

Scabies and other ectoparasitoses

Scabies and other ectoparasitoses are caused by infection with a microscopic mite *Sarcoptes scabiei var hominis*. The female mite burrows into the skin and lays eggs, triggering an immune response that causes intense itching and rash.

Disease and epidemiology

- Scabies and other ectoparasitoses are caused by infection with a microscopic mite *Sarcoptes scabiei var hominis*.
- Human infection is transmitted through close contact with the skin, which the female mite burrows into and lays eggs, triggering an immune response that causes intense itching and rash.
- Bacterial infections can complicate the disease, leading to serious consequences such as severe soft tissue infections, septicaemia, kidney disease and, possibly, rheumatic heart disease.

Core strategic interventions

Preventive chemotherapy	• Mass drug administration (MDA) using oral ivermectin and topical scabicides
WASH	• Hygiene measures may be helpful as part of the response to institutional outbreaks • Hygiene measures reduce the risk of secondary infection in infested individuals
Vector control	N/A
Veterinary public health	N/A
Case management	• Topical scabicides such as permethrin, benzyl benzoate, malathion and sulfur ointment • Oral ivermectin • Treatment of all household contacts • Specialist case management of crusted scabies cases
Other	• Not applicable

Progress against WHO 2020 targets

Not applicable: scabies and other ectoparasitoses were categorized as a WHO neglected tropical disease only in 2017

Risks that require mitigation

- As programmes that use ivermectin are discontinued (e.g. lymphatic filariasis and onchocerciasis in certain areas) in some countries, there is risk of scabies outbreaks or resurgence
- As MDA becomes more commonly used, monitoring for resistance will become important

WHO 2030 target, sub-targets and milestones

Indicator	2020 (baseline)	2023	2025	2030
Number of countries having incorporated scabies management in the universal health coverage package of care	0	25 (13%)	50 (26%)	194 (100%)
Number of countries using MDA intervention in all endemic districts	0	3	6	25

Burden of disease

**About
200 million**

people affected by scabies
at any time

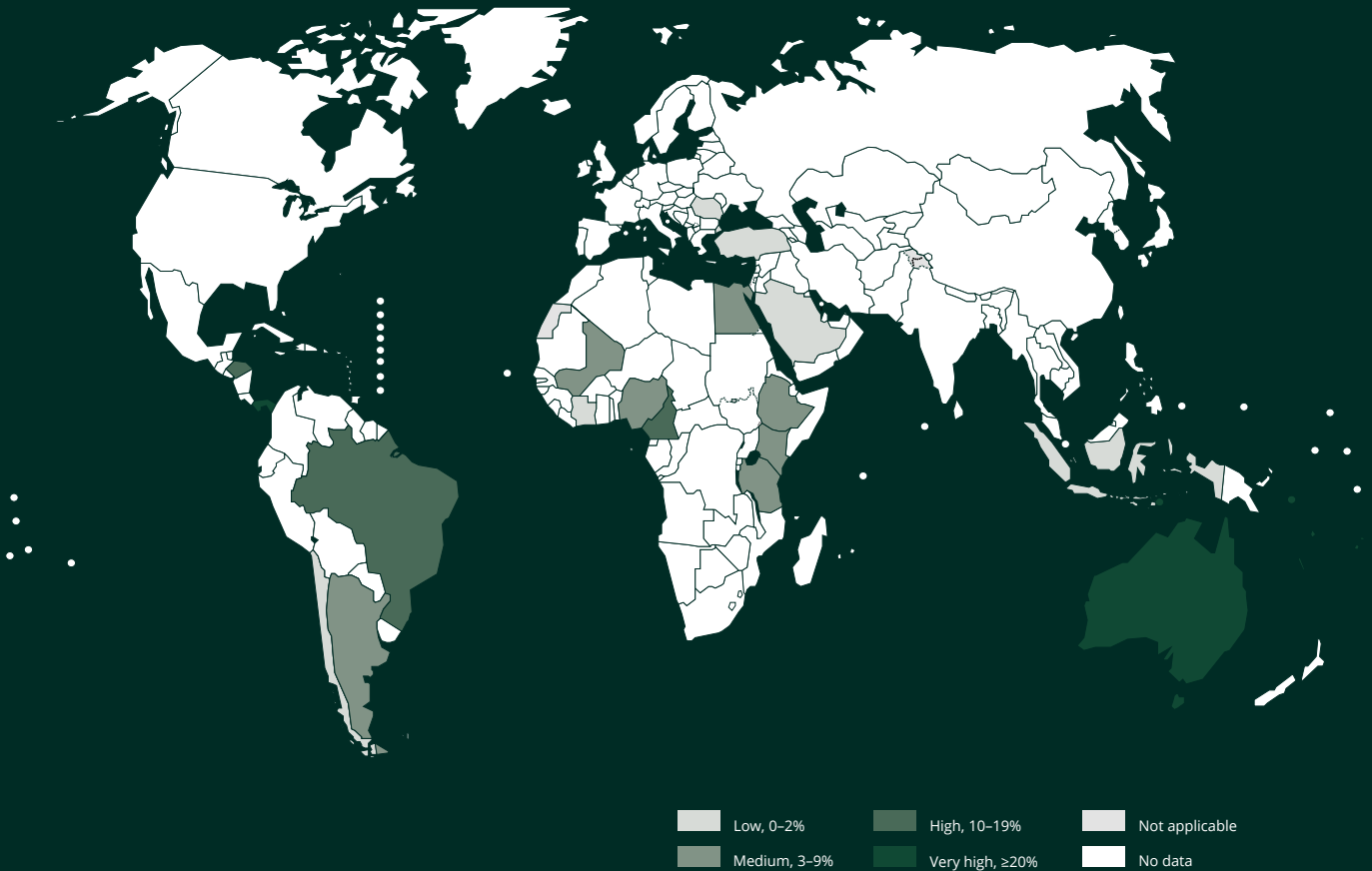
**About
4.5 million**

DALYs (all-age) in 2017

Accurate data on incidence and prevalence are not available.

