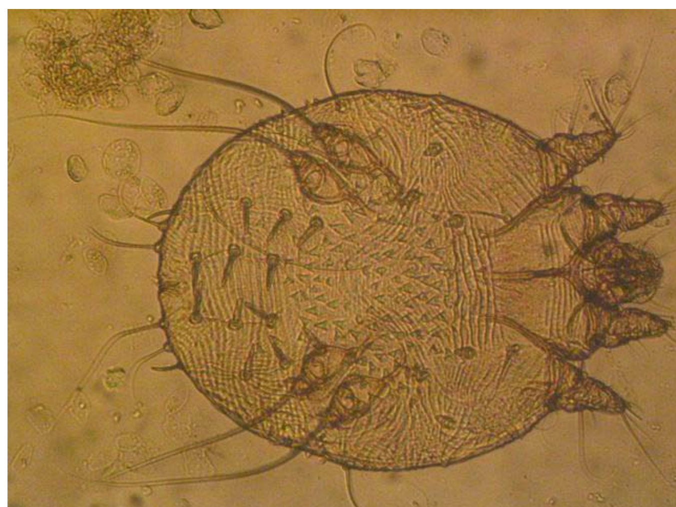
NEVADA STATE HEALTH DIVISION

Bureau of Health Planning, Statistics, Epidemiology and Response

SCABIES PREVENTION AND CONTROL GUIDELINES RESIDENTIAL/GROUP HOME FACILITIES



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I. INTRODUCTION

Scabies is an infestation of the skin caused by the human itch mite. Scabies outbreaks in group living facilities can be costly in terms of the direct and indirect costs of outbreak management, poor public relations, and discomfort and anxiety of affected patients, employees, and their family members. Furthermore, secondary bacterial skin infection is a common complication of scabies infestation that, in elderly or immunocompromised individuals, can lead to sepsis and even death.

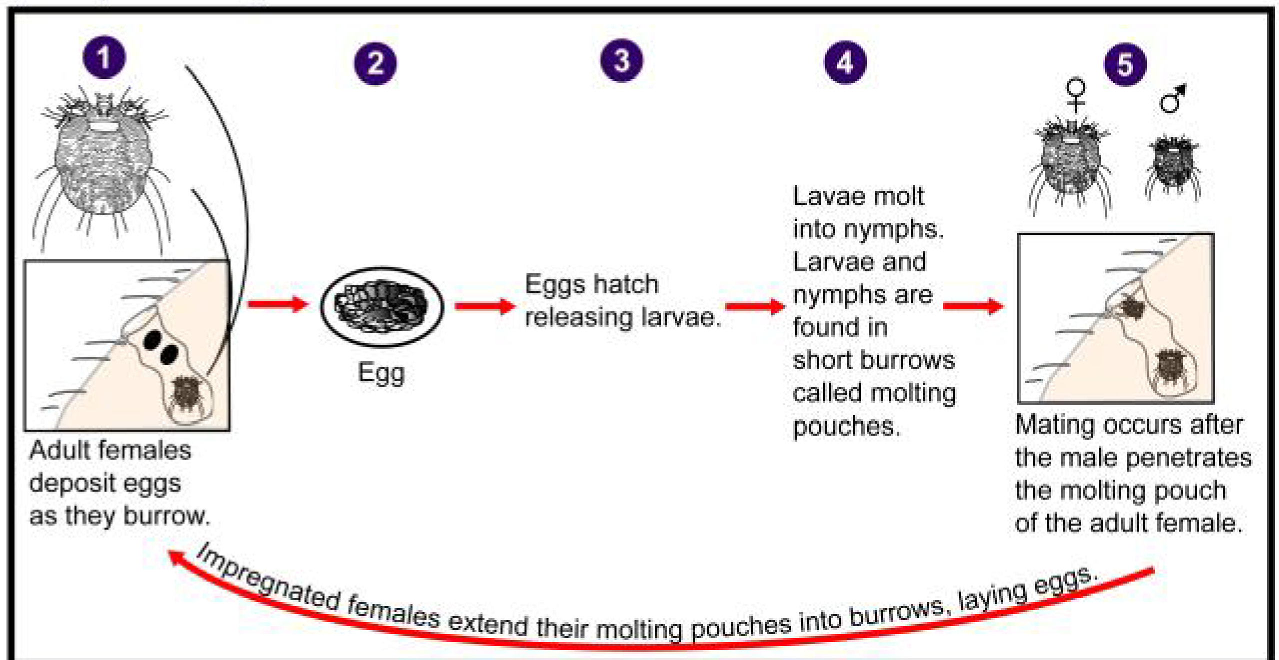
A number of factors influence the extent of a scabies outbreak within a facility. Each group living facility scabies outbreak is unique and requires an individualized approach.

II. GENERAL INFORMATION

A. BIOLOGY OF THE SCABIES MITE

Infestation begins when one or several pregnant female mites are transferred from the skin of an infested person to the skin of an uninfested person. After transfer from the skin of an infested person, the adult female mite travels on the skin surface at the rate of about 1 inch per minute seeking a burrow site. After finding a suitable location, she burrows into the skin, forming a slightly elevated narrow tunnel where she deposits 2 to 3 eggs daily during her 4 to 6 week life span. The eggs progress through larval and nymphal stages to form adults in 10 to 17 days. The adults migrate to the skin surface and mate. The males die quickly and the females penetrate the skin and repeat the cycle. The mite requires human skin to complete its life cycle and is unable to survive apart from the host at room temperature for more than 3 to 4 days.

