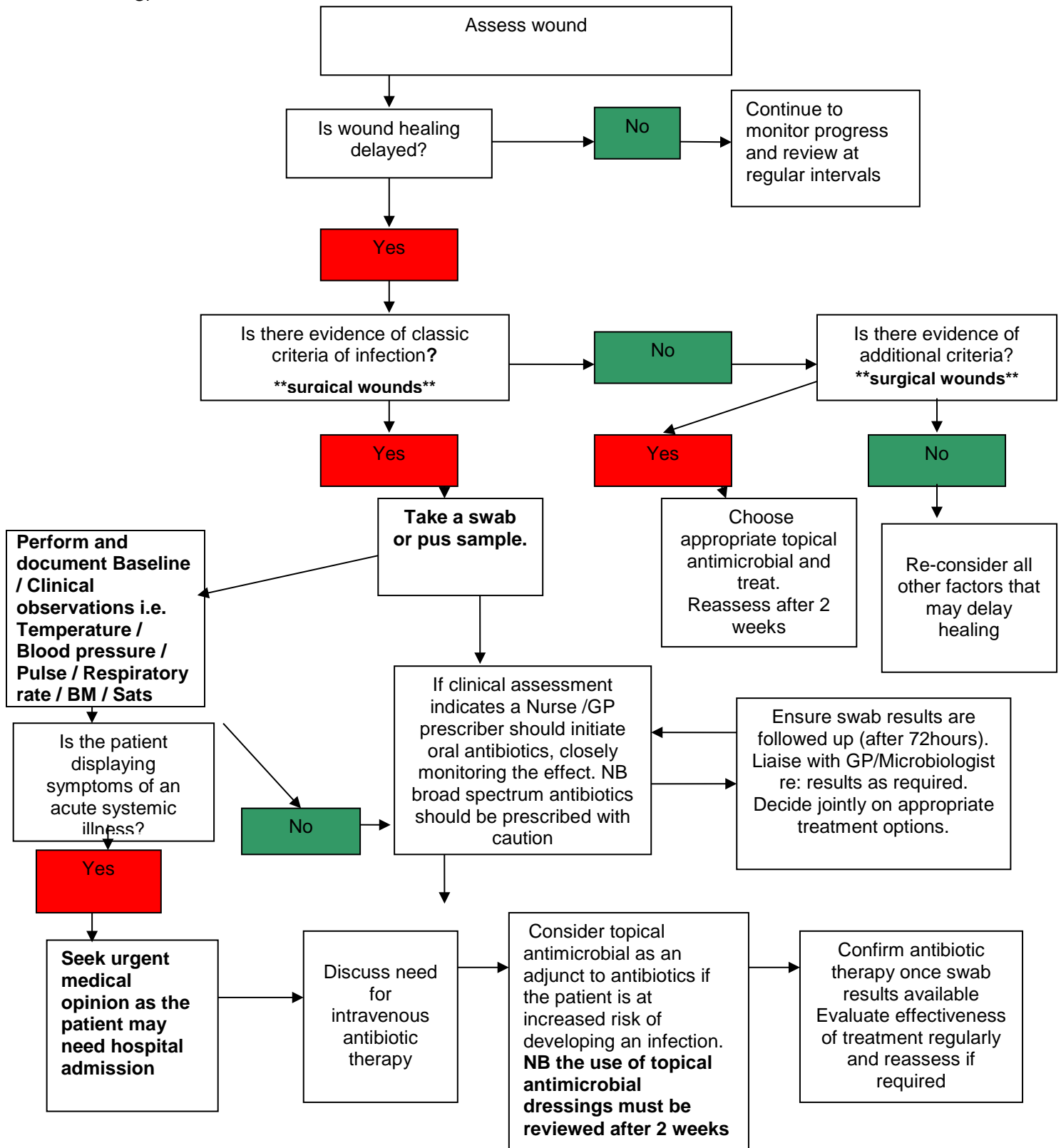
Appendix 2 – Triggers for suspecting wound infection in Acute and Chronic Wounds Adapted from IWII (2016), WUWHS (2008)

