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**FOR: ALL UNDERSECRETARIES AND ASSISTANT SECRETARIES;
DIRECTORS OF BUREAUS, SERVICES AND CENTERS FOR
HEALTH DEVELOPMENT; MINISTER OF HEALTH
-BANGSAMORO AUTONOMOUS REGION IN MUSLIM
MINDANAO, AND ALL OTHERS CONCERNED**

SUBJECT: Interim Guidance for the Diagnosis and Management of Scabies

The Department has received reports of increased cases of scabies, which is a skin infestation caused by the mite *Sarcoptes scabiei*. Commonly transmitted through direct, prolonged skin-to-skin contact, its risk of transmission is increased in crowded conditions and institutional settings.

To guide the diagnosis and management of Scabies, the interim guidance for scabies, available at <https://bit.ly/DOHScabiesInterimGuidance>, is hereby released.

Dissemination to all concerned is requested.

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Interim Guidance for Scabies

Department of Health

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Updating: This interim guidance shall be updated as new guidance or new evidence emerges on the public health and clinical management of Scabies.

Prepared by: Disease Prevention and Control Bureau - National Practice Guidelines Program

DISCLAIMER: The statements in this guidance document are based on current local and international literature at the time that they are written. These are intended to assist healthcare workers in evidence-based decision-making for clinical care but are not meant to restrict the practitioner in using sound clinical judgment and sharing the decision with the patient. Evidence is updated frequently and the statements in this interim guidance may not reflect other recent evidence published after they were written.

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OVERVIEW

Scabies is a skin infestation caused by the mite *Sarcoptes scabiei* (World Health Organization, 2020). There are two variants: classic scabies and crusted scabies. The more common classic variant is characterized by intensely pruritic rashes commonly found on the fingers, wrists, axillary, and genital areas. The less common crusted variant (Norwegian scabies) occurs in immunocompromised individuals and is characterized by heavy infestation, crusts, fissures, and scales (Centers for Disease Control and Prevention, n.d.; World Health Organization, 2020).

Diagnosis is clinical as the signs and symptoms are typically evident but confirmation may be done through the microscopic detection of mites, eggs, or feces of the causative organism.

Treatment of infested individuals involves either topical scabicides such as permethrin, sulfur, or oral agents such as oral ivermectin in countries where it is approved for this indication (World Health Organization, 2020).

Treatment of close personal contacts, household contacts, or cohabitants, and environmental measures are advised to prevent further transmission and reinfestation (Centers for Disease Control and Prevention, 2018; World Health Organization, 2020).

EPIDEMIOLOGY AND RISK FACTORS

A. Incidence and Prevalence

Scabies is one of the most common skin conditions, with an estimated global incidence of 565 million people in 2019. In the Philippines, the country-specific estimates of scabies include an incidence of 16.9 million and a prevalence of 5.6 million or about 5% of the population in 2019 (Global Burden of Disease Collaborative Network, 2020).

Although scabies occurs worldwide and can affect any individual, it is more common in resource-limited countries, with the highest rates of infestations occurring in populations living in hot, crowded conditions with limited access to care (World Health Organization, 2020).

B. Causative Agent

The causative agent for Scabies, *S. scabiei* var. *Hominis*, is an eight-legged mite. The female mite burrows into the epidermis, extends the burrow, lays two to three eggs per day, and lives up to four to six weeks (Fimiani et al., 1997). Larvae hatch in three to four days then molt three times until they reach adulthood. The mites can typically survive off a host (e.g., in fomites) for 24-36 hours but may survive longer in colder and more humid conditions (Arlan et al., 1984).

C. Transmission

Human-to-human transmission occurs through direct, prolonged, skin-to-skin contact. Once infestation occurs, even an asymptomatic person can spread scabies (Centers for Disease Control and Prevention, n.d.). In adults, sexual contact is a common route of transmission.

There is still conflicting evidence regarding the role of fomites in transmission but some evidence states that mites are able to live away from their human hosts up to four days (Bernigaud et al., 2019; Pallesen et al., 2020). Hence, environmental management is an important part of prevention and control.

Humans cannot get scabies from animals, since animals do not transmit the disease to humans. Animal scabies (Sarcoptic mange) should be treated by veterinarians.

D. Risk Factors

Household contacts, cohabitants, sexual partners, and any other person who has had direct, prolonged, skin-to-skin contact with an infested individual are at risk of being infested (Centers for Disease Control and Prevention, n.d.).

Certain settings increase the risk of transmission and are common sites of scabies outbreaks. These settings include childcare facilities, nursing homes, and prisons (Centers for Disease Control and Prevention, n.d.).