Scabies Life Cycle

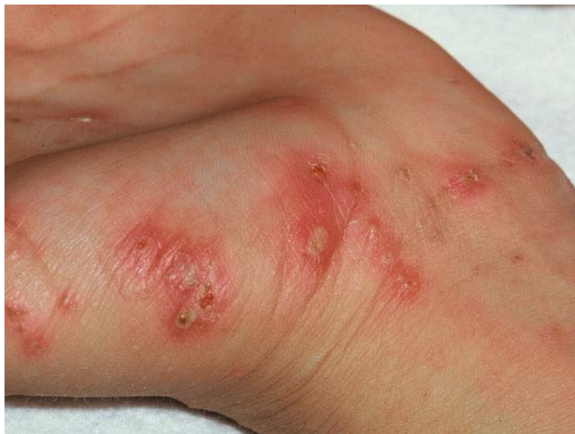


From the CDC website: http://www.dpd.cdc.gov/dpdx/HTML/Scabies.htm

B. CLINICAL PRESENTATION

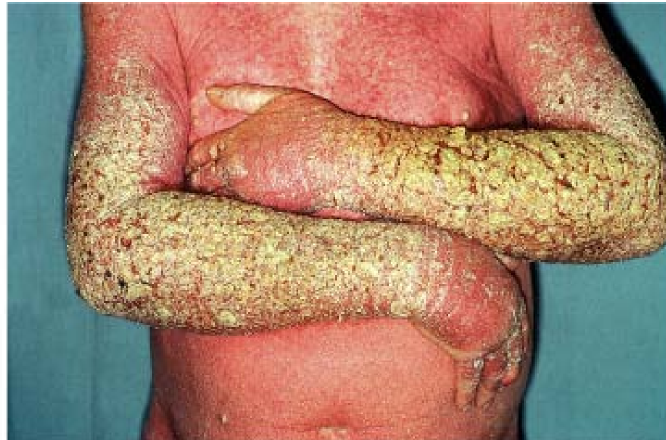
Scabies infestations are generally categorized as typical or atypical (also known as crusted or Norwegian).

1. **Typical Scabies**



Patients with typical scabies usually have only 10 to 15 live adult female mites on the body at any given time. Usually, only one or two mites, and frequently none, are recovered from skin scrapings. Intense itching, which usually becomes worse at night, and a pimply rash with or without burrows occur. The rash and the itching result from an allergic-type reaction to the mite, its eggs, and feces. Areas of the body commonly involved are wrists, finger webs, breasts, waistline, lower abdomen, genitals, and buttocks. The scalp and face are rarely involved in adults, but may be observed in young children with scabies.

2. **Atypical Scabies**



When diagnosis and treatment are delayed, scabies can develop an unusual or atypical presentation, indicating infestation of hundreds to thousands of mites. Atypical scabies are more prevalent in institutionalized or debilitated patients, or those who are immunosuppressed from underlying disease or drug therapy. When extensive skin lesions with crusting and scaling develop, the infestation is called **crusted scabies,** formerly "Norwegian" scabies. Crusted scabies is highly contagious because thousands of mites are imbedded in the thick crusts and easily shed in scales and flakes from affected skin.

B. EPIDEMIOLOGY OF SCABIES

1. ***Transmission***

The transfer of scabies is usually from one person to another by direct skin-to-skin contact. However, procedures that involve hands-on contact can provide an opportunity for mite transmission. Mites may also be transmitted via clothing, bed linen or other objects. The environment of patients with crusted scabies can be heavily contaminated with infectious mites. In group living facilities, scabies may be introduced into the facility by a newly admitted resident with an unrecognized infestation or by visitors or health care workers as a result of contact with an infested person in the home or community.

2. ***Incubation Period***

In a previously unexposed healthy individual, the interval between exposure and the onset of itching is usually 4-6 weeks. In persons who have previously had scabies, re-exposure may produce symptoms in 48 hours or less (owing to prior sensitization to the mite and its saliva and feces). Following exposure to a person with crusted scabies involving extremely large numbers of mites, the incubation period may be reduced from the usual time of 4-6 weeks to as little as a few days.

3. ***Period of Communicability***

Anyone who has been exposed is potentially immediately infectious to others, even in the absence of symptoms. Cases are communicable until mites and eggs are destroyed by treatment.

C. DIAGNOSIS

Definitive diagnosis requires microscopic identification of the mite and/or its eggs or feces on specimens collected by skin scraping or other means. The yield from skin scrapings is highly dependent on the experience of the person taking the scraping and the severity of the infestation. <u>A negative skin scraping from a person with typical scabies does not rule out scabies infestation</u>; mites are easily recovered, however, in skin scrapings from persons with crusted scabies.

