MEASLES MANAGEMENT & CONTACT TRACING POLICY

POLICY

Reference	CPG-TW-ICP 41		
Approving Body	Infection Prevention and Control Committee		
Date Approved	09/02/2024		
For publication to external SFH website	**Positive confirmation received from the approving body that the content does not risk the safety of patients or the public:**		
	YES	**NO**	**N/A**
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Supersedes	Not Applicable – NEW document		
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Consultation Undertaken	Infection Prevention and Control Committee members Paediatrics and Emergency Care teams		
Date of Completion of Equality Impact Assessment	08/02/2024		
Date of Environmental Impact Assessment (if applicable)	08/02/2024		
Legal and/or Accreditation Implications	In accordance with United Kingdom Health Security Agency and NHS England guidance		
Target Audience	Trust wide		
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Sponsor (Position)	Director of Infection Prevention and Control		
Author (Position & Name)	Nurse Consultant Infection Prevention and Control, Sally Palmer		
Lead Division/ Directorate	Clinical Support, Therapies and Outpatients		
Lead Specialty/ Service/ Department	Infection Prevention and Control Team		
Position of Person able to provide Further Guidance/Information	Infection Prevention and Control Team		

Associated Documents/ Information	**Date Associated Documents/ Information was reviewed**
Not Applicable	Not Applicable
Template control	June 2020

CONTENTS

1.0 INTRODUCTION

Measles is caused by a paramyxovirus. The primary site of infection is the respiratory epithelium of the nasopharynx. Viraemia with subsequent infection of the reticuloendothelial system occurs 2-3 days after invasion. A second viraemia occurs 4-7 days after the initial phase, which may result in infection of the lower respiratory tract and other organs. Measles virus is shed from the nasopharynx.

Case Definition

- Generalised rash lasting for more than 3 days; and
- Temperature in excess of 38°C; and
- Coryza or conjunctivitis.

Further defined in Table.

2.0 POLICY STATEMENT

The purpose of the document is to provide clinical staff with guidelines for management of Measles infected/contact patients and to identify strategies for the prevention and of infection to other patients, staff and visitors.

The policy applies to all staff working within Sherwood Forest Hospitals

3.0 DEFINITIONS/ ABBREVIATIONS

OH	Occupational Health
IPCT	Infection, Prevention & Control
MMR	Measle, Mumps and Rubella Vaccine
PEP	Post Exposure Prophylaxis
UKHSA	United Kingdom Health Security Agency
VRD	Viral Reference Department

Measles – an acute, contagious viral disease, usually occurring in childhood and characterised by eruption of red spots on the skin, fever, and catarrhal symptoms. Also called rubeola.
Measles Contacts – person(s) who have come in close proximity for 15 minutes or longer to someone suffering from measles.
Isolation – social separation of a person who has or is suspected of having a contagious disease.
Rash – a skin eruption.
Immunisation – the process of inducing immunity to an infectious organism or agent in an individual through vaccination.

4.0 ROLES AND RESPONSIBILITIES

4.1. Roles of the Managers

Divisional Directors of Nursing and Matrons must ensure that resources are available for health care workers to undertake effective standard and isolation precautions pertinent to Measles.

4.2. Health care personnel

Have a clinical and ethical responsibility to carry out effective infection prevention and control procedures applicable to the control of Measles and to act in a way which minimises risk to the patient.

4.3. The Infection Prevention and Control Team

Is responsible for providing expert advice in accordance with this policy, for supporting staff in its implementation, and assisting with risk assessment where complex decisions are required. The team is responsible for ensuring this policy remains consistent with the evidence-base for safe practice, and for reviewing the policy on a regular basis.

The Infection Prevention and Control team are responsible for contact tracing patients in the event of a case being identified in the hospital.

4.4. The Occupational Health Department

Is responsible for managing appropriate pre-placement health screening for all staff and for managing appropriate contact tracing for staff who are contacts of a confirmed/suspected positive Measles. The aim is to reduce the risk of patients acquiring Measles from healthcare workers who are or may become infectious; and to reduce the risk of health care workers acquiring Measles through the course of their work.

4.5. Consultant Medical Staff

Are responsible for ensuring their junior staff understand this policy, and adhere to the principles contained in it at all times.

5.0 APPROVAL

Following appropriate consultation this policy (v1.0) has been approved by the Trust's Infection Prevention and Control Committee.

