



Northern
Territory
Government

DEPARTMENT OF HEALTH AND FAMILIES



Healthy Skin Program

Guidelines for Community Control of Scabies, Skin Sores
and Crusted Scabies in the Northern Territory

March 2010

**healthy
Territory**
A Territory Government initiative

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Section 1 Background information

1.1 Guiding statement

A coordinated, community-based approach is required to reduce the prevalence of scabies and skin sores within Northern Territory (NT) communities.

1.2 Objectives

To provide a community-based framework for implementation of a Healthy Skin Program.

To reduce prevalence of scabies, streptococcal skin sores and associated post streptococcal illness in NT communities.

1.3 Rationale

Scabies is currently endemic in many remote Aboriginal communities with prevalence up to 50% in children and 25% in adults. Apart from the individual discomfort caused by scabies, it underlies 50% to 70% of streptococcal skin infections. Control of scabies is therefore critical in controlling streptococcal skin infections and its sequelae.

Outbreaks of Acute Post Streptococcal Glomerulonephritis (APSGN) have been documented in the NT since 1965, with large periodic outbreaks involving numerous communities. APSGN occurs following streptococcal skin infection and is characterised by oedema (most noticeably facial), haematuria and hypertension. Recent NT studies have shown that children who have had APSGN have six times greater risk of developing renal disease as an adult. Rates of acute rheumatic fever (ARF) and prevalence of rheumatic heart disease (RHD) in Top End communities are among the highest in the world. High rates of skin infection allowing the streptococcus to remain circulating in communities are likely to be a significant factor in the high rates of RHD and renal disease in the NT.

Treating individuals or even whole families for scabies has not been successful in reducing community rates as many treated cases rapidly become reinfected. A committed and coordinated approach involving the entire community in an initial education, screening and treatment program with an ongoing surveillance and follow-up program has been shown to be effective in reducing and maintaining reduced scabies prevalence rates.

Section 2 Definitions and clinical presentation

2.1 Scabies

Identification

A parasitic infestation of the skin caused by a mite, *Sarcoptes scabiei*, whose penetration is visible as papules, vesicles or tiny linear burrows containing the mites and their eggs. Scabies can be identified by small papules and scratch marks commonly found around web spaces between fingers, toes and anterior surfaces of wrists and elbows. Other sites include axillary folds, belt lines, thighs, abdomen and buttocks. Burrows are often not seen in tropical regions. Infants may have widespread lesions involving the head, neck, palms and soles. Itching is generally intense and often more severe at night.

Mode of transmission

Mites are transferred by direct contact with an infested person and can burrow beneath the skin in 2.5 minutes. Infestation from undergarments and bedclothes occurs only if these have been contaminated by the infested person immediately beforehand. The scabies mite that infects dogs is a different type to human scabies, and treating dogs is not necessary to reduce scabies prevalence amongst people.

Incubation period

Itching develops in those not previously exposed to scabies within 4 to 6 weeks. Those previously exposed develop symptoms 1 to 4 days after re-exposure.

2.2 Crusted (Norwegian) scabies

Crusted scabies is due to the same scabies mite but there is an over proliferation of scabies mites. It can occur in association with underlying immune deficiencies, including human immunodeficiency virus (HIV), hematological malignancy, immunosuppressive therapy, connective tissue diseases and neurologic illnesses, although the majority of cases in the NT have no obvious immune problems. In Central Australia crusted scabies has been associated with human T-cell lymphotropic virus (HTLV-I) infection. People with crusted scabies often have no itch and the rash manifests as generalised scaling and crusting of skin, often on buttocks, elbows and arms. Palms and soles of feet may be fissured. Cases can range from mild, with only a few patches on the skin, to severe infestations, covering the entire body. It may be misdiagnosed as other conditions such as psoriasis or fungal infections. As diagnosis by clinical picture may be difficult, microscopic examination of skin scrapings to detect the presence of mites and/or their eggs is recommended.

Individuals with crusted scabies are highly infectious, requiring systemic treatment and often hospitalisation. They are also highly vulnerable to reinfection. Cases of crusted scabies have an associated high morbidity and secondary skin sepsis may result in life threatening bacteraemia. Undiagnosed cases of crusted scabies play an important role in reinfection of treated household members.