Individuals who have a reduced level of cellular immunity, such as those with immunocompromising conditions (e.g., HIV-AIDS, leprosy, lymphoma, chronic steroid users) and the elderly are at higher risk for the more severe crusted form (Centers for Disease Control and Prevention, n.d.; World Health Organization, 2020). They are also at higher risk of transmitting the disease to their contacts due to higher mite burden.

PREVENTION

Prevention of scabies includes the following measures (Centers for Disease Control and Prevention, 2018):

- Avoiding direct skin-to-skin or sexual contact with an infested person.
- Avoiding direct skin-to-skin contact with the clothing or bedding of an infested person.
- Thorough washing of bedding and clothing used by infested individuals.
- Thorough cleaning and vacuuming of the rooms used by a patient with crusted scabies.

Environmental disinfestation with pesticides or fogging is not needed.

DIAGNOSIS



A. Signs and Symptoms

The diagnosis of scabies remains clinical. History-taking and physical examination should be performed properly in order to distinguish scabies from various differentials. Table 1 shows the signs and symptoms of classic and crusted scabies.

Dermoscopic examination or skin surface microscopy can be done to further identify features of scabies (e.g., identification of burrows) (Dupuy et al., 2007). Diagnosis can be confirmed through the microscopic examination of a skin scraping or mite examination. However, the lack of mites, eggs, or fecal matter (scybala) does not mean that a person is not infested, since less than 10-15 mites may be present in healthy individuals who have classic scabies (Centers for Disease Control and Prevention, 2010).

Table 1. Comparison of Classic and Crusted Scabies

	Classic Scabies	Crusted Scabies
Onset of symptoms	<ul style="list-style-type: none"> • 3-6 weeks after primary infestation • 1-3 days after reinfestation 	<ul style="list-style-type: none"> • Same as Classic Scabies
Pruritus/Itching	<ul style="list-style-type: none"> • Prominent feature • Severe and worse at night 	<ul style="list-style-type: none"> • Absent or minimal
Cutaneous findings	<ul style="list-style-type: none"> • Small erythematous papules with excoriations • Characteristic finding: 2-15 mm burrows which appear as thin/ gray/ red/ brown serpiginous lines (may not be visible due to excoriations or secondary infection) • With or without vesicles, pastures, wheals, or bullae • Burrows may precede the development of pruritus 	<ul style="list-style-type: none"> • Poorly defined reddish patches that undergo scaling, and develop crusts, fissures, discoloration, and thickening
Distribution	Usually in multiple areas: <ul style="list-style-type: none"> • Webs and sides of fingers • Flexor aspects of wrists 	<ul style="list-style-type: none"> • Scalp, hands, and feet are usually affected • May spread to the entire body (generalized)

	<ul style="list-style-type: none"> ● Extensor aspects of elbows ● Axillary folds ● Periareolar skin ● Periumbilical skin ● Waist ● Genitalia ● Extensor surfaces of knees ● Lower buttocks and thighs ● Posterior and lateral aspects of feet 	
<p>Sample lesions</p>	 <p>Image Source: Centers for Disease Control and Prevention, 2017</p>	 <p>Image Source: Chan et al., 2009</p>

B. Differential Diagnoses

The signs and symptoms of scabies may mimic other conditions such as, but not limited to, the following:

- Atopic dermatitis
- Contact dermatitis
- Other types of eczema
- Insect bites
- Allergic reactions
- Psoriasis

C. Possible Complications

Clinicians should be aware of possible complications of scabies which include the following:

- **Secondary bacterial infection** - staphylococci and streptococci may cause secondary infections (e.g., impetigo, furunculosis, etc.) in classic scabies
- **Sepsis** - may occur in individuals affected by crusted scabies

- **Other systemic complications** such as glomerulonephritis in streptococci-infected individuals
- **Generalized urticaria**

TREATMENT

Treatment should involve both infested individuals and their direct contacts. The first-line management is the application of effective topical medications.

A. Treatment Principles

- **Identify and treat all the individuals who had prolonged direct skin-to-skin contact with the infested person, including household members and sexual contacts** (Centers for Disease Control and Prevention, 2018; (UK Health Security Agency, 2023).
- **Treat them all at the same time to prevent reinfestation** (Centers for Disease Control and Prevention, 2018; World Health Organization, 2020).
- Scabies is already contagious once a person is infested despite the lack of symptoms. Hence, **even asymptomatic contacts should be treated**.

B. Topical Treatments

Topical scabicides, in the form of creams and lotions, remain the primary treatment for scabies (Centers for Disease Control and Prevention, 2019). Topical scabicides are shown in Table 2.