Acute Wounds e.g. surgical or traumatic wounds, or burns	
Localised Infection	Spreading Infection
Classic signs and symptoms: <ul style="list-style-type: none"> • New or increased pain • Erythema • Local warmth • Swelling • Purulent discharge • Pyrexia • Delayed wound healing • Abscess • Malodour 	Localised infection PLUS: <ul style="list-style-type: none"> • Further extension of erythema • Lymphangitis • Crepitus in the soft tissues • Wound breakdown / dehiscence
N.B <ul style="list-style-type: none"> • Immunocompromised patients – signs and symptoms may be • Deep wounds – induration, extension of the wound, unexplained increase in White Cell Count or signs of sepsis • Burns 	

Chronic Wounds e.g. diabetic foot ulcers, venous leg ulcers, arterial leg/foot ulcer or pressure ulcers	
Localised Infection	Spreading Infection
<ul style="list-style-type: none"> • Delayed healing • New, increased or altered pain • Discolouration to the wound bed • Induration • Bridging / pocketing • Peri-wound oedema • Increase in purulent exudate • Bleeding or friable tissue • Malodour 	Localised infection PLUS: <ul style="list-style-type: none"> • Breakdown of the wound • Lymphangitis • Malaise or deterioration in patient's general condition • Extending Erythema • Crepitus • Warmth, Induration or discolouration spreading into the peri-wound area
N.B <ul style="list-style-type: none"> • Patients who are immunocompromised and/or have motor or sensory neuropathy, symptoms may be less obvious • Arterial ulcers – may become wet when infected if an increase in exudate • The diabetic foot, inflammation may not necessarily be indicative of infection 	

Appendix 3 – Infected / Critically Colonised Wound Management Algorithm - Adapted from Scanlon (2005)

** NB** For Surgical wounds with a prosthetic implant or deep metal work showing classic / additional signs of infection refer urgently back to Consultant; for any other form of implant urgently discuss with GP

