SCABIES

Federal Bureau of Prisons Clinical Guidance

JANUARY 2020

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WHAT'S NEW IN THIS DOCUMENT?

JANUARY 2020 -

- <u>TABLE 1</u>, ORAL TREATMENT FOR SCABIES (IVERMECTIN): The January 2017 version of this table was expanded to
 include dosing for higher weight inmates.
- The Scables Management Checklist is now covered in two new Appendices:
 - <u>APPENDIX 1A</u> (a one-page checklist of the 26 tasks required for managing cases and contacts) and <u>APPENDIX 1B</u> (detailed guidance for completing the tasks). The checklist has been substantially revised and simplified—based on a thorough review of the scabies literature and CDC guidance.
 - → The checklist in APPENDIX 1A focusses on simultaneously treating typical scabies cases/contacts with oral ivermectin. More information on alternative treatment with permethrin, as well as on treatment for crusted scabies, is available in APPENDIX 1B.

The following changes are included:

- Careful adherence to ALL 26 tasks in the checklist is crucial to containing scabies and preventing an outbreak. Emphasis is placed on developing a plan to ensure that all of the tasks can be accomplished—prior to starting treatment of cases and contacts.
- ▶ **Direct observation of all checklist tasks is recommended** because failure to perform them correctly can lead to ongoing infestations and prolonged outbreaks.
- ► Emphasis is placed on identifying and treating contacts simultaneously with symptomatic cases. After identifying scabies contacts through an interview with the case, a visit should be made to the housing unit to do an environmental assessment and to identify additional contacts by interviewing housing unit correctional officers and unit team staff. *Treatment of cases and contacts should take place simultaneously.*
- ▶ Isolation of typical scabies cases in institutional settings is NOT recommended by the CDC and is no longer routinely recommended in the BOP. Experience has shown that isolating cases can be counterproductive because inmates may hide illness to avoid isolation. However, inmates who are identified at intake with scabies should be housed separately until 8–14 hours after treatment. In addition, inmates with crusted scabies are to be isolated with strict contact precautions (see TASK 11) until complete resolution of symptoms.
- Symptomatic scabies cases should be placed on Medical Hold in SENTRY and BEMR until all treatments are completed.
- ▶ Recommended treatment of typical scabies is with either oral ivermectin (preferred) or permethrin 5% cream, but generally not with both medications.
 - · A current weight should be obtained for weight-based ivermectin dosing.
 - It is very important that ivermectin be administered with food to increase the bioavailability of the drug. It has been demonstrated that the blood levels of ivermectin taken with a 48-gram fatty meal were increased by 2.5 times, compared with taking ivermectin while fasting.
- ► Three or more related cases of typical scabies or a single case of crusted scabies are reportable via the BOP Reportable Infectious Disease (RID) System.
- ▶ Bagging of property, laundry, and disinfection of cells occurs only once: 8–24 hours after the initial ivermectin administration or 8–14 hours after the initial permethrin administration.
 - Property that should be bagged and property that can remain with the inmate are listed in TASK 15.
 - Linen and clothing can be either bagged for 7 days or laundered. If it is to be laundered, Health Services
 must determine if washing machine temperatures exceed 122°F. See TASK 15 for specific information on
 assessing washing machine temperatures. If laundry is bagged for 7 days, it can then be sent to laundry
 as regular laundry.
 - Special attention should be paid to disinfecting durable medical equipment, e.g., wheelchairs, walkers, CPAP machines (with headbands), etc. See TASK 16.
- ► Tasks have been added to the checklist to ensure that proper documentation is completed in the electronic medical record for symptomatic scabies cases and asymptomatic contacts. Sample text strings are provided.

DECEMBER 2016 -

Key changes regarding treatment were made to the previous version issued in 2014:

- Emphasis is placed upon presumptive treatment for scabies, if scabies is in the differential diagnosis.
- TYPICAL SCABIES: Oral ivermectin is recommended as the first-line treatment for typical scabies in the BOP, replacing the routine use of permethrin 5% cream—due to the risk of scabies treatment failure if the permethrin cream is inadequately applied. Scabies treatment failure in the correctional setting can lead to outbreaks of scabies. Oral ivermectin, administered with direct observation, is highly efficacious for treating scabies. Two treatments are recommended—an initial treatment and a repeat treatment 7 days later.
- CRUSTED SCABIES: Treatment consists of both oral ivermectin and permethrin 5% cream administered simultaneously in multiple doses. The treatment schedule is based on severity (see TABLE 1). Isolation for crusted scabies should be continued until after resolution of all scabies-related skin lesions, for a minimum of 8 days.

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1. Purpose

The purpose of the BOP *Clinical Guidance for Scabies* is to provide recommended procedures for detection, diagnosis, treatment, and prevention of scabies in the correctional setting.

2. CAUSATIVE AGENT

- SCABIES is a parasitic infection of the skin. It is caused by the mite, *Sarcoptes scabiei*. Averaging 0.3 x 0.35 mm, female scabies mites cannot be seen with the naked eye. This round, eight-legged mite burrows into the host's superficial skin, laying 1–3 eggs per day during its 30- to 60-day lifetime. On average, a patient with TYPICAL SCABIES harbors 12 mites at a time. Host sensitization to the scabies mite, eggs, and excreta develops over 2–6 weeks.
- **CRUSTED SCABIES**, also known as **Norwegian Scabies**, is an aggressive infestation of *Sarcoptes scabiei*. Due to host immunodeficiency, malnourishment, and/or debilitation, thousands of mites are present in the patient's skin, and the patient is highly infectious.
- Mites can survive for up to 7 days off the host.

