MANAGEMENT OF SCABIES IN LONG-TERM CARE FACILITIES, SCHOOLS AND OTHER INSTITUTIONS

NJ Health
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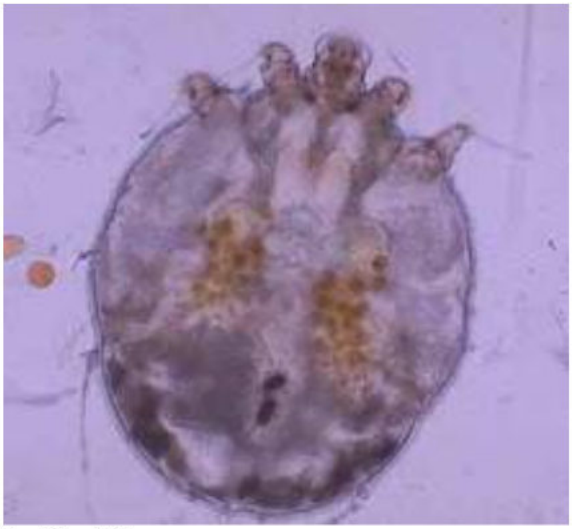
INTRODUCTION

Scabies is a parasitic disease (infestation) of the skin caused by the human itch mite, *Sarcoptes scabiei* and transmitted person to person usually through direct contact. Individual cases of scabies in the community are not reportable to public health but should be evaluated by a healthcare provider. Outbreaks usually occur in crowded living conditions and are often a problem in long-term care settings, schools, daycare centers and prisons. All outbreaks are immediately reportable in New Jersey.

If a person has never had scabies before, symptoms may take as long as 4-6 weeks to appear. In a person who has had scabies in the past, symptoms usually appear sooner (1-4 days) after exposure due to hypersensitivity. The scabies mite is most commonly spread by direct, prolonged, skin-to-skin contact with a person who has scabies.

Each scabies outbreak is unique and requires an individualized approach. This document has been developed to provide a rational approach to the prevention and control of scabies within a healthcare facility, prison, school or other institution. It is intended to assist infection control committees and administrators in developing a scabies prevention and control program.



Scabies Mite
www.stanford.edu

BIOLOGY OF SCABIES

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. Once a site is selected, the mites use their mouths and legs to tear into the surface of the skin. A saliva-like substance is also secreted which aids in the burrowing process by dissolving the skin. When a burrow is complete, a female will lay 2-3 eggs in a burrow. This cycle is repeated many times during the two month life span of the fertile females.

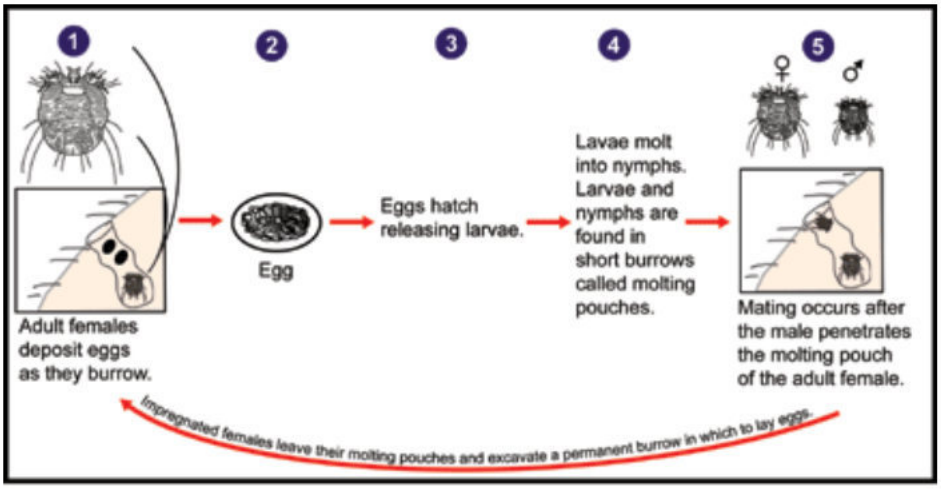
The larvae hatch from the eggs in 3-4 days. The larvae migrate to the surface of the skin within a day after hatching, dig a shallow burrow and feed on fluids contained in the skin cells. Over the next 3-4 days the outer skin layer of the larvae is shed (molted) and the mites develop into sexually immature nymphs (young adults). A final molt occurs 4-6 days later resulting in sexually mature male and female adult mites. The male mites have a very short life span (1-2 days) which is spent seeking out unmated females. Although the pregnant female can lay up to three eggs per day during her two-month life span, fewer than 10% of the eggs live long enough to reach adult stage. Most of the eggs are removed from the skin during bathing or other actions such as scratching or rubbing of the skin.