2.3 Infected scabies

Scabies frequently become infected, with both *Group A streptococcus* (GAS) and *staphylococcus aureus*. Eradication of the GAS is important to prevent post streptococcal disease. Single dose benzathine penicillin will eradicate streptococcus. Antibiotic treatment that also covers staphylococcus is often not required.

2.4 Impetigo / skin sores (no scabies)

Skin sores that are unrelated to scabies are more likely to be on the legs, and are usually due to minor trauma or insect bites. Antibiotic treatment is recommended for multiple sores and is also aimed at eradicating streptococcus. If there are blistertype pustules, this is more likely to be due to staphylococcus. For recommended treatment refer to the Central Australian Rural Practitioners Association, *CARPA Standard Treatment Manual*.

Section 3 Healthy Skin Program

Since 1992, many communities have implemented Healthy Skin programs in the NT. Initial whole population treatment and selective screening has been successful in reducing scabies prevalence from up to 61% to down to 3% across these communities. Ongoing data has been collected in 5 communities at 6 months post the initial treatment day. Three of these communities have maintained low rates, however in the other two communities the prevalence rates had increased to 29%. The necessity of a well planned, coordinated and committed community-approach to an ongoing Healthy Skin Program to reduce scabies prevalence cannot be over emphasised. The program requires more than just the community treatment day. The aim of the treatment day is to reduce prevalence to a manageable level (approximately 5%) so that the focus can be on scabies eradication.

A Healthy Skin Program can be divided into the following 5 phases:

- Planning
- Community involvement and education
- Base-line screening and whole-of-community treatment
- Maintenance
- Evaluation

3.1 Planning

Planning is the key to successful implementation of any program. People to be involved in the initial planning will vary from community to community but may include health staff, council workers, women's centre staff, school teachers and visiting health staff such as environmental health officers (EHOs) and health promotion officers.

See Appendix 1, for a list of educational resources and Appendix 2 scabies fact sheet.

Initial community screening and treatment

A realistic timeframe for the initial community screening and treatment is required. This may need up to 3 months of planning to allow for community awareness and education activities to take place. Small communities may only require one day to screen and treat everyone, but larger communities may need to plan for up to a week of screening and treatment. Other community events should be taken into consideration when deciding on the dates.

Resources required

- Community population list
- Extra supplies for scabies and infected skin sores treatment
- Extra health staff and community members (if required) for the baseline screening and treatment

Education requirements of health staff

Plan an education session for health staff to ensure everyone understands the issues and will be delivering the same health message to the community. A discussion on the diagnosis of both scabies and crusted scabies and appropriate treatment should be included.

Ongoing program

Ways of ensuring the sustainability of the program should be discussed. This should include community education on how the lowered scabies rates will be maintained rather than just focusing on the initial screening and treatment.

3.2 Community involvement and education

This phase may take up to 2 months depending on the size of the community, other community events and available resources.

Community participation

Talk with different community organisations to identify community members who will support the program and take the message to the community. They will include community leaders, elders, council members, teachers, Health Boards, Arts Centre staff, Women's Centre members, outstation resource centres and others specific to your community. These people should be involved in planning, the community treatment day and the ongoing maintenance program.

Community education

Plan to provide school and community education sessions and decide on the messages you want to convey to the community. School teachers may run a competition for children to develop posters about scabies and skin sores. Local organisations often donate prizes, and the posters can be used for community education. Communities can develop their own video story and show this locally.

Key messages for community education include:

- the relationship between scabies, skin sores and kidney and RHD sickness;
- the success of the program in other communities;
- the importance of treating everyone, whether they have scabies or not;
- how to apply scabicide;
- an ongoing program to keep scabies rates low;
- the importance of washing children to reduce skin infection; and
- housing functionality to enable washing of children.

3.3 Baseline screening and community treatment

Reason for screening

- Establish the baseline scabies and skin sore prevalence in the community; and
- Determine which individuals have infected sores and need antibiotics.

Who to screen

Children 0 to 3 years of age are a useful group for selective screening. These children usually have the highest rates of scabies and skin sores, and are an easy group to access. Smaller communities may decide to include up to 5 year olds or up to 15 year olds.

It is not essential to screen adults, however all adults should be encouraged to be treated regardless of whether they are screened or not.