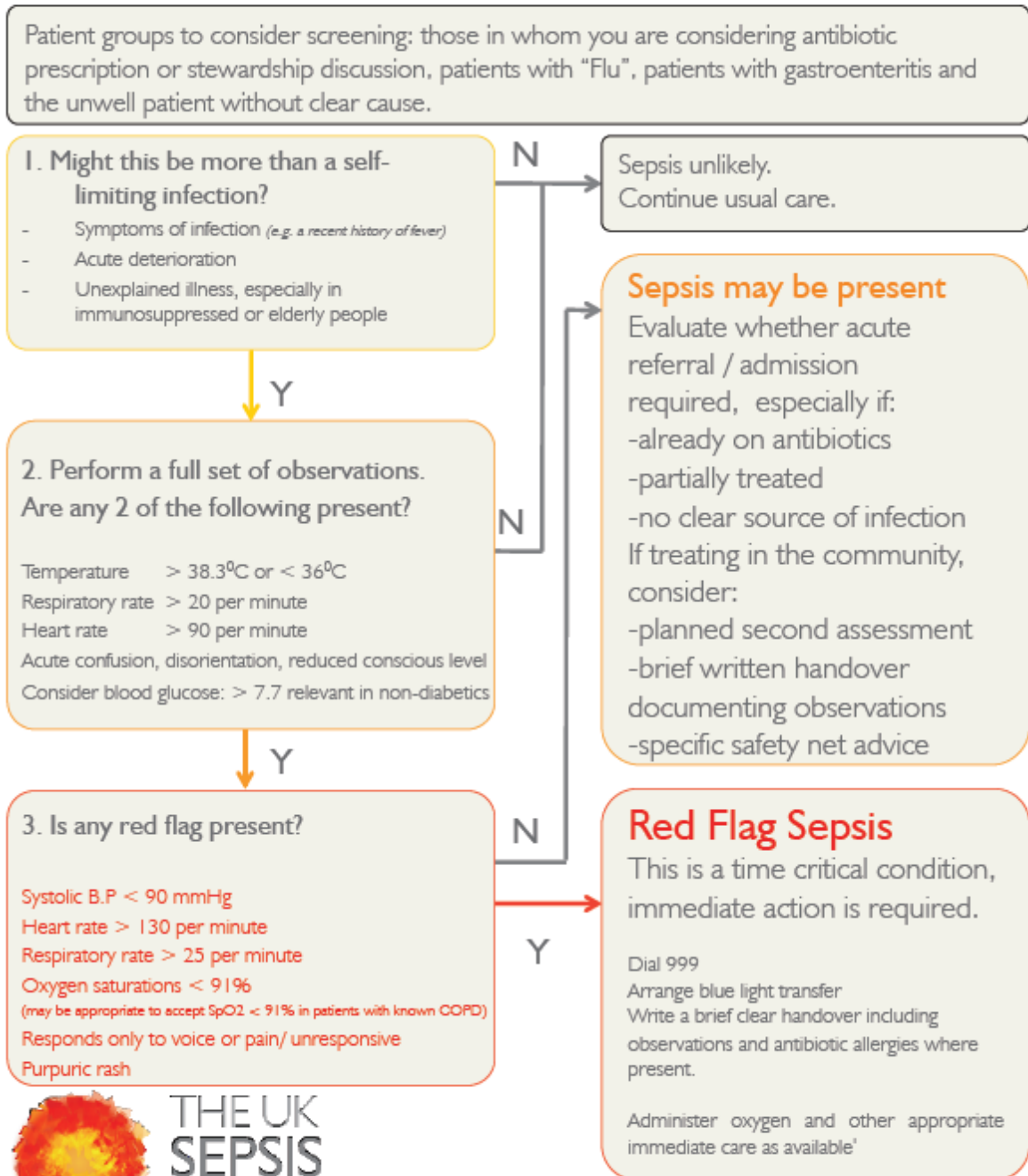


NB - For wounds that display evidence of infection and do not respond to treatment or are recurrently infected, consider referral to the Skin Care Service for advice and support.

Appendix 4 – Sepsis Screening and Action Tool

General Practice Sepsis Screening and Action Tool

Sepsis is a time critical condition. Screening, early intervention and immediate treatment saves lives. This tool should be applied to all adult patients who are not pregnant who have a suspected infection or their clinical observations are outside of normal limits



N.B. please refer to Wound Assessment guidelines for full document:

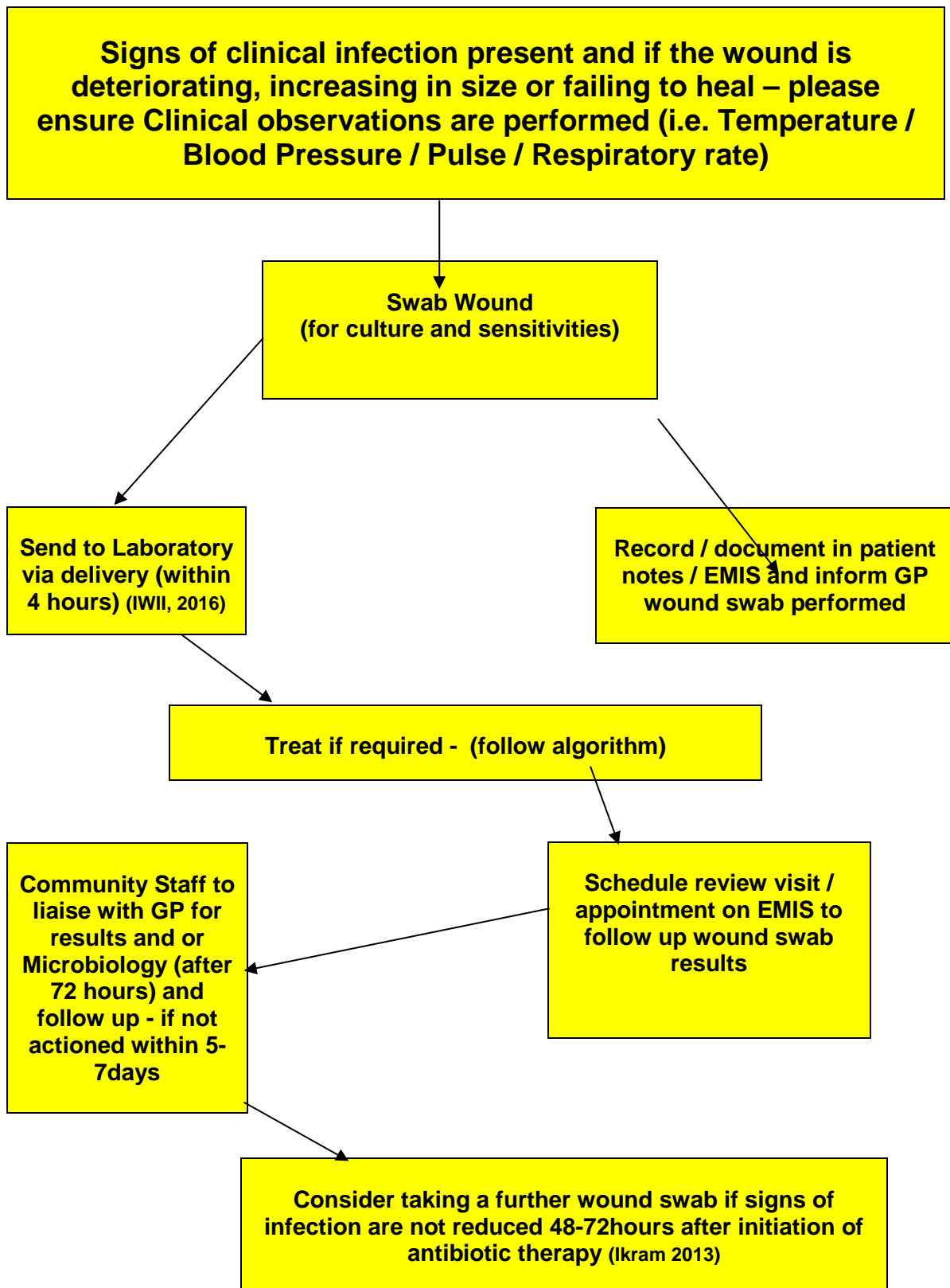
<http://opera.liverpoolch.nhs.uk/SIRS/Policies-and-Procedures/Clinical%20Policies/Forms/Search.aspx>