3. CLINICAL PRESENTATION

TYPICAL INFESTATION

- PRURITUS: A patient without prior infestation typically develops pruritus (itching) 2–6 weeks after acquiring the scabies mite. Previously exposed patients develop pruritus within 24–48 hours of re-infestation. Pruritus is worse at night and after a hot shower or bath.
- **LESIONS:** Typical lesions are symmetrically distributed on the hands (especially the interdigital spaces), wrists, elbows, waist, legs, and feet. In men, lesions are frequently around the belt line, thigh, and external genitalia. In women, they are often located on the areola, nipples, buttocks, and vulvar areas. Lesions can become secondarily infected and present as pustules or cellulitis.
- **Burrows**: Burrows may be observed at these same sites, although many patients will not have observable burrows. Burrows appear as 1–10 mm, flesh-colored to erythematous, wavy, raised, and thread-like lines on the skin surface. Excoriations are commonly found at these sites and may be the only observable findings. The mites may locate under the fingernails secondary to scratching.

CRUSTED SCABIES

- The usual crusted scabies patient is bedridden or with severe disability or immunesuppression. Due to the patient's decreased immunity, impaired sensation, and/or physical inability to scratch, the scabies mites number in the thousands.
- **LESIONS:** The lesions are commonly found on the hands and extremities, but can be located anywhere on the body. Unlike typical scabies infestation, crusted scabies can involve the face and scalp. The lesions are thickened, scaly crusts that may encompass a large body surface area. Pruritus often is not present or is a minor concern.

4. DIAGNOSIS

- → All inmates should be screened at intake for signs and symptoms of scabies.
- Presumptive Diagnosis: The rendering of a presumptive scabies diagnosis is often based on:
 - ► Clinical suspicion
 - ► Severe pruritus
 - ► Typical distribution of lesions
 - ► Response to treatment
 - → Given the consequences of scabies in the correctional setting and the minimal risks associated with treatment, PRESUMPTIVE TREATMENT IS RECOMMENDED if scabies is in the differential diagnosis.
- **CONFIRMATORY DIAGNOSIS:** If available, microscopic examination of mineral oil preparations can identify the mite.
 - → Microscopic verification is NOT needed to initiate treatment.
 - ► This is accomplished by applying mineral oil and gently scraping the suspected lesions with a #15 surgical blade. The collected skin debris is placed on a microscope slide with a coverslip and examined under low power.
 - ► Identification of the mites **CONFIRMS** the diagnosis, while the eggs or scybala (fecal pellets) provide INDIRECT CONFIRMATION.
 - A SKIN BIOPSY is rarely helpful in diagnosing scabies, but may be considered in unusual cases.

5. MODE OF TRANSMISSION

TYPICAL SCABIES INFESTATION

- Generally, 15–20 minutes of direct skin-to-skin contact is needed for transmission of typical scabies.
- Overcrowding and sexual contact increases the risk of transmission.
- Sharing of clothing or bedding and towels can transmit the mite—especially if used immediately after the infested person.
- Asymptomatic patients, or patients with minimal symptoms, can unknowingly transmit mites.

CRUSTED SCABIES

- In contrast, persons with crusted scabies are HIGHLY CONTAGIOUS because of the large number of mites, skin sloughing, and increased mite survival.
- There is a much higher risk of transmission from contaminated clothing, bedding, and towels.
- Close contacts and staff taking care of patients with crusted scabies are at much higher risk of acquiring scabies than in the case of typical scabies.

6. INFECTIOUS PERIOD

Scabies remains communicable until all mites and eggs are eradicated from the host. In the absence of treatment, individuals can remain infectious for prolonged periods. Fomites (e.g., clothing, hats, headphones, towels, bedding, furniture, etc.) can be a source of infection because the mites can live up to 7 days off the host.

7. TREATMENT

→ A general overview of treatment considerations is provided in this section. Consult <u>APPENDIX 1B</u> for more specific guidance on treatment of cases and contacts.

TYPICAL SCABIES INFESTATION

MEDICATION

- ORAL IVERMECTIN, dosed by weight, is the first-line treatment for typical scabies in the BOP, and for presumptive treatment of asymptomatic close contacts.
 - → See TABLE 1 for contraindications, dosing, and treatment guidelines for ivermectin.
- TOPICAL PERMETHRIN 5% CREAM is an effective ALTERNATIVE treatment for cases in which ivermectin cannot be used. It is essential that application of the cream be directly observed and applied contiguously from the neck to the toes.
 - → See TABLE 2 for general information. See detailed instructions in APPENDIX 1B (TASK 12).

INITIAL TREATMENT

- **ISOLATION:** Isolation is generally NOT indicated for inmates with typical scabies. New intakes who are identified with scabies should be housed separately until 8–14 hours after treatment and then can be placed in general population.
- **CONTAMINATED ITEMS:** Clothing, linens, and towels should be either bagged for 7 days or washed in hot water (at least 122°F for 10 minutes) and dried at the hottest setting—at the same time that treatment is initiated, to prevent reinfection. Personal items that have touched the skin should be bagged for 7 days.
 - → See detailed instructions for managing contaminated items in APPENDIX 1B (TASK 15).

SECOND TREATMENT (RETREATMENT)

• Regardless of whether ivermectin or permethrin is used, inmates with typical scabies are retreated 7 days later, generally with the same medication.

