

SCABIES SURVEILLANCE PROTOCOL FOR ONTARIO HOSPITALS

Developed by the Ontario Hospital Association and
the Ontario Medical Association
Joint Communicable Diseases Surveillance Protocols Committee

Approved by
The OHA and the OMA Board of Directors
The Ministry of Health and Long-Term Care –
The Minister of Health and Long-Term Care

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This protocol was developed jointly by the Ontario Hospital Association and the Ontario Medical Association to meet the requirements of the *Public Hospitals Act 1990*, Revised Statutes of Ontario, Regulation 965. This regulation requires each hospital to have by-laws that establish and provide for the operation of a health surveillance program including a communicable disease surveillance program in respect of all persons carrying on activities in the hospital. The communicable disease program is to include the tests and examinations set out in any applicable communicable disease surveillance protocol. The regulation states that the communicable disease surveillance protocols that hospitals must adopt are those "published jointly by the Ontario Hospital Association (OHA) and the Ontario Medical Association (OMA) and approved by the Minister (of Health and Long-Term Care)."

This Protocol has been reviewed since the previous version; changes have been highlighted in yellow for easy identification. Protocols are reviewed on a regular basis, every two years or as required.

The protocol reflects clinical knowledge, current data and experience, and a desire to ensure maximum cost effectiveness of programs, while protecting health care workers and patients. It is intended as a minimum standard that is practical to apply in most Ontario hospital settings. It does not preclude hospitals from adopting additional strategies that may be indicated by local conditions.

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Rationale for Scabies Surveillance Protocol

Scabies is a contagious parasitic infestation of the skin caused by the mite *Sarcoptes scabiei*. The distribution of scabies is worldwide.¹⁻³ Epidemics have previously been associated with deterioration of social conditions, crowding and poor sanitation.¹ However, the recent wave of infestation in North America has occurred in the absence of social disturbance, affecting people from all socioeconomic levels and regardless of personal hygiene.

The mite can only survive on humans, and transmission usually occurs directly from person to person.^{1,4} Transmission by fomites (inanimate objects capable of retaining and transmitting organisms) such as bed linens and clothing, particularly underwear, may occur.¹

Incubation period is from four to six weeks for a primary infestation. Sensitization to mite antigens occurs and is responsible for the intense pruritus that characterizes the disease. Pruritus is worse at night.⁴ Shorter incubation periods are seen in reinfection. The skin rash consists of papules, vesicles and cutaneous burrows, from which the mite and/or eggs may be extracted to confirm the diagnosis. Lesions may become excoriated and secondarily infected. In immunocompromised people, crusted scabies (also known as “Norwegian” scabies) may occur; because of the proliferation of mites, this type of scabies is extremely contagious.

Many outbreaks of scabies have been described in health care settings, including in acute and long-term care facilities.^{1, 5} Diagnosis of the scabies rash is often delayed and misdiagnosis is common, resulting in extended exposure of staff and patients. The prolonged incubation period may delay recognition of institutional transmission and recognition of an outbreak². Asymptomatic case contacts may transmit mites during incubation. Crusted scabies may be particularly difficult to control because of the high numbers of mites on the patient, in the exfoliating scales,¹ and the intense environmental contamination. Mites on clothing and linens are killed by regular laundering in the hot cycle of washer and dryer; clothing and linen used by the patient in the last 48-72 hours should be laundered.^{1,4,6} Mites do not survive more than a few days without contact with skin.

Treatment with scabicide agents is generally effective. Exposure or outbreaks of scabies may be complicated by overuse of topical scabicidals, with resultant irritant dermatitis, which may be mistaken for treatment failure. Pruritus may persist after successful treatment.² Treated persons in whom pruritus persists should be evaluated carefully; they may have repeat skin scrapings, and if these are negative, receive symptomatic treatment and reassurance.

Because of the highly contagious nature of scabies, it is essential that health care workers (HCWs) in whom scabies is suspected be examined as quickly as possible by a physician skilled in its diagnosis and treatment before patient contact resumes. Since scabies is predominantly transmitted by skin-to-skin contact, acquisition can be prevented by Routine Practices, specifically, wearing gloves when touching non-intact skin, and **Contact Precautions (gloves and gown) for suspected or confirmed crusted scabies.**⁵

This protocol is only one component of an infection prevention and control program; HCWs must consistently adhere to Routine Practices.

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I. Purpose

The purpose of this protocol is to provide direction to hospitals to prevent the transmission of scabies among health care workers (HCWs) and patients.

II. Applicability

This protocol applies to **all persons carrying on activities in the hospital**, including but not limited to employees, physicians, nurses, contract workers, students, post-graduate medical trainees, researchers and volunteers. The term health care worker (HCW) is used in this protocol to describe these individuals. This protocol does not apply to patients or residents of the facility or to visitors.

When training students or hiring contract workers, the hospital must inform the school/supplying agency that the school/agency is responsible for ensuring that their student/contractors are managed according to this protocol.

This protocol is for the use of the Occupational Health Service (OHS) in hospitals. It is expected that OHS collaborate with Infection Prevention and Control and other departments, as appropriate.

III. Pre-placement

Routine screening for scabies in HCWs is neither required nor recommended. HCWs must be informed of the requirement to notify the OHS of skin rashes including scabies infestation or exposure to persons with scabies within the last 6 weeks.

IV. Continuing Surveillance

No routine screening for scabies in HCWs is required or recommended.

V. Exposure

Exposure is defined as patient care involving skin-to-skin contact, without wearing gloves. For crusted scabies, exposure also includes handling of infested fomites, such as bed linens, without wearing gloves and gowns.

