HEALTH PROTECTION AGENCY NORTH WEST

The Management of Scabies infection in the Community

October 2007

(Review Date: October 2010)

There are other national guidelines available. This is recommended for use in the North West.

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1. **Introduction**

Scabies is a contagious infection caused by a mite *Sarcoptes scabiei*. The condition is recognised by an allergic reaction to the faecal material excreted by the mite. It is a world-wide disease, more common where overcrowded conditions prevail. It can affect any individual irrespective of social class or race. It is primarily characterised by itching and vesiculation. Signs of reddish, slightly elevated tracts may also occur. Miniature papules, vesiculations, pustules and excoriations soon appear. Scratching of these areas may lead to secondary bacterial infection.

2. **Mode of Transmission**

Scabies is host specific i.e. it lives only on humans, therefore scabies cannot be caught from pets or other animals. Transmission is by direct personal contact i.e. by prolonged skin-to-skin contact of a sexual or social nature, and thus a quick handshake or hug is unlikely to spread the infection. Mites usually pass from person-to-person in close communities, particularly within the household. It is recognised that the spread is not limited to family members, but includes everyone who has intimate contact with infected individuals. Infection occurs following transference of one or more mites, which burrow into the skin. People who have acquired the infection for the first time may not show any symptoms for 4-6 weeks, so this makes spread of the disease difficult to contain in institutions such as care homes.

3. **Life Cycle of the Mite**

- The newly mated female burrows through the skin, at the hands, wrists, elbows, feet or groin.
- Eggs are laid in the burrows at a rate of 2-3 per day for up to 2 months.
- Eggs mature, and larvae emerge from the eggs 3-4 days after they have been laid.
- After emerging from the egg, the larva passes through two moults before becoming adult.
- Adult mites mate
- The entire life cycle can be completed in 10-14 days, and mites live for around 30 days.

4. **Incubation Period**

The incubation period for a first infection is usually 4-6 weeks in people without previous exposure, as the mites faecal contamination takes time to cause an allergic reaction. Subsequent contact with the scabies mite will cause an allergic reaction within one week. Scabies can be easily managed when treatment is performed correctly. However, as a result of the extended incubation period there may also be asymptomatic carriers who can reinfect others after treatment has been performed. It is therefore important to undertake skin assessments for at least two weeks post treatment.
5. **Sites of Infection**

The most common areas affected are between the fingers, wrists, elbows, armpits, waist, thighs, genitalia, nipples, breasts and lower buttocks. In infants, the elderly and those who are chronically ill, the mites can be found on the face, ears and scalp. It should be recognised that scabies causes an allergic reaction, and the itch and the rash may not always coincide with the site of the mite.

6. **Recognition/Diagnosis**

Appropriately trained professionals who will look for burrows and/or mites can make a clinical diagnosis. Usually there are fewer than ten mites on the entire body and therefore evidence of infection can easily be missed. Recovering the mite from its burrow by taking skin scrapings and identifying it microscopically may establish diagnosis. However scabies should always be suspected in the presence of the following symptoms:

- itching, particularly at night
- a symmetrical unexplained rash
- burrows and other lesions on the sites mentioned above

7. **The Rash**

The rash is an allergic reaction of the body to the mite, its waste products and the eggs deposited by the mite under the skin. The allergic reaction may not correspond with the site where the mite may be found. The appearance and severity of symptoms varies from person to person and as with all allergies, the symptoms and their severity are strongly influenced by the immune status of the affected individuals.
8. **Classification of Scabies**

There are two classes of scabies infection, both are caused by the same mite.

8.1 **Classical scabies**

- Found in people with normal immune systems.
- Mites may be few in numbers.
- Itch can start between 2-6 weeks following initial acquisition of the infection.
- Sites of the rash may not correspond to sites of the mites.