EXPECTED IMPROVEMENT

- Most patients report significant improvement within 3-7days of treatment; however, itching can persist for 2–4 weeks. Antipruritic medications may help minimize this discomfort.
- Symptoms or signs of scabies that persist beyond 2 weeks can be attributed to several factors:
 - ▶ Misapplication of permethrin cream, if used
 - ► Reinfection from other inmates (which may be evidenced by new burrows)
 - ► Exposure to infested fomites (e.g., clothing or bed linens)

The health care provider should consider an alternative diagnosis if an inmate is still symptomatic after two sets of completed treatments.

CRUSTED (NORWEGIAN) SCABIES

TREATMENT

- **Crusted scabies is highly communicable**, requiring aggressive treatment and long-term surveillance.
- Multiple doses of IVERMECTIN and PERMETHRIN 5% CREAM are administered simultaneously.
 - → Treatment frequency is based on the severity of the rash. See "Treatment Guidelines" in TABLE 1.

(Discussion of Crusted Scables continues on next page.)

CONTAINMENT MEASURES

• Inmates with crusted scabies are isolated for at least 8 days after treatment and until all scabies related lesions have resolved. See <u>APPENDIX 1B</u> (TASK 11) for detailed information on isolation and daily management of crusted scabies cases.

TREATMENT REGIMENS FOR SCABIES

TABLE 1 and **TABLE 2** below outline the regimens for treatment of scabies. See <u>APPENDIX 1B</u> for specific guidelines on treatment administration and timing with other containment measures.

TABLE 1. ORAL TREATMENT FOR SCABIES (IVERMECTIN)

BRAND NAME	Stromectol® (a	available in 3 m	g tablets).	Generic is	6 6	available.				
DESCRIPTION	Oral ivermectin is an effective agent for scabies treatment.*									
	Ivermectin is now recommended in the BOP as the standard treatment for typical scabies, as well									
		cts of typical an								
	• Ivermectin is also utilized in conjunction with topical permethrin 5% cream ONLY for the treatment of symptomatic crusted scabies (see "TREATMENT GUIDELINES" below in this table).									
	* Ivermectin is an antiparasitic agent that has been used extensively and safely in the treatment of other parasitic infections. While the FDA has not approved the drug for the treatment of scabies infection, CDC indicates that it is safe and effective for treating scabies.									
Dosage Form		vailable in 3 mons rs (mcg) of iver					patient's weig	ht:		
	CURRENT	WEIGHT	IVERN	IECTIN		Curren ⁻	г W EIGHT	IVERN	IVERMECTIN	
	Kilograms	Pounds	Tabs	Dose		Kilograms	Pounds	Tabs	Dose	
	35–37 kg	77–82 lb	2	6 mg		143–157 kg	314–346 lb	10	30 mg	
	38–52 kg	83–115 lb	3	9 mg		158–172 kg	347–379 lb	11	33 mg	
	53–67 kg	116–148 lb	4	12 mg		173–187 kg	380–412 lb	12	36 mg	
	68–82 kg	149–181 lb	5	15 mg		188–202 kg	413–445 lb	13	39 mg	
	83–97 kg	182–214 lb	6	18 mg		203–217 kg	446–478 lb	14	42 mg	
	98–112 kg	215–247 lb	7	21 mg		218–232 kg	479–510 lb	15	45 mg	
	113–127 kg	248–280 lb	8	24 mg		>233 kg	>510 lb	200 n	ncg/kg	
	128–142 kg	281-313 lb	9	27 mg						
TREATMENT GUIDELINES	ADMINISTRATION: Ivermectin administration should be DIRECTLY OBSERVED. Give with food to maximize effectiveness.									
	CONTRAINDICATION: Ivermectin is contraindicated in pregnant or breastfeeding women.									
	Typical scables: Ivermectin is administered orally as a single dose, with a repeat dose in 7 days.									
	CRUSTED SCABIES is treated with both ivermectin and permethrin 5% cream simultaneously in multiple doses. Depending on infection severity, the CDC recommends that the ivermectin/permethrin regimen be administered together in either 3 doses (days 1,2,8), 5 doses (days 1,2,8,9,15), or 7 doses (days 1,2,8,9,15,22, 29).									
	 See <u>TABLE 2</u> below for information on using permethrin cream. CONTACTS: Asymptomatic close contacts of either typical or crusted scabies are presumptively 									
		oral ivermectin						e presum	ouvery	

TABLE 2. TOPICAL TREATMENT REGIMEN FOR SCABIES (PERMETHRIN 5% CREAM)

BRAND NAMES	Elimite® and Acticin®. Generic is available.
DESCRIPTION	Permethrin is an insecticide cream that is considered safe and effective.
TREATMENT GUIDELINES	Treatment failure will occur if the cream is ineffectively applied. Application of cream should be directly observed (see instructions in <u>APPENDIX 1B</u> (TASK 12).
	• TYPICAL SCABIES: Permethrin is an alternative treatment for typical scabies. Cream should be applied to all areas of the body from the neck down, and washed off after 8–14 hours. Cream should be reapplied in 7 days.
	• CRUSTED SCABIES: Treat with <i>both</i> permethrin and ivermectin (see <u>TABLE 1</u> above for dosing schedules). Permethrin should also be applied to the face and scalp.
	• CONTACTS: Permethrin is an <i>alternative</i> presumptive treatment for asymptomatic contacts of typical or crusted scabies, with a repeat treatment in 7 days.
Notes	 Permethrin has a high alcohol content, with associated flammability risk and the potential for diversion. Permethrin products that are utilized for lice come in a lower (1%) concentration.

8. CONTACT INVESTIGATION

Prompt contact investigation is indicated IMMEDIATELY whenever a scabies case is diagnosed.