6.0 DOCUMENT REQUIREMENTS (POLICY NARRATIVE)

6.1 Clinical Management

Incubation period: 10-12 days from exposure until prodrome. Period from exposure to onset of rash onset averages 14 days (range 7-21 days).

Prodrome: lasts 2-4 days (range 1-7 days). Characterised by fever followed by the onset of cough, coryza and or conjunctivitis.

Koplik's spots: lesions present on the mucous membranes, which is considered to be pathognomonic for measles. It occurs 1-2 days before the skin rash and lasts for 1-2 days after the rash has faded. Koplik's spots appear as punctuate blue-whitish spots on the bright red background of the buccal mucosa.

Measles rash: maculopapular eruption, which lasts 5-6 days. It begins at the hairline, and then involves the face and upper neck. Over the next 3 days the rash gradually proceeds downwards and outwards until it reaches the hands and feet. The macupapular rash is usually discrete but may become confluent particularly on the upper body. Initially lesions blanche under pressure, but after 3-4 days they do not blanche with pressure. Fine desquamation occurs over more severely involved areas. The rash fades in the same order that it appears, from head to extremities. The rash may be difficult to recognise in non- Caucasians.

Table 1. Case definitions for measles

Case definition categories	Definition
Laboratory confirmed	A suspected case with laboratory confirmation of acute infection.
Epidemiologically confirmed (a term used for surveillance purposes to define confirmed cases in the absence of a laboratory test to confirm measles)	A clinically classical case of measles with a direct epidemiological link to a confirmed case (where onset of symptoms occurred within 7 to 21 days of exposure),or related to another epidemiologically confirmed case (for example in an outbreak setting).
Likely (probable)	A clinically classical case of measles with epidemiological features that either increase the likelihood of the patient having been exposed and/or favour the diagnosis of measles relative to other causes of rash illness. Clinical features are outlined in Table 2 and epidemiological risk factors are summarised in 'Factors to consider…' below.
Likely breakthrough	A suspected case of measles in a patient who has had 2 doses of measles containing vaccine (usually at least 6 years after vaccination) or has confirmation of previous measles infection (IgG positive). The case will usually

	have mild symptoms (Table 2) and epidemiological information that suggest exposure to measles (see 'Factors to consider…' below). Please note these cases are rare.
Unlikely (possible)	A suspected case of measles which does not meet the definition of a likely case, either because it is not clinically classical (Table 2) or because the epidemiological context is not suggestive of measles.

Table 2. Clinical features of measles

Clinical features	**Symptoms**
Classical primary measles: generally very unwell and considered measles until proven otherwise	• fever equal to or over 38°C in the absence of antipyretics, and • generalised maculopapular rash, and • one or more of: conjunctivitis cough coryza
Mild: generally a milder illness	• fever typically 37.5°C to 39°C • rash may be more localised • may not have conjunctivitis, coryza or cough
Rash or fever following vaccination	Rash and mild fever on day 10 or 11 post-MMR vaccination is likely to be vaccine related

Box 1: Factors to consider in the risk assessment

Factors increasing the risk of exposure

- membership of a community known to be more susceptible, for example, traveller community, Charedi Orthodox Jewish community, anthroposophical (Steiner) communities, local community with low MMR vaccination coverage
- visited an area (local or international) where measles is known to be circulating, during the incubation period
- attendance at large international mass gathering events, where substantial mixing occurs between individuals potentially travelling from areas where measles is circulating; this would include, for example, events such as music festivals

Factors favouring the diagnosis of primary measles infection

- age: the likelihood of a suspected case being confirmed as measles is higher among adolescent and young adults. In infants and toddlers, measles-like clinical presentations due to other illnesses, such as roseola or scarlet fever, are common
- a lack of immunity or incomplete vaccination: the diagnosis is more likely if cases are unvaccinated or partially vaccinated, and have no prior history of measles infection

Table 3: Risk assessment of cases

Laboratory/ epidemiological features		Clinical features		
		Typical	**Mild**	**Atypical**
	Laboratory confirmed	Red	Red	Red
	Epidemiologically confirmed	Red	Red	Amber
	Factors that favour measles (Box 2)	Red	Amber	Amber
	None of the above	Amber	Green	Green

Table 4: Management of cases and vulnerable contacts

Risk assessment	Management
Green	• Post oral fluid kit – sample returned to Viral Reference Department (VRD) UKHSA
Amber	• Urgent testing of case. • Assess susceptibility of vulnerable contacts* and arrange PEP if appropriate. • Post oral fluid kit – sample returned to VRD
Red	• Do not await further testing of case. • Assess susceptibility of vulnerable contacts* and arrange PEP if appropriate. • Post oral fluid kit – sample returned to VRD

* Vulnerable contacts include immunocompromised contacts, infants and pregnant women for cases where primary measles is suspected and immunocompromised contacts where breakthrough measles (reinfection) is suspected.

