Scabies

Site Applicability

All PHC Acute and Long Term Care Sites.

Practice Level

Basic: Physicians, NPs, Nursing, Clinical Nurse Leader, Clinical Site Coordinator, Bed Placement Coordinator

Standards

In addition to Routine Practices, Contact Precautions will be initiated for patients with known or suspected scabies until 24 hours after the start of effective treatment.

The patient/resident who is diagnosed with crusted (Norwegian) scabies will remain on Contact Precautions until directed by the Infection Prevention and Control (IPAC) team in conjunction with the attending physician and/or dermatologist. A private room is strongly recommended.

The physician or other qualitied personnel will take skin scraping for microscopic examination (see Appendix A).

A physician must order the scabicide medication for treatment.

Description of the Disease

Scabies is caused by the burrowing mite, *Sarcoptes scabiei*. After mating, the female burrows into the skin just under the surface and remains there for the rest of her life, extending the burrow and laying two to three eggs daily. The eggs hatch in three to four days to become larvae that move to the surface, molt, develop into nymphs and finally mature mites. These mate and repeat the cycle from eggs to mites. Individuals with common scabies may have 3-50 mites present. Scabies often leads to intense itching, often worse at night, as well as dermatological manifestations like burrows around the hands, webs of fingers, wrists, elbows, and feet and popular/vesicular rashes. Itching/scratching can lead to secondary skin infections.

Crusted (or Norwegian) scabies is a severe form of scabies caused by the same mite. Crusted scabies is highly infectious due to the very large number of mites present (thousands). The usual severe itching may be reduced or absent but a crusty/scaly dermatitis is present often at the hands and feet. This

infestation occurs more frequently in the elderly, immunocompromised and in patients/residents where treatment is delayed.

Signs & Symptoms

The signs and symptoms of scabies present as a result of an allergic reaction to scabies mites, eggs, and feces. Intense itching/pruritus occurs and is often worse at night. Characteristics of scabies rash are as follows:

- Papules or vesicles indicate skin penetration by the microscopic mite.
- Burrows formed by the mite under the skin are visible as linear tracts.
- Lesions are most frequently seen in the following areas:
    - Inter-digital spaces
    - Anterior surfaces of wrists and ankles
    - Axillae
    - Skin folds, under the breasts
    - Genitalia
    - Abdomen, belt line
    - Back, buttocks, especially in long term care residents

As the infestation progresses, the rash may mimic other skin conditions, such as eczema, impetigo, psoriasis and may become infected.

Crusted scabies is distinguishable by a crusted/scaly dermatitis of the hands and feet. Itching may not be present.

Incubation Period

The incubation period for a primary infestation of scabies can be as short as 10 days but is typically four to six weeks. Symptoms for a reinfestation usually begin in just one to three days as the body is already sensitized to the scabies mites, eggs, and feces.

Period of Communicability

Scabies can be transmitted until it is eradicated by effective treatment.

Routes of Transmission

Scabies is transmitted by direct skin to skin contact with the infected person. Spread of infection by fomites (e.g., clothes, bed linen, furniture, etc.) is much less common since the mites feed only on the

intercellular fluid of the skin and usually do not survive off the skin for more than two days. Under ideal conditions, scabies mites may survive for up to five days.

Populations at Risk

Individuals who have had unprotected skin to skin contact with an infected person (e.g., household contacts, sexual partners, healthcare workers not wearing gloves and gowns). Elderly and immunocompromised individuals are at greater risk of crusted scabies.

Assessment and Intervention

Assess the skin on all new admissions. If a rash is noted, assess for location, size, color and character; document clinical findings. Signs and symptoms of infestation should be reported to the Clinical Nurse Leader or the Infection Control Practitioner. If scabies is suspected, notify the physician, who will order the scabicide once the diagnosis is confirmed.

Infection Control Precautions

- **Additional Precautions:** In addition to Routine Practices, Contact Precautions will be initiated for patients with known or suspected scabies until 24 hours after the start of effective treatment. **The patient/resident who is diagnosed with crusted (Norwegian) scabies will remain on Contact Precautions until directed by the IPAC team in conjunction with the attending physician and/or dermatologist.**

  The most responsible nurse will ensure Contact Precautions are ordered in Cerner and post the appropriate sign on the door (i.e., Contact).
- **Hand Hygiene:** Hands should be cleaned before and after every patient contact, as well as after touching potentially contaminated items in the environment (i.e., before donning and after doffing gloves). Using an alcohol based hand rub solution is preferred if hands are not visibly soiled.
- **Patient Placement:** Patients/residents with scabies may be placed/remain in any available bed provided they are able to physically distance/avoid contact with other patients/residents. The room door may remain open. Patients/residents with scabies should remain in their room until treatment is complete and 24 hours has elapsed since treatment (i.e., not to participate in group activities, communal dining, wander halls, etc.). **For patients/residents with crusted scabies, a private room is strongly recommended until precautions have been discontinued by IPAC.**
- **Equipment:** Dedicate equipment whenever possible. Clean and disinfect shared patient equipment routinely and between different patients. Clean commodes regularly and wipe touchable surfaces (armrest, seat and back) with disinfectant wipes between patients.
- **Environment:** Following treatment, the room should be cleaned and disinfected and linen should be changed.