How and where to screen

A designated screening centre could be organised and well advertised prior to the treatment day. An appropriate centre may be the school, health clinic or Women's Centre.

In larger communities health workers may decide to divide into teams to conduct mobile screening while another team works at a screening centre.

To ensure consistency screening should be carried out in the following manner:

- Young children — check all of skin, including scalp
- School children — check hands, arms, legs, feet and waist. Only check rest of skin if scabies or sores noted, or if itching is present on other parts of the body
- Adults (if screening) — check hands, arms and feet, unless scabies or sores found

Refer people with other skin problems (e.g. ringworm) to the clinic for treatment.

See Appendix 3 for a checklist of equipment required for screening and treatment.

Documentation

Accurate documentation is important as this will assist in follow up of cases and contacts and targeted surveillance. Clinic staff should decide on the most appropriate record keeping method for the community taking into account the need for follow up of moderate/severe scabies, crusted scabies and being alerted to household reinfections.

Moderate to severe scabies includes infants with pustules on hands and feet and older children and adults with multiple scabies lesions.

Only infected sores should be documented. Infected sores will be moist and have pus or a yellow/brown crust. Do not record non-infected cuts, scratches or insect bites.

See Appendix 4 for a spreadsheet example for baseline screening.

Treatment

Infected sores

- Treat all cases with a single intramuscular (IM) dose of benzathine penicillin (erythromycin or roxithromycin for 10 days if allergic to penicillin).
- Permethrin 5% cream can be applied at the time antibiotic treatment is given. There is no need to wait for healing, as permethrin has very low skin irritation.

Scabies

- Treatment must be offered to the whole community at the same time and health staff should visit households to demonstrate the correct way to apply the cream. Apply the cream to a young child as a simple way of demonstrating correct treatment.
- Infants less than 2 months of age are treated with sulphur 5% cream daily for 2 to 3 days or crotamiton 10% cream (Eurax) daily for 3 to 5 days. Wash off and reapply the cream each day.

Permethrin is not recommended for use on children less than 2 months of age

- Everyone older than 2 months is treated with 5% permethrin cream. Treatment should be applied late in the afternoon or evening, left on overnight (8–12 hours) and washed off in the morning.

It must be applied from head to toe, ensuring the whole body is covered but avoiding the eyes and mouth.

- Any person with scabies should have a second treatment of 5% permethrin at 1–2 weeks.

Previously only young children were treated from head to toe, but in endemic areas many older children and adults have scabies on their head and neck.

Crusted scabies

Management of crusted scabies is discussed in Section 4.

3.4 Maintenance program

An ongoing maintenance program is essential to ensure community scabies prevalence rates are maintained at the lowered level. A return to previous high prevalence rates has been seen in communities where a maintenance program has not been implemented. A maintenance program involves:

- promoting washing of children and maintenance of health hardware to do this;
- promoting early presentation of any scabies cases;
- ensuring treatment of any new cases and household contacts; and
- regular surveillance of young children to monitor prevalence.

See Appendix 4 for spreadsheet example for follow up screening and treatment.

Follow up and surveillance screening

Surveillance must be regular and focused on identifying reinfection. Reinfection requires active contact tracing as a child with frequent scabies infestation, may be in contact with an undiagnosed case of crusted scabies in an adult in their house.

Who to follow up and deciding on the surveillance target group

All cases of scabies identified during the initial screening should be retreated in 1–2 weeks. Management of crusted scabies is discussed in Section 4.

A target population for regular surveillance must be decided upon. As young children have higher rates of scabies and skin sores it should include children 0–3 years of age, or children 0–5 years. In smaller communities children up to 10 or 15 years may be included.

When should regular surveillance be carried out?

Surveillance following the community treatment day should be done approximately 6 weeks later. Ongoing surveillance could be incorporated into the childhood Growth Assessment and Action (GAA) Program and should be done at least 3 times per year.

Surveillance outcomes and documentation

- treat any skin sores with penicillin (erythromycin or roxithromycin if allergic);
- treat any child with scabies AND all family members living with them;
- maintain documentation indicating which children have had scabies, skin sores and treatment to highlight any children/households that are frequently reinfected; and
- frequently reinfected cases should alert staff to the possibility of contact with an undiagnosed case of crusted scabies.