Measles Immunity

People who have been vaccinated with 2 doses of measles vaccine or have had confirmed measles previously.

6.2 Complications

The most frequent complications include viral pneumonitis and otitis media, as well as diarrhoea. Measles infection often leads to a temporary reduction in immune responses in the few weeks following infection, which may increase the risk of severe secondary bacterial and viral infections. Tracheobronchitis (‘measles croup’) and pneumonia due to secondary bacterial infection are frequent complications of measles. (UKHSA, 2023)

6.3 Epidemiology of Measles

Occurrence: Worldwide
Reservoir: Human disease
Temporal pattern: Peaks in late winter and spring
Transmission: Primarily person-person spread via large respiratory droplets.
Airborne transmission: Via aerosolized droplet nuclei contributes to spread in confined spaces for up to 2 hours after a person with measles occupied the area.
Communicability: highly communicable >90% secondary attack rates in susceptible persons. Measles may be transmitted 4 days prior to 4 days after rash onset.

6.4 Testing of cases

Oral fluid testing: this should be undertaken for all suspect cases (provided by UKHSA). See appendix 1.
Viral throat swab: this should be undertaken for all suspected cases and sent to the Microbiology Laboratory. See appendix 2.

All testing is carried out in external labs and can take several days to receive the results.

6.5 Principles of risk assessment and public health management

1. Unlikely measles case
Step 1. Identify any recent local transmission, if none continue to step 5.
Step 2. Identify if the symptoms are clinically typical of measles, if not continue to step 5.
Step 3. Identify if any close contacts are in the high-risk group (see below), if not continue to step 5.
Step 4. Assess susceptibility of the high-risk group (see below) contacts (including urgent testing as appropriate), arrange urgent testing of case, and then PEP for contacts if necessary (after discussion with Consultant Microbiologist and UKHSA).
Step 5. Request oral fluid kit for the patient, from the UKHSA/obtain a viral throat swab and send to Trust Laboratory.
Step 6. If positive manage as a laboratory confirmed case, if negative discard case.

2. Likely measles
Step 1. Identify if there are any contacts in the high-risk group (see below), if not continue to step 3.
Step 2. Assess the susceptibility of the high-risk group (see below) contacts (including urgent testing as appropriate), and then arrange for PEP if necessary.
Step 3. Identify if there are any immunocompetent vulnerable contacts, if not continue to step 5.
Step 4. Assess susceptibility of immunocompetent vulnerable contacts (including urgent testing as appropriate), arrange urgent testing of the case, and then PEP for contacts if necessary (after discussion with Consultant Microbiologist and UKHSA).
Step 5. Request the oral fluid kit to be sent to the case/obtain a viral throat swab and send to Trust Laboratory.
Step 6. If positive manage as a laboratory confirmed case, if negative discard case.

3. Epi or lab confirmed cases

Step 1. Identify if there are any contacts in the high-risk group (see below), if not continue to step 3.
Step 2. Assess the susceptibility of any contacts in the high-risk group (see below); arrange for PEP if necessary (after discussion with Consultant Microbiologist and UKHSA).
Step 3. Request the oral fluid kit to be sent to the case if not undertaken already/obtain a viral throat swab and send to Trust Laboratory.
Step 4. Manage as a laboratory confirmed case. If negative in reference laboratory discard case.

High Risk Groups

- immunocompromised
- pregnant women
- children under 12 months
- Healthcare worker

6.6 Management of Index Case and Contacts

STEP 1 Establish clinical classification and isolate index case

- In Emergency Department: admit to isolation room or triage room
- On ward: admit to side room (preferably side room 1(lobby ventilated pressure room)) with door closed.
- FFP3 mask must be worn at all times when in contact with these patients.
- Patients with known or suspected measles should be cared for by those staff known to be immune to measles
- Alert Infection Prevention and Control Team (x 3525) or out of hours Consultant Microbiologist.
- Inform the UKHSA
- The UKHSA will require contact details for the case (or parent, guardian, next of kin as appropriate).
- For the case the UKHSA will also require information on date of onset of rash, MMR history, travel history, contact with other case(s) if known.

