Worcestershire NHS
Acute Hospitals NHS Trust

GUIDELINE FOR ALLERGY SKIN PRICK TESTING

This guidance does not override the individual responsibility of health professionals to make appropriate decision according to the circumstances of the individual patient in consultation with the patient and /or carer. Health care professionals must be prepared to justify any deviation from this guidance.

INTRODUCTION

Allergy is a growing problem within the United Kingdom. Reports from the House of Lords review (2007) and the British Society for Allergy and Clinical Immunology identify the importance of correct allergy management in a range of disease processes including respiratory medicine, ENT and dermatology. Identification of an individual's allergy profile is of primary importance in the management of allergic disease. There are two common tests available for this. The radio-allergo-sorbent-test (RAST) is a blood test that can be used to identify circulating allergen specific Immunoglobulin (IgE). However, this test is expensive (which limits the number of allergens that can be tested for) and takes time for results to become available. Alternatively, skin prick testing can be used to look for allergen specific Mast cell based IgE. This allows for a range of allergens to be tested for and provides a result within 15 minutes.

Skin prick testing is still highly relevant today with its value being recognised in current national policies including the BTS/SIGN Guidelines on the Management of Asthma (2008) and the BSACI guidelines for the management of allergic and non-allergic rhinitis (2007). It has been shown to be safe and reliable providing they are interpreted within the context of a comprehensive allergy history taken from the individual patient.

THIS GUIDELINE IS FOR USE BY THE FOLLOWING STAFF GROUPS :

Qualified staff who regularly work alongside a Consultant who is actively involved in allergy management. This will include Registered Nurses who work in the Respiratory, ENT, Dermatology and Paediatric clinics; and Clinical Physiologists at band 6 and above.
The staff must have completed a relevant allergy course e.g. The Diploma in allergy management, or have attending the designated in-house training session for skin prick testing; and have completed the relevant competency based assessment.

Lead Clinician(s)

Sarah Austin	Respiratory Nurse WRH
Mel Chippendale	Advanced Nurse Practitioner Paediatrics

Approved by Clinical Management Committee on: 19th September 2012

Review Date: 30th October 2019
This is the most current document and is to be used until a revised version is available

Key amendments to this guideline

Date	Amendment	By:
November 2016	Documents extended for 12 months as per TMC paper approved on 22nd July 2015	TMC
October 2017	Document extended for further two years with no changes	Sarah Austin
December 2017	Sentence added in at the request of the Coroner	

GUIDELINE FOR ALLERGY SKIN PRICK TESTING

INTRODUCTION

Allergy is a growing problem within the United Kingdom. Reports from the House of Lords review (2007) and the British Society for Allergy and Clinical Immunology (El-Shanawany, TM; Arnold, H. et al; 2005) identify the importance of correct allergy management in a range of disease processes including respiratory medicine, ENT and dermatology (House of Lords, 2007). Identification of an individual's allergy profile is of primary importance in the management of allergic disease. There are two common tests available for this. The radio-allergo-sorbent-test (RAST) is a blood test that can be used to identify circulating allergen specific Immunoglobulin (IgE). However, this test is expensive (which limits the number of allergens that can be tested for) and takes time for results to become available. Alternatively, skin prick testing can be used to look for allergen specific Mast cell based IgE. This allows for a range of allergens to be tested for and provides a result within 15 minutes.

Skin prick testing was initially developed in the early 1900's. Despite this, the test is still highly relevant today with its value being recognised in current national policies including the BTS/SIGN Guidelines on the Management of Asthma (2008) and the BSACI guidelines for the management of allergic and non-allergic rhinitis (2007).

Skin prick testing has been shown to be safe, (Codreanu et al, 2006; Duce and Gouldstone, 2006). They are reliable providing they are interpreted within the context of a comprehensive allergy history taken from the individual patient.

COMPETENCIES REQUIRED

This test may only be performed by qualified staff who regularly work alongside a Consultant who is actively involved in allergy management. This will include Registered Nurses who work in the Respiratory, ENT, Dermatology and Paediatric clinics; and Clinical Physiologists at band 6 and above.

The staff must have completed a relevant allergy course e.g. The Diploma in allergy management, or have attending the designated in-house training session for skin prick testing; and have completed the relevant competency based assessment. Attendance at the course is by invitation only.

PATIENTS COVERED

Patients attending Worcestershire Acute Hospitals NHS Trust for investigations of allergic disease linked to the Respiratory, ENT, Dermatology or Paediatric specialities.

DETAILS OF GUIDELINE

Supply and storage of allergens and control solutions for skin prick testing:

- Allergen solutions will be obtained via pharmacy in accordance with the Trust medicines policy.
- They must be stored at an appropriate temperature (2-8°), in a designated medicines fridge.
- As with all other medical products, staff must check each product's expiry date prior to their use.

