10. GLOVE SELECTION

10.1 Introduction

This document provides guidance on glove choice for those working within NHSScotland, including staff employed directly by NHSScotland and the wider NHS family. It has been produced by the Scottish Executive Health Department in partnership with healthcare professionals.

This document stems from the need to control allergic reactions caused by **natural rubber latex** (NRL). In general, a **latex allergy** means a reaction to NRL's proteins. The clinical effects of a latex allergy are similar to those of peanut allergy, ranging from minor skin reactions to life-threatening anaphylaxis[1].

In healthcare, the greatest exposure to latex comes from NRL gloves. NRL has many positive features[2] which, until now, made latex gloves the standard choice for use within healthcare. However, healthcare workers are known to be at risk from frequent and prolonged use of latex gloves, often worn next to skin which has been damaged from repeated hand-washing, thereby giving latex allergens easy access to the immune system[3].

The use of NRL gloves is not illegal. Nonetheless, since NRL is potentially harmful to health, the use of these gloves should be controlled through the process of risk assessment. In other words, these gloves should **only** be worn where the benefit of wearing latex gloves outweighs any potential risk. In practice, this means:

- **eliminating the use of these gloves** by not wearing them where there is no need to, i.e. when there is no risk of transmitting infection;
- **substituting their use** by using a different glove material where possible, i.e. when the attributes of NRL are not essential for that specific task; and
- **limiting exposure to NRL** by
  - only using these gloves where risk assessment has identified NRL as necessary for a particular task; and

[1] At present it is not possible to predict which individuals might progress from mild reactions to anaphylaxis, or when a more severe reaction might occur.

[2] including comfort, biological protection, strength and low cost

[3] Greater recognition of this problem has led manufacturers to reduce protein content and largely remove powder from medical gloves, but as only some of the many proteins in latex are allergenic, the term 'low protein' does not necessarily mean low in allergens.

- making sure that any latex gloves used are low in protein[4] and powder free[5].

In short, **latex gloves may continue to be used when justified by risk assessment, but unnecessary 'routine' use of latex gloves should be identified and discouraged**. Educating healthcare staff will be central to achieving this, and in addition, Scottish Healthcare Supplies has renegotiated the national contracts for gloves to reflect changing requirements.

This document describes best practice in order to:

- set out a minimum standard for glove selection that complies with the law; and
- give healthcare organisations information to implement glove selection, hand care, risk assessment, health surveillance, education and procurement policies to the benefit of both staff and patients.

We recognise that this document may need to change in line with advances in knowledge and glove technology. For this reason, we will review the document regularly.

10.2 Legal Framework

10.2.1 Health and Safety at Work etc Act 1974
All employers (including general medical and dental practitioners working in the NHS) have a legal obligation under the Health and Safety at Work etc Act 1974 to ensure that all their employees are appropriately trained and proficient in the procedures necessary for working safely.

10.2.2 Personal Protective Equipment Regulations (PPE) 1992
This is secondary legislation under the Health and Safety at Work etc Act. Employers must ensure that protective equipment is provided to employees who may be exposed to a risk to their health while at work. In the healthcare setting, gloves are used to protect all staff against exposure to hazardous substances including chemicals and microbial contamination.

10.2.3 Control of Substances Hazardous to Health Regulations (COSHH) 2002
Employers are required by COSHH to review every procedure carried out by their employees which involves contact with a substance hazardous to health, such as latex.

[4] <50mcg/g

[5] Health and Safety Executive policy

Recently an NHS employer was found culpable under health and safety legislation for failing to control the risk to a nurse's health from latex. All healthcare organisations are expected to have in place a robust policy to:

- minimise the development of latex allergy in the workforce; and
- provide a latex-safe environment for those who have become sensitised to latex[6].

10.3 Glove characteristics

10.3.1 Barrier properties

Historically, the purpose of glove use in the healthcare setting was to help achieve germ-free (aseptic) conditions. However, the development of health and safety legislation on hazardous substances and the recent increase in risk of infections transmitted through blood and body fluids means that gloves[7] must now protect both patients and healthcare workers.

For this reason, **barrier function** is an important measure of the quality of a glove. The glove should act as an effective barrier regardless of the procedure, especially if the gloves are worn for a long period of time. The glove's effectiveness as a barrier depends on a number of factors, including:

- its material and quality;
- how the glove has been made;
- nature and duration of the task to be performed; and
- exposure to chemicals.

Medical gloves should carry the CE mark[8] and conform to the following BS EN 455 Standards:

- freedom from holes;
- physical properties; and
- biological evaluation.

Although gloves may meet these standards while in the box, they gradually become less effective as a barrier during use, and may show an increase in leakage.

[6] This presents a significant challenge, as NRL can crop up in numerous items of medical equipment and is often unlabelled as such. This is being addressed by replacement with synthetic alternatives and improved labelling.

[7] sterile gloves (for surgical purposes) and non-sterile gloves (for examination purposes)

[8] The CE mark is a mandatory European marking for certain product groups to indicate conformity with the essential health and safety requirements set out in European Directives. The letters 'CE' are an abbreviation of Conformité Européene (European conformity).

10.3.2 Evaluating different glove materials

10.3.2.1 Natural rubber latex (NRL)

NRL has high tensile strength, durability and elasticity, and offers good protection against transmission of viral infections (including HIV). Some chemicals may penetrate NRL or affect its physical properties, but it is not known if this can influence transmission of infectious agents. Currently no material appears to be able to match NRL's full characteristics and resistance to transmission of pathogens[9].

10.3.2.2 Acrylonitrile butadiene (Nitrile)

This is generally of similar tensile strength to NRL, but its stiffness is often higher. 'Soft nitrile' gloves are available which relax to the shape of the hands in use, but they can deform with use (this is known as 'finger flop'). Nitrile has high resistance to a range of chemicals (although not all), and manufacturers should be contacted for advice in specific situations.

Several technical publications have demonstrated protection against penetration by viral particles. Currently, nitrile gloves are believed to be potentially less harmful than NRL, and are an acceptable alternative where protection is required against blood and body fluids during clinical procedures.

10.3.2.3 Polyvinyl choride (PVC / Vinyl)

This is inferior to latex and nitrile due to its lower elasticity, lower tensile strength and a lower 'force at break' standard. There are also reports of reduced durability and greater compromise of barrier protection during use. However, PVC complies with the BS EN 455 series of standards and is fit for clinical use. Manufacturers' test reports are generally available demonstrating a barrier to penetration by viral particles.

It is recommended that vinyl gloves are not used for clinical tasks involving exposure to blood or body fluids. Instead, it should only be used for procedures where there is a low biohazard risk.