Burrowing scabies mite
dermatologie.md

TRANSMISSION

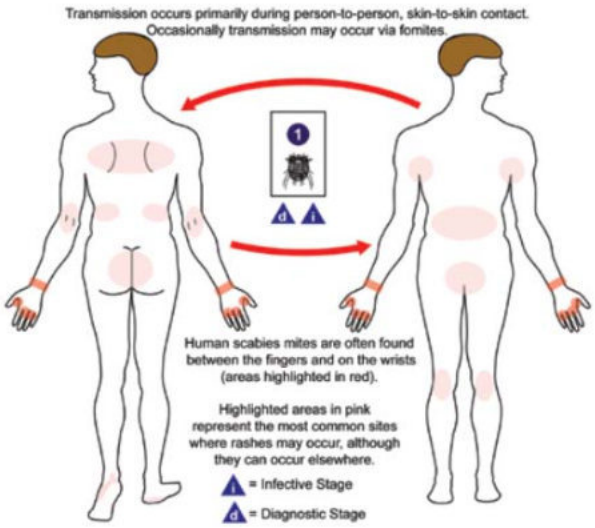
The primary mode of transmission of the human scabies mite is direct skin contact between two individuals. Although mites cannot jump, they can crawl up to one inch per minute on the skin surface and can move to a new individual when prolonged skin-to-skin contact is made. Therefore, any person who has direct contact with someone who has scabies may be at risk for infestation. Once on a new person, the mites can begin to burrow within minutes. Scabies mites do not transmit disease; however, the burrowing and feeding process cause irritation and allergic responses to the infestation. The associated scratching may lead to secondary skin infections.

The role of fomites is uncertain but the mites can survive away from the host for short periods of time. A fomite is defined as an inanimate object, such as a doorknob or other surface, which may be contaminated with infectious organisms and serve in their transmission. It is assumed that scabies mites can infest new hosts through shared clothing, bedding, carpets and furniture. On a person, scabies mites can live for as long as 1-2 months. Off a person, scabies mites usually do not survive more than 48-72 hours. Scabies mites will die if exposed to a temperature of 50°C (122°F) for 10 minutes.



CLINICAL PRESENTATION

After initial exposure the most common symptom of scabies is itching (pruritus), especially at night or after a hot shower. A pimple-like itchy red rash is usually seen. Common areas in which these signs and symptoms appear include the head, face, neck, armpit, elbow, wrist, palms, buttocks and soles. The rash presentation may also include papular (bumpy) eruptions, pustules (pus-filled lesions) and nodules. Rash on the head, face, neck, palms and soles are often seen in infants and very young children, but not usually in older children and adults. Young children and infants may develop blister-like lesions on the scalp, neck, palms and soles of the feet.



Burrows can sometimes be visualized with the assistance of a magnifying lens and will appear as short, wavy, elevated lines of red skin. As the infestation progresses, the rash may mimic other dermatological conditions. These conditions include eczema, drug reactions, impetigo, folliculitis, dermatitis herpetiformis, pyoderma, tinea, pityriasis, psoriasis, syphilis, mycosis fungoides, lupus, acute urticaria, insect bites, and contact dermatitis.