Environment:

- Though skin prick testing is considered to be a safe procedure, there is a theoretical risk of a systemic allergic reaction to skin prick testing to food allergens.
- Where the patient is being tested as a result of experiencing an anaphylactic reaction or other significant systemic response (e.g. their airway has been compromised as a result of possible allergen exposure) the test must be completed where there is immediate access to emergency equipment and medical assistance. A medically qualified person must be aware the test is occurring.

Allergy history:

- Skin prick tests cannot be read in isolation and it is important that the results are interpreted in the light of the individual history.
- Before skin prick testing can be undertaken, the patient's allergy history should be recorded by either a medical practitioner or by a nurse who has completed a relevant allergy course.
- Where a doctor has request a panel of allergens for a patient prior to obtaining a history, the responsibility for interpreting the results lies with that medical practitioner. Staff must be aware that a positive result does not necessarily indicate a confirmed allergy and must not interpret the results or recommend allergen avoidance strategies to patients under these circumstances.

Selection of allergens for testing:

- Allergens must be selected on the basis of the person's allergy history. Random selection of allergens can result in inaccurate results that will complicate rather than clarify the patient's allergy profile.
- All skin prick tests must include positive and negative control solutions.
- Some allergens are identified by their Latin names, e.g. Dermataphagoides pteronyssinus (house dust mite). Staff must be confident in the common names used in skin prick testing and must not use any product of which they are unsure.
- List the allergen solutions being used on a skin prick test form, which will act as the permanent record of the test.

Preparation of the patient:

- The Trust policy for identification of the patient must be followed prior to the test.
- The staff member must check when the patient last had antihistamine medication. Many patients who suffer with allergy related disease are on multiple medications and may not be aware of which of their medication is an antihistamine. If unsure, staff must check with a doctor or a senior nurse before starting the test. Other medication e.g inhaled or topical steroids, leukotriene receptor antagonists should not be stopped.
- The staff member must explain the nature of the test, the anticipated effects (itching, redness and swelling at the test sites) and possible side effects (e.g. late local response) to the patient and obtain verbal consent.
- Ensure the patient's arm is visibly clean.
- Use a pen to mark the palmer aspect of the lower arm to indicate the allergen test sites. Numbers or letters may be used as long as the staff member is clearly able to identify the position of each allergen.

- In young children or those with acute eczema the back may be preferable site to facilitate stability.
- Drip a small drop of each allergen onto the patient's skin, at the identified site.
- Prick the skin through each drop using an allergen lancet or a skin prick needle. The prick should be adequate to introduce the allergen to the dermal layers of the skin. It should not be sub-cutaneous nor should it be deep enough to draw blood.
- Use a fresh needle or lancet for each allergen.
- Blot the allergen solutions from the skin, taking care not to contaminate one solution with another.
- Ensure the patient is comfortable and leave them to rest for 10 mins. Ensure the nurse call system is available to them.
- After 10 mins, read the histamine result, check the patient is comfortable and leave them to rest for a further 5 mins.
- After a total of 15 mins, read the remaining results.
- The results should be read by identifying the degree of wheal at each skin prick test site and outlining this area in pen. The wheal area is then measured by using a template and recording the result in mm on the skin prick test form, or by transferring the pen outline to a skin prick test form using sticky tape.

Interpretation of results:

- The results of the skin prick test must be interpreted by a doctor or nurse trained in allergy, in the light of the patient's history. This person should be responsible for discussing allergen avoidance issues with the patient.
- Avoidance information must not be distributed to patients on the basis of the skin prick tests alone.
- Staff giving out information must be aware that all avoidance strategies require a degree of behaviour modification and some have a significant financial cost to the patient. They must therefore take responsibility for ensuring that they are up-to-date on current avoidance strategies.

Completion:

- Ensure the patient is comfortable.
- If the patient is suffering with itching at the skin prick test sites, running cold water over their arm and patting the area dry may help.
- If the itching is severe, consider using topical steroid cream. This is a medication and must be prescribed.
- Ensure that results are reported to the patient's physician and that the skin prick test form is filed in the patients notes.

MONITORING TOOL

How will monitoring be carried out? Clinical Audit

Who will monitor compliance with the guideline? Directorate Clinical Governance Committees

STANDARDS	%	Clinical Exceptions
An allergy history is taken prior to skin prick testing	100%	None
Positive and negative control solutions are used	100%	None

REFERENCES

British Thoracic Society / Scottish Intercollegiate Guidelines Network (2008) revised 2011. British Guideline on the Management of Asthma – A national clinical guideline. http://www.brit-thoracic.org.uk/Portals/0/Guidelines/AsthmaGuidelines/sign101%20Sept%202011.pdf (Accessed 13/2/12)

Codreanu, F, Moneret-Vautrin, DA et al. (2006) The risk of systemic reactions to skin prick-tests using food allergens: CICBAA data and literature review. European Annals of Allergy Clinical Immunology 38(2):52-4.

Duce K, Gouldstone A. (2006) A practical guide to carrying out skin-prick allergy testing. Nursing Times 102(48):28-9.