III. SCABIES PREVENTION AND CONTROL PROGRAMS

It is recommended that group living facilities incorporate a scabies prevention program. The program should include an assessment of the skin, hair and nail beds of all new residents as soon as possible following arrival. Itching, rashes and skin lesions should be documented acted upon.

Essential elements of a successful scabies prevention program include:

1. Written policies and procedures for prevention and control of facility-acquired scabies;

2. Staff who are trained to be suspicious of scabies in themselves or residents if unexplained rash or itching occurs in themselves or the residents, and to report such occurrences to their supervisors;

3. A policy to screen new residents for scabies during the intake and any suspect resident will immediately be placed on contact isolation until examined for scabies;

4. A policy that all new employees (especially employees who work at more than one facility) will be screened for scabies as part of pre-employment screening;

5. Access to and use as needed of the diagnostic skills of a dermatologist experienced in recognizing scabies to evaluate difficult or unusual cases or response to treatment;

6. Assurance of adequate support from administration and staff for appropriate evaluation and treatment of employees, residents and exposed discharged residents should an outbreak of scabies occur.

IV. SCABIES OUTBREAK MANAGEMENT

A. OVERVIEW

The primary goal of an outbreak investigation is to identify how the outbreak occurred and to take action to prevent further transmission of scabies cases. In general, an outbreak can be defined as an increase in the incidence of new cases above baseline within a defined period of time and within a defined geographical location (one floor or one wing, a department or, in some cases, the entire facility).

A “baseline” for scabies is not a standard measurement and the definition of a scabies outbreak may be multifaceted. A facility-specific definition should be developed to determine whether an outbreak has occurred and to estimate the magnitude of the outbreak. The following are examples of scabies outbreak definitions:

- Two (2) or more confirmed (positive skin scraping) cases of scabies identified in residents, staff, volunteers and/or visitors during a two (2) week period of time, or
- One (1) confirmed (positive skin scraping) and at least two (2) clinically suspect cases identified in residents, staff, volunteers and/or visitors during a two (2) week period of time, or
- At least two (2) clinically suspect cases identified in residents, staff, volunteers and/or visitors during a two (2) week period of time.

Transmission from within the facility is highly probable if scabies is confirmed in two or more staff persons who have worked in the same area of the facility within the previous six weeks and who do not have an apparent source of exposure outside the facility.

Outbreak management should include protective equipment and pharmacy supplies. Provisions should be made for obtaining additional personal protective equipment (PPE) such as disposable, long sleeve gowns and gloves. The facility should also make arrangements for obtaining permethrin (Elimite) 5% cream.

B. SUMMARY OF ACTION STEPS

1. Immediately remove from work any staff with signs and symptoms of scabies and refer to a dermatologist or other designated consultant or clinician experienced in the diagnosis of scabies.
2. Evaluate residents in affected areas and immediately place residents with suspected scabies in contact isolation (Appendix E)

3. Report scabies outbreaks and any **single case** of crusted scabies infestation to the Nevada State Health Division (NSHD).

4. Meet with facility key staff and a professional from NSHD to coordinate control measures. Assign a leader.

5. Search for a possible source case—the person who brought scabies to the facility. If two or more employees working in the same unit/area are diagnosed with scabies, it is likely that the source case was a resident with **crusted scabies** infestation.

6. Have a dermatologist confirm the presence of scabies by microscopic identification of the mite or its products (skin scraping) in one or more symptomatic residents or employees.

7. Prepare a line listing of symptomatic residents and staff and a separate line listing of their contacts (Appendix F and G). Evaluate contacts for scabies.

8. Treat symptomatic residents and staff with an approved scabicide (scabies-killing agent), provide preventive scabicide to all contacts of symptomatic cases, and perform environmental cleaning of affected units. Ideally, these steps (treatment, prevention, and environmental cleaning) should all be accomplished within the same 24 hour period to prevent re-infestation of treated or prevention-treated individuals.

9. Provide training to all staff on the signs and symptoms of scabies. Emphasize that people can be infested and contagious for up to 6 weeks before any symptoms start.

10. Perform environmental cleaning of affected units (Appendix E).

11. Arrange for follow-up evaluation and preventive treatment of discharged residents who were contacts to scabies. (Appendix H and I).

C. MANAGEMENT OF SYMPTOMATIC CASES

Often the first indications of a scabies outbreak are complaints of itching and rash in two or more health care workers or residents. Properly performed skin scrapings will almost always be positive in persons with crusted scabies but are generally negative in cases of typical scabies, even when performed by experienced operators. None-the-less, it is recommended that efforts be made to confirm the diagnosis of scabies (perform skin scraping) in at least one symptomatic individual.

1. Staff With Symptoms

"Staff" refers to all facility employees, contract employees, medical staff, house staff, students, religious workers and volunteers, etc.

a. Immediately remove from work any staff with signs or symptoms consistent with scabies and refer them to employee health or other designated consultant experienced in the diagnosis of scabies. Confirm the presence of scabies by microscopic identification of the mite or its products in one or more symptomatic residents or employees.

b. Prepare a line-listing of **symptomatic staff** that includes name, age, gender, symptoms, date of onset, result of scabies evaluation, any prior treatment for scabies, usual work and "float" assignments from six weeks before onset of symptoms until the current date, and symptoms in household or other close contacts (Appendix F).

c. Treat all staff with confirmed or suspected scabies infestation with an approved scabicide according to consultant's recommendation or as outlined in Appendix B. **Review scabicide package insert before prescribing, dispensing, or applying scabicide. Provide clearly written instructions for proper application of dispensed scabicide** (Appendix C). Re-evaluate cases weekly to monitor response to treatment.

d. Symptomatic staff can return to work as soon as treatment is completed but should use gowns and gloves for direct resident care to prevent reinfestation until all control measures for affected units/areas have been completed.

e. Provide scabicide with written instructions for application for all household contacts of symptomatic staff.