3.5 Evaluation

Start a file and after each surveillance:

- use graphs and pictures to present scabies rates to community decision-makers such as Councils, Woman's Centres, community elders and teachers; and
- write a short report on how the program is going and discuss it with the Maternal, Child and Youth program staff, rural health coordinators, environmental health officers (EHOs) and relevant stakeholders.

Section 4 Management of crusted scabies

4.1 Medical assessment and diagnosis

Assess for

- The extent and severity of rash.
 - Thickened skin patches may be localised in 1 or 2 areas, often on buttocks, hands, feet or shoulders or cover the whole body with a thick flaky crust.
 - The rash can look like tinea, psoriasis or eczema/dermatitis.
- Secondary skin infection.
- Weight (check for weight loss).
- Other conditions as indicated (e.g.: examine the spleen, lymph nodes, and for signs and symptoms of leprosy).

Blood tests

- FBC, ESR, eosinophil count, CRP
- UEC, LFT, ANF
- Venous blood glucose
- HIV Ab, HTLV-I Ab
- Complement — C3, C4

Skin

- Skin scrapings for microscopy and culture — ask for scabies microscopy and fungal culture
- Skin swabs for microscopy and culture if indicated

Collect skin scrapings by running a surgical blade held perpendicular to the skin across the affected area using light pressure. Skin flakes should be collected in a sterile container (yellow topped urine jar is suitable) and stored in the refrigerator.

If the specimen is being collected to aid diagnosis, send it to your usual laboratory service. Request skin parasitology, m/c/s and specify for scabies and fungal identification.

If the specimen is to assess treatment effectiveness, it should be forwarded to Menzies School of Health Research within 48 hours and labelled *Attention scabies laboratory, MSHR, RDH campus, Phone 08 89228196*. The specimen will be treated differently and examined for both dead and live mites.

4.2 Treatment of crusted scabies cases and their contacts

Treatment of cases

Treat milder cases in the community, in consultation with the Infectious Diseases physician if you are not familiar with treating this condition. Severe cases will need to be admitted to hospital.

Two treatments:

- Calmurid® (urea 10%, lactic acid 5%) to soften skin crusts and allow penetration of scabies cream.
- Permethrin 5% cream OR benzyl benzoate 25% lotion (+/- tea tree oil 5%) **plus** oral ivermectin to kill scabies mites.

Calmurid®: apply once daily to rash only (softens skin) after bath or shower. Do not apply on treatment day with permethrin/benzyl benzoate.

Permethrin cream or benzyl benzoate: apply initially second daily after bath or shower for 1 week, then twice weekly thereafter until discharged/cured. Cover the whole body, including head and face. Leave on for **24 hours** (instead of usual 8 hours).

Ivermectin: 200mcg/kg/dose (do not use less than 200mcg/kg/dose – can use up to 300 mcg/kg/dose). Tablets are 3mg each and **should be given as directly observed therapy** with each dose documented in the patient chart. They are best taken with food for better bioavailability.

Mild crusted scabies: give 3 oral doses on Day 1, Day 2, Day 8.

Moderate crusted scabies: give 5 oral doses on Day 1, Day 2, Day 8, Day 9, Day 15.

Severe crusted scabies: admit to hospital for fully supervised therapy, up to 7 doses of ivermectin (Day 1, Day 2, Day 8, Day 9, Day 15, Day 22, Day 29) may be required plus more frequent topical therapy.

Note: *ivermectin is not licensed in Australia for use in scabies, but it can be prescribed by a doctor familiar with the drug and its effects on crusted scabies. It is not approved for use in children or in pregnant women, but can be prescribed for children with crusted scabies by a doctor familiar with the drug and its effects on crusted scabies.*

Treatment of contacts of crusted scabies cases

Treat all household and close contacts with single application of permethrin 5% cream (head to toe).

All contacts with clinical scabies, especially young children should have a second treatment after 1–2 weeks. Household contacts should be treated either the day of or the day prior to the house being treated.

4.3 Treatment of House

Insecticide treatment of their usual residence (and other houses the person may have regularly stayed at) is required only for people with crusted scabies as they are highly infectious. It is not recommended for normal scabies cases. House treatment may be arranged by contacting the EHO.

See Appendix 8 for environmental health guidelines on treating the house.