[9] European Commission, October 2003

10.3.2.4 Polychloroprene (Neoprene), Polyisoprene and Polyurethane

Polychloroprene and polyisoprene are newer synthetic glove materials that are becoming established as promising alternatives to latex as surgical glove materials. However, polyurethane examination gloves have not been well received due to the higher stiffness of initial gloves.

Latex allergen has occasionally been found within synthetic gloves, and purchasers should check that these are free of NRL proteins.

10.3.3 Adverse glove reactions

10.3.3.1 Irritant contact dermatitis

This is the commonest form of adverse reaction to gloves and presents as dry, rough, sore skin, most commonly on the back of the hand or fingers.

10.3.3.2 Allergic contact dermatitis[10]

In allergic contact dermatitis, the skin becomes itchy, red and scaly. Clinical symptoms are generally delayed by several hours after the skin has been exposed to the allergen.

It may be impossible to differentiate irritant from allergic contact dermatitis on the appearance of the skin. If there is any suspicion of an allergic reaction, the patient should be referred to a dermatologist for formal patch-testing.

10.3.3.3 Latex allergy

Natural rubber latex (NRL) contains proteins to which an allergic reaction may develop. Clinical symptoms of this reaction may include contact urticaria, rhinitis, conjunctivitis, bronchospasm and occasionally potentially fatal anaphylaxis. Symptoms generally appear within minutes of exposure. Pre-existing hand dermatitis is an important risk factor for developing latex allergy, as the damaged skin allows easy access for the allergenic proteins.

[10] A wide range of chemicals is used in the manufacture of both natural and synthetic rubber gloves, against which an allergic reaction may develop. The main allergic sensitisers are the thiuram, carbamate and benzothiazole accelerators, which may cross-react.

Powder in NRL gloves can act as a carrier of allergen. The dust created by putting on and taking off gloves provides a further route of exposure for both healthcare staff and patients. Powdered gloves have now been largely phased out from UK healthcare settings.

Diagnosing latex allergy should only be done with a clear clinical history, together with immunological evidence of specific IgE production from skin prick testing (which is preferable) or immunoassay (RAST blood test). Skin prick testing carries a risk of causing anaphylaxis and should only be conducted by persons experienced both in its technique and interpretation.

Individuals who are allergic to latex need to be advised on how to avoid allergens due to the fact that NRL can be found in so many contexts within healthcare.

10.3.3.4 Adverse reactions to PVC and nitrile

Contact urticaria and dermatitis from PVC and nitrile have occasionally been reported.

10.4 Glove selection strategy

10.4.1 Policy

To implement the appropriate use of gloves locally, each NHS employer must make sure that it has a clear policy relating to the use of gloves. This section provides more detail on key elements of a glove selection policy, and a model policy is attached at Appendix 10A. In summary, any such policy should include as a minimum:

- **Background**: outline the rationale for the policy and current evidence [see model policy].
- **Aim of the policy**: clearly state what the policy is designed to achieve [see model policy].
- **Legal framework**: take account of current legislation and legal advice [see Section 10.2].
- **Cross-references**: to infection control issues including standard precautions, guidelines for good hand hygiene and use of lotions [see section 10.4.2 opposite].
- **Risk assessment**: including reducing unnecessary glove use and assessing the suitability of alternatives for the task, taking into account the need for:
  - high barrier protection from BBVs

- high manual dexterity
- minimal hand fatigue
- high tensile strength
- tear and puncture resistance

[see section 10.4.3 below].

- **Guidelines on glove selection**: take account of the risk assessment [see model policy].
- **Requirements for health surveillance**: including indicators for health surveillance and who will undertake it [see section 10.4.4 below].
- **Training and education**: outline how this will be undertaken and in what context [see section 10.4.5 below].
- **Roles and responsibilities**: identify the role of key staff groups in the organisation [see model policy].
- **Monitoring and review**: state how this should be undertaken, indicators for success and links to the risk management structure in the organisation [see model policy].
- **References and further reading** [see model policy].

10.4.2 Hand care

10.4.2.1 Principles of hand care

Most hand problems arise because of wear and tear factors. These factors include:

- repeated immersion in water;
- exposure to soaps and detergents;
- manual work tasks; and
- cold dry air.

Individuals with inherently dry skin are more susceptible to the adverse effect of these irritant factors, and should be particularly careful to look after their hands at all times.

10.4.2.2 Practical guidance

❶ What staff can do

■ Hand-washing

Regular hand-washing plays an important role in minimising hospital-acquired infection. Healthcare staff complaining of irritation from commonly used hand-hygiene products may benefit from a change of cleanser to one with an emollient[11] base.

[11] An agent that softens or soothes the skin

■ **Moisturising**

A good moisturiser (emollient) should be an integral component of any hand care regime. People vary enormously in their preference of moisturiser, and it is often helpful to try a range of products to identify which suits an individual skin best. How often a moisturiser needs to be applied will depend on the individual. Applying it once a day would be a sensible protective measure for all staff exposed to irritant substances, whereas those with dry skin or dermatitis should apply more often.

Alcohol-based hand gels are becoming more popular for treating hands that have been contaminated. They may improve hydration, although contact allergy has been reported.

Oil-based ointments may adversely affect latex gloves and should be avoided if these are being worn.

❷ **What employers can do**

In relation to hand care, measures that employers can take include:

■ **Preventative measures**

Employers should provide good quality non-perfumed hand creams for staff in clinical environments.

■ **Referral to the Occupational Health Service (OHS)**

If a member of staff develops hand dermatitis, s/he should be referred by the line manager to OHS to determine whether there is a need to withdraw from working in an environment that includes direct patient care.

10.4.3 Risk assessment

10.4.3.1 Principles of risk assessment

Risk assessment is necessary to eliminate or control exposure to latex. This means that:

- the hazard should be **eliminated** where possible by only using gloves where necessary;
- latex must be **substituted** for a less harmful substance unless this is not reasonably practicable[12];

[12] Cost is not the prime consideration in determining reasonable practicability

- A **risk assessment** must be undertaken for all tasks which require glove use to determine the appropriate glove type. The glove type must meet essential criteria to carry out the task, but must be made from the least harmful material. **In selecting glove type, a more harmful material should not be selected even if its properties are the best for the task; if a less harmful material would be sufficient for purpose, this must be selected.** For clinical tasks, the main qualities to be considered in selecting glove type are:
  - barrier properties to blood or body fluids;
  - resistance to chemicals;
  - comfort; and
  - closeness of fit.
- for employees who remain exposed to latex, **health surveillance** is necessary. The flowchart at Appendix 10.B illustrates the pre-employment screening and health surveillance processes and how they link.