TYPICAL SCABIES

In the case of typical scabies, **CLOSE CONTACTS** include any individuals who have had skin-to-skin contact; cellmates; and those with potential exposure to the inmate's clothing, bed linens, or towels. It is critically important to identify all contacts and treat them simultaneously with the cases.

→ See APPENDIX 1B (TASKS 3–5) for guidance on identifying scabies contacts.

SPECIAL CONSIDERATIONS WITH CRUSTED SCABIES

Crusted scabies is much more communicable than typical scabies infestations, requiring rapid and aggressive detection, diagnosis, infection control, and treatment measures. A wider circle of contacts should be evaluated and considered for presumptive treatment.

→ Treatment of contacts to crusted scabies cases is the same single-drug ivermectin treatment that is used for contacts to typical scabies.

OUTBREAK INVESTIGATION AND MANAGEMENT

→ The Regional/Central Office Infection Prevention & Control Consultants should be consulted regarding scabies outbreak management.

A scabies OUTBREAK suggests that transmission has been occurring within the institution for several weeks to months—thereby increasing the likelihood that infested inmates may have had time to spread scabies elsewhere in the facility and to other facilities.

MEASURES TO CONTROL SCABIES in an institution depend on factors such as:

- The number of cases that have been diagnosed or are suspected
- How long infested individuals have been at the institution while undiagnosed or unsuccessfully treated

(Discussion of Outbreak Management continues on next page.)

- The type of housing (dormitory versus cells)
- Whether cases are from just a single unit or from multiple housing units
- Whether any of the cases are crusted scabies

KEY ELEMENTS OF MANAGING AN OUTBREAK include the following:

- The tasks in the SCABIES MANAGEMENT CHECKLIST should be carefully planned and fully implemented as described in *APPENDIX 1B*.
- During an outbreak, ALL HEALTH CARE WORKERS in the facility should be educated regarding scabies diagnosis, treatment, and infection control measures.
- During an outbreak, heightened surveillance for EARLY DETECTION OF NEW CASES is crucial. It may be necessary to conduct a mass screening, including interviews and visual inspection of large groups of potential inmate contacts, together with simultaneous treatment.
- Long-term surveillance for scables following an outbreak is imperative for the eradication of scables from an institution. For months following a scables outbreak, clinicians should remain alert for signs and symptoms of scables and utilize a low threshold of suspicion to initiate treatment of cases and contacts.

9. REPORTING

The following should be reported via the BOP Reportable Infectious Disease System (RIDS).

- Three or more epidemiologically linked cases of typical scabies
- Any case of crusted scabies

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APPENDIX 1A. SCABIES MANAGEMENT CHECKLIST

The Scables Management Checklist on the following page is a list of the 26 REQUIRED TASKS for managing scabies cases and contacts. The CHECKLIST is designed so that it can be printed out and copied, and (as its name implies) tasks can be checked off as they are completed.

- ★ CAREFUL ADHERENCE TO ALL 26 TASKS IN THE CHECKLIST is crucial to containing scabies and preventing an outbreak. DIRECT OBSERVATION of all tasks by health care staff is recommended.
 - → TREATMENT must be administered to cases and contacts simultaneously to avoid reinfection.
 - → Follow-up activities must be scheduled in the recommended time-frame after medication administration (8–24 hours after ivermectin administration; 8–14 hours after permethrin application).
- ★ Before starting any of the tasks, develop a **COMPREHENSIVE PLAN**, based on the task-by-task instructions provided in **APPENDIX 1B**.
- ★ The CHECKLIST in APPENDIX 1A focusses on treating typical scabies cases/contacts with ivermectin.
 - → For more information on alternative treatment with permethrin, as well as on treatment for crusted scabies, see APPENDIX 1B.

Federal Bureau of Prisons Clinical Guidance

SCABIES MANAGEMENT CHECKLIST **APPENDIX 1A** A. INITIAL ASSESSMENT 1. Report scabies case to IP&C Coordinator and Health Services leadership. 2. STOP. Develop a plan to implement all 26 Tasks in this checklist. See APPENDIX 1B for detailed instructions for each TASK. 3. Interview the scabies case(s) for contacts. ☐ 4. Visit housing unit and interview officers/unit team for additional contacts. ☐ 5. Conduct environmental assessment of quarters of cases/contacts. Arrange with correctional officers for removal of trash and excess property. ☐ 6. Inspect mattresses/pillows. See TASK 6 in APPENDIX 1B for instructions. **B.** Initial Treatment of Case(s) and Contacts 7. Perform physical exams. Obtain weights. 8. Educate case(s) & contacts about treatment plan. 9. Obtain medication orders. See Task 9 in APPENDIX 1B for important instructions. ☐ 10. Place symptomatic scabies cases on Medical Hold (SENTRY/BEMR) until treatments are completed. ☐ 11. ISOLATION: Usually not indicated for typical scabies. FOR NEW INTAKES WITH TYPICAL SCABIES: House separately until 8-14 hours after initial treatment. FOR ALL CRUSTED SCABIES CASES: Isolate using strict CONTACT PRECAUTIONS (see Task 11 in Appendix 1B). ☐ 12. SIMULTANEOUSLY medicate case(s) AND contacts (administer ivermectin with food). IF PERMETHRIN TREATMENT IS USED: Directly observe application. ☐ 13. Document in BEMR: See TASK 13, APPENDIX 1B. FOR CRUSTED SCABIES ONLY: Document isolation. CODE CASES: B86 Scabies; B86C Crusted Scabies CODE CONTACTS: Z207S Exposure to Scabies 14. Report via RID (Reportable Infectious Disease) system if: 3 or more related cases of typical scables or a single case of crusted scables.