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Appendix 1 Educational resource / ideas list

Creating community awareness:

- plan a barbeque, football game or other community activity to celebrate
- organise poster competitions, displays etc
- work with councils and Environmental Health Officer's (EHO) to arrange a community/house clean up day on the same day as community scabies treatment.

TITLE	WHAT	SOURCE
CARPA Standard Treatment Manual	Book	Central Australian Rural Practitioners Association (CARPA)
Healthy Skin Story Scabies	Flipchart	http://www.crcah.org.au/research/east_arnhem_healthy_skin_project.html
Recognising and Treating Skin Conditions	Flipchart	http://www.crcah.org.au/research/east_arnhem_healthy_skin_project.html
Scabies	Fact sheet	Appendix 2 NT Centre for Disease Control -8922 8044 Centre for Disease Control - Publications www.nt.gov.au/health/cdc
Clean kids are deadly kids	Poster	Tropical Public Health Unit QLD Health 07 4050 3600
Scabies	Flip chart	http://www.crcah.org.au/research/east_arnhem_healthy_skin_project.html
Scabies prevention and treatment	Information Sheet	Fact sheet (South Australian government) http://www.health.sa.gov.au/pehs/PDF-files/ph-factsheet-scabies.pdf
Scabies and Skin Sores	Poster	Australian Kidney Foundation DHF Reprint CDC-08 8922 8044 / 08 8951 6918
Scabies and other mites causing skin disease	Fact sheet	Staying Healthy in Child Care 4 rd edition http://www.nhmrc.gov.au/publications/synopses/ch43syn.htm
The scabies story: under your skin	Video, Poster, School education package	Goldfields Public health Service, Kalgoorlie 08 9021 2622

The Healthy Skin Team with the Cooperative Centre for Aboriginal Health (CRAH) have provided research implementing the Healthy Skin program

Further information is available from:

http://www.crcah.org.au/research/east_arnhem_healthy_skin_project.html

CRAH Contact person Elizabeth Curlisa 08 8943 5000.

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Appendix 2



Centre for Disease Control

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Scabies

What is scabies?

Scabies is a skin condition caused by a microscopic mite called *Sarcoptes scabiei*. The mites burrow under the skin and the females lay eggs. The itch results from the inflammatory response to mite excreta and other components.

It is a common problem in many remote Aboriginal communities within the Northern Territory where in some areas up to 50% of children and 25% of adults are affected.

What are the symptoms?

The first time someone is infected symptoms do not appear until 2-6 weeks after exposure. If someone has been infected previously, symptoms usually take 1-4 days to appear.

A red lumpy rash appears. Rarely little burrow markings about 10mm long can also be seen. In adults the rash is usually around the buttocks, wrist and ankles, and between the fingers and toes. It also commonly occurs in the folds of the skin around the armpits, elbows and genitals. In young children the rash may be from head to toe with early pustule formation on the hands and feet. The rash is very itchy, often much more so at night.

Are there any complications?

Scratching of the affected area often causes secondary infection with *Staphylococcus* and *Streptococcus* bacteria. Streptococcal infections can be associated with kidney infections (glomerulonephritis) and rheumatic fever

so early antibiotic treatment for skin infection is recommended.

How is it spread?

The scabies mite is spread from person to person by direct physical contact. Contact must be prolonged – a quick handshake or hug will not spread it. Although the scabies mite does not live long outside the human body it can also be spread by clothes and linen that have been used by a person with scabies if they have been worn or used immediately before. People with untreated crusted scabies can be 'core transmitters' of scabies in communities and health care facilities. Scabies will continue to be spread until all mites and eggs are destroyed.

A similar illness occurs in dogs, however the mite that causes dog scabies is different from that which causes human scabies.

Who is most at risk?

Scabies occurs worldwide, however people living in crowded conditions with poor hygiene and malnutrition are most at risk.

How is scabies treated?

For the individual

There are currently a number of creams or lotions for the treatment of scabies for adults and children available. These include:

- 5% Permethrin (Lyclear)
- Benzyl Benzoate (Ascabiol, Benzemul)

For babies less than 2 months old:

Crotamiton cream (Eurax)

Application of the treatment varies depending on which one is used, so it is important to read the instructions carefully.

The person who is infected should first have a shower or bath to soften the skin. The treatment should then be applied to the skin as per the instructions and left on for the recommended period of time before washing it off. While the treatment is on the skin a complete set of new clothes should be worn.