2. Residents with Symptoms

a. Immediately place any resident in whom scabies infestation is suspected in contact isolation as outlined in Appendix E, “Isolation and Environmental Control for Patients with Scabies.” Maintain contact isolation until treatment is completed and/or case is determined by dermatology consultant or other experienced designee to be non-infectious.

b. Attempt to confirm the diagnosis of scabies by microscopic identification of the mite, its eggs, or feces if the resident is the suspected source of the outbreak or if the clinical diagnosis of scabies is in question (Appendix A). If a resident is a suspected case of **crusted scabies,** obtain dermatology consult for assistance with diagnosis and management.

c. Treat with an approved scabicide according to consultant’s recommendation or as described in Appendix B.

d. Perform environmental cleaning of the resident’s room and areas as described in Appendix E.

<u>Single cases of atypical (crusted) scabies</u> and <u>all outbreaks of scabies</u> are required to be reported to the Nevada State Health Division during business hours, Monday through Friday, 8:00 A.M. to 5:00 P.M. Call 775 684-5911.

D. MANAGEMENT OF CONTACTS

Contacts to typical (non-crusted) scabies cases are defined as persons who had “hands-on” contact, handled infested clothing or bed linen, or slept in the same bed as the infested resident during the exposure period.

Contacts to atypical (crusted) scabies also include persons who had substantial contact with a crusted scabies case-resident’s environment, including staff who worked in the same area as the case-resident during the exposure period. If the case-resident occupied more than one area before control measures were initiated, each area must be considered affected.

The outbreak **exposure period** is the period between the discovery date of a scabies case and the date the condition is correctly diagnosed and control measures are implemented. The identification of two or more symptomatic staff suggests that preventive treatment is indicated for all area contacts, whether or not they were direct contacts of a known scabies case.

Occasionally, a source case cannot be identified. In this situation, the exposure period should be lengthened to include the 6 weeks before the onset of symptoms to the date of implementation of control measures.

1. STAFF CONTACTS

a. Identify and prepare a line listing of all staff that had direct contact with residents or fellow employees with scabies during the exposure period (Appendix G).

b. Interview staff contacts to determine the presence of scabies symptoms and the possible source of exposure; manage as a case if the staff member is symptomatic.

c. Provide preventive scabicide along with written instructions for application, as described in Appendix B, to all staff with direct contact to a scabies case. Staff scabies contacts that decline preventive treatment must be required to **wear gowns and gloves for contacts with residents or fellow employees for 6 weeks from the date of last potential exposure** (usually 6 weeks from implementation of control measures).

2. RESIDENT CONTACTS

a. Identify and prepare a line listing of all residents who were contacts to a resident or staff with scabies during the exposure period (Appendix G). This includes residents who resided in the same area as a crusted scabies case during the exposure period and those who were already discharged.

b. Examine resident contacts to determine the presence of signs and symptoms of scabies. If symptomatic, manage as a case.

c. Apply preventive scabicide, as described in Appendix C, to residents with direct contact to a scabies case.

d. Residents who occupied the same area as a crusted scabies resident with no direct contact to the case should be monitored with daily skin observations until six weeks past the date of last potential exposure and follow-up as appropriate.

e. Notify any **discharged resident contacts** of their potential exposure to scabies. Screen discharged residents for symptoms of scabies. Symptomatic residents should receive treatment and their family

contacts should receive prophylaxis. Asymptomatic residents should be directed to follow up with their physician regarding possible scabies exposure and at a minimum, observe skin daily until six weeks past the date of last potential exposure. **It is the responsibility of the facility to ensure that all discharged exposed residents receive appropriate follow-up** (Appendices H and I, “Sample letters to discharged residents and their physicians”).

f. Notify facilities to which resident contacts have been transferred of their potential exposure.

E. EXTENDING RECOMMENDATIONS FOR PREVENTIVE TREATMENT

Facility-wide (mass) preventive treatment of all residents and at-risk employees (employees involved in direct resident care or exposed to resident care environment) *should be considered* if positive scrapings are found in residents or employees assigned to 2 or more areas of the facility where no direct link with an infested case-resident or staff can be established.

F. NOTIFICATION OF STAFF, VISITORS AND HOUSEHOLD MEMBERS

Staff, volunteers, family members, sexual partners, and anyone else who have had contact with a scabies case should be notified immediately of the facility outbreak and assessed for symptoms. A scabies fact sheet and notification letter, which includes information about the scope of the outbreak and strategies that are being implemented to control the outbreak and prevent future cases, should be distributed to the above groups.