The disease is endemic across all continents; the highest burden is in Asia (number of cases, DALYs).

Prevalence of scabies, latest year available



Scabies: assessment of actions required to meet 2030 sub-targets



Summary of critical actions to achieve targets

- Develop guidance and tools for mapping in endemic countries to estimate the burden of disease.
- Develop guidance for implementation of preventive chemotherapy.
- Create an advocacy and funding plan; secure financing for ivermectin and topical treatments; advocate for inclusion in universal health coverage.

Category and current assessment

Technical progress

Category and current assessment	Current status	Actions required
<p>Scientific understanding</p>	<ul style="list-style-type: none"> • Significant research has been performed to define the impact of MDA strategies on transmission of scabies • Initial research on burden of scabies has begun in certain regions 	<ul style="list-style-type: none"> • Evaluate epidemiological burden globally • Improve understanding of recrudescence of transmission in settings where MDA with ivermectin for other NTDs has stopped • Understand the life cycle and the impact of treatments on individuals and associated morbidity (e.g. impetigo and rheumatic fever)
<p>Diagnostics</p>	<ul style="list-style-type: none"> • Methods exist for screening and individual diagnosis, but lack of point-of-care confirmatory diagnostics • New international consensus criteria 2019 will facilitate programmatic screening 	<ul style="list-style-type: none"> • Validate clinical diagnostic algorithms for programmatic use • Develop population-level diagnostics to facilitate integration with other NTD programme activities and evaluate programme end-points
<p>Effective intervention</p>	<ul style="list-style-type: none"> • Strong evidence for effectiveness of ivermectin MDA in combination with topical scabicides for those who cannot take ivermectin; ivermectin cannot be safely used in areas in which loiasis is co-endemic 	<ul style="list-style-type: none"> • Determine if ivermectin-based single-dose MDA (instead of two doses 7 days apart) is effective for programmatic use • Identify alternative strategies for MDA including in areas where loiasis is co-endemic • Understand if moxidectin could serve as a treatment



For more details, please visit:
www.who.int/neglected_diseases/diseases/scabies/en/

Category and current assessment	Current status	Actions required
Strategy and service delivery		
Operational and normative guidance	<ul style="list-style-type: none"> Provisional framework in development 	<ul style="list-style-type: none"> Develop guidance and tools for mapping in endemic countries to estimate the burden of disease Develop guidance for implementation of preventive chemotherapy
Planning, governance and programme implementation	<ul style="list-style-type: none"> Informal bodies exist to support coordination Country-level organization and planning are often lacking MDA with ivermectin for lymphatic filariasis or onchocerciasis has had some impact on transmission, although these strategies miss some children at risk for infection 	<ul style="list-style-type: none"> Include scabies and impetigo in national universal health coverage and integrated management of childhood illness guidelines Incorporate scabies into national NTD programme planning in known highly endemic countries
Monitoring and evaluation	<ul style="list-style-type: none"> Burden of the disease and its prevalence are poorly understood 	<ul style="list-style-type: none"> Design operationally feasible mapping strategies Develop and disseminate protocols for standardization of mapping to ensure consistency of data Develop system for tracking scabies outbreaks; monitor particularly where lymphatic filariasis or onchocerciasis elimination programmes are closing Consider integrating M&E strategies with other skin diseases
Access and logistics	<ul style="list-style-type: none"> Ivermectin added to WHO Model List of Essential Medicines for ectoparasites (2019) 	<ul style="list-style-type: none"> Secure supply of low-cost ivermectin and topical scabicides; identify potential generic manufacturers of ivermectin that could obtain WHO prequalification Ensure availability of topical scabicides and treatment of secondary infection
Health care infrastructure and workforce	<ul style="list-style-type: none"> WHO manual on skin NTDs provides some guidance on diagnosis and management in the primary health care setting (2018) 	<ul style="list-style-type: none"> Develop national plans for staff training in diagnosis and management of scabies including secondary infection Ensure good-quality prescribing practices in skin NTDs
Enablers		
Advocacy and funding	<ul style="list-style-type: none"> Currently minimal donor support and limited domestic prioritization in many countries 	<ul style="list-style-type: none"> Create an advocacy and funding plan; secure financing for ivermectin and topical treatments; advocate for inclusion in universal health coverage
Collaboration and multisectoral action	<ul style="list-style-type: none"> Collaboration beginning to increase as a framework is developed The International Alliance for the Control of Scabies and the International League of Dermatological Societies helps coordinate action against scabies 	<ul style="list-style-type: none"> Strengthen integrated management of skin NTDs Coordinate with other programmes that use ivermectin (e.g. lymphatic filariasis) Strengthen collaboration with WASH in institutional settings
Capacity and awareness building	<ul style="list-style-type: none"> Needs have not been assessed but are expected to be high 	<ul style="list-style-type: none"> Capacity-building should be considered across skin NTDs for treatment and prevention of secondary infection