It is recommended that treatment be repeated after 1 week.

Tingling and itching may still be present for 1 to 2 weeks after treatment.

For others in the house

For the treatment to be successful all members of the household and other close contacts should be treated at the same time as the infected person. Contacts may be incubating scabies at the time of treatment and therefore not show any symptoms.

For the household

All clothing, towels and linen need to be washed in hot soapy water and left to dry in the sun.

Mattresses and pillows should be put out in a shaded position in the late afternoon, sprayed with surface spray containing pyrethroid according to the directions, left overnight, then put in sun full day the next day. Curtains, chair covers and carpets may also need to be sprayed with surface spray.

How is scabies prevented?

Early diagnosis and prompt treatment helps to prevent the spread of scabies.

Healthy Skin Programs are being conducted by many communities, for further information about this contact your nearest health centre.

What is Crusted (Norwegian) scabies?

While most people are infested with about 10 to 15 mites, in crusted scabies, there is a proliferation of mites and people are infested with thousands of mites. Sometimes this happens because a person's immune system is not working well due to other illness. However, in many cases in the NT there are no clear underlying immune problems.

Crusted scabies does not look like scabies. The rash appears as scaling, thickening and crusting of the skin. Often this appears on buttocks, elbows and arms.

Mild cases of crusted scabies can be treated in the community with creams, lotions and oral ivermectin. Severe cases will require admission to hospital.