V. REPORTING

Single cases of atypical (crusted) scabies and all outbreaks of scabies are required to be reported to the Nevada State Health Division during business hours, Monday through Friday, 8:00 A.M. to 5:00 P.M. 775-684-5911.

APPENDICES

APPENDIX A

TREATMENT AND PROPHYLAXIS OF SCABIES

A. Application of Scabicides: General Principles

1. Gowns and gloves are worn when applying scabicides to residents.

2. Bathe residents as usual and change bed linens. Allow skin to cool completely.

3. Apply scabicide to every square inch of skin, from behind the ears down over the entire body. Include creases, navel, skin folds, palms and soles, and webs between fingers and toes. If scabicide is washed off during handwashing, toileting, or perineal care, it must be reapplied.

4. In infants and young toddlers, the elderly, and the immunocompromised, the head (forehead, temples, and scalp) requires application of scabicide. Pay close attention to the area behind the ears. Do not get the scabicide near the eyes or mouth. Prior treatment failure may be an indication to include the head upon retreatment.

5. **Fingernails and toenails should be clipped and scabicide applied under nails.**

6. Follow directions and precautions outlined in the package insert accompanying scabicide.

7. A cleansing bath is taken when scabicide is to be removed.

8. Linens and clothing are changed after treatment. Contaminated clothing and linens may be 1) dry-cleaned or 2) washed in the hot cycle of the washing machine and dried in the hot cycle of the dryer for 10-20 minutes.

9. Provide detailed written instructions for scabicide use when dispensing scabicide for home application by employees and household members.

B. Scabicides

1. 5% permethrin cream (*Elimite, Acticin)* - currently considered drug of choice.

   a. The usual adult dose is 30 grams. A 60 gram tube should treat two adults.

   b. For adults and children, the cream should be massaged into the skin from below the chin to the soles of the feet. Scabies rarely infests the scalp of

adults, although the hairline, neck, temple, and forehead may be infested in infants and geriatric residents. Infants should be treated on the scalp, temple and forehead.

c. The resident should be instructed to remove the medication by thoroughly bathing 8 to 14 hours after application. Contact with the eyes and mouth should be avoided. If contact with the eyes occurs, they should be immediately flushed with water.

d. Permethrin is regarded as safe for children two months of age and older. No instance of toxicity following accidental ingestion has been reported. The most commonly reported side effects are itching, swelling and redness, which may continue for up to two weeks after treatment. Residents should be told that the itching or stinging of scabies infestation may continue after treatment, but that repeated application of the scabicide should be avoided. Identification of living mites after 14 days indicate that retreatment is necessary.

e. Although animal studies showed no adverse effects to reproductive function or damage to the fetus, no adequate studies have been done on pregnant women. Therefore, permethrin should be used during pregnancy only when clearly necessary. If treatment is necessary for lactating mothers, breast-feeding should be discontinued during the treatment period.

2. 10% crotamiton cream or lotion (*Eurax)*

   a. Massage thoroughly into skin once a day for two to five days. Remove by bathing 48 hours after last application.

   b. Crotamiton is 60% effective when full five-day course is given.

   c. Can be used on young children and elderly with dry, sensitive, but no chafed or raw skin.

   d. Avoid contact with eyes and mucous membranes.

3. Ivermectin (*Mectizan or Stromectol)*

   Ivermectin is an antiparasitic agent shown to be safe and effective for treatment of certain worms on humans in Africa. Experience with the agent in a single dose administered orally is limited, but encouraging, for treatment of crusted scabies or for infestations that do not respond to topical therapy. It is not yet approved by the Food and Drug Administration, but can be obtained from the manufacturer (Merck and Co, West Point, Pa.). A recent report described increased mortality from all causes in a small series of elderly residents who had received ivermectin.

C. Treatment Regimen for Typical Scabies Infestation

1. A single adequate application of 5% permethrin cream is usually sufficient to eradicate typical scabies, whether a symptomatic case or asymptomatic carrier. Reevaluate response to treatment in 14 days.

2. In facilities with recurrent or endemic scabies or when application of scabicide for treatment of symptomatic scabies is not performed by a trained individual, a second application 3-7 days after the first is recommended by some authorities.

3. Asymptomatic contacts, including household and sexual contacts, of persons with clinical or confirmed scabies require one treatment with reevaluation in 14 days.

D. Treatment Regimens for Crusted (Norwegian) or Severe Atypical Scabies

1. Cases of crusted scabies and other variants of severe atypical scabies are best managed with the assistance of a dermatologist. Controlled studies to determine the most effective regimen for treatment of crusted scabies infestation have not been performed. The following regimens were selected from several that have appeared in the literature and have been successful in single or small series of cases. They are included as examples and are not necessarily endorsed by ACDC.

2. Residents with crusted or keratotic lesions should be soaked in a tub of lukewarm water for 10 minutes immediately prior to application of scabicide to hydrate the skin; use of keratolytic agents (e.g., salicylic acid gel) may soften scales and enhance penetration of scabicide. Allow skin to cool before applying scabicide.

3. Regimen A

   a. 5% permethrin cream for 12 hours, followed by repeat application of 5% permethrin cream for 12 hours, wash off.

   b. After seven days, repeat step (a), above.

   c. Seven days following last treatment, obtain scrapings from at least 3 sites. If scrapings are positive or if symptoms unabated, treat again.