Scabies burrows
webmd.com

The excoriated skin lesions may become infected with bacteria such as *Staphylococcus aureus* or beta hemolytic streptococci. This may contribute to the misdiagnosis of a primary bacterial skin infection as opposed to a diagnosis of scabies that is secondarily infected.

Adult Scabies
hardinmd.lib.uiowa.edu

Crusted Scabies
webmd.com

Pediatric Scabies
American Academy of Dermatology

The severity of scabies infestation is directly related to the number of mites residing on the skin and the length of time between initial infestation and subsequent diagnosis and treatment. Scabies infestations are generally categorized as typical, atypical or Norwegian (subtype of atypical).

Persons with typical scabies generally have fewer than 50 live mites on their skin at any given time. If diagnosis and treatment are delayed, the number of live mites multiplies resulting in heavier or atypical infestations.

Atypical scabies presentation is uncommon. Persons with atypical presentation include the very young, elderly, debilitated and immunocompromised. Symptoms may include

excessive hyperpigmentation, scaly rash, and infection of the skin. Due to atypical presentation, itching and eruptions may not be present.

Norwegian scabies was first described in persons diagnosed with leprosy in Norway. This severe form of scabies occurs when treatment for infestation has been delayed for many months and is characterized by thick, crusted lesions. Imbedded within these crusts are thousands to millions of live mites. These cases are more infectious due to the increased number of mites.

There are several physiological and immunological factors that influence the progression of infestation. Persons diagnosed with renal failure, insulin dependent diabetes, or severe mental retardation may progress from typical to atypical scabies in a shorter period of time than in healthy persons. Norwegian scabies is more commonly associated with persons diagnosed with acquired immunodeficiency syndrome (AIDS), T cell leukemia and those who are receiving steroids or immunosuppressive therapy.

TREATMENT

Effective treatment of scabies requires the administration of a safe, effective scabicide. Scabicides are available only by prescription; no over-the-counter products have been tested and approved. All symptomatic persons and their close contacts who have had prolonged skin-to-skin contact must be treated with a scabicide. **All cases and their contacts should be treated within the same 24-hour period to prevent reinfestation.** Contacts may include other residents, health care workers, visitors and volunteers. Health care workers who have received treatment may return to work after the treatment period. If contact with a symptomatic patient is not direct, such as staff delivering meals, then no treatment is recommended. For management of contacts see page 14.

Bedding, clothing and towels used by the infested individual or close contacts during the five days before treatment should be decontaminated. This can be accomplished by washing in hot water and drying in a hot dryer, dry-cleaning or sealing in a plastic bag for at least seven days. Scabies mites usually do not survive more than two to three days away from the human host. For environment of care see page 10.

Since scabies symptoms are due to a hypersensitivity reaction to mites and their feces (scybala), itching may continue for several weeks after treatment even if all of the mites and eggs are killed. The individual should be re-examined every week for four weeks after treatment for symptom resolution. If itching is present more than two to four weeks after treatment or if new burrows or pimple-like lesions reappear, retreatment is recommended. If skin sores become infected, treatment with an antibiotic may be needed.

The rash from the infestation may still be visible several weeks after treatment but symptoms such as itching should subside.

Persons with atypical scabies generally require treatment at least twice, a week apart. Topical treatment with permethrin or oral treatment with ivermectin has been used successfully, although ivermectin currently is not FDA-approved for treatment of scabies.

Medications

Elimite (5% permethrin cream)

The currently recommended first-line treatment for scabies is 5% permethrin cream. When applied to the skin as directed, this product is approximately 90% effective after one application. Two applications a week apart may be required and is often recommended assuring complete eradication of atypical scabies. Multiple treatments may be required for the treatment of crusted or keratotic scabies. Permethrin has a low

rate of side effects that may include burning, stinging or itching immediately following the application.