KEY POINTS:

- Before starting, develop a plan to perform all tasks in the checklist.
- Direct observation of all checklist tasks is recommended because failure to perform them correctly can lead to ongoing infestations and prolonged outbreaks.
- Time the administration of medication (TASKS 12) so that follow-up tasks (TASKS 15–19) can be completed 8–24 hours later (ivermectin) or 8–14 hours later (permethrin).
- Failure to completely implement this checklist can lead to a scabies outbreak!

C. Follow-Up for Case(s) and Contacts (8–24 hours after ivermectin; 8–14 hours after permethrin)
☐ 15. Observe bagging of inmate property* and all linens and clothing**. Label/store bags in secure area for 7 days. (Note that "linens" includes bed sheets, blankets, pillow cases, towels, and washcloths.)
 See list in TASK 15, APPENDIX 1B. ** Alternatively, can launder as infectious laundry in institutional washer that exceeds 122°F x 10 minutes, in accordance with local procedures.
☐ 16. Observe cleaning/disinfecting of cell and mattress. See TASK 16, APPENDIX 1B for instructions for durable medical equipment.
☐ 17. Provide 7 days of clean linen and clothing, and footwear.
18. Recommend that inmates shower and change into clean clothes and put clean linens on bed.
IF PERMETHRIN TREATMENT IS USED: A shower and change of clothes is required 8–14 hours after treatment.)
☐ 19. After the shower, bag used clothing with other laundry bagged in Таѕк 15.
20. Move new intakes, who were housed separately (in Таѕк 11) to general population.
 21. Document in BEMR that property and linen were bagged and removed from cell.
D. RETREATMENT OF CASE(S) AND CONTACTS (7 days after initial treatment)
22. SIMULTANEOUSLY medicate case(s) AND contacts (administer ivermectin with food).
23. Assess cases for symptomatic improvement. (See Task 23, Appendix 1B, for follow-up if no improvement.)
24. IF PERMETHRIN TREATMENT IS USED: Instruct inmates to shower 8–14 hours after second treatment; provide clean linen and clothing for use after shower. Bag linen and clothing used in the last week and send to laundry (without special precautions).
☐ 25. Return property bagged in TASK 15. Send any linen or clothes bagged in TASK 15 to laundry (as regular laundry).
☐ 26. Document in BEMR.
For Cases: Document if symptomatic improvement. If yes, resolve "Scabies" diagnosis code. If no, reschedule for visit in 3 weeks.
For Contacts: Resolve "Exposure to Scabies" code with note in comments that patient completed two treatments.
E. Continue Surveillance for New Scabies Cases for 6–8 Weeks.
Note: This checklist focuses on treatment of typical scabies cases/contacts with ivermectin. For more detail about alternative

treatment with permethrin cream, or treatment regimen and

management for crusted scabies, see APPENDIX 1B.

APPENDIX 1B. DETAILED INSTRUCTIONS FOR SCABIES MANAGEMENT CHECKLIST

Careful adherence to all of the tasks in the SCABIES MANAGEMENT CHECKLIST is critically important to containing scabies and preventing a scabies outbreak.

- DIRECT OBSERVATION by health care staff of all checklist tasks is recommended.
- Scabies cases and close contacts should be treated SIMULTANEOUSLY to avoid reinfection.
- Plan to perform Tasks 15–19 (bagging property/laundry and environmental cleaning) at 8–24 hours after ivermectin administration or 8–14 hours after permethrin application.
- → CRUSTED SCABIES: Crusted (Norwegian) scabies requires ADDITIONAL measures, as described in the relevant TASKS below.

A. INITIAL ASSESSMENT

1. Report scabies case to IP&C Coordinator and Health Services leadership.

Health care providers should report scabies case to the IP&C Coordinator and Health Services leadership whose job it is to ensure that the case and the contacts are appropriately managed.

2. STOP. Develop a PLAN to implement all 26 tasks in the SCABIES MANAGEMENT CHECKLIST.

It is important to take the time to review what is involved in the checklist and to formulate a plan that will account for the following:

- Ensure an adequate supply of weight-based ivermectin to treat all cases and contacts TWICE.
- Ensure adequate staff time to complete case and contact evaluation, environmental assessment, and complete treatment of cases and contacts (including disinfection, and bagging of property/laundry).
- Plan for simultaneous treatment of all cases and contacts.
- Plan for and acquire supplies for bagging personal items and bagging laundry (or laundering linens and clothing as infectious laundry at temperatures exceeding 122° F x 10 minutes, in accordance with local procedures).
- Plan for and acquire supplies for cleaning and disinfection of cell.
- Plan for acquiring from Laundry a supply of clean linens, clothing, and footwear.
- Plan for 7-day follow-up treatment of cases and contacts.
- **3. Interview the index case for contacts.** Ask the inmate(s) with scabies to identify other inmates who, in the previous 6 weeks ...
 - Shared skin-to-skin contact of any kind (including handshakes, etc.)
 - Had contact with the inmate's sheets or towels
 - Shared head phones, hats, gloves, scarves, or shoes
 - Spent time together in sports or recreation that involved physical contact
 - Any shared clothing practices, e.g., sharing aprons in Food Service or coats and hats in the Special Housing Unit
- **4. Visit housing unit and interview officers for additional contacts.** Interview the housing unit officers and/or unit team to identify additional contacts.