10.4.3.2 Carrying out the risk assessment

Risk assessment in this context therefore needs to be based on the following questions:

- Is glove use necessary?
- Does the task involve exposure to blood or body fluids capable of transmitting blood-borne viruses?
- Does the task require a sterile glove?
- Does the task require prolonged glove use (e.g. surgery)?
- Does the task require fine dexterity, thus requiring a very close and/or sensitive glove fit?

This is summarised in the flowcharts at Annexes 1 and 2 of the model policy at Appendix 10.A.

10.4.3.3 Recording the risk assessment

For most areas, a generic risk assessment will be sufficient, particularly if latex glove use is eradicated. Worked examples are attached at Appendix 10.C.

Where local departments need to make a more detailed risk assessment, for instance in order to justify continued use of latex gloves for certain tasks, this must be recorded separately and retained with

other COSHH risk assessments. For areas like theatres which may retain latex surgeons' gloves, a generic risk assessment for glove use in operative surgery may be used.

10.4.4 Health surveillance

10.4.4.1 Principles of health surveillance

Under COSHH, where employees are exposed to a substance hazardous to health and there are valid techniques for detecting a health effect, health surveillance is likely to be required as an additional control measure.

Where health surveillance is conducted, a health record must be kept by the employer and retained for 40 years. There are legal requirements on the information to be kept in a health record, such as basic demographic details and the National Insurance Number. The health record does not normally contain any clinical detail, simply a record that surveillance has been undertaken and the outcome of that surveillance. As such, it is not a clinical record and is usually kept by managers. An example is attached at Appendix 10.D.

10.4.4.2 Models of health surveillance

NHS employers and Occupational Health Services will need to determine what an appropriate, suitable and sufficient level of health surveillance is for latex exposure. Below are three examples of models to adopt, of increasing complexity and effort.

❶ Hazard notification and annual enquiry by responsible person

This would be the least onerous and rigorous method of health surveillance. It would be founded upon the system of pre-employment health assessment by OHS, who would assess fitness for latex exposure. Thereafter, this model would be based on the absolute requirement for training of exposed employees on the hazards of latex exposure and the presenting symptoms of sensitisation. Exposed employees would be reminded of these hazards annually by a **responsible person** and individually asked to report any symptoms. A responsible person can be a line manager or other appropriate individual trained to administer a basic form of health surveillance and convey information on the hazard to exposed staff.

Those reporting symptoms would be referred to OHS for further assessment. Records of training and systems to ensure exposed employees are questioned would be required annually. Each exposed employee would have a health record established by his or her line manager, which would be updated annually by the responsible person.

❷ Hazard notification and annual survey by responsible person

This would be similar to Model 1, but would be more systematic in that the responsible person would administer a short questionnaire to each exposed employee containing a series of simple questions regarding new symptoms that could reflect sensitisation, e.g.

- "Have you, in the last 12 months or since last surveillance, had any of the following?
  - persistent problems affecting the skin on fingers or hands
  - persistent problems affecting the nose or eyes such as itching or watering
  - persistent problems affecting the chest such as cough or wheeze
- In the last 12 months have you had any significant symptom which you think is due to latex exposure?"

Positive responses to any questions would result in referral to OHS for further assessment. Although clinical information is not normally contained in the statutory health record, it would be pragmatic to keep the questionnaire along with the health record retained by line management, with the staff member's consent. If a staff member declined to answer questions s/he could be offered the alternative of OHS assessment.

❸ Hazard notification and high-level health surveillance by OHS

This would be the traditional model of respiratory and skin health surveillance used by Occupational Health Services based on questionnaire administration and spirometry by OHS staff. Questionnaires to support this process are attached at Appendix 10.D.

10.4.4.3 Choosing the level of health surveillance

As long as the principles of stepped care are followed in a systematic way and statutory records are maintained, the workplace-based surveillance models 1 and 2 should be acceptable (indeed, such an approach is commended by HSE on their website http://www.hse.gov.uk/latex/law.htm). Stepped care would mean that reported symptoms are assessed by trained occupational health nurses and where necessary an occupational health physician. Onwards referral to dermatology or respiratory medicine specialists may sometimes be required.

One of the key features of all models is the hazard notification element for staff exposed to latex.

10.4.5 Education

10.4.5.1 Principles

The Health and Safety At Work etc Act places a duty upon employers to safeguard health and safety at work. It also places a duty upon them to ensure that others (patients, visitors etc) who might be affected by how work is undertaken are not put at risk.

In order to do this, education on latex must be provided for all staff likely to encounter medical products, in particular gloves. This includes all clinical staff, allied health professionals and support service staff. The best time to provide this education is at induction to a post.

The emphasis of education must be on the **collective** responsibility for health and safety, and include the risks and appropriate control measures for NRL. To help employers fulfil their duties and to look after health and safety in the workplace, staff must co-operate with employers and follow the guidance and instructions given around the use of NRL products.

10.4.5.2 Specific areas for education and training

- **Hand care**

All healthcare staff working in a clinical environment should receive core education on general hand care and hygiene, preferably at induction. It makes more sense to prevent hand dermatitis than to have to treat once it has developed.

■ **Risk assessment and incident reporting**

NHS employers must also provide the safest products, within current knowledge, in order for staff to comply with their part in the legislation, i.e. by using the appropriate products and carrying out risk assessment and incident reporting as necessary.

No matter how dedicated and professional staff are, incidents related to personal protective equipment and medical devices will happen. Appropriate reporting procedures must be in place and education must encompass these. Education about reporting must emphasise risk management and the no-blame culture, to ensure that staff understand that reporting is used to prevent similar incidents happening again.

10.5 Procurement

10.5.1 Market overview

In the past, NHSScotland has not made the most of its considerable purchasing power. Scottish Healthcare Supplies have negotiated contracts on a national basis to provide a framework agreement for NHS employers to purchase surgical gloves and medical gloves[13]. Currently there are seven suppliers on the surgical glove contract and nine on the medical glove contract[14], reflecting preferences across NHSScotland.

10.5.2 Market trends

Suppliers are adapting to the reduction in the purchase of latex medical gloves. Many suppliers are developing alternatives which are latex-free, such as those described at 10.3.2.

10.5.3 National Commodity Sourcing Strategy

The full Commodity Sourcing Strategy is available through the BPI section of the SHOW website at **www.show.scot.nhs.uk/sap/BPI/index4.htm** (Choose Commodities from the Strategic Sourcing drop-down menu.) The key points relating to glove selection are as follows:

- **General**
  - NHSScotland wants to achieve **greater value for money** through a rigorous tendering process.