STEP 2 Contact Information (if the case was NOT isolated within 15 minutes of arrival into the department)

- Record names of all parent/guardians, siblings/children and record names of staff who were primary contacts.
- Record name, current location, contact number, date of birth, measles history/MMR status of all patients exposed to the case for > 15 minutes.
- Check if contacts are pregnant or immunocompromised.
- Send staff contacts details to Occupational Health

Children aged > 13 months

- Check the MMR status of exposed children >13 months
- Children with no history of MMR should be offered vaccination <72 hours post exposure.
- Children aged >18 months with record of one MMR should be offered MMR 2 if more than 4 months since MMR 1 (contact in the community via their GP, in-patients via responsible clinician unless ‘live’ vaccination is contra-indicated.

Vulnerable Contacts

- Collect name, current location (i.e. hospital ward on in the community, contact number, date of birth, measles history/MMR status of patients exposed to the case for >15 minutes and discuss with the Infection Prevention and Control/UKHSA.

6.7 PPE for assessment and management of confirmed and suspected cases of measles

Staff should wear the following PPE when assessing or managing patients with confirmed or suspected measles:

- single-use, disposable gloves
- single-use, disposable apron (or gown if extensive splashing or spraying, or performing an aerosol generating procedure (AGP))
- respiratory protective equipment (RPE) – FFP3 mask (must be fit tested)
- eye/face protection (goggles or visor)

If the patient has confirmed or suspected measles, then if possible/tolerated the patient should wear a surgical face mask (type I/II/IIR) in communal areas (for example, during transfer).

6.8 Visitors

Parents and carers should be supported to attend the care area while minimising the risk of exposure to other patients and themselves. Non-essential visitors should be minimised. Parents, carers, or visitors with symptoms (or who are a known, non-immune contact – for example, siblings) should not visit. However, if their presence is considered essential for compassionate (end of life) or other care reasons (for example, they are a parent or child) a risk assessment should be undertaken and mitigations (including source control) put in place to support attendance wherever possible.

Parents, carers, and visitors should be instructed on effective hand hygiene, be made aware of any infection risks, and offered appropriate PPE. Appropriate PPE, surgical face masks should be considered for parents, carers, or visitors who are considered a non-immune contact. Parents, carers, or visitors who are considered a household contact of the infected patient do not require PPE.

Parents, carers, or visitors should not be present during AGPs on infectious patients unless they are considered essential following a risk assessment.

It may be considered appropriate to restrict visiting in the event of an outbreak of measles within the healthcare setting. This is a local outbreak management team decision.

6.9 Duration of precautions

In general, patients should remain in isolation or cohorted, and transmission-based precautions (TBP) should be applied until resolution of symptoms and/or in accordance with the exclusion period (4 full days after rash onset, where day 0 is the date of onset of rash).

The duration of TBPs may require modification as some patients with more severe illness or underlying immune problems may remain infectious for a longer period. TBPs should only be discontinued in consultation with clinicians (including microbiology/IPC team).

6.10 Cleaning

In line with Trust cleaning procedures the clean required for measle would be and Amber clean.

6.11 Agency/Team contact details

UKHSA – 03442254524 – must be contact as soon as Measles is suspected (they will support with determination of likelihood)
Consultant Microbiologist – via Switchboard
IPC Team – 3525 – between 8am-4pm 7 days a week.

7.0 MONITORING COMPLIANCE AND EFFECTIVENESS

Minimum Requirement to be Monitored (WHAT – element of compliance or effectiveness within the document will be monitored)	Responsible Individual (WHO – is going to monitor this element)	Process for Monitoring e.g. Audit (HOW – will this element be monitored (method used))	Frequency of Monitoring (WHEN – will this element be monitored (frequency/ how often))	Responsible Individual or Committee/ Group for Review of Results (WHERE – Which individual/ committee or group will this be reported to, in what format (eg verbal, formal report etc) and by who)
Use of personal protective equipment	IPCT	Audit	Monthly	IPCC
Hand hygiene	IPCT	Audit	Monthly	IPCC

8.0 TRAINING AND IMPLEMENTATION

There is no specific training requirement in relation to this policy. When treating patients with suspected/confirmed infection related to measles, healthcare staff should follow this policy. If required, further assistance can be sought from senior colleagues and/or the Infection Prevention and Control Team.