5. Conduct environmental assessment of the quarters of cases and contacts.

- · Visit cell or dorm where inmate is housed:
 - ► **DORMITORIES:** Identify **ALL** adjacent beds, and consider inmates in those beds as contacts in need of treatment. Identify owners of any clothing items hanging on the bunk belonging to the scabies case.
 - ▶ CELLS: Cellmates during the last 6 weeks are ALWAYS considered contacts.
 - ► Conduct an **ENVIRONMENTAL ASSESSMENT** of the quarters of cases and contacts. Arrange with correctional officers to have excess property and trash discarded prior to initiation of treatment regimen.

6. Inspect mattresses and pillows.

- If plastic or vinyl and torn, arrange to have them replaced or bag them for 7 days.
- If plastic or vinyl and intact, see **TASK 16** for cleaning/disinfection instructions.
- Discard and replace cloth mattresses and pillows.

B. Initial Treatment of Case(s) and Contacts

7. Perform physical exams on case(s) and contacts. Obtain weights.

Inspect skin with an emphasis on skin folds, areas in-between fingers, around nipples and umbilicus, and in the groin. Ask about itching, duration of itching, and factors that make it worse, e.g., after showering or at night. Obtain current weight to use for calculating the ivermectin dose.

- 8. Educate case(s) and contacts on the treatment plan. Provide education to case(s) and contacts, including the information in <u>APPENDIX 2</u>, INMATE FACT SHEET ON "TYPICAL" SCABIES:
 - Educate inmates about the treatment plan, including the weight-based ivermectin treatment that will be provided now and again in 7 days.
 - Educate inmate regarding the importance of taking the ivermectin with or just prior to a meal to increase absorption of medication.
 - Advise inmates that their property, linens/clothing, and unwashable footwear that has touched the skin cannot be disinfected and will be bagged up and returned to them 7 days later.
 - Inform inmate that it is normal for the existing rash and itching to persist for up to 2–4 weeks after treatment. Inmates should inform staff if they develop new sores or rash areas.
 - Advise the inmate that treatment will be repeated in 7 days and that their property will be returned to them at that time.

- Obtain medication orders for cases and contacts.
 - a. Oral Ivermectin is the standard treatment for Typical scabies cases, as well as for ASYMPTOMATIC CONTACTS to either typical or crusted scabies cases.
 - ▶ Refer to weight-based dosing chart for ivermectin in *Table 1*.
 - ► For each case and contact, order one initial weight-based dose and an additional weight-based dose for 7 days later. Indicate that the dose should be taken with FOOD.
 - ► CONTRAINDICATIONS: Ivermectin is contraindicated in pregnant and breastfeeding women.
 - ▶ ALTERNATIVE TREATMENT: Use permethrin 5% cream—by itself—as an alternative to ivermectin, if ivermectin is contraindicated. Consider using permethrin 5% cream if inmates refuse oral medication. Treatment of typical scabies with both ivermectin and permethrin cream is generally NOT recommended.
 - ► CRUSTED SCABIES: Inmates with suspected crusted scabies should be treated with both oral ivermectin and permethrin 5% cream. See the multi-day dosing schedule in <u>Table 1</u>.
 - b. Permethrin 5% cream is used only in certain situations, as described above (i.e., as an alternative treatment if ivermectin is contraindicated and as part of the regimen for inmates with crusted scabies).
 - → Do not confuse this cream with permethrin 1% lotion, which is used for treating lice.
- 10. Place inmates with symptomatic scabies on MEDICAL HOLD (in both SENTRY and BEMR) until all treatment is completed.
- 11. ISOLATION: Usually not indicated for typical scabies.
 - → The CDC does not recommend isolation of typical scabies cases.

FOR NEW INTAKES WITH TYPICAL SCABIES: Inmates who are identified at intake as having typical scabies should be housed separately until 8–14 hours after the initial treatment, and then can be moved to general population.

FOR CRUSTED SCABIES CASES ONLY: Isolate cases using strict CONTACT PRECAUTIONS.

Inmates who have crusted scabies should be isolated. The protocol for multi-day treatment with both permethrin and ivermectin should be followed as outlined in *Table 1*.

Care for inmates with crusted scabies should include the following DAILY routines to remove contaminated skin crusts (containing thousands of mites) from the inmate and the environment:

- ★ Shower or be bathed *daily*.
- ★ Be provided with clean linens and clothing daily.
- ★ Have their cell (including the bunk) disinfected daily.
- → A BEMR note should be recorded EACH DAY that an inmate with crusted scabies is isolated, indicating that the inmate has showered (or been bathed), laundry was replaced, and the cell was disinfected.
- → Isolation of crusted scabies cases is continued until after at least 8 days of treatment AND until complete resolution of scabies-related skin lesions.

CONTACT PRECAUTIONS (ISOLATION) GUIDELINES FOR CRUSTED SCABIES

- Staff should wear a disposable gown when entering the room.
- Staff should wear gloves for contact with the inmate.
- Dispose of used gloves and gown in regular trash before leaving room. Wash hands after gloves and gown are removed and disposed of.
- Keep soiled linen away from the body, handling it carefully, and either bagging it as infectious laundry in accordance with local procedures or bagging it for 7 days.
- Restrict the inmate from work or visits while isolated.