8.2 **Hyperkeratotic Scabies** (also known as crusted, Norwegian and atypical scabies)

- An unusual form of the infection that is highly contagious.
- Occurs in immunodeficient individuals e.g. the frail elderly. Infection often appears as a generalized dermatitis more widely distributed than the burrows and the usual severe itching may be reduced or absent.
- Persons with crusted scabies are highly contagious because of the large number of mites present in the skin scales.
- Skin becomes scaled, crusted and unsightly due to the numbers of mites present.

9. **Contact Tracing**

Unless the original source of infection and all contacts are identified and treated, the disease will continue to spread with the possibility of re-infection for those already treated.

The purpose of contact tracing is to identify anyone who may be infected and advice them about treatment options. All those with whom intimate skin contact was made for a prolonged period of time within the previous 2-6 weeks must be identified. It is beneficial for those people to seek information and guidance from their family doctor, practice nurse or community pharmacist.

10. **Treatment**

The index case (first person identified as having Scabies) and all members of the affected household should be treated simultaneously even in the absence of symptoms. It is also important to stress that this is not limited to family members but should include everyone who has had intimate contact with infected affected individuals, e.g. sexual contacts. All members of the household should be treated at the same time (preferably within twenty four hours notice). For those who have been diagnosed with a scabies rash, treatment should be undertaken twice, one week apart.
11. **Scabicidal treatments for topical use**

Treatments of choice are:

11.1 **Permethrin 5% Dermal Cream** (pyrethroid)

- Should be applied to the whole body and washed off after eight - twelve hours contact time.
- Apply also to the face, neck, scalp, and ears, and if hands (or other areas of the body) are washed within the eight - twelve hours of application, reapply to that area of the skin.
- Children aged 2 months to two years medical supervision is required.
- Do not apply to broken or secondarily infected skin.

11.2 **Malathion 0.5% Liquid** (organo-phosphate)

- Should be applied to the whole body and washed off after 24 hours contact time.
- If hands (or other areas of the body) are washed within the 24 hours of application, reapply to that area of the skin.
- For young children under 6 months, use under medical supervision.

It is recommended that these products be applied twice, seven days apart.

A non-pyrethroid product should be recommended for people who are allergic to Chrysanthemums.

Not contra-indicated in pregnancy or breast-feeding.

Aqueous liquids and creams are preferable to alcoholic preparations; they are easier to apply and are less irritating to the sensitive areas of the skin.

Transmission of the mite ceases after the first application has been applied, however, itching may persist for several weeks after the infection has cleared.

Use sufficient quantities of the scabicide, usually 30 grammes = 1 tube of cream or 100mls of lotion, this will cover the average person, but larger people in size and body weight will require two tubes of cream/bottles of lotion to ensure all areas of the body are covered adequately.

11.3 **Benzyl Benzoate B.P**

The use of Benzyl Benzoate as a treatment for scabies infection is generally no longer recommended, as it has been superseded by more contemporary products (see above).

It requires a long contact time (24 hours) with a repeat application after 24 hours (sometimes a third application is required) without the patient bathing in between applications. It is not recommended for use in children, should not be applied to broken or secondarily infected skin, and should not be used be used by breast-feeding mothers.
12. **Treatment of classical scabies**

Liquids or cream should be applied by rubbing gently onto all parts of the body including the face, behind the ears and the scalp. Hot baths before treatment should be avoided as evidence suggests this aides absorption into the blood stream, and reduces its action at the site.

The liquid or cream should be allowed to dry before getting dressed.

Partners and close contacts should be treated simultaneously.

People may need assistance to apply the treatment properly and special attention should be paid to armpits, wrists, elbows, finger webs and under nails, beneath the breasts and around the nipples, and the toes. Liquid should be brushed under the ends of the nails.

The cream or liquid should be reapplied after washing hands or other areas (e.g. after nappy changing or after a person is incontinent) during the treatment time, and to prevent small children and babies sucking the treatment from their hands, mittens can be worn.

There is no evidence to suggest that scabies is transmitted on clothing, towels and bedding, therefore no special cleaning or laundering measures other than the usual hygienic ones are required following treatment.