The cream should be applied to every surface of the body from the head to the soles of the feet. Particular attention should be paid to skin folds and webs of the fingers and toes. Massage the medication under fingernails and toenails using a soft brush, if necessary. The cream should be left on for a period of 8-14 hours then washed off thoroughly after the treatment period has ended.

Eurax (10% crotamiton cream)

Crotamiton lotion is approximately 50% effective in the treatment of scabies. The safety and effectiveness in children has not been established. Allergic and irritant dermatitis may occur in some persons. The product should not be used on acutely inflamed or open skin lesions. Frequent treatment failure has been reported with crotamiton. For these reasons crotamiton is not considered a first-line treatment.

Stromectol (ivermectin)

Ivermectin is an oral antiparasitic agent that has not yet been approved by the U.S. Food and Drug Administration for use in the treatment of scabies. Ivermectin has been shown to be effective in the treatment of crusted scabies. Ivermectin should only be recommended for those individuals in whom application with a topical cream or lotion is contraindicated, e.g. patients on ventilators, severe contractures or open skin/soft tissue lesions. In addition treatment with this medication should be considered for patients who have failed treatment with approved topical medications. The dosage is 200mcg/kg and should be taken on an empty stomach with water. A total of two or more doses at least seven days apart may be necessary to fully treat the scabies infestation. The safety of ivermectin in children weighing less than 33 pounds and in pregnant women has not been established.

Rash and pruritus may worsen within the first few days following treatment with Ivermectin. Side effects may include cutaneous and/or systemic reactions.

Kwell (1% lindane lotion)

Lindane is not recommended as a first-line treatment due to drug resistance and toxicities. Lindane should only be used in patients who cannot tolerate or have failed first-line treatment with safer medications. Lindane should not be used in persons with a seizure disorder, women who are pregnant or breast-feeding, persons who have irritated skin or sores, infants, children, the elderly and persons who weigh less than 110 pounds.

Treatment Failure

If signs and symptoms persist, intensify, or if new lesions are identified within 7-14 days post treatment, this may be indicative of treatment failure. Treatments may fail for several reasons. The most common include:

1. Poor application of scabicide lotion/cream.
2. Continued contact with untreated individuals.
3. Improper identification and treatment of close personal contacts and family members.
4. Use of topical steroids during the treatment period.
5. Ineffective environmental cleaning.
6. Resistance to scabicide.
7. Failure to administer a second application, if necessary.

Treatment may also fail due to an incorrect diagnosis of scabies. Many drug reactions or side effects can mimic the symptoms of scabies and cause a skin rash and itching. Other types of skin ailments such as eczema may be mistakenly diagnosed as scabies. The diagnosis of scabies should be confirmed, when possible, by a skin scraping that includes observing the mite, eggs or mite feces under a microscope.

ISOLATION AND ENVIRONMENT OF CARE

Typical Scabies

Affected residents with typical scabies should be placed on contact precautions prior to and during the treatment period in another room (until their room is terminally cleaned). This period includes 24 hours after initial and subsequent administration of a scabicide.

Healthcare workers (HCWs) must wear gloves and a long-sleeved gown for hands-on contact. Wash hands after removal of gloves.

Place bed linens, towels and clothing used by an affected person during the five days prior to initiation of treatment in plastic bags inside the patient'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. Non-washable blankets and articles can be placed in a plastic bag for seven days; dry cleaned or tumbled in a hot dryer for 20 minutes.

Routine disinfection procedures of hard surfaces are adequate. Disinfect patient-use items, such as walking belts, blood pressure cuffs, stethoscopes, wheelchairs, etc., before using on other patients. Discard all creams, lotions or ointments used prior to effective treatment.

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.

Norwegian Scabies

In addition to the above, the following actions should also be implemented.

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

Assign resident to a private room. Restrict visitors until treatment is 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.

HCWs must wear gloves and a long-sleeved gown with the wrist area covered and shoe covers to attend to patient needs, for housekeeping duties, and handling of laundry. Remove gown before leaving the room.

The affected individual'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.