El-Shanawany, TM; Arnold, H. et al. (2005) Survey of clinical allergy services provided by clinical immunologists in the UK. Journal of Clinical Pathology 58(12): 1283–1290.

House of Lords Science and Technology Committee (2007) Allergy 6th report of the 2006-2007 session. Vol 1 **Authority of the House of Lords** London

Scadding, GK; Durham, SR; Mirakian, R. Et al. (2007) BSACI guidelines for the management of allergic and non-allergic rhinitis Clinical and Experimental Allergy **Vol 38** pp19 – 42

Patient's addressograph label

Department of Respiratory Medicine
Skin Prick Tests

What is your presenting problem?

Have you ever suffered from asthma, hay fever, rhinitis, eczema, urticaria, allergic conjunctivitis, or food allergy?

What symptoms do you have at the moment?

Have you taken any antihistamines in the last 3 days: Yes / No

What makes your symptoms worse?	What is your job? What jobs have you done in the past?
Is there any time of day when your symptoms are better or worse?	Does anything that you do at work or school make your symptoms worse?
Is there any time of year when your symptoms are better or worse?	Is there anything you do in your house (e.g. dusting) that makes your symptoms worse?
Is there any change in your symptoms when you go on holiday?	What is your bedroom like? (e.g. bunk bed, feather pillows)
Is there any type of food that upsets you?	Do you have any contact with animals or birds?

Patient's addressograph label

BASIC ATOPY ASSESSMENT

	Histamine	Physiological saline
Mite II (P.ter)	Cat	Aspergillus
Trees I (early)	Trees II (mid)	Grasses

AEROALLERGENS (Based on assessment overleaf)

Mite I (D.far)	Animal hair I	Animal hair II
Dog	Horse	Others:
Altenaria	Cladisporium	:

FOOD ALLERGENS (Based on assessment overleaf)

Whole Egg	Brazil nuts	:
Rye flour	Walnuts	:
Wheat flour	Hazel nuts	:
Cow's Milk	Peanuts	:
Shrimp	Others:	:
Cod fish	:	:
:	:	:

Practitioner's name Practitioner's signature

Area used for skin tests: Test to be read at: Date

Worcestershire Acute Hospitals NHS trust
Assessment of competency for allergy skin prick testing

ASSESSMENT SPECIFICATION: The candidate should be able to demonstrate competence in performing a skin prick allergy test using the following knowledge evidence and performance criteria:

KNOWLEDGE EVIDENCE: The candidate should be able to:

a) Discuss the principles of skin prick testing and describe the limitations of this test for diagnosing allergy.

b) List commonly used antihistamines and explain why antihistamines should not be used prior to the test.

c) Explain why the patient's allergy history must be known prior to skin prick testing, with regard to allergen selection and result interpretation.

d) Explain the importance of using positive and negative control solutions and the way in which the results of these affect the interpretation of the test.

e) List potential complications associated with skin prick tests, detail how to recognise these adverse events and state how to manage them.

f) Demonstrate competence in performance of skin prick testing, using criteria below.

g) Discuss the principles of responsibility and accountability during skin prick testing, with reference to the relevant Code of Professional Conduct

You need a supervisor who has been deemed competent in skin prick testing by a Specialist Nurse or Nurse Practitioner who has completed their competencies

If the candidate still feels they lack competence after supervised practice of 2 skin tests, they should seek further training or supervised practice.

Clinical Supervisor *(please print):* …… Signature: …… Date: ……..

Candidate *(please print)*: …… Signature: …… Date: ……

Ward/Department: ……... Directorate/ PCT: …… Location: ……

Comments by Supervisor	**Comments by Candidate:**

Photocopy of completed competencies to held in personal file

Worcestershire Acute Hospitals NHS Trust

PERFORMANCE CRITERIA FOR ASSESSMENT OF COMPETENCY FOR ALLERGY SKIN PRICK TESTING

PERFORMANCE CRITERIA	COMPETENT- Supervisor Initial & Date	
	Direct observation 1	Direct observation 2
1. Patient Preparation		
Correct patient identified		
Explanation of procedure given		
Exclusion of antihistamine exposure in the last 3 days		
Confirm patient's allergy history has been completed		
2. Preparation of Equipment		
All equipment assembled		
Identify allergens to be used, dependent on the patient's allergy history		
3. Procedure		
Position the patient correctly		
Mark allergen test sites on the volar aspect of the patient's arm		
Apply allergen solutions and ensure use of positive and negative control solutions		
Prick skin to appropriate depth		
Clear allergen and control solutions from skin		
Measure the results after appropriate time		
Document results, using tape or diameter measurement		
Ensure appropriate information regarding results is given to the patient		
4. Correct disposal of all equipment		
5. Ensure the patient is comfortable		
6. File test results in patient notes		
Clinical Supervisor (*please print): ……..* **Signature**: …… **Date:** ……	**Candidate** *(please print)* …… **Signature**…….. **Date:**……	

CONTRIBUTION LIST

Key individuals involved in developing the document

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Name	Committee / group
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