4. Regimen B

   a. Apply 5% permethrin cream, as previously described, on day one.

   b. Apply 10% crotamiton lotion, as previously described, on days 2-6.

c. Reapply 5% permethrin cream on day 7.

d. Reassess on days 7 through 14, obtain scrapings from at least 3 sites in one month. If scrapings are positive or if symptoms unabated, begin regimen again.

5. Regimen C

a. Ivermectin 200 ug/kg in a single oral dose in combination with 5% permethrin cream on day one.

b. Two weeks after therapy (day 15), obtain scrapings from at least 3 sites. If scrapings are positive or if symptoms unabated, treat again.

E. Treatment Failures

1. Treatment failures can result from:

a. Inadequate application of scabicide;
b. Infected, crusted, or keratotic lesions with insufficient penetration of scabicide;
c. Reinfestation from untreated contacts;
d. Resistance of mites to scabicide.

2. Itching and rash can continue for 1-4 weeks after treatment and should not be considered evidence of treatment failure until one month after last treatment. To ameliorate these signs and symptoms, some dermatologists use various creams applied to the most intense rash sites **after** the first scabicide treatment. Oral antihistamines are also used to alleviate the hypersensitivity response.

APPENDIX B

TREATMENT OPTIONS

Patient Being Treated	Treatment Options	Dose	How To Treat	How Long is Treatment	Who Can Be Treated?
Typical Scabies	Treatment A 5% permethrin cream (*Elimite, Acticin)*	Adult dose – 30 grams 60 gram tube can treat two adults	Massage cream into skin from under chin to soles of feet Attention to hairline, neck, temple in geriatric patients	One treatment usually sufficient May repeat if needed 7 days after 1st treatment	Cases > 2 months, healthy adults Used for prophylaxis of asymptomatic contacts
	Treatment B Ivermectin (*Mectizan or Stromectol)* oral antiparasitic Used for patients who have failed treatment with or cannot tolerate topical treatment	200 mcg/kg	Given orally to treat suspect/confirmed cases of scabies	Single dose; 2nd dose may be necessary to eliminate infection	Cases > 12 years
Atypical Scabies	Treatment A 5% permethrin cream (*Elimite, Acticin)*	Adult dose – 30 grams	Massage cream into skin from under chin to soles of feet	Apply once, 2nd application 12 hrs later May repeat if needed 7 days after 1st round of treatment	Cases > 2 months, healthy adults
	Treatment B 5% permethrin cream (*Elimite, Acticin)* 10% crotamiton lotion (*Eurax*)	Adult dose – 30 grams Enough lotion to cover skin chin to feet	Apply permethrin once as above and again 12 hrs later on day 1 and day 7 Apply crotamiton as above on days 2-6	One week long treatment sufficient; reassess 7 days after treatment completed	Cases > 2 months, healthy adults
	Treatment C 5% permethrin cream (*Elimite, Acticin*) Ivermectin (*Mectizan or Stromectol)* oral antiparasitic	Adult dose – 30 grams 200 mcg/kg	Apply permethrin once as above and again 12 hrs later Single oral dose	One treatment; reassess 14 days after treatment	Cases > 12 years

APPENDIX C

DIRECTIONS FOR SCABIES TREATMENT OR PROPHYLAXIS WITH ELIMITE

Clothing, towels, and bed linen that have been used within the last four days should be machine-washed and dried using the hot cycle for 10-20 minutes. Articles that cannot be washed can be dry cleaned or tied in a plastic bag for a week. Floors and carpets should be vacuumed and the vacuum bag placed in a plastic bag and discarded.

DIRECTIONS

1. Take a bath, soaping the body completely, rinse well, and then dry thoroughly. Allow your body to cool.

2. Apply Elimite into the skin from the chin to the soles of the feet. Scabies rarely infests the scalp of adults, although the hairline, neck, temple, and forehead may be infested in infants and geriatric residents. Pay particular attention to skin folds and creases. Avoid contact with the eyes. Reapply if washed off following use of the toilet, handwashing, etc.

3. Put on clean clothing. Use freshly laundered bed linens and towels.

4. Leave cream on for at least 8 hours but no more than 14 hours, and then take a warm shower or bath, soaping the body completely, rinsing and drying well.

5. Put on clean clothing. Re-launder towels and bed linens used during treatment.

6. Itching may continue for days or weeks.

7. A single treatment is generally adequate.

CAUTION

1. If pregnant or a nursing mother, consult your private physician.

2. Elimite is approved for use in children two months of age and older.

APPENDIX D

SCABIES FACT SHEET

What is scabies?
Scabies is an infestation of the skin caused by a mite. The female mite burrows into the top layer of the skin. This forms a slightly raised tunnel where the mite lays eggs and leaves waste.

Who gets scabies?
Anyone can get scabies.

How is scabies spread?
The mite is passed from person to person by skin contact or sharing bedding, clothing or other linens with a person who has scabies.

What are the symptoms and when do they appear?
The most common symptom is an itchy rash. Often the rash itches most at night. It can appear anywhere on the body but is usually on the hands, wrists, elbows, breasts, armpits, waistline, and groin.