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

OUTBREAK MANAGEMENT IN LONG TERM CARE AND RESIDENTIAL FACILITIES

OVERVIEW

The primary goal of an outbreak investigation is to identify risk factors contributing to the outbreak and to take corrective action to prevent further transmission of scabies cases. In general an outbreak is defined as an unusual increase of disease within a population within a specific time and location. The expected number of scabies cases routinely present within a facility should be zero.

If symptom presentation is consistent with scabies infestation, lab confirmation is not obtained and alternate diagnoses are ruled out, proceed with scabicide treatment and continue with outbreak protocol.

Outbreak management should include planning for 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 pharmacy should make the necessary arrangements for obtaining the scabies treatment.

DEFINITION OF A SCABIES OUTBREAK

The optimal definition of a scabies outbreak in a long-term care or residential care facility is one or more laboratory confirmed (via positive skin scraping) cases of scabies or at least two clinically suspected cases (which includes clinically diagnosed and treated individuals) in residents, health care providers, visitors, and/or volunteers within a four week period of time.

OUTBREAK REPORTING

The local health department should be notified of any outbreak including those that may have community implications e.g., possible spread by residents or staff to other institutions.

CONFIRM THE DIAGNOSIS

Clinical identification of scabies is necessary to confirm scabies infestation. Laboratory confirmation of scabies infestation should be attempted immediately upon identifying potential scabies cases. Skin scrapings from multiple sites should be obtained from at least one symptomatic resident. Additional specimens can be obtained from health care workers, volunteers, and/or visitors.

Negative skin scrapings may occur in cases during a confirmed scabies outbreak due to the typically small number of mites that are present. Clinical presentation and exposure history should be considered when diagnosing scabies. An alternative diagnosis should be considered if multiple persons have negative scrapings and response to treatment is minimal after two weeks.

Negative skin scrapings **do not** rule out the presence of scabies. Skin scrapings are often negative in typical cases of scabies, even when performed by experienced personnel. Properly collected and prepared specimens will almost always be positive in those with Norwegian scabies.

MANAGEMENT OF SYMPTOMATIC CASES

Symptomatic Residents

Immediately place any resident in whom scabies infestation is suspected in contact isolation. Maintain contact isolation until treatment is completed and/or case is determined by physician or other experienced designee to be non-infectious.

Prepare a line-listing of **symptomatic residents** that includes name, age, gender, unit, room number, symptoms, date of onset, result of scabies evaluation, any prior treatment for scabies. A sample line list (CDS-34) for residents can be found at http://www.state.nj.us/health/forms/cds-34.dot.

Treat with a scabicide according to physician's recommendations. Perform environmental cleaning of case-resident's room.

Symptomatic Healthcare Workers

HCWs refer to all facility employees, contract employees, medical staff, house staff, students, religious workers and volunteers, etc.

Immediately remove any HCW with signs or symptoms consistent with scabies from duty and refer to employee health or other designated healthcare provider experienced in the diagnosis of scabies.

Prepare a line-listing of **symptomatic HCWs** 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 their symptoms until the current date, and symptoms in household or other close contacts. A sample line list (CDS-35) for staff can be found at http://www.state.nj.us/health/forms/cds-35.dot.

Treat all HCWs with confirmed or suspected scabies infestation with a scabicide according to physician's recommendation. Provide clearly written instructions for proper application of dispensed scabicide. Re-evaluate cases on day 14 and 28 post treatment to monitor response.

Symptomatic HCWs can return to work when 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.

Recommend scabicide prophylaxis, along with written instructions for application, for all household contacts of symptomatic HCWs.

MANAGEMENT OF CONTACTS

When a person is infested with scabies mites the first time, symptoms may not appear for up to six weeks after being infested. However, an infested person can transmit scabies, even if symptoms are not present. Scabies usually is passed by direct, prolonged skin-to-skin contact with an infested person. However, a person with Norwegian scabies can spread the infestation by brief skin-to-skin contact or by exposure to bedding, clothing, or even furniture that he/she has used.