People should be advised that itching could persist for several weeks after successful treatment. In fact the symptoms may become more pronounced. This is because the body reacts to the dead mite and its waste products, which remain in the skin. Skin becomes scaled, crusted and unsightly due to the numbers of mites present and for this reason an anti-pruritic liquid or cream may be helpful.

The guiding principle is co-ordination of treatment to limit both spread of the disease and pesticide exposure. Successful treatment does not however protect the person from re-infection from undiagnosed contacts inside and outside the family.

13. **Treatment of hyperkeratotic scabies**

An oral product, Ivermectin, is available on a named person basis and has been used in combination with topical treatments for the treatment of hyperkeratotic (crusted, Norwegian or atypical) scabies that does not respond to topical treatment alone.

Patients with hyperkeratotic scabies may require 2 or 3 applications of topical treatment on consecutive days to ensure that enough penetrates the skin crusts to kill all mites.
14. **Health and Social Care Settings (e.g. Care Homes, Day Centres)**

All staff and residents having close contact with a diagnosed case of scabies may require treatment even in the absence of symptoms. In many institutions this will involve all patients and staff that provide direct client care being treated simultaneously (within a 24 hour period) in a co-ordinated way.

It is recommended that the management of care home facilities take responsibility for purchasing the scabicidal treatments for their staff. By doing this the home management can ensure that treatment is undertaken at the same time and will reduce the risk of prolonged infection.

There is no evidence to support the spread of scabies by fomites such as towels, bedding, soft furnishings or equipment. However, fomites may play a part in the dissemination of the more unusual form of scabies infection known as hyperkeratotic scabies (also known as crusted, Norwegian or atypical scabies).

Normal washing temperatures can be used and should be followed by thorough drying.

Care home staff do **not** need to stay off duty provided that they have observed the minimum contact time for their initial treatment.

Where staff have responsibility for applying the liquids/cream to residents, they should wear disposable non-sterile CE marked gloves to do so.

15. **Principles of an outbreak management and control**

The control of an outbreak of any infectious disease depends on early detection, investigation and appropriate control measures to prevent further spread.

For the purpose of a suspected outbreak of scabies, the following definitions can be applied:

- Two or more persons diagnosed with scabies by a clinician
- Two or more persons with an unexplained rash, diagnosed by a clinician as probable scabies.

Where possible scabies infection should be diagnosed by an appropriately trained person, i.e. dermatologist or dermatology nurse.

In the event of a suspected outbreak of scabies, it is the responsibility of the owner, manager or nominated lead of a care facility to liaise with local infection control nurse at the primary care trust or local health protection unit for support and advice. It may also be appropriate to liaise with the Commission for Social Care and Inspection (CSCI).
All GPs should be informed of the problem by the manager/deputy and should be requested to see their patients to make a clinical diagnosis, to treat and follow up as necessary.

Effective control requires early identification of index cases and adequate and simultaneous treatment (within a 24 hour period) of cases and contacts to prevent further spread.

Treatment should be co-ordinated with all care staff and residents in the affected area given two applications 7 days apart.

If possible, have one principle pharmacy co-coordinating the supply of treatments.

Family members of staff may require treatment if they have prolonged skin-to-skin contact and therefore should seek advice from their respective GPs.

Regular visitors to the home should also be advised about the scabies outbreak and given advice to seek treatment from their GP.

The management of the home should also post a notice in a public area of the home to inform visitors that an outbreak of infection is currently being experienced.

Management should consider the need to temporarily close to admissions / respite patients.

Care institutions that have recently taken a transfer of a resident from an affected care area (care home or hospital ward) should be informed so that an assessment of the patient can be made for possible infection.

**For any further advice please contact the Community Infection Control Nurse at the Primary Care Trust or the local Health Protection Unit**
16. References


Link to HPA North West Scabies Leaflet: http://www.hpa.org.uk/northwest/factsheets/SCABIES.pdf