9.0 IMPACT ASSESSMENTS

- This document has been subject to an Equality Impact Assessment, see completed form at Appendix 3
- This document has been subject to an Environmental Impact Assessment, see completed form at Appendix 4

10.0 EVIDENCE BASE (Relevant Legislation/ National Guidance) AND RELATED SFHFT DOCUMENTS

Evidence Base:

- National Measles guidelines, UKHSA, February 2024
- Guidance for risk assessment and infection prevention and control measures for measles in healthcare settings, NHS England, January 2024

Related SFHFT Documents:

- Isolation Policy
- Personal Protective Equipment (PPE) Policy

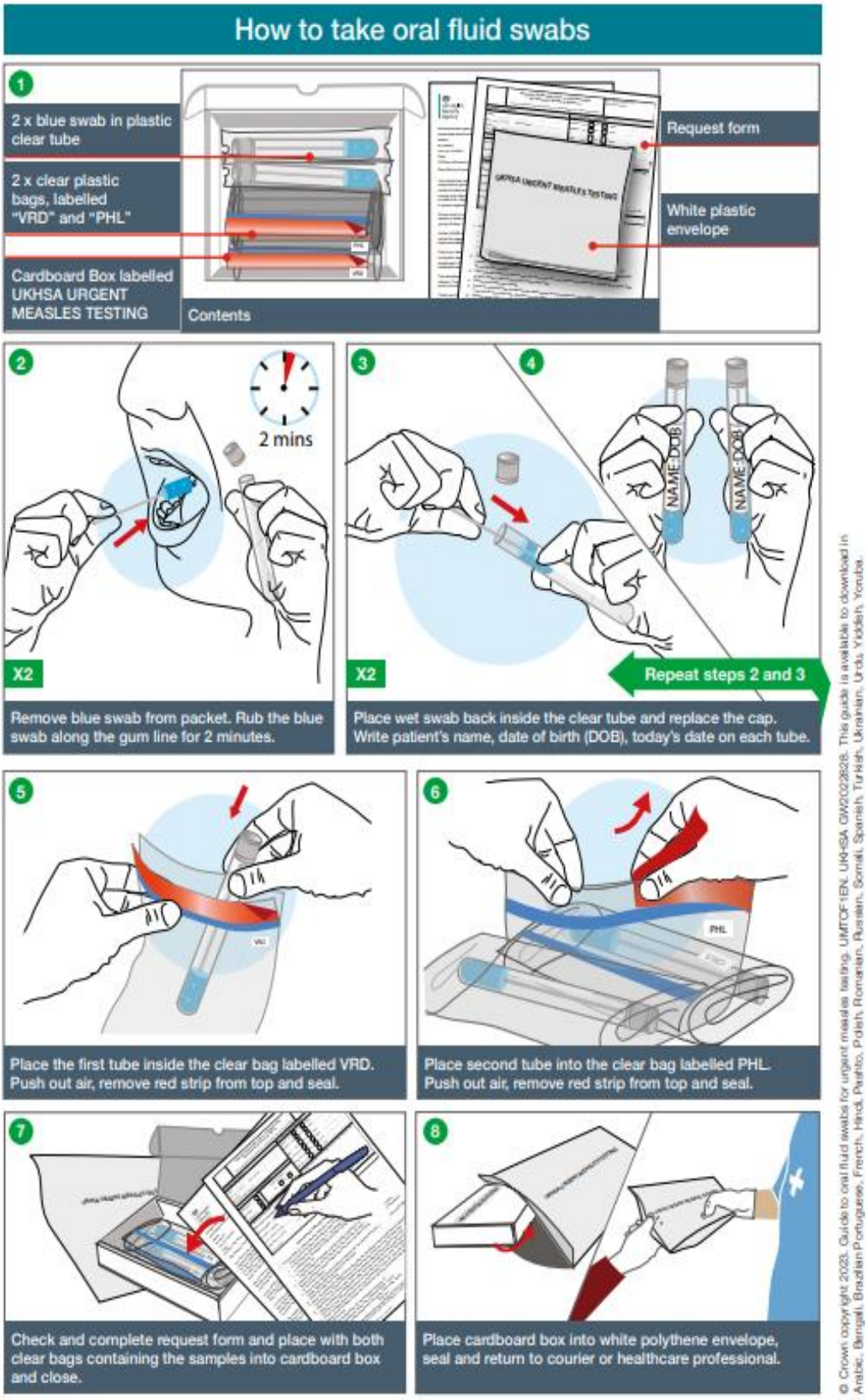
11.0 KEYWORDS

PPE, MMR

12.0 APPENDICES

Appendix 1 – How to take an oral fluid swab
Appendix 2 – Viral throat swab
Appendix 3 – Equality Impact Assessment
Appendix 4 – Environment Impact Assessment