Contacts to typical scabies cases are defined as persons who had "hands-on" contact, handled infested clothing or bed linen, or roommates of the case-resident during the exposure period.

Contacts to Norwegian scabies also include persons who had substantial contact with the case-resident's environment, including HCWs who worked on the same unit as the case-resident during the exposure period. If the case-resident was housed on more than one unit before control measures were initiated, each unit must be considered affected.

In a long-term care resident, the exposure period extends from six weeks prior to onset of symptoms**.** The identification of two or more symptomatic HCWs assigned to a particular unit suggests that prophylaxis is indicated for all unit contacts, whether or not they were direct contacts of a known scabies case.

Identify and prepare a line listing of all direct contacts to a case during the exposure period. If symptomatic these contacts should be managed as cases.

Provide a single course of prophylactic scabicide along with written instructions for administration to all HCWs with direct contact to a scabies case. Skin-to-skin contact with resident cases should be avoided for at least eight hours after treatment. HCWs that refuse prophylactic treatment should be monitored for symptoms at least weekly and required to **wear gowns and gloves for contact with residents or fellow**

employees for six weeks from the date of last potential exposure (usually six weeks from implementation of control measures).

Administer prophylactic scabicide to residents with direct contact to a scabies case. Residents who reside on the same unit as a Norwegian scabies case 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.

Notify **discharged resident contacts** of their potential exposure to scabies. Symptomatic discharged residents should receive treatment and their family contacts should receive prophylaxis. Asymptomatic discharged residents should be directed to follow up with their healthcare provider regarding possible scabies exposure and at a minimum, observe skin daily until six weeks past the date of last potential exposure.

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

EXTENDING RECOMMENDATIONS FOR PROPHYLAXIS

Facility-wide (mass) prophylaxis of all residents and staff involved in direct resident care or exposed to resident care environment, should be considered if confirmed or suspect cases are found in patients or employees assigned to two or more areas of the facility where no direct link with an infested case-resident or HCW can be established. Careful planning is required to ensure everyone is treated within the same 24 hour period.

NOTIFICATION OF STAFF, VISITORS AND HOUSEHOLD MEMBERS

Healthcare workers, volunteers, family members, sexual partners, and anyone else who may have had close 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.

TREATMENT

Refer to treatment section on page 7.

ADDITIONAL CONTROL MEASURES

Surveillance

Long-term surveillance for scabies is imperative to eradicate scabies from an institution. All new residents and staff should be screened and treated for skin conditions

suggestive of possible scabies. The local health department (LHD) and neighboring institutions should be notified of the outbreak and of any residents who may have been transferred or staff who may have worked in other institutions. Facility should work with LHD and provide needed information such as line lists to the LHD frequently during an outbreak.

Education

Education and training should be provided to direct care staff caregivers employed by the facility, including but not limited to volunteers, private duty staff, laundry and housekeeping personnel. General information should also be provided for residents, families, volunteers, and/or visitors. Adequate and accurate knowledge about scabies treatment and control will improve understanding, reduce anxiety, and facilitate outbreak control. Contact the local health department for fact sheets and other pertinent educational materials.

Evaluation

Generally, the outbreak is considered to be over when two incubation periods (12 weeks) have passed without a new case being identified. Waiting two incubation periods allows for recognition of potential secondary cases that are still asymptomatic but in whom the disease may be incubating.

If new cases are identified after control measures have been instituted for one incubation period, continue outbreak control measures in consultation with the facility, LHD and NJDOH. Evaluate and enforce adherence to infection control precautions by all staff, residents and visitors. Continue control measures until no new cases are identified for two incubation periods. When no new cases are identified after two incubation periods, control measures may be discontinued.

FINAL REPORT

When the outbreak has been controlled, the LHD and facility shall collaborate on a final report and submit it to the NJDOH within 30 days of completion of the investigation. See the NJDOH website for the report format (CDS-30) available at http://www.state.nj.us/health/forms/cds-30.dot and http://www.state.nj.us/health/forms/cds-30_instr.doc (instructions for completion). This report should summarize the investigation, control measures that were implemented, and the final outcome.