For more information contact the Centre for Disease Control in your region

Alice Springs 8951 7540

Darwin 8922 8044

Katherine 8973 9049

Nhulunbuy 8987 0357

Tennant Creek 8962 4259

or

<http://www.nt.gov.au/health/cdc>

Appendix 3 Equipment list

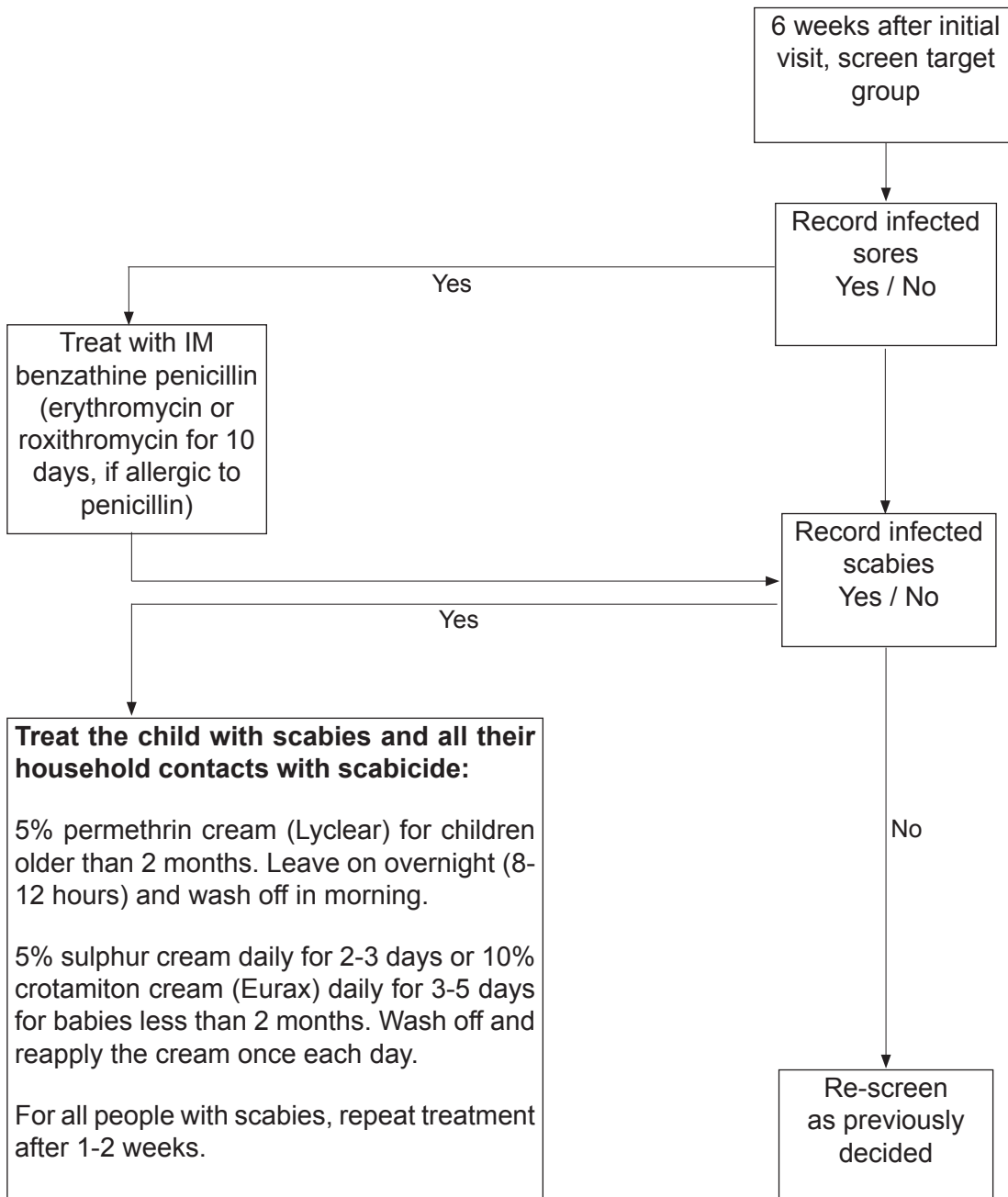
General

- Community population list
- Screening spreadsheet
- Pens/paper
- Sharps container
- Alcohol swabs
- Needles and syringes
- Gloves
- Hand wash
- Scales