[13] National contracts also exist for soaps and creams.

[14] For medical gloves, currently around £2m is spent purchasing over 840,000 boxes per annum: Almost 80% of this expenditure is with three suppliers, and the mix of glove types purchased is 71% latex, 18% vinyl and 11% nitrile.

- An improved **national selection and evaluation process** for awarding contracts has been developed, along with a national process that includes evaluating new product developments for NHSScotland.
- NHSScotland wants to **provide information**, including test results, data sheets etc through the CDSnet catalogue of national contracts managed by Scottish Healthcare Supplies, available through **www.shsweb.csa.scot.nhs.uk/CDSnet**.

Specific

- NHSScotland wants to **minimise health risks** by moving to latex-free products (such as nitrile, vinyl, synthetic polyisoprene, polyurethane and others).
- NHSScotland wants to **manage demand** by:
  - reducing unnecessary glove use; and
  - using the right glove for the right task.
- The contract for **medical gloves** ended in December 2004, with a new contract in place from January 2005. **This contract is with three suppliers**.
- The current contract for **surgical** gloves will end on 30 April 2005, with a new contract in place from 1 May 2005. A **similar approach** will be taken to reduce the number of suppliers.
- Glove **specifications have been improved** to reflect technical, quality and test-data requirements.

APPENDIX 10.A

Model policy on the use of gloves

1 Background

Changes in health and safety legislation, the recognition of increased risks to healthcare workers from blood-borne viruses (BBVs) and the introduction of Standard (previously known as Universal) Precautions in order to prevent transmission of these viruses has resulted in significant increase in use of natural rubber latex gloves. However for some workers exposure to latex may result in skin rashes; hives; flushing; itching; nasal, eye or sinus symptoms; asthma and rarely anaphylactic shock. Reports of such allergic reactions to latex have increased, especially among healthcare workers. Recent legal precedent has renewed focus on the issue of glove selection and use.

Health managers, clinical staff, purchasers and manufacturers all have responsibility in ensuring that risks relating to glove-associated allergies and costs relating to increased use are managed effectively by making informed decisions on selection, use and purchase.

2 Aims of the policy

2.1 General aims

The purpose of this policy is to:

- minimise the risks to staff and patients by reducing the use of latex gloves in [NAME OF ORGANISATION];
- promote good practice and appropriate glove usage through increased knowledge of risks;
- raise awareness of the effects of latex sensitisation on the individual;
- identify appropriate glove required for specific procedures and situations; and
- outline a reporting system for adverse reactions/incidents.

2.2 Statement of good practice

- The wearing of gloves is not a substitute for thorough hand washing.
- Gloves should only be worn when necessary.
- Gloves should be changed after contact with each patient.
- Hands should be washed thoroughly after gloves have been removed.
- All gloves in use should be non-powdered[16].

3 Legal framework

3.1 Health and Safety at Work etc Act 1974

All employers (including general medical and dental practitioners working in the NHS) have a legal obligation under the Health and Safety at Work etc. Act 1974 to ensure that all their employees are appropriately trained and proficient in the procedures necessary for working safely.

3.2 Personal Protective Equipment (PPE) 1992

This is secondary legislation under the Health and Safety at Work etc Act. Under these regulations employers must ensure that protective equipment is provided to employees who may be exposed to a risk to their health while at work. In the healthcare setting, gloves are used to protect against microbial contamination and goggles may be used when there is a risk of being splashed.

3.3 Control of Substances Hazardous to Health Regulations (COSHH) 2002

Employers are required by the Control of Substances Hazardous to Health Regulations 2002 to review every procedure carried out by their employees which involves contact with a substance hazardous to health. This includes latex.

4 Standard precautions

(See [NAME OF ORGANISATION]'s Infection Control Manual)

4.1 Standard Precautions are the precautions taken by clinical staff to limit the risk of spread of infectious diseases, in particular BBVs.

[16] Medical Devices Agency (1996), *Latex Sensitisation in the Healthcare Setting*, MDADB 9601, Department of Health, UK.

Medical Devices Agency (1998), *Latex Medical Gloves* (*Surgeons' and Examination*), *Powdered Latex Medical Gloves* (*Surgeons' and Examination*), MDASN9825, Department of Health, UK.

Ulf Haglund & Klaus Junghanns (1996), *Glove Powder*: *The Hazard which Demands a Ban*, European Journal of Surgery, Scandinavian University Press, Oslo.

Such precautions mainly apply to blood and body fluids, and are widely accepted and practised both nationally and internationally. In essence the guidelines centre on safeguards aimed at reducing the risk of transferring infections from patient to practitioner, patient to patient, or practitioner to patient. The main safeguards are:

- regular hand hygiene using good washing and drying techniques;
- **wearing gloves when handling blood or body fluids or when in contact with soiled surfaces;**
- wearing plastic aprons;
- wearing an appropriate mask and protective eyewear when there is a risk from irrigations, splashes or aerosols;
- not re-sheathing needles and disposing at point of use; and
- taking care to ensure that all soiled materials or waste is disposed of correctly.

The term Standard Precautions includes those policies and procedures that govern isolation and aseptic practice.

4.2 Standard Precautions must be used when handling:

a. Blood and body fluid

b.

Cerebrospinal fluid	Synovial fluid
Peritoneal fluid	Amniotic fluid
Pleural fluid	Semen
Pericardial fluid	Vaginal secretions

c. Saliva in association with dentistry/extubation especially bronchoscopy.

d. Unfixed tissues or organs

To prevent parenteral innoculation of these fluids cuts, scratches and open sores on the hands must be covered with a waterproof plaster.

4.3 Guidelines for good hand hygiene

- Wet hands before applying soap or antiseptics.
- Wash hands using a good technique (see Infection Control Manual).
- Rinse and dry hands thoroughly.
- Cover all cuts and abrasions with a waterproof dressing.

- Keep fingernails short and clean.
- Avoid jewellery, i.e. watches, bracelets etc.
- Always wash hands after removal of gloves.
- Use a water-based hand lotion.

N.B. All hand lotion used must be obtained via the supplies department or pharmacy who will only stock approved products. This is to ensure that the hand cream is compatible with other skin products and the gloves in use.

5 Guidelines on glove selection

5.1 Risk Assessment

Before selecting a glove staff should ask themselves "are gloves really necessary for this task?" using the flowchart at **Annex 1**.

