

## Table 10

---

### **SCABIES: Diagnosis and Management in the Long Term Care Facility**

#### **BACKGROUND**

Scabies is a contagious parasitic infestation of the skin caused by the mite, *Sarcoptes scabiei* var *hominis*. Although not a reportable disease, scabies outbreaks have been increasingly reported from long term care facilities. Employees, family members, and residents are at risk of exposure to scabies.

Scabies in residents of LTCF may often be atypical in appearance and symptoms, causing a delay in diagnosis as well as heavy infestation. An additional factor contributing to the increased risk of exposure is the opportunity for direct skin contact between staff and residents or residents and other residents. Such contact is increased with LTCF residents who often require assistance with dressing or positioning as well as other nursing care. Further opportunities for transmission can occur through rotation of asymptomatic staff members to various units within the LTCF.

#### **DEFINITIONS**

**Outbreak:** An outbreak of scabies will be determined to be present if two or more concurrent cases of scabies affecting residents and/or staff members are identified or there are two or more consecutive cases of scabies occurring within four to six weeks of each other .

**Case:** A confirmed case of scabies is defined as a person who has a skin scraping with identified mites, mite eggs, or mite feces. A probable case of scabies is a person with clinical symptoms of a persistent pruritic rash.

**Contact:** A contact is defined as anyone with whom a case has had skin-to-skin contact (e.g., staff member, physical therapist, phlebotomist, family member who is a regular visitor, or other residents with whom the case has had direct skin contact). Roommates will also be considered contacts.

**Incubation Period:** The time between contact with the mite and the appearance of the rash varies depending on previous exposure. If the individual has never had scabies, the onset of symptoms tends to occur two to six weeks following the initial infestation by the mite. If the individual has had scabies previously, symptoms can occur one to four days following mite infestation.

## Table 10

---

**Period of Communicability:** The infested individual may be asymptomatic yet able to transmit the mite to others. After infestation occurs, the female mite deposits eggs under the skin of the human host. After larvae hatch from the eggs, they travel to the surface of the skin. Transmission can occur as early as two weeks after the original infestation of the individual. A person is considered to be no longer infectious 24 hours after start of effective therapy.

### DIAGNOSIS

Typical scabies lesions consist of papules, vesicles, or linear burrows containing the pinpoint mite; however, these may not be present on an elderly or immunocompromised infested person. Erythematous papules, excoriations, or occasionally vesicles are often located between the fingers, on the upper back, wrists, elbows, thighs, breasts, or genitalia. The lesions may also appear as eczematous plaques, pustules, or nodules located in skin folds under the breasts, around the naval, axillae, buttocks, scrotum, or at the belt line on the abdomen. Infested individuals usually complain of severe nighttime itching. The itching is often worse following a hot shower or bath. The location of scabies lesions also differs in the elderly or immunocompromised.

New residents or those accepted in transfer from another care facility will be examined on the first day of arrival for evidence of skin lesions.

#### **Confirmation of Diagnosis:**

Suspicious lesions should be scraped with a sterile needle or scalpel blade. Health care personnel will be trained to perform skin scrapings according to the following procedure:

- Choose lesions without significant excoriation. A magnifying glass may be used to locate burrows. When a possible burrow is detected, mark with a wide felt tip pen. Apply an alcohol pad to remove the surface ink. If a burrow is present, the ink will remain within the burrow. The burrow will then appear as a dark, irregular line.
- Apply sterile mineral oil to the surface of the lesion to be sampled.
- With a glass slide held at a 90 degree angle to the surface of the lesion, scrape the lesion. Collect the scraping on the glass slide. Scrapings from several lesions may be collected onto a single glass slide.
- Place a coverslip over the scrapings and examine with a microscope under low power. The presence of a mite, eggs of a mite, or mite fecal material confirms the diagnosis of scabies. In the absence of a microscope, the coverslip should be sealed with fingernail polish and the slide sent to a lab for evaluation.

## Table 10

---

### **Treatment:**

The recommended treatment for scabies is 5% permethrin cream. Application of this cream to the skin of an infested resident should be supervised by the staff of the LTCF. Usually the cream is best applied prior to bedtime. The cream must cover all skin areas from the neck down.

In the case of an incontinent resident, the LTCF staff must ensure that any cream that is removed during bouts of incontinence is promptly replaced. Following 8-14 hours of skin contact, the cream should be removed by shower or bath. Treatment may need to be repeated in seven days if there is evidence of persistent or recurrent lesions.