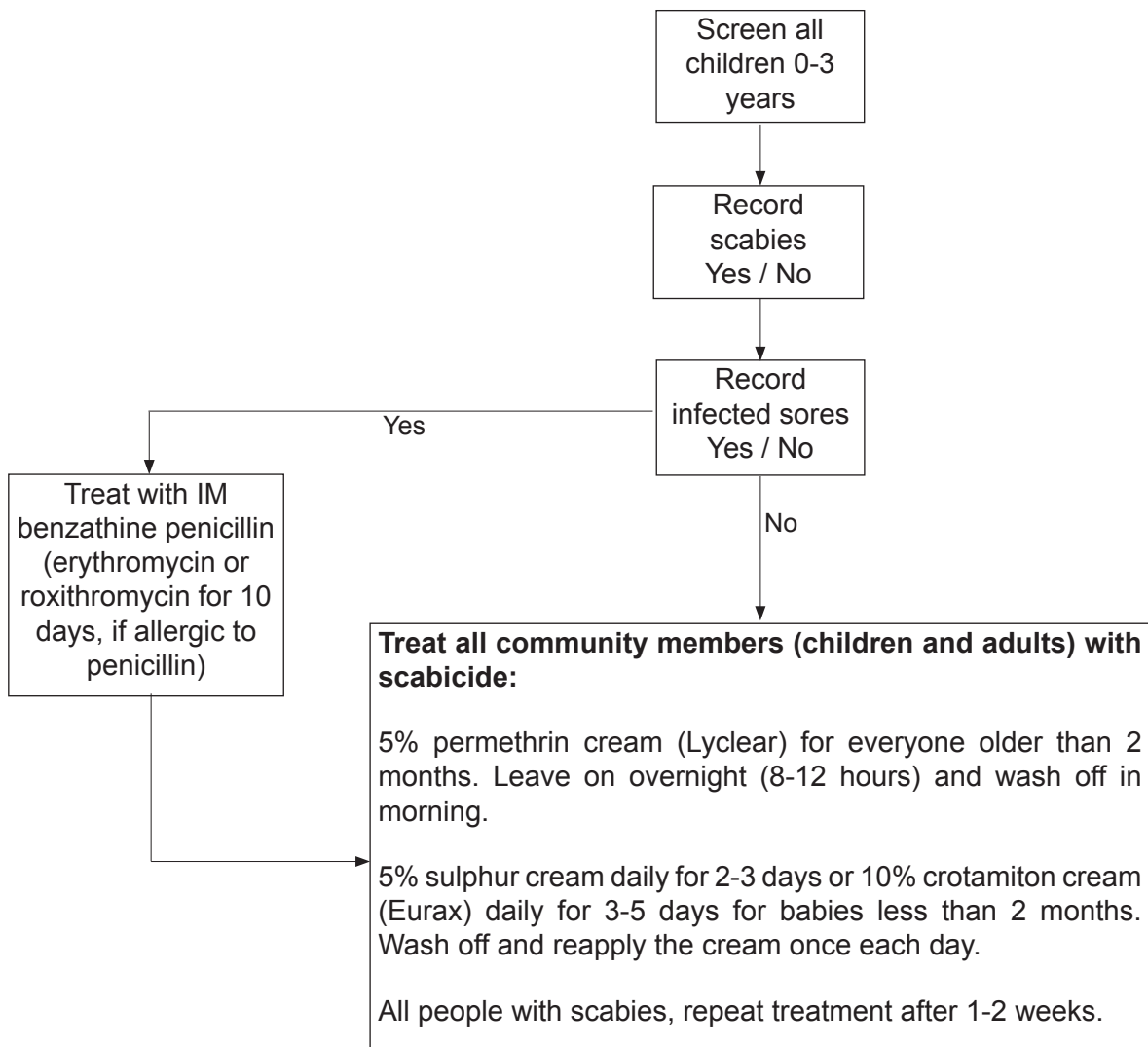
Scabies and skin sores treatment

- Permethrin cream (Lyclear)
 - ~ 1 tube for 2 adults
 - ~ 1 tube for 4 children
 - ~ 1 tube for 8 babies
- Crotamiton cream (Eurax)
- Benzathine penicillin (2ml) – store in esky to maintain temperature between 2–8° C

Appendix 6 Baseline screening and community treatment



Appendix 7 Maintenance program



Appendix 8

Housing Treatment – Crusted Scabies Protocol

Environmental Health Component

Guidelines for treatment of a house

The treatment of a home for scabies forms part of the Crusted Scabies protocol. The protocol was developed by Environmental Health Officers (EHOs), Infectious Diseases Physician, Public Health Physicians and CDC.

1. Clinic staff contact the Environmental Health Officer to advise them of a case of crusted scabies.
2. A date is negotiated with Clinic staff to implement the first stage of the protocol.
3. The date of house treatment is usually the day before the patient with Crusted Scabies is discharged from hospital.
4. Contact the family of the patient prior to the day of treatment and advise them of proposed action.

On the day:

1. Meet with family (at the home in which patient is to live in upon discharge from hospital). This should be done in the presence of a community representative (as agreed to by family).
Advise family to:
 - Remove food and food utensils
 - Arrange for the house to be cleaned
 - Wash clothes, towels, blankets, sheets, pillow cases
 - Hang washed laundry in sun
 - Put pillows and mattresses in sun
 - Consider new mattresses for all family members living in the house.
2. Close all windows. Where a house has no windows seal the windows with plastic sheeting or other appropriate materials.
3. With guidance from the EHO, consider the use of a pest bomb.
4. Family need to remain out of the house whilst it is being treated. Approximately 3 – 4 hours.
5. Open all windows and doors to fully ventilate the house or as per instructions before advising family to re-enter (approximately 30 minutes).
6. Advise family regarding cleaning floors, benches and other surfaces upon re-entering the house if a pest bomb has been used.

Clinic staff will advise family on procedure for the application of medicated creams etc. This may be conducted while the house is being treated or the day before the treatment of the house.

Role of EHO/suitably trained person

1. Contact the family and advise of proposed action.
2. Negotiate times and day to carry out treatment of family and house with clinic staff and family.
3. Provide family with information, advice and support.
4. Suitably trained person to carry out the ignition of the pesticide bomb.
5. Where possible train a local person to carry out treatment of the home.
6. Always include the family in the implementation of the protocol e.g.: sealing windows.
7. Assist clinic staff where necessary.

Role of clinic staff

1. Confirm discharge day of patient from hospital.
2. Contact EHO and negotiate date of treatment.
3. Prescribe medication to family members and ensure treatment is carried out.

Role of family

1. Washing of clothing, linen etc.
2. Providing new mattresses.
3. Cleaning of house and preparing house for the pesticide treatment.

Guidelines for Community Control of Scabies, Skin Sores and Crusted Scabies in the Northern Territory

Northern Territory Department of Health and Families
Centre for Disease Control

www.nt.gov.au/health/cdc