In addition to considering risks to themselves, the healthcare worker must consider risks to patients with latex sensitivity in line with the Clinical Latex policy.

Risk assessment must underpin all glove selection. This is the responsibility of the individual undertaking the task. **Annex 2** gives examples of key tasks undertaken in the healthcare setting and the appropriate glove to be used.

It is essential that gloves are not used inappropriately and that all gloves used are within their "use by" date.

5.2 Glove selection in general clinical settings

Vinyl examination gloves should be worn where there is a low risk of contamination, non-invasive clinical care, or environmental cleaning.

Non-sterile nitrile gloves should be worn for procedures where there is a high risk of exposure to BBVs and high barrier protection is needed.

Sterile nitrile gloves should be used in clinical procedures outwith the theatre setting where a sterile field and high barrier protection is required.

5.3 Glove selection in theatre settings

Several factors influence glove selection in the theatre setting, for example the need for:

- high barrier protection from BBVs;

- high manual dexterity;
- minimal hand fatigue;
- high tensile strength; and
- tear and puncture resistance.

Gloves should be selected by individuals according to the risk assessment and their personal preference. Advice is available from the Occupational Health Service (OHS) if required.

Where **sterile latex surgical** gloves are selected they must be non-powdered. All staff using latex gloves will be required to participate in regular skin health surveillance via OHS.

5.4 Glove selection in non-clinical settings

The principles outlined in 5.1 above apply to all departments and services where gloves are used including non-clinical areas. Each department should have its own procedure covering appropriate glove selection using Annexes 1 and 2 as guidance.

6 Training and education

6.1 Formal training programmes for all staff are designed to cover:

- risks of occupational exposure to BBVs and need for standard precautions;
- safe working practices and appropriate glove selection in general and surgical settings;
- understanding of latex allergy and health surveillance programmes;
- the importance of staff awareness of and adherence to the organisation's policy on the use of gloves and skin health surveillance; and
- ordering of gloves.

6.2 The training will take several forms:

- at core induction of all new staff to the organisation;
- at induction for medical staff twice yearly (February and August);
- formal and informal teaching undertaken by OHS and Infection Control staff;
- ad hoc teaching on clinical observation of a person undertaking poor practice; and

- in response to ongoing audits to ensure high standards are maintained.

7 Roles and responsibilities

7.1 [NAME OF ORGANISATION] responsibilities

In accordance with the COSHH Regulations 2002, [NAME OF ORGANISATION] will ensure that the health and safety of employees and patients is not put at risk as a result of contact with latex products. Gloves must only be obtained via the supplies department who will only stock approved products.

7.2 Wards and departmental responsibilities

Managers are ultimately accountable to the Chief Executive of [NAME OF ORGANISATION] for the implementation of these guidelines within their sphere of responsibility. Managers must ensure that:

- suitable and sufficient assessment of risks to the health of staff and patients is carried out in relation to the products containing latex used in their area of responsibility (COSHH Regulations 2002);
- OHS is notified of staff exposed to latex to enable regular health surveillance to be undertaken;
- any reaction by staff thought to be due to the working environment (particularly products containing latex) is immediately referred to OHS; and
- advice received from OHS regarding glove selection and use and/or skin health is implemented.

7.3 OHS responsibilities

The responsibilities of OHS are to:

- undertake pre-employment screening to identify staff who will be working in clinical areas who may have pre-existing allergies, and provide subsequent advice to management;
- receive referrals from managers or from staff who have concerns about latex allergy/skin problems;
- record information relating to latex allergies in individual staff health records and advise managers accordingly;
- monitor areas of high incidence of skin problems/latex allergy and make recommendations to the appropriate manager and Health and Safety staff on remedial action;

- ensure that RIDDOR reports are made where appropriate;
- advise the Occupational Health & Safety Forum and Risk Management Board [or equivalent] on incidences and trends; and
- assist in risk assessment when required.

7.4 Employees' responsibilities

Employees should ensure that:

- they safeguard their own health, colleagues' health and the health of patients by following the advice set out in the guidelines, in particular use of standard precautions and appropriate glove selection;
- they pay attention to their own skin care to protect against damage;
- they refer themselves to OHS with any skin condition that results in broken skin including eczema/dermatitis, especially if it is thought to be work-related; and
- any advice received from OHS regarding glove use and/or skin health is implemented.

8 Monitoring and review

8.1 Monitoring of incidents will be via the OHS health surveillance programme, referral process, incident recording system and RIDDOR reporting. Regular reports will be made to the organisation's risk management structures.

8.2 OHS will review these guidelines annually to take into account new legislation and research findings.

9 Further reading

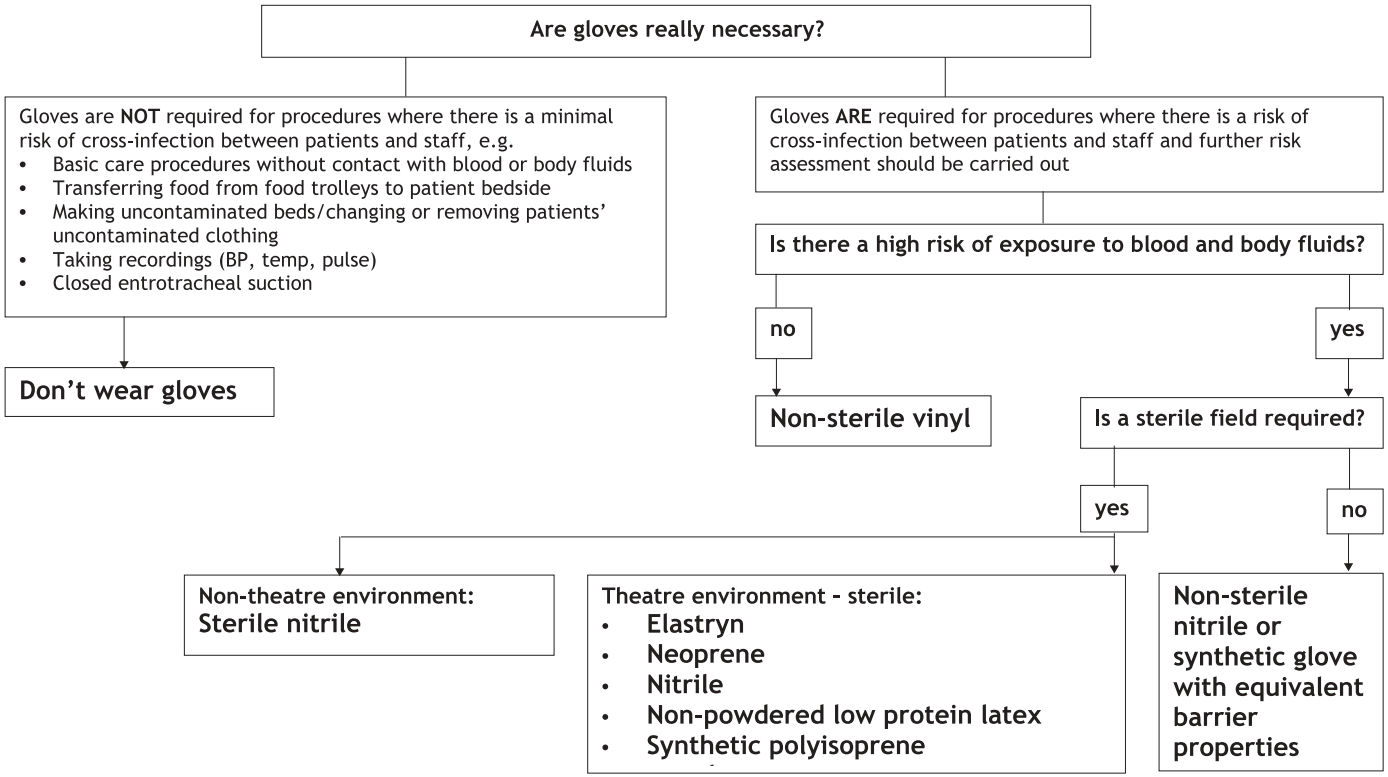
Guidance For Clinical Health Care Workers: Protection Against Infection With Blood-Borne Viruses. UK Department of Health, HMSO 1998.