Appendix 5 - Recommended Technique for Taking a Wound Swab

Action	Rationale	Supporting evidence and level
The wound should be irrigated with warm saline or tap water prior to swabbing	To remove dressing residue and surface contaminants therefore improving accuracy in sampling of invasive causative organisms	C
The tip of the wound swab should be moistened with normal saline or tap water prior to sampling	This ensures that the swab is absorbent and increases the survival of bacteria prior to microbiology culture	C
Only areas of viable tissue should be sampled	If slough or necrotic tissue is sampled only surface contaminants will be cultured	C
Swabs should be taken in a zig-zag motion, covering the whole wound whilst rotating the swab	This ensures that an accurate microbial sample is collected	C
The swab should be clearly labelled with all relevant patient details	To allow for accurate patient identification	C
<p>The microbiology request form should be accurately completed to include the following clinical information:</p> <ul style="list-style-type: none"> • Patient details • Location of wound • Size of the wound • What signs of infection are present • Wound aetiology • Recent or current antibiotic therapy • Any underlying pathologies such as peripheral vascular disease, diabetes and immunosuppression • Recent increase in pain, exudate or malodour 	This will provide the microbiologist with an accurate clinical picture and will allow more appropriate interpretation of microbial growth. It will reduce the risk of false positive and false negative results. The skin supports the growth of different natural flora in different body locations.	C
Ideally swabs should be cultured within 4 hours of collection from the patient. For community practitioners swabs should be cultured as soon as is reasonably possible from the point	This reduces the risk of microbes being missed possibly due to death on route to being processed.	C

Action	Rationale	Supporting evidence and level
of patient sampling, but should certainly reach the laboratory on the same day	Microbes vary in their sensitivity to oxygen and nutritional availability once removed from their natural environment	
Swabs should be stored at ambient temperatures whilst awaiting processing	Microbes vary in their sensitivity to temperature changes when removed from their natural environment	C
Any practitioner taking a wound swab is individually responsible for ensuring the results are reviewed and acted upon appropriately	This ensures that swab results are reviewed in a timely manner, antibiotic therapy adjusted if necessary and wound infection treated effectively	C
Clinical observations: Any practitioner taking a wound swab should also perform Clinical observations (i.e. Temperature / Blood Pressure / Pulse / BM / Oxygen saturations and Respiratory rate) to rule out systemic signs of infection	This will ensure that screening / early interventions are performed to determine if immediate treatment is required	C

Appendix 6 – Wound Swab Flowchart



Appendix 7 - Aseptic / Clean technique (NICE, 2011, 2012) (also see Mersey Care Infection Control Guideline)

Introduction

An aseptic technique is used to carry out a procedure in a way that minimises the risk of contaminating an invasive device, e.g., a susceptible body site such as a wound.

When an aseptic technique should be used

The following are some examples of when an aseptic technique should be used, but is not an exhaustive list:

- when dressing wounds healing by **primary intention**, e.g., surgical wounds, burns
- dressing deep wounds that lead to a cavity or sinus
- minor surgery procedures
- suturing wounds
- if the patient is immunosuppressed, diabetic or at high risk of infection.