HCWs who have direct unprotected contact with a person with scabies have a responsibility to inform the OHS as soon as possible. A HCW who has been exposed to a confirmed case of scabies should be assessed as soon as possible by OHS for signs and symptoms of infestation. All exposed HCWs should receive treatment as soon as possible, ideally before return to work.

- Asymptomatic HCWs who have had skin-to-skin contact with a patient with typical scabies should be offered scabicial prophylaxis (see Glossary).
- Asymptomatic HCWs who have had skin-to-skin contact with or handled bed linens of a patient with crusted scabies without wearing gloves and gowns (Contact Precautions) must receive scabicial prophylaxis, unless medically contraindicated.
- Asymptomatic HCWs who have received scabicial prophylaxis may continue to work. Further follow-up is not required. Advise them to return to OHS if they develop symptoms compatible with scabies (see Glossary).
- Asymptomatic HCWs who refuse scabicial prophylaxis or for whom treatment is medically contraindicated may continue to work, but must be assessed at the end of the 6 week incubation period, measured from the last contact, and be examined to ensure they are free of symptoms or signs of scabies. Advise them to return to OHS earlier if they develop symptoms compatible with scabies (see Glossary).

VI. Acute Disease

HCWs diagnosed with scabies should be advised regarding assessment and prophylaxis or treatment of their close contacts (e.g., household and sexual contacts). Asymptomatic household contacts of a symptomatic HCW should complete scabicial prophylaxis at the same time to avoid reinfection, as directed, unless medically contraindicated.^{1,6,7}

Work Restrictions

HCWs with symptoms or signs suspected to be caused by scabies (see Glossary) must be excluded from work until the diagnosis of scabies is ruled out by a physician skilled in its diagnosis.

HCWs with scabies who have completed scabicial treatment (see Glossary) may return to work 24 hours after treatment. They should be reassessed in one week to assess effectiveness of treatment. (**Note:** itching may persist for 1-2 weeks^{1,7} and skin may become dry and itchy with treatment; this should not be considered a treatment failure).

VII. Reporting

In accordance with the Occupational Health and Safety Act and its regulations, an employer must provide written notice within 4 days of being advised that a worker has an occupational illness, including an occupationally-acquired infection, and/or Workplace Safety and Insurance Board (WSIB) claim has been filed by or on behalf of the worker with respect to an occupational illness, including an occupational infection, to the:

- Ministry of Labour,
- Joint Health and Safety Committee (or health and safety representative),
and
- trade union, if any.

Occupationally-acquired infections and illnesses are reportable to the WSIB.

VIII. Outbreaks

A single case of suspected or confirmed scabies should prompt active surveillance and contact tracing for additional cases among HCWs. Control of a scabies outbreak, particularly if prolonged, may require simultaneous treatment⁶⁻⁸ of the entire population at risk (patients and HCWs) over the same 24-48-hour period, whether or not symptoms are present.

IX. Glossary

Direct Patient Contact

- “hands on” patient care
- handling of infested fomites, such as bed linens

Symptoms of Scabies

- intensely pruritic skin rash, particularly at night⁴
- rash characterized by papules, vesicles and cutaneous tracks (burrows) in the skin that may appear as small, threadlike, wavy, slightly elevated, greyish-white lesions
- most common sites are finger webs, hands, anterior surfaces of wrists and elbows; also, anterior axillary folds, belt line, knees, thighs, stomach, external genitalia, buttocks and female nipple ^{1,4,7,9}
- excoriation and secondary bacterial infection¹.
- immunocompromised people may develop generalized dermatitis with extensive scaling, vesiculation and crusting (crusted scabies); this form of the disease is highly contagious.

Diagnosis

- confirmation of diagnosis is by recovery of an 8-legged mite, or their eggs or fecal pellets from a burrow, and microscopic identification¹⁰
- application of mineral oil to lesions facilitates collection and examination of scrapings.
- application of ink¹⁰ to skin then washing it off will disclose burrows
- avoid sampling excoriated areas
- in outbreaks, clinical presentation with rash compatible with scabies may be sufficient for diagnosis; maintain high index of suspicion.
- persons who have had previous infection with the mite will have a rapid immune response and itching can develop within hours.

Treatment of Exposed HCWs

Asymptomatic: Prophylaxis

1. Skin should be clean and dry, and cool. Do not apply after a hot shower.
2. Massage in 5% permethrin^{1,4,11} (Kwellada-P™, NIX®) lotion* from neck to soles of feet, particularly to axilla, groin, wrists, web spaces of fingers and toes, including under fingernails/toenails, buttocks; avoid eyes, head and mouth. Apply before retiring. Put on clean clothes, and sleep in clean bedding.
3. Leave lotion on for 12-14 hours. Reapply to any areas that have been washed during treatment e.g. hands after using the toilet.
4. Thoroughly wash off by shower or bath in the morning.
5. Launder all bedding, night clothes and towels in regular laundry detergent with hot water, and dry in a hot dryer for 20 minutes.

Symptomatic: Treatment

1. Follow steps 1 through 5 above.
2. Symptomatic staff must remain off work until 24 hours after application of scabicial treatment.
3. Re-examine person 7-10 days after treatment.
4. Counsel regarding need for assessment and prophylaxis or treatment of close contacts.
5. **Avoid over treatment.** Skin may become dry and itchy with treatment; this should not be considered a treatment failure. Retreatment is typically only necessary if live mites or new lesions appear, but is sometimes recommended for crusted scabies.

***Note:** Permethrin 5% lotion is considered by many consultants to be safe for use during pregnancy.^{6,11}

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