Brown Robert et al (2003) *How Health Care Organisations Can Establish And Conduct A Program For A Latex Free Environment.* Joint Commission Journal on Quality and Safety. Vol. 29 No. 3.

Health & Safety Executive 2000. *Latex and You*. HSE INDG320.

Risk assessment: Glove usage

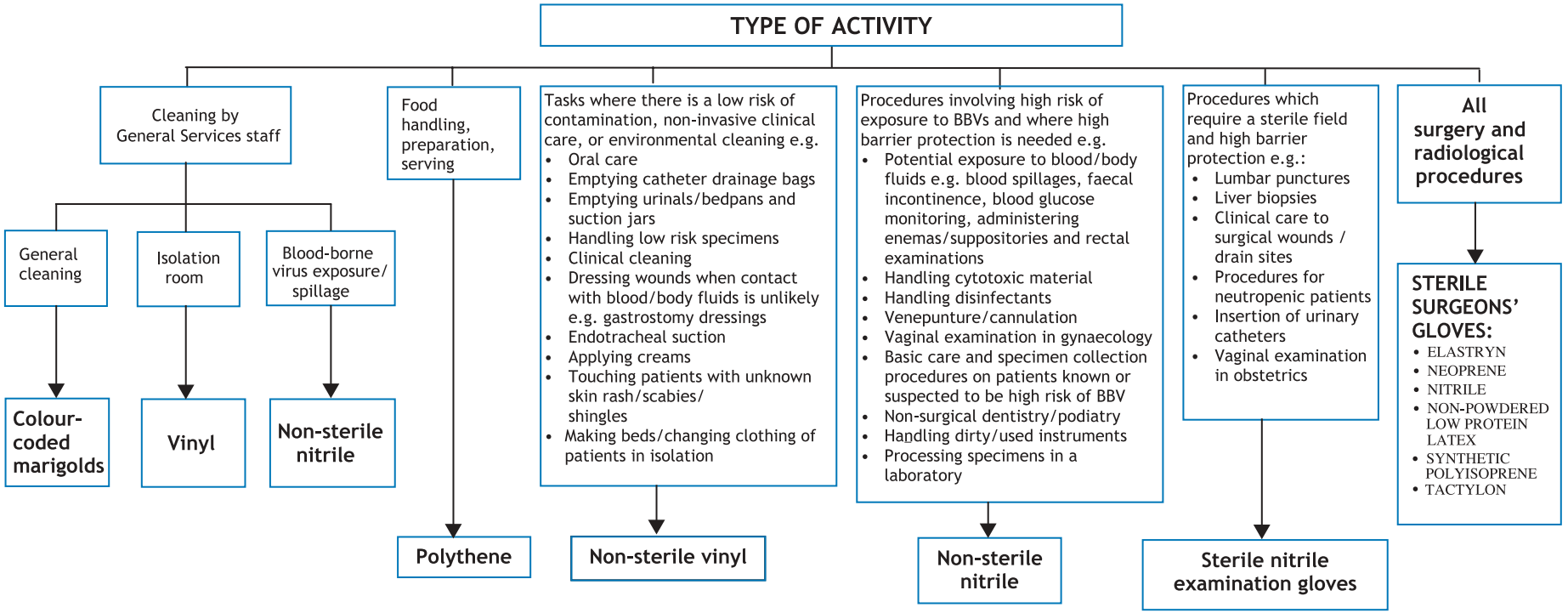
Annex 1



Glove Selection

Annex 2

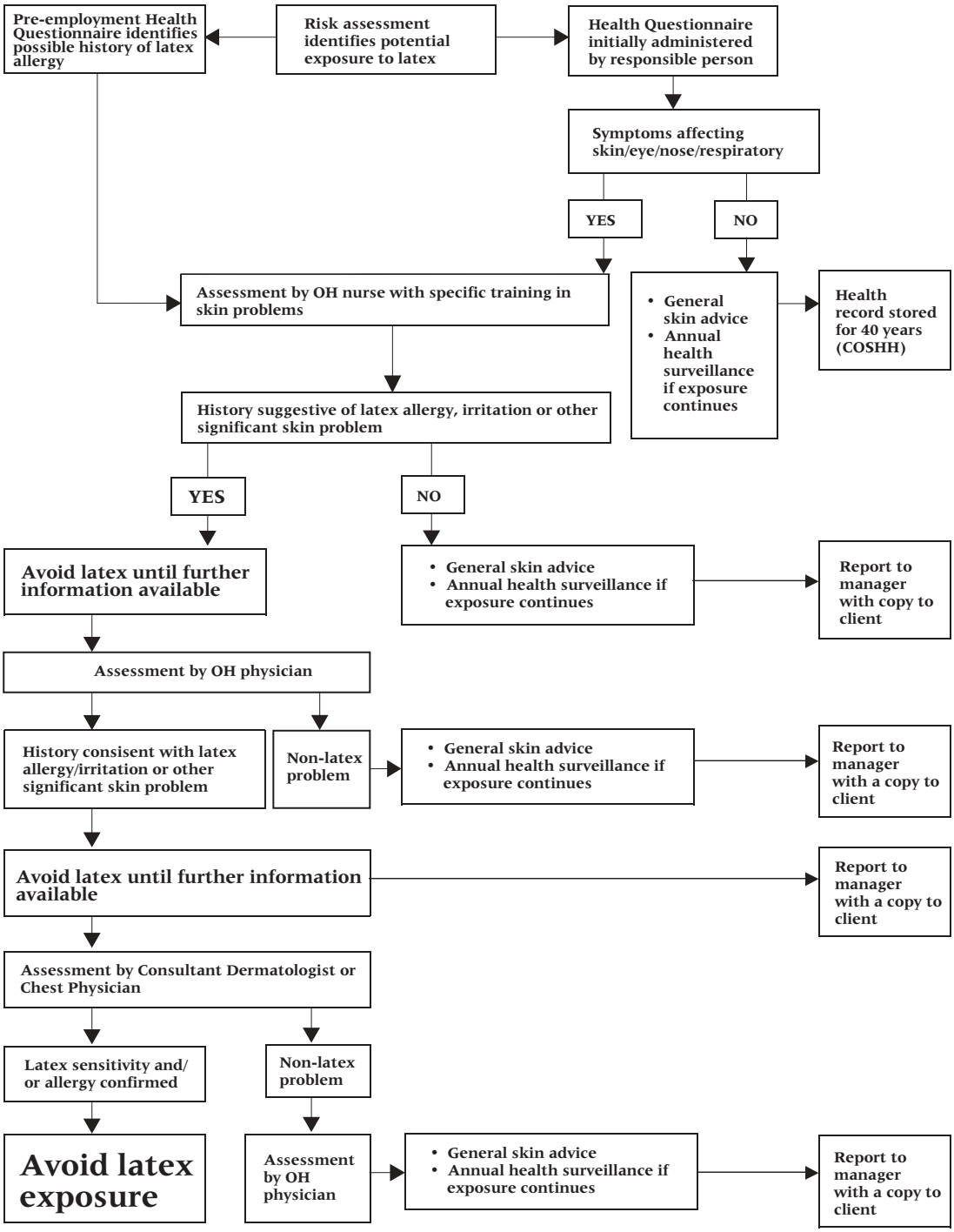
ALL GLOVE SELECTION MUST BE PRECEDED BY RISK ASSESSMENT



All staff using latex gloves of any type will be required to participate in the OHS skin health surveillance programme.

APPENDIX 10.B

Pre-employment screening and health surveillance for employees potentially exposed to latex



APPENDIX 10.C

Generic risk assessment: worked examples

Generic Risk Assessment Form Ref No:

Location	Ward 12	Department	Medicine	Manager	Sister Bloggs

Operation/Activity	
Use of non-sterile examination glove	**Complete the relevant details of the activity being assessed.**

Hazards	
Allergy to materials within the glove such as latex or chemical accelerators Potential breach of the glove barrier with exposure to blooc or body fluids Irritant effects leading to hand eczema	**All hazards associated with the activity should be entered here (e.g. physical hazards, machinery, electricity, working at heights, substances, access, equipment, vehicles, etc).**
Individuals or groups exposed — **All clinical staff**	**Highlight the people at risk and the likely maximum numbers exposed.**

Current control measures	
• Use of risk assessment* which advises staff on appropriate glove selection, including synthetic alternatives to latex This eradicates latex gloves from use for this activity • Guidance on appropriate and inappropriate glove use for all clinical staff • Guidance on skin care for all clinical staff	**List current control measures, including physical controls but do not forget to include other controls including safe working procedures, information instruction and training.**

With these controls in place, the risk is: (please tick)	LOW ✔	MEDIUM	HIGH

Further control measures required	
Monitoring of any reported skin problems with synthetic glove, assessment by occupational health where necessary	**Include any additional controls identified to eliminate or reduce the risk further. Or state whether the risks are already as low as reasonably practicable.**

Date					
Initial					

(Use a new box each time this assessment is received)

* See Annex 2 of Model Policy on the use of gloves

Generic Risk Assessment Form Ref No:

Location	St Anywhere	Department	Main Theatres	Manager	Joe Bloggs

Operation/Activity	
Glove use in surgery	**Complete the relevant details of the activity being assessed.**

Hazards	