Who should undertake an aseptic technique?

- staff who are trained and competent in an aseptic technique should undertake this procedure. Adherence to the principles of asepsis (as described below) plays a vital role in preventing the transmission of infection in any environment. It is the responsibility of each member of staff who undertake an aseptic technique to understand the meaning of these principles and to incorporate them into their everyday practice.
- Education, training and assessment of aseptic technique should be provided for all persons before undertaking such procedures.
- It is good practice to undertake peer audits to monitor competency and a record of training and audit should be available.
- Staff undertaking an aseptic technique should be free from infection, e.g., colds, sore throats, septic lesions.

The principles of asepsis/aseptic technique

Asepsis is defined as the absence of pathogenic (harmful) organisms. The principles of asepsis/aseptic technique are:

- reducing activity in the immediate vicinity of the area in which the procedure is to be performed
- keeping the exposure of a susceptible site to a minimum
- checking all sterile packs to be used for evidence of damage or moisture penetration
- ensuring all fluids and materials to be used are in date
- not re-using single use items
- ensuring contaminated/non-sterile items are not placed in the sterile field
- ensuring appropriate hand decontamination prior to the procedure
- protecting uniform/clothing with a disposable apron
- using sterile gloves.

Good practice

- Use standard precautions.
- Dispose of single use items after use. Do not re-use.
- Dispose of single patient use items after the patient / clients treatment (single patient use items can be decontaminated and re-used again on the **same** patient / client, but cannot be used on another service user).
- Store sterile equipment in clean, dry conditions, off the floor and away from potential damage.
- Dispose of waste as per local policy.

The procedure for dressing a wound using an aseptic technique

- Avoid exposing or dressing wounds or performing an aseptic procedure for at least 30 minutes after bed making or domestic cleaning to allow any dust particles to settle.
- Staff should be 'Bare Below the Elbows' (see Infection Control guidelines for Hand Hygiene Guidance).
- Maintain a sterile field throughout the procedure.

ASEPTIC TECHNIQUE

1. Decontaminate hands by washing with liquid soap and warm water or by applying alcohol handrub, using the recommended technique (see Infection control guidelines on Hand hygiene technique for staff).
2. Decontaminate the trolley (or working surface to be used if trolley not available, e.g., in a service users home) with detergent and warm water or detergent wipes and dry.
3. Assemble sterile procedure packs, e.g., dressing packs and equipment, check all items are in date and packaging is intact.
4. Ensure any windows are closed and fans switched off.
5. Explain and discuss the procedure with the patient / client.
6. Ensure patient / client is positioned both comfortably and so the area to be exposed is accessible without undue exposure.
7. Put on disposable apron.
8. If an old dressing is in place, loosen the tape/adhesive securing it, but leave in place. Decontaminate hands with alcohol handrub.
9. Open sterile procedure pack outer packaging, sliding the contents onto the top shelf of the trolley (or working surface).
10. Open the sterile field by using the corners of the paper.
11. Add any extra items without compromising the sterile field.
12. Decontaminate hands with alcohol handrub.
13. Lift the plastic waste disposal bag from the sterile field carefully by its open end and holding one edge of the opening end, place the other hand into bag, hence covering the hand with a sterile 'glove'. Using the sterile 'glove', arrange sterile items on the sterile field.
14. With sterile 'glove' still in place, remove the old dressing from wound. Invert the 'glove', removing it from hand ensuring the old dressing is left inside it. Attach the bag to the trolley, below the top shelf or on a nearby surface if in a service user's home.
15. Avoid exposing the wound for longer than the minimum time to prevent air borne contamination and to maintain optimal wound temperature.
16. Apply alcohol handrub and put on sterile gloves ensuring hands do not contaminate outer surface of the glove.
17. Perform the procedure, including cleaning of the skin where applicable.
18. Ensure equipment is discarded if it becomes contaminated.

19. Dispose of all used items, including soiled dressings, into the plastic waste disposal bag and seal.
20. Remove gloves, apron and discard disposal waste bag.
21. Decontaminate hands with alcohol handrub.
22. Decontaminate the working surface with detergent and warm water or detergent wipe.
23. Decontaminate hands with liquid soap and warm water or apply alcohol handrub.
24. Complete appropriate documentation.