SCABIES PREVENTION AND CONTROL PLAN

It is recommended that healthcare and residential care facilities incorporate a scabies prevention program that involves all levels of the health care team. The program should include an assessment of the skin, hair and nail beds of all new admissions as soon as possible following arrival. Pruritus, rashes and skin lesions should be documented and brought to the attention of the designated personnel and the attending physician for further follow-up. Preparing as much information as possible prior to an outbreak will save valuable time if an outbreak occurs and control measures need to be put into place.

Essential elements of a successful scabies prevention plan include:

1. Written policies and procedures for prevention and control of healthcare associated scabies including a plan for mass prophylaxis;

2. A policy to screen newly admitted residents for scabies during the initial assessment (especially if transferred from another healthcare facility). Residents suspected of having scabies should immediately be placed on contact isolation until further examination can be performed.

3. A policy that all new employees will be screened for scabies as part of pre-employment screening;

4. Training of healthcare workers to be suspicious of scabies if unexplained rash or pruritus occurs in themselves or their residents, and to report such occurrences to their supervisors;

5. Access to and use of the diagnostic skills of a healthcare provider experienced with diagnosing scabies and who is able to evaluate difficult or unusual cases and the response to treatment;

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

7. In-services to provide education to staff on a regular basis.

SUMMARY OF ACTION STEPS

- ☐ Immediately remove any HCW with signs or symptoms consistent with scabies from duty and refer to employee health or other designated healthcare provider experienced in the diagnosis and management of scabies.

- ☐ Evaluate residents on affected units and immediately place patients with suspected scabies in contact isolation.

- ☐ Report scabies outbreaks that occur in LTC facilities to the New Jersey Division of Health Facilities Evaluation and Licensing at 609-292-0412 and to the local health department. The list of local health departments can be found at http://localhealth.nj.gov.

- ☐ Meet with key staff to coordinate control measures. Representatives from the following departments should be included: Administration, Employee Health, Environmental Services, Infection Control, Pharmacy, Medical Staff, and Nursing. One person, generally the Infection Preventionist, should coordinate control measures and should be given adequate resources to accomplish this objective in a timely and efficient manner.

- ☐ Search for a possible source case.

- ☐ Verify the diagnosis in one or more symptomatic residents or employees.

- ☐ Prepare a line listing of symptomatic residents and health care workers and a separate line listing of their close contacts.

- ☐ Treat symptomatic residents and health care workers with a scabicide, provide prophylactic scabicide to all close contacts of symptomatic cases. **Ideally, these steps (treatment, prophylaxis, and environmental cleaning) should all be accomplished within the same 24 hour period to prevent re-infestation of treated or prophylaxed individuals.**

- ☐ Perform environmental cleaning of affected rooms.

- ☐ Provide training to all staff on the signs and symptoms of scabies. Stress that people can be infested and contagious for up to six weeks before symptoms appear.

- ☐ Arrange for follow-up evaluation at 14 days and 28 days post treatment and for prophylactic treatment of discharged residents who were contacts to scabies cases.

- ☐ Monitor for new cases for 12 weeks and repeat treatment as necessary.

CHILD CARE AND SCHOOLS

Management of scabies in daycare centers, schools, and places where extracurricular activities for children take place can be challenging. Children typically have direct contact with each other, which can increase the chance of transmission within a facility. Scabies outbreaks occasionally occur in daycare centers. Young children tend to play in ways that involve skin-to-skin contact. They may also share naptime mats and blankets.

Scabies should be suspected when a child has a rash that causes intense itching, especially at night. Itchy red bumps or blisters are commonly found on skin folds between the fingers, toes, wrists, elbows, armpits, waistline, thighs, penis, abdomen and lower buttocks. Children younger than two years of age are likely to be infested on the head, neck, palms, and soles of feet or in a diffuse distribution over the body. Norwegian scabies is uncommon but has occurred in otherwise healthy children after long-term use of topical corticosteroid therapy.

