Regional Health Authority
Central Manitoba Inc.
Office régional de la santé
du Centre du Manitoba inc.

POLICY NUMBER:	IPC-109.000
ISSUING AUTHORITY:	Infection Prevention & Control
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SUBJECT: SCABIES

BOARD POLICY REFERENCE:

Executive Limitation (EL-2) Treatment of Clients
Executive Limitation (EL-3) Treatment of Staff
Executive Limitation (EL-7) Asset Protection & Risk Management

POLICY:

Prevention of infection and control of spread of scabies is required to reduce risk of potential outbreak.

DEFINITIONS:

Case Definition

Body infestation by *S. scabiei.*

PROCEDURE:

Reporting Requirements

Scabies is not a reportable condition in Manitoba.

Signs & Symptoms

Intensely itchy rash found particularly around the fingers, wrists, elbows and arm pits. The rash is caused by a mite which burrows under the skin to lay its eggs. Sensitization to the proteins of the parasite gives rise to the itchy rash. Secondary skin infections may occur. The itching is often worse at night.

Infants

- The rash may also be on the head, neck, palms, and soles.
- Scabies infestations may be typical or crusted.

Immunocompromised persons

- May have crusted lesions with many mites on any part of the body (see also Norwegian scabies).

Older adults

- Scabies lesions may be more difficult to identify, with affected areas more likely to be atypical or nonspecific. Since warm temperatures increase the prevalence of burrowing and egg laying of the scabies mite, clients who are bedridden may have lesions on their back, sacrum, legs and scalp. Itching for these clients may be incessant instead of being confined to certain times of the day.

Clients in Long Term Care Facilities (LTC)

- Include a mix of typical scabies and atypical heavy infestations of scabies mites. The skin surface may contain up to hundreds to thousands of mites. Impaired or delayed immune responses and urinary incontinence are prevalent in LTC facilities. The warm moist skin environment affords mites a much larger "choice" of locations to start burrows on clients so afflicted. Skin lesions often occur on the buttocks or back as well as on the more typical locations.

Norwegian Scabies

- Is a rare subset of the disease characterized by neglected, chronic, and extremely florid scabies in an impaired host. Individuals who are mentally challenged, physically debilitated, malnourished, or immunocompromised – such as those with AIDS, diabetes or receiving immunosuppressive therapy – are most susceptible to this rare form of scabies. Although caused by the same mite, the prevalence of the mites in Norwegian scabies can be in the millions, compared to the 10 to 15 normally seen on the host with regular scabies. Clients with Norwegian scabies have crusting and scaling of the face, scalp, hands, feet, and pressure bearing areas. Pruritus may or may not be present.

Etiology

Sarcoptes scabiei.

Epidemiology

Reservoir: Humans. Infestation acquired from dogs and other animals is uncommon, and these mites do not replicate in humans.

Transmission Risks: Direct skin contact with a scabetic person is usually required. Close family contacts such as bed partners, caregivers, and other close family members are at most risk. The mites can only crawl, and cannot jump therefore acquiring scabies from the environment is unlikely unless the patient has Norwegian scabies (shed vast numbers of mites). Because of the large number of mites in exfoliating scales, even minimal contact with a patient with crusted (Norwegian) scabies may result in transmission. Freshly contaminated fomites such as clothing and bedding

can also serve as vectors. The mites do not live more than three to four days without contact with skin.

Occurrence: Worldwide. Outbreaks occur in all socioeconomic conditions, but are more common in situations where there is crowding.

Incubation Period: In persons without previous exposure, it may take up to six weeks for symptoms to develop. In persons with previous exposure to scabies, itching may develop in one to four days after infestation. These re-infestations usually are milder than the original episode.

Susceptibility and Resistance: Any person may become infested under suitable conditions of exposure.

Period of Communicability: Transmission can occur as long as the infested person remains untreated and until 24 hours after treatment including the interval before symptoms develop. The mites do not live for more than three or four days without contact with skin.

Control for Institutions – Refer to IPC-E00.013 Scabies Flow Sheet for Follow-up

1. Identify Cases
    - 1.1 Confirm Diagnosis in Initial Case: Identification of mites from scrapings of the affected skin. The following may be used to confirm the diagnosis. A consult with a dermatologist may be required. (Refer to IPC-E00.052 Scabies Case Worksheet ~ Client andIPC-E00.054 Scabies ~ Employee with Scabies ~ For Occupational Safety & Health Program
        - 1.1.1 Skin Scrapings Refer to IPC-E00.055 Scabies ~ Procedure for Skin Scraping for detailed procedure and information on finding burrows.
        - 1.1.2 Felt Pen Test – used to increase the diagnostic yield
            - ♦ Rub a felt pen over areas suspicious for burrows.
            - ♦ Wipe off the ink with an alcohol swab.
            - ♦ Examine the burrows highlighted by the remaining ink.
    - 1.2 Identify Additional Clinical Cases (skin survey): Scabies will be recognized by the occurrence of one or more unexplained rashes on residents (clients) or staff. Try to confirm these diagnoses if possible.
    - 1.3 Contact the Medical Officer of Health for additional advice on scabies management in institutions. The primary goal of managing cases of scabies infestation in institutions is to prevent the further transmission to others who may have close contact with the case. Under treatment of a facility results in “ping pong” outbreaks occurring weeks to months later. Over treatment of a facility may result in excessive cost for staff overtime and supplies where budgets are limited.