Non-touch technique (clean technique)

This is a modified aseptic technique that can be used for undertaking procedures on vulnerable sites that are not sterile, but there is a need to avoid the introduction of micro-organisms to the site. A non-touch technique (clean technique) should be used for the following:

- dressing open wounds that are healing by **secondary intention**, e.g., pressure sores, leg ulcers, dehisced wounds, dry wounds, simple grazes and removing sutures

The aim is to avoid contamination by not touching key elements, e.g., the inside surface of a sterile dressing, end of a sterile connection or other item that will be in contact with a susceptible site. A disposable apron should be worn. Non-sterile gloves can be worn, as they are usually for the protection of staff rather than the service user. Tap water rather than sterile saline can be used for the cleaning of wounds.

Please note: if wounds enter deeper sterile body areas, then an **ASEPTIC TECHNIQUE** must be used. If the risk assessment shows the service user to be high risk, then an aseptic technique must be used.

If two procedures are being undertaken, e.g., suction and a wound dressing, change gloves and decontaminate hands between each procedure.

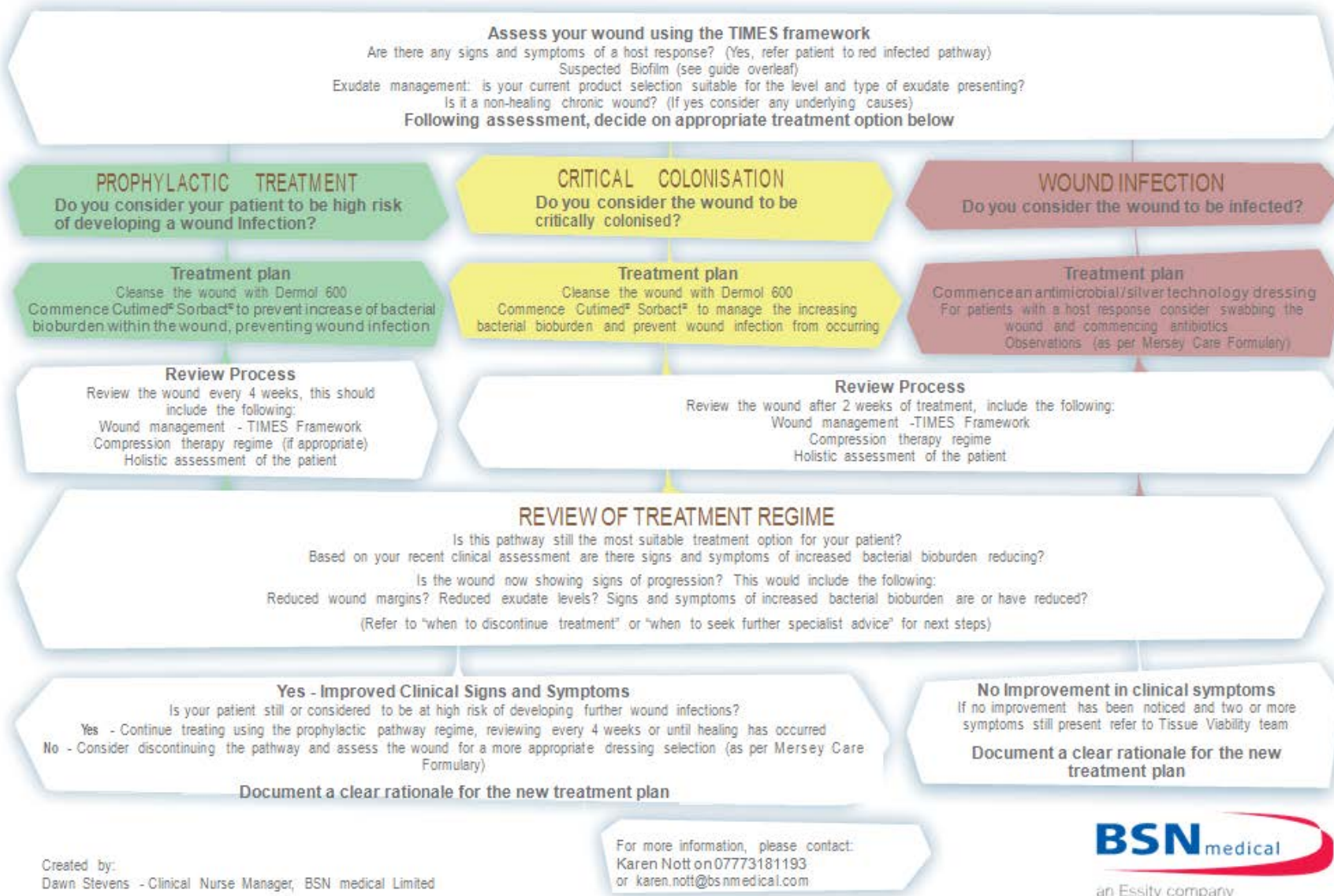
Appendix 8 - Potential Wound Pathogens

(Cooper 2003)