Persons who have never had scabies before usually notice symptoms about 4 to 6 weeks after their contact with someone with scabies. Persons who have had scabies before may notice their symptoms sooner, often within a few days to 1 week.

Elderly persons, persons in institutions, and persons whose immune system is weak may not have itching. Any unusual skin problem should be checked by a doctor.

How long is a person able to spread scabies?
A person is probably able to spread scabies from the moment of contact until after all treatment is complete.

How is scabies diagnosed?
Scabies is diagnosed by a doctor or nurse looking at the rash and/or by taking a scraping from the skin.

What is the treatment?
A medicated cream will be prescribed by your doctor. It is put on the skin, left on for several hours, and then washed off. You must put on clean clothes and use freshly laundered bed and bath linens. An oral medication may also be prescribed.

Can a person get scabies again?
Yes. In fact, the symptoms (itching and rash) will appear more quickly.

Should infested persons be excluded from school or work?
Yes, until treatment has been finished, but generally this is less than one day.

What are the health problems associated with scabies?
Usually none. Occasionally, secondary skin infections may occur from scratching.

What can be done to prevent its spread?
Persons with symptoms should be checked and treated by their doctor as quickly as possible. Household members and other persons with skin-to-skin contact should be preventively treated. Clothing, bedding, and bath linens used within the 4 days before initiation of therapy should be washed in a washer using hot water and dried using the hot drier cycle. Clothing and other items that cannot be laundered should be stored in a closed plastic bag for one week.

APPENDIX E

ISOLATION AND ENVIRONMENTAL CONTROL FOR RESIDENTS WITH SCABIES

A. Typical Scabies

1. Place residents with typical scabies on contact precautions during the treatment period; 24 hours after application of 5% permethrin cream or 24 hours after last application of scabicides requiring more than one application.

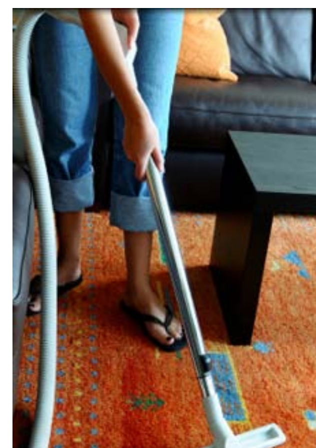
2. Staff must wear gloves and a long-sleeved gown for hands-on contact. Wash hands after removal of gloves.

3. Place bed linens, towels and clothing used by an affected person during the 4 days prior to initiation of treatment in plastic bags inside the resident's room, handled by gloved and gowned laundry workers without sorting, and washed in hot water for at least 10 minutes. The hot cycle of the dryer should be used for at least 10-20 minutes. Nonwashable blankets and articles can be placed in a plastic bag for 7 days; dry cleaned or tumbled in a hot dryer for 20 minutes.

4. Change all bed linens, towels and clothes daily.

5. Disinfect multiple resident-use items, such as blood pressure cuffs, stethoscopes, wheelchairs, etc., before using on other residents. Discard all creams, lotions or ointments used prior to effective treatment.

6. Vacuum mattresses, upholstered furniture and carpeting. There is no need for special treatment of furniture, mattresses or rugs or fumigation of areas. General cleaning and thorough vacuuming is recommended.



7. Routine disinfection procedures are adequate.

8. Symptomatic employees should be allowed back to work the morning following overnight treatment with 5% permethrin cream. Disposable gloves should be worn 2-3 days by symptomatic staff that most provide extensive hands-on care to their residents.

B. Crusted (Atypical)Scabies

(Maintain contact isolation until treatment is completed and/or case is determined by dermatology consultant or other experienced designee to be non-infectious).

1. Assign resident to a private room. Restrict visitors until treatment regimen completed; alternatively, require visitors to gown and glove as required for contact isolation precautions. If resources permit, cohort employees to care for this resident only (no other direct care responsibilities) until effective treatment is completed.

2. Staff must wear gloves and a long-sleeved gown with the wrist area covered and shoe covers to attend to resident needs, for housekeeping duties, and handling of laundry. Consider spraying pyrethrin insect repellent to wrist (edge of glove and ribbing of sleeve area), arms and front of gown. Remove gown before leaving the room. Wash hands.

3. Bed linens, towels and clothing used by the affected persons during the 4 days prior to initiation of treatment should be placed in plastic bags inside the resident's room, handled by gloved and gowned laundry workers without sorting, and laundered in hot water for at least 10 minutes. The hot cycle of the dryer should be used for at least 10-20 minutes. Non-washable blankets and articles can be placed in a plastic bag for 7 days; dry cleaned or tumbled in a hot dryer for 20 minutes.

4. Change all bed linens, towels and clothes daily.

5. Blood pressure cuffs, stethoscopes, etc. should be designated for single resident use and left in the resident's room. Discard all creams, lotions or ointments used prior to effective treatment.

6. Upholstered furniture containing any cloth fabric should be removed from the room and, if necessary, replaced with plastic or vinyl furniture. Mattresses must be covered with plastic or vinyl.