Allergy to latex protein and chemical accelerators in latex gloves Blood or body fluid exposure hazard if insufficient glove barrier Possible hand discomfort (dependent on length of time worn) Inferior dexterity potentially causing technical difficulty	**All hazards associated with the activity should be entered here (e.g. physical hazards, machinery, electricity, working at heights, substances, access, equipment, vehicles, etc).**
Individuals or groups exposed — **Surgeons, scrub nurses**	**Highlight the people at risk and the likely maximum numbers exposed.**

Current control measures	
• Latex gloves are selected on grounds of barrier properties, comfort and superior qualities of dexterity in comparison with alternative glove materials • Non-powdered gloves are used • Staff who use latex gloves are informed of the hazard and signs of latex or chemical accelerator allergy • Staff who use latex gloves are under health surveillance	**List current control measures, including physical controls but do not forget to include other controls including safe working procedures, information instruction and training.**

With these controls in place, the risk is: (please tick)	LOW	MEDIUM	HIGH
		✔	

Further control measures required	
Uses of synthetic non-latex gloves if these meet similar technical standards to latex, are approved by procurement and are less potentially allergenic	**Include any additional controls identified to eliminate or reduce the risk further. Or state whether the risks are already as low as reasonably practicable.**

Date					
Initial					

(Use a new box each time this assessment is received)

APPENDIX 10.D

Health surveillance: examples of documentation

- Health Surveillance Information for staff
- Sample COSHH Health Record
- Sample Latex Surveillance Questionnaire
- Sample Occupational Health Questionnaire

Health Surveillance: Potential allergens or sensitisers
Information for employees, responsible persons and managers

The Control of Substances Hazardous to Health (COSHH) Regulations 2002 set out legal requirements for protecting people in the workplace against health risks from hazardous substances including potential sensitisers. Health surveillance is only one part of this protective strategy.

Health surveillance is not a substitute for preventing or adequately controlling exposure, but it is an additional requirement to protect your health. The purpose of health surveillance is to detect early changes of disease to ensure the adverse effects are minimised. Exposure to sensitisers, e.g. latex may cause sensitisation. Sensitisation may take place as a result of changes in the immune system that normally protects the body from the harmful effects of contaminants in the air we breathe or substances that we come in contact with.