Appendix 1: How to take an oral fluid swab



Appendix 2: Viral throat swab

APPENDIX 3 - EQUALITY IMPACT ASSESSMENT FORM (EQIA)

Name of service/policy/procedure being reviewed: MEASLES MANAGEMENT & CONTACT TRACING POLICY			
New or existing service/policy/procedure: New			
Date of Assessment: 08/02/2024			
For the service/policy/procedure and its implementation answer the questions a – c below against each characteristic (if relevant consider breaking the policy or implementation down into areas)			
Protected Characteristic	**a) Using data and supporting information, what issues, needs or barriers could the protected characteristic groups' experience? For example, are there any known health inequality or access issues to consider?**	**b) What is already in place in the policy or its implementation to address any inequalities or barriers to access including under representation at clinics, screening?**	**c) Please state any barriers that still need to be addressed and any proposed actions to eliminate inequality**
The area of policy or its implementation being assessed:			
Race and Ethnicity	None	None	None
Gender	None	None	None
Age	None	None	None
Religion	None	None	None
Disability	None	None	None
Sexuality	None	None	None
Pregnancy and Maternity	None	None	None
Gender Reassignment	None	None	None
Marriage and Civil Partnership	None	None	None

Socio-Economic Factors (i.e. living in a poorer neighbourhood / social deprivation)	None	None	None

What consultation with protected characteristic groups including patient groups have you carried out?

-

What data or information did you use in support of this EqIA?

-

As far as you are aware are there any Human Rights issues be taken into account such as arising from surveys, questionnaires, comments, concerns, complaints or compliments?

- No

Level of impact

From the information provided above and following EQIA guidance document Guidance on how to complete an EIA (click here), please indicate the perceived level of impact:

Low Level of Impact

For high or medium levels of impact, please forward a copy of this form to the HR Secretaries for inclusion at the next Diversity and Inclusivity meeting.

Name of Responsible Person undertaking this assessment:
Sally Palmer

Signature:

Date:08/02/2024

APPENDIX 4 – ENVIRONMENTAL IMPACT ASSESSMENT

The purpose of an environmental impact assessment is to identify the environmental impact, assess the significance of the consequences and, if required, reduce and mitigate the effect by either, a) amend the policy b) implement mitigating actions.

Area of impact	Environmental Risk/Impacts to consider	Yes/No	Action Taken (where necessary)
Waste and materials	• Is the policy encouraging using more materials/supplies? • Is the policy likely to increase the waste produced? • Does the policy fail to utilise opportunities for introduction/replacement of materials that can be recycled?	Yes Yes Yes	Additional PPE will be required
Soil/Land	• Is the policy likely to promote the use of substances dangerous to the land if released? (e.g. lubricants, liquid chemicals) • Does the policy fail to consider the need to provide adequate containment for these substances? (For example bunded containers, etc.)	No	
Water	• Is the policy likely to result in an increase of water usage? (estimate quantities) • Is the policy likely to result in water being polluted? (e.g. dangerous chemicals being introduced in the water) • Does the policy fail to include a mitigating procedure? (e.g. modify procedure to prevent water from being polluted; polluted water containment for adequate disposal)	No	
Air	• Is the policy likely to result in the introduction of procedures and equipment with resulting emissions to air? (For example use of a furnaces; combustion of fuels, emission or particles to the atmosphere, etc.) • Does the policy fail to include a procedure to mitigate the effects? • Does the policy fail to require compliance with the limits of emission imposed by the relevant regulations?	No	
Energy	• Does the policy result in an increase in energy consumption levels in the Trust? (estimate quantities)	No	
Nuisances	• Would the policy result in the creation of nuisances such as noise or odour (for staff, patients, visitors, neighbours and other relevant stakeholders)?	No	