12. Medicate case(s) and contacts simultaneously.

KEY POINT: It is important to time MEDICATION ADMINISTRATION so that FOLLOW-UP tasks (TASKS 15–21) can be completed within 8–24 hours later (for ivermectin) or 8–14 hours later (for permethrin).

a. ORAL IVERMECTIN

- ▶ DIRECTLY OBSERVE ivermectin administration.
- ▶ IMPORTANT: To maximize the effectiveness of ivermectin, it should be given with food.
- ► Advise the inmate that they will shower and get clean clothes and bedding 8–24 hours after being medicated.

b. PERMETHRIN 5% CREAM

- → The most common reason for scabies treatment failure with permethrin cream is INADEQUATE APPLICATION. The following directions should be followed CAREFULLY:
- ► The inmate should take a lukewarm shower before treatment, if necessary for hygiene reasons.
- ▶ The inmate should trim fingernails and toenails prior to treatment.
- ► Health care staff should directly observe application of permethrin, and assist with application of cream in locations that the inmate cannot reach.
- ▶ Ensure that the cream is applied to every square inch of the skin from the neck to the toes, including: between the fingers, under the fingernails, in the armpits, under the breasts, between the buttocks, in the umbilicus, in the genitalia/perianal areas, in between the toes, and on the soles of feet.
- ► The face and scalp are not usually treated with permethrin for typical scabies infestations, except for CRUSTED SCABIES, where the face and the scalp SHOULD be treated.
- ▶ About half of a 60-gram tube (30 grams) is required to treat an average-size person.
- ► Leave a small amount of permethrin cream with the inmate in a labeled cup so that the inmate can reapply permethrin after washing hands or another part of the body.
- ▶ Advise the inmate that they will shower and get clean clothes and bedding 8–14 hours after being medicated.
- 13. Document in BEMR: Medical exam results and current weight; education given; plan in place for bagging property/linens and disinfection; isolation (for CRUSTED SCABIES cases).

CODE CASES: B86 Scabies; B86C Crusted Scabies

Sample Text String for Evaluation of Symptomatic Cases (modify to reflect actual situation)

- Inmate reports itching with associated rash. Itching worse [at night and after showering]. On exam, lesions noted to [hands, between fingers, wrists, waistline, genitals, legs, ankles, & feet. Burrowing present.]
- Oral ivermectin ordered per weight-based protocol and administered on pill line.
- Education on scabies and scabies treatment provided. Advised that inmate rash and itching may persist up to 4 weeks after treatment and any new rash or lesions should be reported to health services.
- Plan in place to complete tasks for bagging property, linen, and disinfection [tomorrow].

CODE CONTACTS: Z207S Exposure to Scabies

Sample Text String for Evaluation of Asymptomatic Contacts (modify to reflect actual situation)

- Inmate presents as part of a contact investigation for scabies. Inmate denies itching or rash. Physical exam reveals no rash present. Inmate will be prophylactically treated as contact to a scabies case.
- Oral ivermectin ordered per weight-based protocol and administered on pill line.
- Education on scabies and scabies prophylactic treatment provided. Advised to report development of rash or itching.
- Plan in place to complete tasks for bagging property, linen, and disinfection [tomorrow].

14. Report via RID (Reportable Infectious Disease) System:

- Three or more related cases of typical scabies OR
- A single case of **CRUSTED SCABIES**

C. FOLLOW-UP FOR CASE(S) AND CONTACTS

(8-24 hours after ivermectin administration*; 8-14 hours after permethrin application*)

* KEY POINT: TASKS 15-21 should be carefully timed after treatment in accordance with this timetable.

15. Observe bagging of inmate property and all linens and clothing. Inform inmates about process and planned return of property.

PROPERTY: Have inmates remove all items from lockers; identify items that need to be bagged.

- Items that can remain with the inmate include papers, books, and magazines; plastic items; liquid medication or lotion in bottles, pump bottles, or tubes; toothpaste; factory sealed food items, sealed medical supplies.
- Other items (other than laundry) that have touched the skin should be bagged in a sealed plastic bag for 7 days. Be sure that plastic bags used do not have holes in them. Examples of items that should be bagged include:
 - ► Headphones with foam ear covers, hats that cannot be washed, footwear that cannot be disinfected, religious jewelry that cannot be disinfected
 - ▶ Lotions, creams, hair care products, and makeup that you can dip your hand into, stick or gel deodorant
- Label and seal the bag with the inmate's name, registration number, and the date. The property should be moved to a secure location. Plan to return property after 7 days.

LINEN/CLOTHING: There are two options for managing linen and clothing: **(1)** bag it and store it for 7 days with bagged property, and subsequently launder it as regular laundry, or **(2)** launder it as infectious laundry, in accordance with local procedures, in a washing machine that achieves **temperatures exceeding 122° F for at least 10 minutes**, the temperature/time that must be achieved to kill scabies.

Follow the instructions below if a decision is made to launder linen and clothing instead of bagging it for 7 days:

- It is essential to determine if washing machine temperatures are high enough to kill scabies. A calibrated (e.g., infrared) thermometer should be used to measure the temperature in the center of wet laundry in the washer AFTER at least a 10-minute hot water laundry cycle. If the temperature does not exceed 122° F, then laundry should be bagged for 7 days rather than laundered as infectious laundry. Do not rely on dryer temperatures for scabies eradication.
- Notify laundry staff and provide the following instructions:
 - ▶ A disposable gown should be worn by everyone handling contaminated linen.
 - ► Gloves should be worn, and hands are washed after the gloves are removed and disposed of in regular trash.
 - ► Laundry from a scabies case should NOT be sorted; it should be placed directly into the washing machine, avoiding contact with it.
 - ► Laundry should be washed in hot water (>122 ° F for at least 10 minutes) and dried at the hottest setting.