7. The resident's room should be vacuumed daily with a vacuum cleaner designated for this room alone, followed by routine room cleaning and disinfection. The vacuum cleaner bag should be changed daily; removal and disposal of contaminated bags should be performed in accordance with infection control protocol.

8. The room should be terminally cleaned upon discharge or upon transfer of the resident from the room.

APPENDIX F

SCABIES CASE/CONTACT LINE LIST FORM: EMPLOYEES*

Submitted by (Name & Title):_________________________________ **Date:** ___/___/___

Facility: ___________________________________ **Outbreak#:** _________________

Employee Name	Job Title	Location/ Description of Rash	Date of Symptom Onset	Diagnosed Eval. By (Name)	Usual Work Assign	Skin Scraping	Scabicide Dates of Rx	Follow-Up/ Dates, Results	Family Members Sx	Family Members Rx'd

*Includes employees, family and other non-resident contacts

APPENDIX G

SCABIES CASE/CONTACT LINE LIST FORM: RESIDENTS

Submitted by (Name & Title):_________________________________ **Date: ___/___/___**

Facility: ___________________________________ **Outbreak #:_________________**

Resident Name	Age/ Sex	Medical Record Number	Adm. Date	Dx Date	Curr. Unit/ Bed No.	Dates Exposed - Exposure Period	Bed/Unit since Exposed	Scabies Signs/ Symp.	Dr.'s Name / Date Evaluated	Skin Scraping Results	Scabicide Rx/ Dates

APPENDIX H

Sample Letter to Discharged Residents

Facility Letterhead

Date

Dear _______:

During your recent stay you may have been exposed to scabies. Although it is unlikely that the exposure will result in you becoming infected with scabies, we want to alert you to the possible exposure. We are working in collaboration with the Nevada State Health Division and want to ensure that you are informed of the possible exposure and the appropriate follow-up steps are taken, if needed.

Scabies is a contagious skin condition caused by a mite that requires skin-to-skin contact. Signs and symptoms include a rash and itching, especially at night. It can appear anywhere on the body but is usually on the hands, wrists, elbows, breasts, armpits, waistline, and groin. Scabies has a long incubation period (the time from possible exposure to the time symptoms develop), usually four to six weeks.

Persons who have scabies are infectious to others, even before symptoms develop. Scabies is diagnosed by a physician or nurse looking at the rash and/or taking a scraping from the skin. Usually, scabies is easily treated by a medicated cream or oral medication prescribed by your physician.

The Health Division recommends that you check your skin daily and if a rash and/or itching occurs, notify your personal physician as soon as possible, or you may call me at _______________ if you have any questions.

Thank you for your cooperation.

Sincerely,

Name, Title

APPENDIX I

Sample Letter to Physicians of Discharged Residents

Facility Letterhead

Date

Dear Physician:

Our facility is currently experiencing an outbreak of scabies. Attached is a list of residents who may have been exposed. The period of potential exposure was from _________ to _________.

Residents whose last date of exposure was more than six weeks ago should be questioned regarding symptoms consistent with scabies. Residents found to be symptomatic should be evaluated and treated as necessary. Family members and other close contacts should receive prophylactic scabicide therapy at the same time the resident is treated. Permethrin 5% cream (*Elimite*) is now the recommended agent for treatment of scabies.

Residents whose last date of exposure was less than six weeks from this date should be treated with topical scabicide or monitored for symptoms until the six week period is over. Close contacts of symptomatic patients should also receive treatment or monitoring as well.

Enclosed is a list of your residents who are considered exposed and their last date of exposure. Please notify ___ at ___ if any of your residents develop scabies. Thank you for your assistance.

Sincerely,

Name, Title

Appendix J

Scabies Outbreak Management Checklist

Outbreak Interventions				
Communication	**N/A**	**Completed**	**Date**	**Signature**
Notification of facility administration				
Notification of infection prevention and control team				
Outbreak reported to the local health officer – LAC Acute Communicable Disease Control Program				
Outbreak reported to CDPH Licensing & Certification local office – LAC Health Facilities Division				
Notification of residents and relatives/visitors				
Health facility closed to new admissions				
Health facility reopened to new admissions				
Investigation and Monitoring	**N/A**	**Completed**	**Date**	**Signature**
Symptomatic health care workers removed from work and referred to Employee Health and/or evaluated by a clinician				
Residents evaluated for scabies and placed in contact isolation				
Resident line list completed				
Employee line list completed				
Confirm confirmed skin scraping in symptomatic residents/employees				
Daily skin assessments documented on all residents				
Treatment	**N/A**	**Completed**	**Date**	**Signature**
Symptomatic residents/employees treated with scabicide (refer to Appendix B, C & D)				
Prophylactic treatment offered to staff				
Prophylactic treatment offered to family/visitors				
Environmental Cleaning	**N/A**	**Completed**	**Date**	**Signature**
Enhanced environmental cleaning done throughout the outbreak period				
Education	**N/A**	**Completed**	**Date**	**Signature**
Training provided to all staff on the signs and symptoms of scabies				

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Revisions

The current revision and expansion of the *Scabies Prevention and Control Guidelines for Acute and Sub-Acute Care Facilities* was prepared by the Acute Communicable Disease Control Program, in conjunction with Community Health Services Division.

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