Table 2. Topical Scabicides

Medication	Remarks	Mechanism of Action	Philippine FDA-registered?*	Included in the PNF 8th edition*?
Permethrin 50 mg/g (5%) (cream or lotion)	Drug of choice for treatment of scabies; able to kill the mites and eggs	Synthetic pyrethroid that works by acting on the nerve cell membrane to disrupt the sodium channel current by which the polarization of the membrane is regulated, resulting in paralysis.	Yes DR-XY42215** Expiry date: 18 July 2023	Yes
Sulfur (5%-10%) ointment	An alternative to Permethrin for scabies but its smell can be unpleasant	Keratolytic, mild antiseptic, mild antifungal, and parasiticide	Yes	Yes
Benzyl benzoate emulsion (10-25%)	Can cause local skin irritation and pruritus	An acaricide used to treat scabies	Yes DR-XY19331** Expiry date: 11 March 2027	Yes
Crotamiton lotion or cream (100 mg/g) (10%)	Less effective than permethrin	Scabicial and antipruritic agent	Yes, 10% lotion DRP-7780 Expiry date: 23 February 2027	Yes
Malathion 0.5% aqueous liquid	Less effective than permethrin; flammable	Parasympathomimetic organophosphate	No	No

*FDA Registration of drugs can be checked at: https://verification.fda.gov.ph/drug_productslist.php

**Other dosage forms registered

*The **Philippine National Formulary 8th Edition** is available at this link: <https://drive.google.com/file/d/1QA05jVfoQu7DJZihMRx5Mq53TobWTwah/view>.

Table 3. How to Use Topical Scabicides for Classic Scabies

Scabicide*	Instructions		Safety Considerations
Permethrin 5%	For ADULTS	Apply 5% cream or lotion to the entire skin from head down to and including toes and under fingernails and toenails, leave on for 8–14 hours after which it can be washed off, then repeat in 1–2 weeks.	Dermatological effects: may temporarily exacerbate pruritus, edema, and erythema associated with scabies infestation. Children: safety and effectiveness in children <2 months have not been established. Lactation: excreted in breast milk; withhold drug while the mother is nursing
	For CHILDREN >2 Months Old		
Sulfur 5-10%	For ADULTS	Apply a thin layer uniformly and massage gently into all skin surfaces from the neck to the toes (including the soles), leave on for 24 hours (overnight) before washing, repeat application for 2–3 successive days, 30 g is sufficient for each application.	Contraindications: Children <2 years Precautions: May stain the skin black and give off a foul smell when applied concomitantly with mercurial compounds.
	For CHILDREN	Use a smaller proportion of adult dose.	
Benzyl benzoate lotion 10-25%		Apply once daily at night for 2 consecutive nights then repeat application after 7 days.	Contraindications: Broken or irritated skin; neonates; pregnancy Precautions: Prevent drug from entering the eyes. The elderly have an increased risk of drying effects. Adverse Drug Reactions: Irritant to eyes and mucous membranes, allergic dermatitis reactions, drying effects (elderly)
Crotamiton lotion 10% and Crotamiton cream 10%	For ADULTS	Thoroughly massage into the skin of the whole body from the chin down, paying attention to all folds and creases, re-apply after 24 hours, wash all clothing and bed linen the next morning, and take cleansing bath 48 hours after the last application.	Precautions: If severe irritation or sensitization develops, treatment with this product should be discontinued and appropriate therapy instituted. Pregnancy: use with caution; use only when clearly needed. Adverse Drug Reactions: Dermatitis, pruritus, rash, allergic sensitivity reactions. Do NOT apply in the eyes or mouth because it may cause irritation.
	For CHILDREN >3 Years Old		
	For CHILDREN <3 Years Old	Apply once daily with medical supervision.	Do NOT apply to acutely inflamed skin or raw or weeping surfaces until the acute inflammation has subsided.

*The Philippine National Formulary 8th Edition is available at this link: <https://drive.google.com/file/d/1QA05jVfoQu7DJZihMRx5Mq53TobWTwah/view>.

C. Oral Treatment

Existing international guidance state that oral Ivermectin should be considered as **off-label treatment only for patients who fulfill any of the following** (Centers for Disease Control and Prevention, 2019; Salavastru et al., 2017; UK Health Security Agency, 2023):

- **Have failed treatment with or who cannot tolerate FDA-approved topical medications for the treatment of scabies;**
- **Have immunosuppression or crusted scabies; OR**
- **In outbreaks within closed settings, when there are logistical considerations in the successful delivery of topical therapy.**

Medication	Remarks	Mechanism of Action	FDA-registered?*	Included in the PNF 8th edition*?
Oral Ivermectin	Use in humans remains in off-label	Binds to glutamate-gated chloride channels of invertebrate nerve and muscle cells	No Previously approved as an antinematodal. Registration expired in 2022.	No

*FDA Registration of drugs can be checked at: https://verification.fda.gov.ph/drug_productslist.php

*The Philippine National Formulary 8th Edition is available at this link:

<https://drive.google.com/file/d/1QA05jVfoQu7DJZihMRx5Mq53TobWTwah/view>.