All high-touch surfaces in the patient/resident's room must be cleaned and disinfected at least daily as per standard cleaning schedule. Following discharge of the patient, the room should have a terminal clean carried out prior to the next patient being admitted.

- **Visitors:** Discourage visits by friends and family during the treatment period. Instruct family/friends/visitors to see their family physician to obtain scabicide treatment if they had close, direct contact with the patient/resident so that treatment can happen simultaneously.
- **Patient Transport:** When the patient is required to leave the room for diagnostic purposes, notify receiving department prior to transport of the precautions in place.
- **Management of Close Contacts:** For optimum control, the contacts of all patients/residents diagnosed with scabies will be treated with scabicide at the same time. Contacts include household members, roommates, tablemates, health care workers, visitors, students, and anyone who has had substantial contact with a symptomatic patient/resident.

  Healthcare workers/staff who are close contacts of a patient/resident with scabies or who have an active scabies infection should follow Occupational Health and Safety recommendations.

Lab Testing

- Scabies mites, eggs, or fecal pellets may be observed under microscopic examination of skin scrapings collected by a physician (see Appendix A).

Treatment

- Appropriate scabicide treatment for patients/residents will be ordered and managed by the most responsible physician. A second treatment may be required in select circumstances. Treatment options include topical permethrin 5% cream (apply per directions below; commonly applied to all areas of the body from the neck down and washed off after eight to fourteen hours) or oral ivermectin. Patients/residents with crusted scabies may require simultaneous oral and topical treatment.

  Procedure for application of topical cream:

  1. Perform hand hygiene.
  2. Apply Personal Protective Equipment for Contact Precautions (i.e., gloves and gowns).
  3. If lesions are crusted, bathe the patient/resident in warm water and soap to soften and remove the crusts so that the scabicide can reach these areas. Allow the skin to cool and dry.
  4. Clean and trim finger and toe nails as required. Bag all clothing/gowns for laundering.
  5. Apply the scabicide to the dry, cool skin. Thoroughly cover the entire skin surface with a thin layer from the neck to the soles of the feet including under the fingernails and toenails. For crusted scabies apply cream from hairline to the soles of the feet, including forehead, ears and neck. Avoid mucous membranes (eyes, nose and mouth).
     Note: During the treatment period, the scabicide will be reapplied to any treated area that is washed for any reason (e.g., incontinence, handwashing, toileting, perspiration, etc.).

6. Apply clean gowns/clothing, change all bed linen and clean and disinfect personal room area after the bath and before the patient/resident returns to room.
7. After 8-14 hours following application, wash off the scabicide thoroughly with soap and water (follow medication directions).
8. Apply clean gowns/clothing and change the bed linen.
9. Discard any topical creams, ointments and lotions used by patients diagnosed with scabies.
10. Ensure that all washable clothes, bed linen, transfer belts and slings from mechanical lifts used in the week prior to treatment and during treatment are washed (hot water and dry with high heat) or bag and send to laundry. Non-washable clothes can be dry cleaned or sealed in a plastic bag for 7 days or placed in a dryer (high heat) for 20 minutes.
11. Fumigation is not necessary. The room will be routinely cleaned and swept/vacuumed. Furniture should be wiped down with the approved hospital cleaner/disinfectant. Furniture that cannot be wiped down should be removed from the room and covered with plastic for 7 days.
12. If a second application of scabicide is required, repeat the same procedure as ordered.
13. Monitor the patient/resident at least weekly to determine effectiveness of the treatment. The rash should gradually resolve following effective treatment. If symptoms persist, notify the physician or Clinical Nurse Leader as an additional treatment may be required. If re-infestation is suspected, initiate Contact Precautions and contact IPAC.

Transfer/Discharge Planning

- Notify the receiving facility, hospital, nursing home or community agency involved in the patient's care of their status.

Outbreak Management

- Direction will be provided to the unit/hospital staff, should the Infection Control Practitioner/Physician determine there is an outbreak of scabies.

Documentation

- Ensure order for Contact Precautions is in patient's Cerner chart, and discontinue order once 24 hours of effective antibiotic therapy is complete, unless the patient has crusted scabies in which case consult IPAC before discontinuing Contact Precautions.
- Chart assessments of skin integrity and rashes, if present.
- Document administration/application of scabicide medication and effectiveness of treatment.