2. Institute Precautions:
    - 2.1 Institute Contact Precautions as soon as scabies is suspected as the cause of a rash in a client. Refer to IPC-E00.046 Contact Precautions Door Sign. Maintain Contact Precautions until 24 hours after initiation of treatment. In Norwegian or crusted scabies maintain precautions until rash is abated.

2.2 Appropriate education and communication to staff, clients and family. This will help to reduce the stress and fear that can occur with scabies infestations. Refer to IPC-E00.014 Scabies Client Teaching Sheet,IPC-E00.056 Scabies Outbreak Staff Notice,IPC-E00.057 Scabies Outbreak Visitor Notice,IPC-E00.058 Scabies Outbreak Admission Precaution.

3. Identify Contacts:

3.1 Transmission is likely where there has been direct person to person skin contact with an infested individual i.e. bed partners, caregivers, and other close family members. Transmission may occur occasionally through contact with clothing/bedding of an infested individual. Minimal contact may be all that is required for transmission when an individual has Norwegian scabies. See also "Incubation Period". Refer to IPC-E00.053 Scabies ~ Contact Tracing Worksheet.

4. Categorize Cases and Contacts:

4.1 Clients, family and staff are categorized according to their degree/probability of infestation. Appropriate facility staff i.e. ICP, Charge Nurses should be instructed on the type of skin lesions to identify. A line listing of those individuals with a suspicious rash should then be generated utilizing the following categories for treatment: (Refer to IPC-E00.012 Scabies Line Lists for Treatment Categories and IPC-E00.096 Scabies Body Diagram for Rashes Documentation)

Category I: Norwegian or crusted scabies are defined as "heavy" infestation (>50 lesions) or long term involvement that has been refractory to previous treatment or positive scrapings with numerous mites per slide.

Category II: Typical or probable scabies are defined as <50 skin lesions, no crusting or scaling, and papular rash or burrows involving a small or moderate area of skin surface. If scraping is positive only 1 mite is found per slide.

Category III: Possible scabies is defined as atypical skin lesions or no skin lesions but direct contact with persons classified in Category I or II, their bedding, or their clothes (i.e. health care workers, therapists, volunteers).

Psychogenic Scabies: Itching but no skin lesions, also can be assigned to Category III. Treatment is safe enough to be given to those individuals who insist on treatment even though they do not fit into a treatment category. Unnecessary treatments can usually be reduced by an aggressive communication plan.

5. Treatment:

Schedule according to Category:

Day	Category I (Norwegian Scabies)	Category II (Typical Scabies)	Category III (Possible Scabies)
1	*5% permethrin, head & neck; clip fingernails	*5% permethrin, neck down; clip fingernails	*5% perverting, neck down
2	Bath	Bath	Bath
7	Repeat 5% permethrin, neck down	-------	-------
8	Bath	-------	-------
14	Re-examine	Re-examine	-------
28	Re-examine	Re-examine	Re-examine

Treatment Options

I. 5% permethrin cream or lotion (NIX or Kwellada P)

Dosage:

Adults and children over 12 years of age: 30-g tube

Children 5 – 12 years: ½ of a 30-g tube

Children 2 – 5 years: ¼ of a 30-g tube

- Thoroughly massage the dermal cream or lotion into the skin from the head to the soles of the feet (include head and neck if indicated by Treatment Category). Pay particular attention to the areas between the fingers and toes, wrists, axillae, external genitalia and buttocks.
- Reapply to the hands and buttocks if area washed with soap and water within eight hours of application (and as directed on the product). It is not necessary to apply a thick visible layer of cream into the skin.
- Scabies rarely infects the scalp of adults, although the hairline, neck, temples and forehead may be involved in geriatric clients.
- Remove the dermal cream or lotion according to product guidelines (shower or bath).
- See Treatment Categories for specific guidelines for re-treatment.

Precautions

- 5% permethrin should not be used on a person with a known hypersensitivity to any of their components or to chrysanthemums.
- Should be used during pregnancy only if clearly needed and should not be used by breastfeeding mothers. Consider discontinuing nursing during treatment or withholding treatment if it is not possible to discontinue nursing.

II. 10% crotamiton (Eurax)

- Apply cream to the entire body from the neck down, nightly, for two nights. Wash it off 24 hours after the second application. Efficacy is not more than 50%, even when used as directed.