- 16. Observe cleaning and disinfecting of cell and mattress.
 - **Disinfect plastic/vinyl mattress.** Wipe off with EPA-approved disinfectant, adhering to manufacturer's "wet-times." Ensure that disinfectant is diluted in accordance with manufacturer's instructions.
 - Thoroughly disinfect all durable medical equipment, e.g., wheelchairs, walkers, CPAP machines (with headbands), etc. If wheelchair cushions or ROHO® cushion have non-cleanable surface or are torn, it may be necessary to either replace them or bag for 7 days. Consult Regional IP&C Consultant regarding disinfection of durable medical equipment.
 - Clean the inmate's cell, bunk, and locker with general cleaner and disinfectant. Fumigation is NOT necessary.
- 17. Provide 7 days of clean bed linens, towels, washcloths, clothing, and footwear for use after a shower.
- 18. Recommend that inmates shower, change into clean clothes, and put clean bed linens on mattress.

IF TREATED WITH PERMETHRIN: A shower and a change of clothes are required 8–14 hours after application of permethrin.

- 19. After the shower, bag used clothing with other bagged linen and laundry.
- 20. Move new intakes who were housed separately (see TASK 11) to general population after TASKS 15–19 are completed related to bagging property, handling linen and clothing, and disinfection.
- **21.** Document in BEMR that the property and linen was bagged and removed from cell, that the cell was disinfected, and that new linens/clothing were issued.

Sample Text String for Documentation of Property Tasks (modify to reflect actual situation)

- Personal items that cannot be washed, to include work boots or shoes, have been bagged and sealed. Bagged personal items were collected to be stored in secure location for 7 days.
- Inmate [showered and] clean laundry provided.
- Used laundry was [bagged and sent to laundry as infectious laundry OR bagged for 7 days].

D. RETREATMENT OF CASE(S) AND CONTACTS

(7 days after initial treatment)

- 22. Simultaneously medicate case(s) AND contacts (ivermectin administered with food).
- 23. Assess cases for symptomatic improvement. Note that most cases show some symptomatic improvement after one week; however, itching may persist 2–4 weeks. If inmates do not have evidence of symptom improvement, advise them that you will schedule a repeat visit in 3 weeks. If there is no symptom improvement at that time, then they may be retreated.
- 24. If TREATED WITH PERMETHRIN: Instruct inmates to shower 8–14 hours later. Provide clean linen, clothing and footwear for use after shower. Bag linen and clothing used in the last week and send to laundry (without special precautions).
- **25. Return property bagged in TASK 15.** Send any linen or clothing bagged in **TASK 15** to laundry (as regular laundry, NOT infectious laundry)
- 26. Document in BEMR.

FOR CASES: Document symptomatic improvement.

- If yes, resolve "Scabies" diagnosis code.
- If no, reschedule for visit in 3 weeks.

For contacts: Resolve "Exposure to Scabies" code with note in comments that patient completed two treatments.

APPENDIX 2. INMATE FACT SHEET ON "TYPICAL" SCABIES

What is scabies?

Scabies is a skin infestation with tiny mites (insects) that cannot be seen with the naked eye. The mites create tunnels (burrows) under the skin, and cause intense itching. Often the burrows can be found on or near the webs of the fingers, the inside of the wrist, the nipples (especially in women), the waist, and the sexual organs.

How is scabies spread?

Scabies is spread with close skin-to-skin contact, including sexual contact. Scabies can also be spread through contact with the infested person's clothes, bedding, towels, or other personal items. Tell your health care provider about anybody who has been in close contact with you or borrowed your belongings such as head phones or hats. These people may also need to be treated for scabies, even if they have no symptoms. Symptoms can take several weeks to show up in an infested person, but the mites can still be spread in the meantime.

How is scabies treated and prevented from spreading?

1. Y	our treatment will b	e either with pills	(ivermectin)) or with a cream r	medication	(permethrin) to	apply to your ski	n.
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П	If '	treated with ivermectin pills:				
	Take the pills as prescribed close to meal time. The number of pills you take depends on how much you weigh.					
	lf '	treated with permethrin cream:				
	a.	Clip fingernails and toenails. Your nail clipper will be sanitized after you use it.				
	b.	Apply the permethrin cream medication in a thin, even layer over your entire body from your neckline down, including your feet and behind the ears. Avoid getting the medication into your eyes, nose, or mouth, or vagina (women).				
	c.	Pay special attention to getting cream on your hands (between the fingers and under the nails), between all skin folds, on the navel, on the chest, under the breasts, on the external genital area, between the buttocks, and all over the feet (including the soles and in between the toes). Get assistance from health care staff for places you cannot reach.				
	d.	8–14 hours after treatment, you will shower and be provided clean linens, clothing, and shoes.				
No	TE:	After the treatment, you may initially experience increased itching and continue to itch for 2–3 weeks.				

However, this does NOT usually mean that you are still infested. Ask your health care provider about medication that can help with the itching.

- 2. About 8–24 hours after treatment, you will be advised to place your unit bed linens, blankets, towels, and any clothes into plastic bags so they can be properly laundered or bagged for 7 days. If laundered, these items will be kept separate from other laundry, machine-washed in hot water, and then dried on the hot cycle. You will be issued a clean set of clothing and linens.
- 3. The mattress, pillows, bedside equipment, and floors will be completely cleaned with a routine disinfectant.
- 4. All wearable items that cannot be washed—such as shoes, head phones, hats—should be placed in a sealed plastic bag. Also, bag up any used stick deodorant, or lotions, creams, or ointments that you can dip your hand into. These items will be returned to you after 7 days. (Mites can live up to 7 days away from someone's body.)
- 5. Remove any metal or plastic jewelry and clean them with soap and water.
- **6.** You will be re-treated 7 days after the first treatment, and your property will be returned.

When should I see my health care provider for follow-up?

If the original rash does not go away or if any new rashes or skin burrows appear after the second treatment, report this to the health care staff.