The symptoms of sensitisation are:

- **Acute reactions:**
  - localized itching;
  - sore throat;
  - runny nose and eyes;
  - swelling of lips;
  - redness/swelling of skin; and
  - shortness of breath or wheeze.

- **Chronic reactions:**
  - contact dermatitis (red scaly itchy rash on hands)

Pre-placement and periodic assessments

- Initial baseline screening will be carried out via pre-employment screening through OHS when information will be collected before you work with a known sensitiser.
- Following this, a responsible person in the workplace will monitor you at intervals throughout your potential exposure.
- Should there be any change in your health or your answers to the questionnaire then it may be necessary for you to be seen by an Occupational Nurse or Physician.
- It may be necessary for your working environment to be adapted or altered, which may involve redeployment in order to reduce the risks to your health, upon the advice of Occupational Health Service.

References

[1] HSE MS 24 1998 *Latex & You* ISBN 0717615456

[2] *Health Service Risks Croner* 76 November 2002

[3] *Medical aspects of Occupational Asthma Guidance* Notes MS 25 1998 HMSO London

[4] *Preventing Asthma at Work How to control respiratory sensitisers* HSE1994 ISBN 0717606619

Sample COSHH Health Record

For surveillance of people exposed to a sensitiser, e.g. latex

For responsible person to complete with the employee under health surveillance

Note: this record should be kept by the employer for 40 years

SECTION A:	**Personal details of employee**	**NI Number:**
Surname	**Forename(s)**	
Date of Birth	**Telephone number**	
Occupation	**Home address**	

Consent to participate in health surveillance programme

In this workplace, substances are in use which have been known to cause allergic problems or sensitisation. Following risk assessment under Section 6 of the Control of Substances Hazardous to Health (COSHH) Regulations 2002, a programme of periodic health surveillance as required by Regulation 11 of the COSHH Regulations will be carried out. In some cases further advice may be required from an Occupational Health Service physician or other specialists.

I understand that a programme of health surveillance is necessary in this employment, and that this document acts as a record of surveillance. I understand that further clinical details may be recorded in my occupational health clinical notes.

Signature: **Date:**

(employee)

SECTION B:	**Record of Surveillance**				
Date of surveillance	Hazardous substance	Result (fit/unfit/refer to OHS)	Date of next surveillance	Signed (Manager or OH professional)	Name and Title

COSHH Health Surveillance: Sample Latex Surveillance Questionnaire for administration by responsible person (e.g. line manager)

Administer this questionnaire annually or at other intervals to be advised by the Occupational Health Service.

SECTION A:	**For the employee**		
Name (exposed employee)		**Job Title:**	
Please answer the following question by marking 'Yes' or 'No' with an 'x':			
In the last 12 months, or since last inspection, have you had any of the following:		**YES**	**NO**
1	**Persistent** problems affecting the skin on fingers or hands		
2	**Persistent** problems affecting nose and eyes		
3	**Persistent** problems affecting chest		
4	Have you had **any** significant symptoms that you attribute to use of latex gloves?		
Signed (exposed employee)		Date:	

SECTION B:	**For the responsible person**

- If all the answers are **NO** then this employee may continue to be exposed
- If exposure continues follow-up survey is normally advised in 12 months
- If any answers is **YES** this person should be referred to Occupational Health Service prior to working with or continuing work with latex or other allergens. Referral made to OHS
- Retain this questionnaire as well as the statutory COSHH Health Record
- Complete the statutory COSHH Health Record

Signature: **Date:**

(responsible person)

OCCUPATIONAL HEALTH SERVICE

Sample Health Questionnaire

For surveillance of people potentially exposed to substances which may cause sensitisation

Please indicate the sensitisers identified in risk assessment by marking x in box Latex ☐

SECTION A:	**Personal details of employee**
Surname	**Forename(s)**
Date of Birth	**Telephone number**
Occupation/place of work	**Start date**

Consent to participate in health surveillance programme

In this workplace, substances are in use which have been known to cause allergic problems or sensitisation. Following risk assessment under Section 6 of the Control of Substances hazardous to Health (COSHH) Regulations 2002, a programme of periodic health surveillance as required by Regulation 11 of the COSHH is being carried out.

In some cases further advice may be required from an Occupational Health Service physician or other specialist.

I understand that a programme of health surveillance is necessary in this employment and will form part of my health record.

SIGNATURE: (employee)	**DATE:**

	SECTION B: For the employee to answer **Please answer the following questions by marking 'Yes' or 'No' with an 'x', and give details where required**	**Yes**	**No**	**Dates & details**
1	**Have you or your family a history of any allergic problems, such as:**			
	– Asthma			
	– Hayfever			
	– Hand eczema			
	– Other eczema			
2	**Have you ever had a reaction to:**			
	– Latex products			
	– Fruit			
	– Your dentist's or other medical gloves			
	– Rubber gloves			
	– Condoms or balloons			
3	**Do you have or have you ever had any of the following? (Do not include isolated colds, sore throats or flu)**			
	– Recurring soreness of or watering of eyes			
	– Recurring blocked or runny nose			
	– Bouts of coughing			
	– Chest tightness			
	– Breathlessness			
	– Wheeze			
4	**Did these problems last for more than three weeks?**			
5	**Did these problems occur more than once? *(details overleaf)***			
6	**Does your skin get better with periods off work? *(details overleaf)***			
7	**Have you lost time from work with skin problems in the last year *(details overleaf)***			
8	**Do you think you know what caused the problems? *(details overleaf)***			
9	**Name the substance/material/contact that you think was responsible. *(details overleaf)***			
10	**Which hand cleaner do you currently use at work? *(details overleaf)***			
11	**Which if any emollients do you use? *(details overleaf)***			

SECTION C:	For occupational health advisor

History and examination findings

Action Plan: please mark box with x	YES	NO	Signature/date
Repeat surveillance one year			
Referral to Occupational Health Physician			
Summary report to Service Manager (copy to employee)			
Discharged from surveillance as no longer exposed			

APPENDIX 10.E

Membership of Hand and Glove Short-life Working Group

Hand and Glove Short-life Working Group

Members

Susan B Russell (Chair)	GMB Scotland
Irene Bonnar	OH Service Manager
Sandy Elder	OH Physician
Lynne Horn	Head of Procurement
Stan Hughes	SEHD
Kirsten Imlach	Clinical Nurse Specialist; Infection Control
Vic Laing	Scottish Healthcare Supplies
Graham Lowe	Consultant Dermatologist
David Mains	Health & Safety
Carole Reed	Infection Control Specialist
Ray Watkins	SEHD