Patient and Family Education

HealthLinkBC Files:

- Scabies

Related Documents

- B-00-07-13029 - Contact Precautions - Infection Control
- Occupational Health and Safety guide for staff infected with or exposed to scabies

References

Arlian, L. G., & Morgan, M. S. (2017). A review of *Sarcoptes scabiei*: past, present and future. *Parasites & vectors*, *10*(1), 297. https://doi.org/10.1186/s13071-017-2234-1

BC Centre for Disease Control. (2005). Communicable Disease Control: Scabies. Retrieved from http://www.bccdc.ca/resource-gallery/Documents/Guidelines%20and%20Forms/Guidelines%20and%20Manuals/Epid/CD%20Manual/Chapter%203%20-%20IC/InfectionControl_GF_Scabies_Feb_2005.pdf

Cassell, J. A., Middleton, J., Nalabanda, A., Lanza, S., Head, M. G., Bostock, J., Hewitt, K., Jones, C. I., Darley, C., Karir, S., & Walker, S. L. (2018). Scabies outbreaks in ten care homes for elderly people: a prospective study of clinical features, epidemiology, and treatment outcomes. *The Lancet. Infectious diseases*, *18*(8), 894–902. https://doi.org/10.1016/S1473-3099(18)30347-5

Centers for Disease Control. (2022). 2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings. Retrieved from https://www.cdc.gov/infectioncontrol/pdf/guidelines/isolation-guidelines-H.pdf

Appendix A: Skin scrapings for microscopic examination

Skin scrapings for microscopic examination will be taken by the physician or other qualified personnel.

Equipment Required:

1. Gloves, gown (as per contact precautions)
2. Scabies Scraping Kit (available from the laboratory):
    - Glass slide (1)
    - Cover slip (1)
    - Cardboard slide container/holder
    - Mineral oil with dropper
    - Alcohol prep
    - Disposable scalpel blade
    - Biohazard specimen transport bag
    - PHC Microbiology Laboratory requisition
    - Rubber band
3. **Note:** A Scabies Scraping Kit containing the above specimen collection supplies is available in the laboratories at SPH and MSJ and at each residential care site, who obtain replacements through the supply ordering procedure of MSJ lab.
4. Sharps container
5. Specimen label

Specimen Collection Procedure:

1. Explain procedure to patient/resident.
2. Clean hands. (Wash using soap and water or use ABHR
3. Apply personal protection equipment as per Contact precautions (gown and gloves for direct care).
4. Assemble equipment. Write name of patient/resident on the slide. Label the slide container. Fill out requisition, including exact specimen sites.
5. Identify areas to be scraped:
    i. Observe client's skin and look for lesions suggestive of scabies infestation. The shoulders, back, abdomen, hands, wrists, elbows, buttocks, axillae, knees, thighs and breasts are common sites for burrows.
    ii. Look for new burrows or papules. If the burrow or papule is very fresh, a tiny speck (mite) may be visualized at either end of the burrow or in the papule. The mite will not be found in excoriated, scabbed or infected skin lesions. Preserved, unscratched papules may sometimes be found in a grouping of scratched papules.
    iii. Select an unexcoriated burrow or papule.
6. Remove any topical cream/ointment that has been applied on the area to be scraped.
7. Apply a small amount of mineral oil with the dropper or gauze to the area(s) being scraped.
8. With scalpel blade, scrape area vigorously 6 or 7 times to remove the top of the papule (there should be tiny flecks of blood in the oil). Repeat procedure on 3-4 different areas if available.

9. Transfer the oil and scraped material to a glass slide. Stir the mixture with the tip of the scalpel blade. Any large clumps can be crushed to expose hidden mites.
10. Place a cover-slip on top.
11. Place into slide container and enclose with rubber band.
12. Discard waste appropriately, i.e., scalpel blade into sharps container.
13. Remove gloves and gown. Wash hands.
14. Place slide container in the biohazard bag; close the zip lock.
15. Place the completed requisition in the outside pouch of the bag. Be sure to list the skin scraping sites on the requisition. Send to the laboratory responsible for your site, i.e., SPH or MSJ. (The MSJ laboratory will accession and forward the specimen to the Microbiology Lab.)

Notification:

The Microbiology laboratory will notify Infection Prevention and Control of all positive results.

First Released Date:	19-MAR-2003
Posted Date:	13-OCT-2022
Last Revised:	13-OCT-2022
Last Reviewed:	13-OCT-2022
Approved By: *(committee or position)*	PHC
	IPAC Standards Committee
Owners: *(optional)*	PHC
	IPAC