The following table lists the organisms most frequently isolated from wounds

Gram-positive facultative cocci	Beta-haemolytic streptococci	<i>Streptococcus pyogenes</i> <i>Streptococcus species</i> (Group G)
	Enterococci	<i>Enterococcus faecium</i> <i>Enterococcus faecalis</i>
	Staphylococci	<i>Staphylococcus aureus</i> Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA) <i>Staphylococcus epidermidis</i>
Gram-negative aerobic rods		<i>Pseudomonas aeruginosa</i>
Gram-negative facultative rods		<i>Acinetobacter species</i> <i>Enterobacter species</i> <i>Eschericia coli</i> <i>Klebsiella species</i> <i>Proteus species</i> <i>Serratia marcescens</i>
Anaerobes		<i>Bacteroides species</i> <i>Clostridium species</i> <i>Peptostreptococcus species</i> <i>Prevotella species</i>
Fungi	Yeasts	<i>Candida species</i>
	Mycelial fungi	<i>Aspergillus species</i> <i>Fusarium species</i>

PREVENTING AND MANAGING WOUND INFECTION



Appendix 9

PREVENTING AND MANAGING WOUND INFECTION

SUPPORTING INFORMATION

What is a High Risk Patient?

- Co-morbidity that alters a patient's immune response
- Patient who has had 2 or more infections within the same wound previously
- Medications that can alter a patient's immune response (chemotherapy)

Holistic Assessment of the Patient

Consider the following:

- Nutritional status including fluid intake
- Co-morbidities - are they being managed effectively?
- Medication regimes
- Compliance with the treatment is there anything that is preventing compliance?

Wound Assessment - TIMES Framework

- T** - Tissue type - viable - continue as healthy granulation tissue present. Non-viable - consider debridement options before continuing
- I** - Inflammation or Infection - review pathway if wound is infected
- M** - Moisture levels - aim for a moist wound healing environment
- E** - Edge of the wound - is epithelisation present? If no progress observed please review the wound starting at T of TIME
- S** - Surrounding skin assess the cause and manage hyperkeratosis/eczema/dry skin / oedema/skin damage. Protect the skin for further damage

Signs and Symptoms of Critical Colonisation

- Increased exudate levels
- Wound progression slows down (static wound)
- Erythema not exceeding 2cm
- Alteration in pain levels

Suspected Biofilm in the Chronic Wound - Are Any of the Following Present?

- Absence of healing progression, even though all obvious co-morbidities and wound management issues have been addressed
- Visible, slimy, gel-like and shiny material on the surface of the wound bed, which detaches easily and atraumatically from the wound bed
- Re-forming of slough quickly, despite debridement
- An increase in the production of exudate
- Poor quality granulation tissue - possibly fragile and/or hypergranulation
- Signs of local infection (as biofilm is a precursor to infection) e.g. heat, redness, swelling, pain, odour

Cellulitis Guidelines

Diagnosis will include an assessment of the patient highlighting the following:

- Painful, hot, swollen, and tender skin, that spreads rapidly. Skin may have a glossy tight appearance, blisters may also be present
- Look for a skin break where the infecting organism may have entered
- Mark it with a pen to monitor for spreading infection
- GP to commence 7 days oral antibiotics
- Monitor for signs of sepsis - if suspected admit to acute hospital to follow sepsis pathway (the sepsis six)

Cellulitis can often be misdiagnosed and could be:

- Lipodermatosclerosis - hardened, tight, red or brown skin, typically affecting the inner aspect of the calf
- Venous eczema - red, scaly or flaky skin, which may have blisters and crusts on the surface
- Exclude DVT