An infested individual should be considered contagious until 24 hours after start of effective treatment. Itching often persists in spite of treatment and may require additional therapy for symptomatic relief.

Alternative treatments are occasionally prescribed. These may include 1% lindane cream or lotion, 6% precipitated sulfur in petroleum, or 10% crotamiton cream or lotion.

### **Environmental Control Measures:**

While scabies is readily transmissible with skin to skin contact, the mite can only survive in the environment for 48 hours without a human host. The bedding and clothing of an infested individual may contain viable mites, but exposure to a human host must occur within a short period of time for transmission to occur.

The environment in the patient's room will be cleaned in the standard fashion. Fumigation is not necessary; and furniture will not be discarded. Clothing or bedding used by an infested individual during the seven days before effective treatment will be laundered and dried with the hot cycle or dry cleaned. Items that cannot be laundered or dry cleaned will be placed in a plastic bag and sealed for seven days to allow time for mites and eggs to die.

### **Cohort Measures:**

During an identified scabies outbreak, staff members who have been providing care to an identified case will not be rotated to other resident care units until 24 hours after completion of the staff member's scabicide treatment. The case will also be isolated from other residents for 24 hours.

## Table 10

---

### Protocol For Assessment And Control Of Scabies Outbreaks in Long Term Care Facilities

#### General Actions

- List of all cases and contacts will be created. This will include roommates, staff members (permanent and rotating) providing care, and regular visitors will be considered contacts
- Diagnosis should be confirmed

#### Educate staff and residents (if possible) and families on:

- Mode of transmission
- Communicability
- Potential for widespread epidemic if prompt action not begun
- Need for prophylactic treatment of even asymptomatic contacts
- Need for coordinated timing of treatment
- Proper application of treatment medication
- Environmental control measures: Laundry, dry cleaning, or isolation of clothing in plastic bags for seven days

#### Cases and contacts will be categorized for treatment assignment as follows:

##### Management: Group I: Confirmed or Suspected Scabies and Contacts

##### 1. Action:

Isolate case (Contact precautions) for 24 hours after start of effective therapy.

##### Perform environmental control measures:

- Laundry, dry cleaning, or isolation of clothing in plastic bags for seven days.
- Exclude case from congregative activities or work until the day after treatment.
- Do not transfer a resident without notifying the accepting facility of the diagnosis of scabies.

##### 2. Treatment:

- **Day 1 (PM)** Clip nails. Bathe or shower. Apply 5% permethrin cream to all skin areas from the neck down and under nails. (Staff member should apply permethrin to the skin of the resident.)
- **Day 2 (AM)** Bathe or shower to remove the cream. Inform person that itching may persist for weeks.
- **Day 14** Reexamine; retreat if persistent or recurrent lesions.
- **Day 28** Reexamine; retreat if persistent or recurrent lesions.

## Table 10

---

### **Institutional Treatment Plan: Selective vs Mass Treatment**

Although scabies frequently presents as a widespread outbreak within a LTCF, there are circumstances in which a more selective treatment plan may be utilized.

#### **Selective Treatment Protocol**

If a single case of scabies occurs within the population of residents or employees, a selective treatment protocol will be utilized:

- The case will be identified and a list of all contacts (roommate, care providers including radiologists, physical therapists, etc., sexual contacts, family members, or regular visitors) will be identified for the previous two months. Contacts will be checked for a rash or itching symptoms..
- Treat case and contacts to permit simultaneous treatment to prevent reinfection and spread of the infestation
- Reexamination at 14 and 28 days.
- Employ environmental control measures for laundry and clothing as previously described.

#### **Mass Treatment Protocol**

A more extensive treatment plan will be utilized if any of the following occur:

- a single case of crusted or atypical scabies (Norwegian scabies) is diagnosed within the resident population and at least one employee is symptomatic;
- two or more residents have positive scrapings and at least one employee on the same unit is symptomatic; or
- one asymptomatic resident has a positive scraping and other residents or employees have exhibited symptoms of infestation for a period exceeding a month.

#### **The following actions will be taken:**

- List of cases and contacts.
- There will be facility-wide screening to detect skin lesions or symptoms that may be present in residents, employees, or close contacts of cases.
- Employees will be cohorted to designated units until coordinated treatment is completed.
- Perform mass treatment within a 24 hour period of all residents and staff members employed within a defined area of the facility .
- Perform followup examination and retreatment as necessary
- Perform environmental cleaning as previously described.