- ☐ Report any outbreak to the local health department where the school is located. The list of local health departments is available at http://localhealth.nj.gov. In the school setting, an outbreak is defined as two or more confirmed or suspect (treated) cases that are epidemiologically linked within a four week period. Work with the local health department to determine if other outbreaks exist.

- ☐ Exclude from school and other extracurricular activities until treatment recommended by the child's healthcare provider has been completed.

- ☐ For students participating in contact sports see http://www.ncaapublications.com (search "sports medicine handbook") for guidance.

- ☐ A designated staff member of the child care center or school nurse should develop a list of cases and contacts. A sample line list (CDS-33) is available at http://nj.gov/health/cd/forms.shtml.

- ☐ Inform parents/guardians who have children in the same classroom or who have children who have had direct contact with a confirmed or suspect scabies case. See Appendix A for a sample notification letter. Alert possibly exposed staff members to watch for symptoms.

- ☐ All cases, their close contacts and family members must be treated at the same time as the child, even if no signs or symptoms are present.

- ☐ Launder bedding and clothing (hot water and hot drying cycle) worn next to skin during the five days before start of treatment.

- ☐ Items that cannot be laundered should be placed in plastic bags for seven days.

Date:

Dear Parent or Guardian,

Subject: Scabies Notification

Your child may have been exposed to scabies. Scabies is a disease of the skin caused by burrowing of the scabies mite. The mite is transmitted through direct skin-to-skin contact or through sharing of an infested person's personal items such as clothing or bedding.

Please observe your child for intense itching (especially at night) and rash. The rash can usually be seen in the following places:

between webs and sides of fingers
wrists
elbows
armpits
breasts
genitalia
lower buttocks
waist
thighs

Infants may experience rash on the:
face
scalp
lower buttocks
palms of hands
soles of feet

Symptoms usually appear within **two** to **six** weeks after coming in contact with a person who has scabies. Persons who have had scabies before may have symptoms appear within one to four days.

Treatment Recommendations
If you are concerned that your child or anyone else in your family may have scabies, please see your family doctor. If necessary, your doctor will be able to prescribe medications that can kill the scabies mite. Usually one application of a prescription scabicide is adequate to treat scabies. It is recommended that if your child has scabies, the entire family should be treated. Please discuss this with your doctor.

Cleaning & Disinfecting
Washable items such as clothing, bedding, and towels can be disinfected by washing the items in hot water and detergent. Wash water temperature should be set to the highest temperature possible. Use the hot setting on the dryer to dry the items *for at least 20 minutes*.

Non-washable items such as shoes, coats, jackets, and scarves can be disinfected in one of three ways: 1) place the items in a dryer *for at least 20 minutes* on the hot setting; or 2) seal the items in a plastic bag for *seven days*.

Fumigating rooms and using insecticidal sprays on furniture, infant carriers, child car seats and carpets are not recommended for cases of common scabies. Thorough cleaning and vacuuming of these items is sufficient.

Attendance
Children who have scabies should be excluded from school and/or extracurricular activities until the treatment has been completed.

If you have any questions, please contact:

Sincerely,

_____ _____
School or Daycare Manager Phone

REFERENCES

1. American Academy of Pediatrics. 2012. *Red Book* (29th ed.).
2. Scabies. Centers for Disease Control and Prevention. 2010. Available at http://www.cdc.gov/parasites/scabies/gen_info/index.html. Accessed April 22, 2014.
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4. *Scabies Prevention and Control Manual*. Michigan Department of Community Health. Lansing, Michigan. May 2005.
5. *Scabies Prevention and Control Guidelines Acute and Sub-Acute Care Facilities.* Los Angeles County Department of Public Health Acute Communicable Disease Control Program. Los Angeles County, California. July 2009.