Signs of Sepsis

- Class I - there are no signs of systemic toxicity and the person has no uncontrolled co-morbidities
- Class II - the person is either systemically unwell or systemically well but with a co-morbidity (for example peripheral arterial disease, chronic venous insufficiency, or morbid obesity) which may complicate or delay resolution of infection
- Class III - the person has significant systemic upset such as acute confusion, tachycardia, tachypnoea, hypotension, or unstable co-morbidities that may interfere with a response to treatment, or a limb-threatening infection due to vascular compromise
- Class IV - the person has sepsis syndrome or a severe life-threatening infection such as necrotising fasciitis

Signs and Symptoms of Wound Infection

Local

- Localised erythema
- Localised heat
- Pain and discomfort
- Increased exudate
- Oedema
- Delayed healing
- Friable tissue
- Malodour
- Discoloration of tissue
- Pocketing

Systemic

- Spreading erythema
- Pyrexia
- Abscess/pus
- Wound breakdown
- Cellulitis
- General malaise
- Raised WBC count
- Lymphangitis

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Appendix 10 - Standard of Frequency for Recording Clinical Observations Guidance as per NEWS 2 (Respirations, Oxygen Saturation, Blood Pressure, Pulse, Consciousness and Temperature)

Please note: this guidance does not override clinical judgement

Patient Cohort/Condition	Frequency
On admission to Caseload	ALL Patients to have completion of baseline observations on initial assessment
Referral to GP	Record observations - before contacting GP for a review or if patient is requiring an admission hospital (planned or emergency admission) To be documented in letter to GP/acute
Patients with wounds: <ul style="list-style-type: none"> • If any new wound identified Patient or carers reports patient feeling unwell at time of visit or within last 24 hours • If a wound has clinical signs of infection and/or a decision has been made to commence an antimicrobial dressing to reduce bacterial load • When taking a wound swab* • Deteriorating wound /not healing 	Frequency – observations to be recorded at each visit * Note it is the service who has taken the swab who is accountable for following this up
Patients with other conditions who:- Present as unwell following holistic assessment If any concerns re a patient being unwell or carers reports feeling patient feeling unwell at time of visit or within last 24 hours	Record observations at each visit until condition stable
Patients on Intravenous (IV) infusions/transfusions/flushes, any IV access device	Record observations at each visit
Patients on daily visits for other care interventions with stable condition (administration of medication etc.)	Record observations when updating care plans/nursing summary and as clinically indicated. Minimum of annual update
Patient on monthly, 2 monthly, 3 monthly visits (B12 etc.) with stable condition	Record observations when updating care plans/nursing summary and as clinically indicated. Minimum of annual update
Patients who are immunosuppressed at each intervention	Record observations as per hospital Care Plan Management Advice unless clinically indicated during visit under any of the above guidance
Patients with urinary catheters	Record observations at each intervention, when updating catheter bundle & as clinically indicated. Minimum 3 monthly Intermittent catheter patient – as clinically indicated/minimum 3 monthly
End of life patients	Record observations as clinically indicated in relation to patient, family & multi-disciplinary care planning using Advanced/Anticipatory/ End of Life Care Planning discussions/Gold Standard Framework (GSF) meetings etc. to aid decision making. Decision making must take into account whether there are there are potentially reversible causes for clinical deterioration

Appendix 11 - Audit Tool for Infected Wounds

NB This Tool must be used in conjunction with the Wound Assessment Audit Tool

Speciality:

Date episode of care commenced:

Date of audit:

Completed by: (name /designation)

Reference/details:

	CRITERION	EXCEPTION	COMPLIANCE ACHIEVED		
			YES	NO	N /A
<i>Patient Assessment</i>					
1	Is there documented evidence that baseline investigations have been carried out if systemic infection suspected?	None			
<i>Specific assessment of the wound</i>					
2	Is there documented evidence that where clinical infection is suspected, a wound swab has been taken?	None			
3	If the patient has been prescribed antibiotics has the following information been recorded?	Not required where antibiotics not prescribed.			
	• Antibiotic name	None			
	• Dose	None			
	• Frequency	None			
3	• Length of Course	None			
4	Is there documented evidence that a rationale has been provided for a diagnosis of wound infection?	None			
5	Is there documented evidence that the results of any clinical investigations (blood tests, wound swabs) have been followed up?	Not required where no clinical investigations have been undertaken .			
<i>Communication</i>					
6	Is there documented evidence that the patient / carer has been informed of the potential diagnosis of a wound infection?	None			

Care Planning and Evaluation

7	Is there documented evidence that an appropriate management plan has been developed to treat a wound infection?	None			
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