Note: Oral Ivermectin 200 mcg/kg single oral dose followed by a repeat dose after one to two weeks may be used off-label for **classic scabies**. For **crusted scabies**, it can be given for three, five, or seven nonconsecutive days depending on the severity of the infestation. It is **not** a recommended first-line treatment for pregnant individuals and children who weigh less than 15 kg because of safety concerns.

D. Outbreak Management in Closed or Institutional Settings

Scabies outbreaks may occur in closed or institutional settings such as nursing homes, prisons, and long-term accommodation facilities (e.g., hostels). A scabies outbreak is defined as “two or more epidemiologically linked cases of scabies within an eight-week period”. Closed settings are settings where people live in close contact inside the setting and have limited contact with the wider community (UK Health Security Agency, 2023).

The following guide should be followed when scabies is diagnosed in individuals residing or working in closed settings (UK Health Security Agency, 2023):

- Once a single case is identified, all residents and staff of the closed setting should be assessed for signs and symptoms.

- Contact tracing should identify close contacts of the case within the preceding eight weeks before the case's diagnosis.
- **The case and the close contacts should receive treatment at the same time.**
- Occupationally-exposed staff should complete the first 24 hours of treatment before returning to work.
- The first-line treatment is still topical scabicide treatment.
- Isolation of cases is not usually warranted since PPE should be used for any direct contact and treatment of all identified contacts should be initiated at the same time.
- Close contact of cases with people not undergoing treatment or not wearing PPE should be avoided as much as possible.
- **Similar to countries abroad (e.g., United States, United Kingdom), the use of oral ivermectin for the treatment of scabies was considered off-label in the Philippines. However, with the expiration of its FDA authorization in 2022, this drug is not licensed for human consumption in the Philippines as of the writing of this document.**

E. Follow-up and Referral

Cure is likely if the active rashes and pruritus at night resolve by one week after treatment. Pruritus or post-treatment itch can persist for two to four weeks after completion of treatment and can be treated with emollients, oral antihistamines, or mild topical steroids (Salavastru et al., 2017).

Clinicians should reassess patients who have persistence of skin lesions and pruritus a month after completion of treatment. This may indicate treatment failure, persistent infestation, or reinfestation.

Appropriate referrals to specialists, including dermatologists and infectious diseases specialists should be initiated in the following instances:

- When there is suspicion of crusted scabies.
- When the complications are severe or needing specialty care (e.g., sepsis, severe secondary bacterial infections, glomerulonephritis).
- When it is uncertain that the treatment has been completed successfully or the patient is not responding to treatment.

OTHER INFECTION PREVENTION AND CONTROL MEASURES

A. Personal Protective Equipment (PPE)

Standard infection control principles can prevent transmission (UK Health Security Agency, 2023). The following PPE may be used when caring for patients with scabies:

- Gloves and plastic aprons for most activities
- Gloves and single-use long-sleeved gowns or sleeve protectors for activities involving close personal care, skin-to-skin contact, or contact with possibly infested clothing or bedding.

B. Environmental Management

Although the evidence regarding fomite transmission of scabies is conflicting, proper cleaning and laundry remain essential (Centers for Disease Control and Prevention, 2018; UK Health Security Agency, 2023). Appropriate PPE (e.g., gloves and plastic apron) should be worn while cleaning or doing laundry. The following should be observed:

- **Cleaning:**
 - For **classic scabies**, normal cleaning regimens are sufficient for skin scale and environmental dust removal.
 - For **crusted scabies** which results in increased skin shedding, regular vacuuming and deep cleaning including damp dusting of soft furnishings, cleaning touch points, and vacuuming mattresses, are needed.
 - Fumigation or treatment of pets is not necessary.
- **Laundry**
 - Ideally, bedding and clothing worn or used within the three days before treatment should be machine-washed and dried using hot water and hot dryer cycles (minimum 50°C), or be dry-cleaned.
 - Alternatively, thermal disinfection at 71°C for three minutes or 65°C for 10 minutes can be done.
 - Items which cannot be washed with hot water should be placed in a sealed plastic bag for at least four days to a week to kill any mites present.

- Avoid mixing contaminated and uncontaminated items in the laundry.

REINTEGRATION

Return to school or work can be done **24 hours or the day after initiation of treatment**, provided that the treatment has been applied correctly and the patient consents to the completion of the prescribed course of treatment (Centers for Disease Control and Prevention, 2018; UK Health Security Agency, 2023).

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