Adverse Reactions

- Little is known of the toxic effects of crotamiton in children, or its short-term or long-term toxicity in pregnancy or during lactation. However, no serious drug reactions have been reported. Local erythema may occur in sensitive persons.

III. 5% sulfur (in petrolatum)

- Apply from the neck down, nightly, for three nights. Bathe before reapplying and 24 hours after the last application. No controlled studies of efficacy or safety are available.

Adverse Reactions

- This product may cause local erythema. It has a foul odour and is messy to apply.

Treatment Tips:

- coordinate a treatment plan so that all affected individuals can be treated at the same time (within the same 24 to 48 hour period);
- apply treatment with single-use disposable gloves;
- ensure sufficient product is available;
- coordinate Laundry and Housekeeping;
- follow the recommendations on the product insert for correct application of treatment;
- pay close attention to treatment of skin folds;
- apply cream to nails with soft toothbrush;
- reapply cream to areas where it is washed off i.e. hands, buttocks; within 8 hours of application (follow product recommendations);
- treated staff are considered noninfectious after one overnight application and may return to work the next day
- in the majority of persons, scabies infestation is cleared with a single application. If necessary, a second application may be given seven to 10 days after the first, but only if live mites can be demonstrated or new lesions appear.
- Note that a flare in the level of itchiness following treatment is normal and not an indication of treatment failure.

Treatment Tips for Crusted (Norwegian) Scabies

- In the usual scabies infestations, 10-15 mites can be found on the body. In crusted scabies, where the patient does not respond well immunologically to the infestation, thousands of mites can be present, making treatment difficult. Although the mite is still sensitive to the usual treatment, the huge number of mites and the accompanying rash make repeat treatment mandatory.

- Treatment should focus on areas where mites can be sequestered, such as under fingernails (these may be cut and brushed before treatment) and in skin folds, including the umbilicus.
- For persons in institutions who have crusted scabies, contact precautions should be maintained until the patient's rash has resolved, confirming adequacy of treatment. Refer to IPC-E00.046 Contact Precautions Door Sign.

Pruritis:

- The pruritis associated with scabies may be treated with diphenhydramine HCL (Benadryl), hydroxyzine HCL (Atarax) or other anti-pruritic medication if necessary. The pruritis may persist for up to three weeks after treatment even though all mites are dead, and is not an indication to retreat unless live mites are identified

6. Environmental Controls

- Launder in the hot cycle (60°C) and heated drying, any clothing and bedding worn or used by the client in the four days prior to treatment and until the treatment is washed off
- Items that cannot be washed should be placed in a sealed plastic bag for at least seven (7) days before reusing;
- There is no need for special treatment of furniture, mattresses or rugs or fumigation of areas. General cleaning and thorough vacuuming is recommended, including soft or upholstered furniture.
- In a facility with a high percentage of demented clients transmission through fomites may occur more frequently due to inadvertent sharing of clothing, beds and other personal items.
- Discard creams/ointments that are currently used directly by the client in order to eliminate this as a possible reservoir of infestation, or take out of use for seven (7) days;
- Staff should wash hands and forearms thoroughly between clients;

7. Follow Up Observation and Treatment.

- After treatment of the index case and contacts, re-treat according to Treatment Categories and if there is demonstration of live mites at least one week after treatment. New rashes may just represent an allergic response to dead mites that have not yet been shed from the skin. Failure to ensure that live mites are present will lead to over-treatment of staff and clients. It is not unusual in an institutional setting to have one or two secondary cases after the initial treatment, but transmission should cease with the institution of contact precautions.
- If outbreak control measures have been successful, no new cases should be seen within several weeks following treatment. However, cases can still occur as late as six (6) weeks following the last exposure. If cases are still occurring several weeks following prophylaxis, either the source case was not identified, was not treated appropriately, or there is a new unidentified source(s) somewhere in the facility.
- Notify any facility/program who may have been exposed to a positive client through a transfer, admission, or treatment.

DOCUMENTATION:

Scabies Line Lists for Treatment Categories IPC-E00.012
Scabies Flowsheet for Follow Up IPC-E00.013
Scabies Client Teaching Sheet IPC-E00.014
Contact Precautions Door Sign IPC-E00.046
Scabies Case Worksheet ~ Client IPC-E00.052
Scabies ~ Contact Tracing Worksheet IPC-E00.053
Scabies ~ Employee with Scabies ~ For Occupational Safety & Health Program IPC-E00.054
Scabies ~ Procedure for Skin Scraping IPC-E00.055
Scabies Outbreak Staff Notice IPC-E00.056
Scabies Outbreak Visitor Notice IPC-E00.057
Scabies Outbreak Admission Precaution IPC-E00.058
Scabies Instruction for Nix Treatment IPC-E00.059
Scabies Body Diagram for Rashes Documentation IPC-E00.096

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